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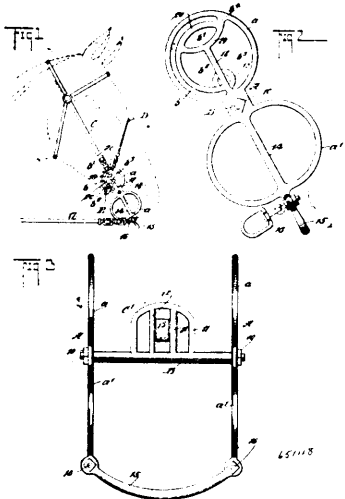
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INVENTIONS PATENTED.

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No. 65,148. **Curb Bit.** (*Gourmette de mors.*)

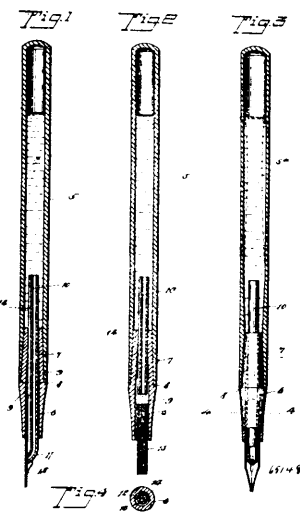


William H. Aughey and John L. Scarlett, Billings, Montana, U.S.A., 1st December, 1899; 6 years. (Filed 4th November, 1899.)

Claim.—1st. A bit, the cheek pieces whereof are provided with series of spaces separated by bars, the said spaces being located at each side and above the centre, one of the bars being a central bar, for the purpose specified. 2nd. A bit, the cheek pieces whereof are provided at their upper ring sections with a central bar extending from the bottom of the ring to a point near the top, a curved cross bar attached to the upper portion of said ring section, being connected with the vertical bar, and a segmental section curved in an opposite direction to the cross bar and connected therewith at the ends and also with the lower portion of the central cross bar, forming thereby a segmental slot at one side of the ring, for the purpose described. 3rd. A bit, the body of which comprises cheek pieces

having a ring formation at their upper ends, a mouth bar connecting the cheek pieces, and a gag carried by the mouth bar, the upper ring portion of each cheek piece being provided with a central bar extending from the bottom of the ring section to a point near the top, a curved cross bar attached to the upper forward portion of said ring section, being connected with the vertical bar, and a segmental bar curved in an opposite direction to the cross bar and connected therewith at each of the ends and also with the lower portion of the central cross bar, for the purpose described. 4th. A bit, the body of which comprises cheek pieces having a ring formation at their upper ends, a mouth bar connecting the cheek pieces, and a gag carried by the mouth bar, the upper ring section of each cheek piece being provided with a central bar extending from the bottom of the ring section to a point near the top, a curved cross bar attached to the upper forward portion of said ring section, being connected with the vertical bar, a segmental bar curved in an opposite direction to the cross bar and connected therewith at each of the ends, and also with the lower portion of the central cross bar, said segmental bar being eccentric with the body of the said ring section of the body, the curved cross bar being provided with a guide section for the nose strap of the bridle, which section is located where the said cross bar connects with the body of said ring section, for the purpose described.

No. 65,149. **Fountain Pen.** (*Plume-fontaine.*)

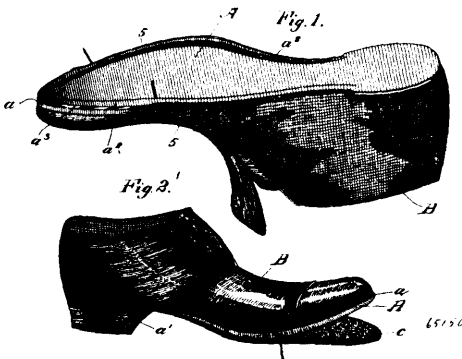


Albert D. Wright, assignee of Byron Fitts Marsh, both of Eustis, Lake County, Florida, U.S.A., 1st December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. A fountain pen, having a barrel, a pen seat fitted into the open end thereof and comprising a plug hermetically engaging the inner walls of the barrel, and an outer portion projecting beyond the barrel, the pen seat being formed with a longitudinal cavity extending through it from end to end, and an air tube fitting

in the cavity and projecting beyond each end of the pen seat, the air tube filling the inner portion of the cavity in the pen seat and being firmly engaged with the inner walls of the plug of the pen seat, and the outer portion of the cavity being enlarged at its outer portion to form an ink reservoir and the air tube being formed with a longitudinally extending external groove forming an ink duct, the outer portion of the air tube serving to hold the pen point against the inner wall of the outer portion of the pen seat. 2nd. A fountain pen, having a barrel, a pen seat fitted in the open end thereof, and comprising a plug hermetically engaging the inner walls of the barrel and an outer portion projecting beyond the barrel, the pen seat being formed with a longitudinal cavity extending through it from end to end, and an air tube fitting in the cavity and projecting beyond the inner end thereof, the air tube filling the inner portion of the cavity in the pen seat and being firmly engaged with the inner walls of the plug of the pen seat, the cavity being enlarged at its outer portion to form an ink reservoir, and the air tube being formed with a longitudinally extending external passage forming an ink duct, and a pen point fixed in the outer portion of the pen seat.

No. 65,150. Shoe. (Chaussure.)



Albert Many, St. Hyacinthe, Quebec, Canada, 1st December, 1899; 6 years. (Filed 24th October, 1899.)

Claim.—1st. An inner sole for boots and shoes, comprising a blank, an extension integral therewith and extending from the toe portion of said blank to and terminating at the front of the heel portion, a groove or cut formed in the bottom of said sole adjacent to and parallel with said extension and terminating at substantially the same point, a second groove or cut formed substantially at the point of junction between said extension and said sole, substantially as described. 2nd. A boot or shoe comprising an upper, an inner sole adapted to be secured thereto and having an extension integral therewith and extending from the toe portion thereof to and terminating at the front of the heel portion, a groove formed in the bottom of said sole, adjacent to and parallel with said extension and terminating at substantially the same point, a second groove formed substantially at the point of junction between said extension and said sole, stitching passing through the bottom of said grooves and the upper, and an outer sole secured to the said extension of the inner sole, substantially as described.

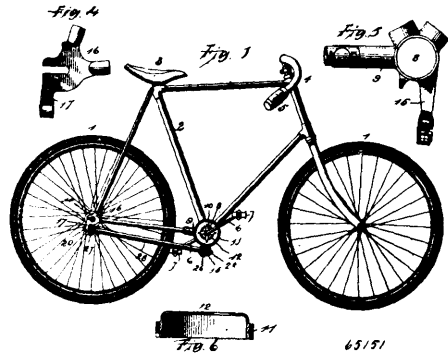
No. 65,151. Vehicle Driving Mechanism.

(*Mécanisme de commande pour véhicules.*)

Moses Carlyle Johnson, Hartford, Connecticut, U.S.A., 1st December, 1899; 6 years. (Filed 14th March, 1899.)

Claim.—1st. In combination in a vehicle, a geared driving mechanism including a driving member, a spiral gear fast to such driving member, a driven member with the spiral gear, a connecting shaft bearing spiral pinions in mesh with the gears on the driving member and driven member respectively, and means for imparting motion to the driving member. 2nd. In a geared driving mechanism for vehicles, in combination, a driving member provided with the spiral gear, a driven member placed at an angle with the driving member and having a spiral gear in mesh with the first named gear, the teeth of the intermeshing gears consisting of short sections of screw threads, all pitched to the same angle and in the same direction. 3rd. In a geared driving mechanism for vehicles, in combination with the frame and wheels, a crank shaft, a driving wheel shaft or hub, a connecting shaft, gears on the crank shaft and driving wheel respectively, pinions on the connecting shaft in mesh with the crank shaft gear and driving wheel gear respectively, all of said gears and intermeshing pinions having teeth consisting of short sections of screw threads or spirals pitched to the same angle and in the same direction on the respective gear wheels and pinions, the said angle of pitch of the teeth with reference to the axis of the

gear being equal substantially to one half the included angle formed by the axes of the intermeshed gears and pinions. 4th. In a bicycle,



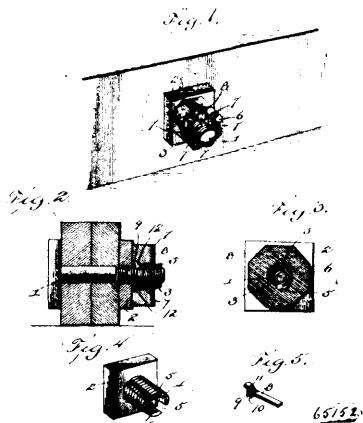
in combination, a pair of wheels, a frame supported by the wheels, a crank shaft supported by the frame, a spiral gear connected with the crank shaft, a spiral gear connected with the hub of the driving wheel, and a pair of spiral pinions connected together by a hollow shaft and supported by bearings on the frame in such manner that the teeth of the pinions mesh with the teeth of the spiral gears, substantially as specified. 5th. In a bicycle, in combination, the wheels, the frame supported by the wheels, a crank shaft supported in the crank shaft bracket, a spiral gear connected with the hub of the driving wheel, a spiral pinion meshing with the spiral gear connected to the crank shaft, a spiral pinion meshing with the spiral gear at the driving wheel hub, a shaft connecting the spiral pinions, and means including ball bearing devices for supporting and connecting the said shaft with arms projecting from portions of the frame of the wheel and the arms. 6th. In a bicycle, in combination, the wheels, the frame supported by the wheels, the crank shaft supported by the frame, a spiral gear connected with the crank shaft, a spiral gear connected with the hub of the driving wheel, a spiral pinion meshing with the spiral gear at the crank shaft, a spiral pinion meshing with the spiral gear at the driving wheel hub, a hollow shaft connecting the spiral pinions, a rod extending through the hollow shaft and through arms projecting from a portion of the frame, said rod bearing near each end a ball cone, one of said ball cones being threaded and free to turn in a threaded opening in the arm, a binding bolt for clamping the threaded ball cone in position, and balls between the ball cones and spiral pinions, substantially as specified. 7th. In a bicycle having a rear driving wheel, geared driving mechanism extending between the crank shaft bracket and the driving wheel, a driving gear including a pair of screw gear wheels at the pedal crank axle, a pair of similar screw gear wheels at the driving wheel axle, and a shaft supported on the bicycle frame at its side and carrying the driven wheel of the front pair of gears and the driving wheel of the rear pair. 8th. In a bicycle, in combination with the frame, wheels and crank shaft, the crank shaft and the hub of the driving wheel having screw or spiral gears thereon, of a shaft carried by the frame and having screw or spiral pinions thereon each meshing with the gears on the crank shaft and driving wheel hub respectively, the pitch of the teeth of said gears and pinions being in the same direction and of the same angle whereby motion is communicated from the crank shaft to the driving wheel, and the end thrusts of the intermediate connecting pinions and shaft are eliminated, substantially as and for the purpose specified.

No. 65,152. Nut Lock. (Arrête-écrou.)

Richard Titus and William S. Walker, both of Bowling Green, Ohio, U.S.A., 1st December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. In a nut lock, the combination with a bolt and a nut having a hollow extension which is internally and externally threaded and split longitudinally, of a clamping nut for the extension, and a key adapted to be inclosed by the clamping nut and having an interlocking engagement with the bolt and with the clamping nut, substantially as shown and described. 2nd. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally threaded, a clamping nut adapted to be fitted upon the conical extension and clamp the jaws thereof upon the bolt, and means whereby the clamping nut may be locked against being accidentally turned upon the extension, substantially as shown and described. 3rd. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally

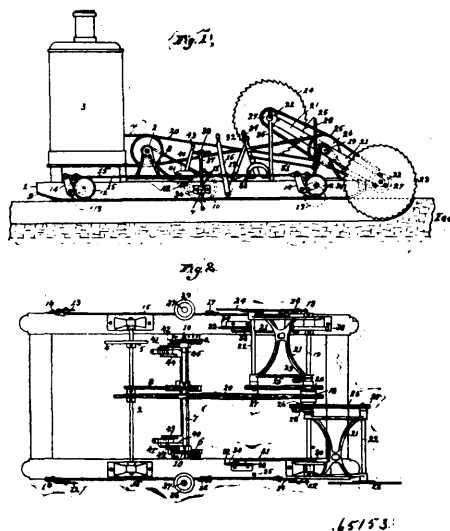
breaded, a clamping nut adapted to be fitted upon the conical extension and clamp the jaws thereof upon the bolt, and locking



means engaging the bolt and the clamping nuts, whereby the latter is prevented from being accidentally turned, substantially as shown and described. 4th. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally threaded, a clamping nut adapted to be fitted upon the conical extension and clamp the jaws thereof upon the bolt, and a locking key adapted to be fitted between respective edges of the jaws of the extension and provided with an engagement with the clamping nut, whereby the latter is prevented from being accidentally turned upon the extension, substantially as shown and described. 5th. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally threaded, a clamping nut having radial grooves provided upon its outer face and intersecting the bore thereof, said clamping nut being adapted to be fitted upon the extension and clamp the jaws upon the bolt, and a locking key adapted to be fitted between respective opposite edges of the jaws, and have its outer end bent into one of the grooves of the clamping nut, whereby the latter may be prevented from being accidentally turned, substantially as shown and described. 6th. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally threaded, a locking key having teeth or threads upon one of its faces and adapted to be fitted between respective opposite edges of the clamping jaws, the teeth being in engagement with the threads of the bolt, and a clamping nut adapted to be fitted upon the clamping jaws and bind the same and the teeth of the key upon the threads of the bolt, to lock the nut and prevent longitudinal displacement of the key, the latter having an engagement with the clamping nut, whereby the latter is prevented from being accidentally turned, substantially as shown and described. 7th. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite clamping jaws, the latter being externally and internally threaded, a locking key having teeth or threaded upon one face, and a beveled or rounded portion on its opposite face, the key being adapted to be fitted between respective opposite edges of the spring jaws, having its teeth engaging the threads of the bolt and its beveled or rounded portion projecting beyond the spring jaws, and a clamping nut adapted to be fitted upon the spring jaws to clamp the same upon the bolt, and bind upon the rounded or beveled portion of the key and force the teeth thereof into the threads of the bolt, the key having an engagement with the clamping nut, whereby the latter is prevented from being accidentally loosened, substantially as shown and described. 8th. In a nut lock, the combination with a bolt, of a nut having a hollow conical extension split longitudinally forming opposite spring jaws, the latter being externally and internally threaded, a locking key having teeth or threads upon one face, and a round or beveled offset lug provided upon the opposite face thereof, the key being adapted to be fitted between respective opposite edges of the spring jaws with its teeth in engagement with the threads of the bolt and its lug projecting beyond the exterior of the jaws and engaging against the face of the nut, and a clamping nut having the inner end of its bore enlarged and smooth or unthreaded and adapted to be fitted upon the spring jaws, the unthreaded portion of the bore engaging the rounded or beveled lug of the key, and the latter having an engagement with the clamping nut, whereby the latter is prevented from being loosened, substantially as and for the purpose set forth.

No. 65,153. Ice Cutting Machine.

(Machine à couper la glace.)



Charles H. Edmonds, Saugus, Massachusetts, U.S.A., 1st December, 1899; 6 years. (Filed 27th September, 1899.)

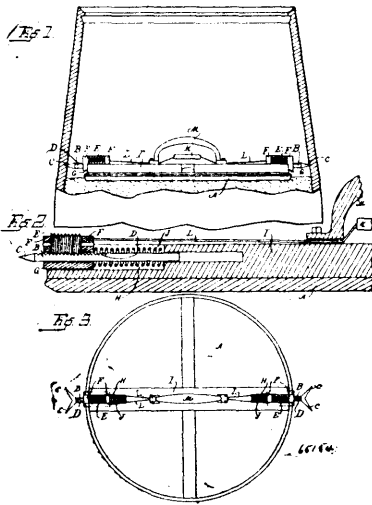
Claim.—1st. In an ice cutting machine, the combination with a frame and associated parts, of a propelling wheel on one side of the frame and a turning post on the other side of the frame, whereby when the turning post is depressed, the propelling wheel will turn the machine around, substantially as described. 2nd. In an ice cutting machine, the combination with a frame and associated parts, of propelling wheels on the sides of the frame, means for raising the propelling wheel of one side independently of the propelling wheel of the other side, turning posts on the side of the frame, and means for depressing the turning post on one side independently of the turning post of the other side, whereby when one turning post is depressed and the propelling wheel on the same side therewith is raised, the propelling wheel on the opposite side will turn the machine around, substantially as described. 3rd. In an ice cutting machine, the combination with a frame and associated parts, of propelling wheels on the sides of the frame, means for raising the propelling wheel of one side independently of the propelling wheel of the other side, turning posts on the sides of the frame, means for depressing the turning post of one side independently of the turning post of the other side, suitable guides on the sides of the frame, and means for raising and lowering the guide of one side independently of the guide of the other side, whereby when the guides are raised, one turning post is depressed and the propelling wheel on the same side therewith is raised, the propelling wheel of the opposite side will turn the machine around, substantially as described. 4th. In an ice cutting machine, the combination with a frame and associated parts, of a pair of propelling wheels, a pair of turning posts, and means for raising one of the propelling wheels out of contact with the ice so that the other shall co-operate with one of the turning posts, to turn the machine around, substantially as described. 5th. In an ice cutting machine, the combination with a frame and associated parts, of a propelling wheel, two pairs of guides mounted upon opposite sides of the frame, two turning posts mounted respectively in line with the pairs of guides adapted to be depressed into the groove in the ice between the guides whereby the machine may be turned around said posts to a position parallel with and opposite to its original position, substantially as described. 6th. In an ice cutting machine, the combination with a frame and associated parts, of a pair of propelling wheels, two pairs of guides mounted upon opposite sides of the frame, two turning posts mounted respectively in line with the pairs of guides and adapted to be depressed into the groove in the ice between the guides, and means for raising one of the propelling wheels out of contact with the ice, whereby the machine may be turned around said posts to a position parallel with and opposite to its original position, substantially as described.

No. 65,154. Barrel Cover. (Couvercle de baril.)

Martin M. Barrett and John Hess, both of Rhinelander, Wisconsin, U.S.A., 1st December, 1899; 6 years. (Filed 4th November, 1899.)

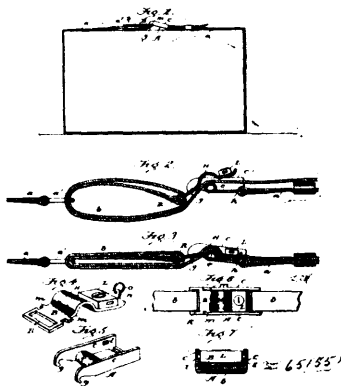
Claim.—1st. The combination of the cover A, cover retaining spikes B, spike actuating springs J, adapted, by their recoil, to force said spikes outward and in contact with the walls of the retaining receptacle, spike actuating handle K, and flexible connections K, communicating between said spikes and said actuating handle,

substantially as and for the purpose set forth. 2nd. The combination of a cover A, cross piece I, provided with recesses H, for the



reception of the fastening mechanism, lifting handle M, secured to the upper surface of said cross piece, cover retaining spikes B, spike actuating springs J, adapted, by their recoil, to force said spikes outward and in contact with the walls of the retaining receptacle, spike actuating handle K, flexible connections L, communicating between said spikes and said actuating handle, spike supporting brackets G, screw threaded sleeves E, respectively located between the vertical walls of said brackets G, the threads of said sleeves E, being adapted to engage in corresponding threads provided therefor in the upper surface of said spikes B, said spikes being adapted to be adjusted relatively to their supporting brackets outward or inward by turning said screw threaded sleeve E, all substantially as and for the purpose specified.

No. 65,155. Strap Fastener. (*Attache de courroie.*)

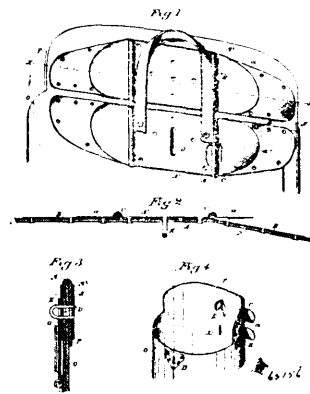


Amasa J. Spaulding and George H. Bell, both of Silver City, New Mexico, U.S.A., 1st December, 1899; 6 years. (Filed 3rd November, 1899.)

Claim.—1st. A two part fastening device for straps, consisting of a jaw part formed with side walls and terminating at one end in hooks, the bottom of said jaw having an interior bearing back of the hooks and between the walls, and a lever clamp part adapted to operate between the walls of the jaw part, arched to conform to the interior bearing of the jaw part, and having studs or pivots adapted to engage the hooks of the jaw part. 2nd. A fastening device for straps, consisting of a base part open at the top and both ends, the sides extending beyond the bottom at one end and terminating in hooks, the bottom of said base part having an interior bearing located back of the hooks between the walls and an eye at the other end, and a lever clamping jaw eyed at one end, arched back of said eye to conform to the raised bearing of the base part, and having pivots on its edges between the arch and the eye for engagement with the base part hooks. 3rd. A fastening device for straps, consisting of a base part formed with side walls terminating at one

end in hooks, an interior bearing located at the bottom of said base part between the walls thereof, and a lever clamping jaw tongue part having pivots for engagement with the hooks of the said base part and adapted to operate between the walls thereof, in combination with means for fastening together the free end of the lever clamping jaw tongue part and the base part. 4th. In a fastening device for straps, the combination of a clamping jaw formed with side walls terminating at one end in hooks, and a clamping surface located at the bottom of said jaw between the walls, with a clamping jaw tongue part arched coincident with and adapted to overlap said clamping surface between the walls of the base part, and provided with pivots by means of which the two jaw parts are held in operative relation to each other, and with an extension to which a strap is secured. 5th. In a fastening device for straps, the combination of the separable clamping jaw part substantially as described and its connected strap having a ring at one end, a separable clamping tongue part having a ring at one end and a strap secured in said ring and adapted to form a double loop engagement with said ring and the ring of the other strap, with means for fastening the free end of the clamping jaw part to the clamping jaw part.

No. 65,156. Pouch Fastener. (*Attache de sacs de mailles.*)



Watson Ebenezer Griffin, Reno, Nevada, U.S.A., 1st December, 1899; 6 years. (Filed 23rd October, 1899.)

Claim.—1st. A closure for the mouths of mail pouches, consisting of plates secured transversely across the central upper rear portion of the pouch and the corresponding portion of the flap, other plates hinged to the ends thereof and extending to the outer edges of the pouch and riveted thereto, said plates being foldable inwardly with relation to the first named plates when the pouch is opened, and stops suitably mounted upon said first named plates by which they are prevented from bending in the opposite direction when the pouch is closed. 2nd. A mail pouch having a foldable flap at the top, plates riveted to the upper central back portion of the pouch and to the corresponding portion of the flap, other plates hinged thereto extending outwardly to the edges of the pouch and flap respectively, other plates coincident with the first named plates having rigid wings or extensions in line therewith against which the hinged plates abut when the pouch is closed. 3rd. A mail pouch having a flexible flap adapted to close over the mouth, metal plates fixed to the rear central portion of the top of the pouch and the corresponding portion of the flap, a staple carried by one of said plates and adapted to extend through a slot made in the other plate when the flap is closed, other plates hinged to the ends of the first named plates, extending therefrom to the outer edges of the back of the pouch and the flap respectively, and other plates riveted to the first named plates, having the ends projecting beyond the hinges of said plates, whereby the extensions may be bent inwardly when the pouch is opened but are prevented from moving in the opposite direction when the pouch is closed.

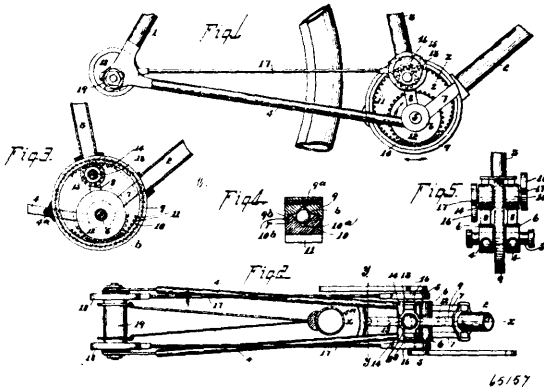
No. 65,157. Bicycle. (*Bienle.*)

Elbridge Colburn Doolittle, Philadelphia, Pennsylvania, U.S.A., 1st December, 1899; 6 years. (Filed 25th March, 1899.)

Claim.—1st. In a cycle driving mechanism, the combination with the frame having the hanger or hub in two separated barrel sections, the bifurcated frame pieces connected to said sections, and the ring secured to the frame with its centre above the centre of the said hub or hanger, of the crank shaft having the gear wheel, the shaft journaled in the frame above the crank shaft, the pinion thereon, the rotatable internally toothed annulus mounted in said ring and engaged by the said pinion, the eccentrics on the end of the pinion carrying shaft, the similar eccentrics on the rear wheel hub, and the connecting straps and rods, substantially as specified. 2nd. In a cycle driving mechanism, the combination with the

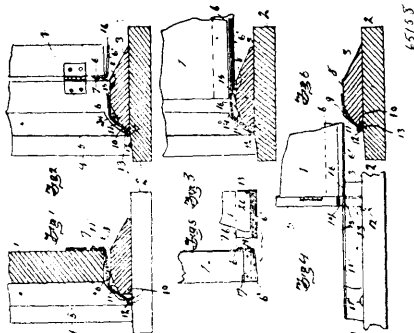
frame having its hub formed in two separated barrel sections, the bifurcated seat post whose furcations are connected to the respective

set forth. 3rd. A building tile, comprising a tube, one part of which is provided with an open ended slot and the other part having



sections, and having barrel casings formed thereon above the barrel sections of the hub, and the ring secured to said frame between said sections and casings, with its centre above the centre of said hub or casing, of the rotatable internally toothed annulus mounted in the said ring, the shaft journaled in said casings, the pinion on said shaft engaging the teeth of said annulus, which is geared to the crank shaft, and the connected eccentrics on the pinion shaft and rear wheel hub respectively, substantially as specified.

No. 65,158. Weather Strip. (Bourrelet de porte.)



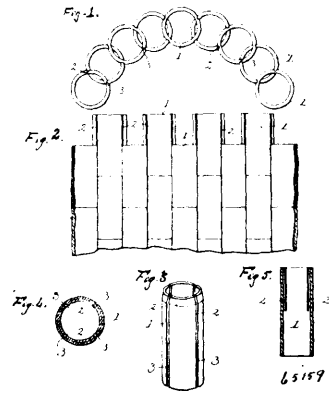
Walter C. Stephens, assignee of Thomas E. West, Lincoln, Nebraska, U.S.A., 1st December, 1899; 6 years. (Filed 1st November, 1899.)

Claim.—1st. The combination with a door or the like, of a strip 6 fixed to its bottom on its inner side and having a free edge, a threshold having an outward and downward incline, said strip edge overhanging and extending beyond the upper part of said incline, and a hinge strip 11 adapted to drop upon the threshold when the door is opened, said strip 6 being adapted to conduct water outwardly to a line beyond the upper part of said incline, substantially as described. 2nd. The combination of a door, a threshold having an outward incline 9 extending under the edge of the door, a hinged strip situated over the said incline, and a strip 6 adapted to under-run the hinged strip when the door is closed and at such time extending beyond the top of incline 9, whereby water driven under the door above strip 6 is conducted back beneath the said strip and outside the door, substantially as described.

No. 65,159. Building Tile. (Tuile.)

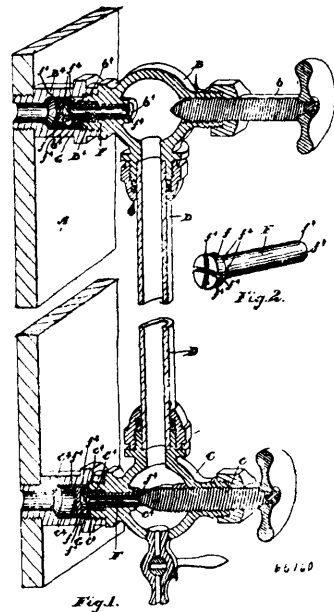
Peter Jacobs, assignee of Elmer Ellsworth Van Wic, all of Kenosha, Wisconsin, U.S.A., 1st December, 1899; 6 years. (Filed 19th July, 1899.)

Claim.—1st. A tubular building tile having open ended slots extending a part only of the length thereof, as and for the purpose set forth. 2nd. A building tile comprising a tube, one end of which is provided with open ended slots extending longitudinally to or near the centre of the tube, the other part of the tube being grooved on a line with the slots, substantially as shown and for the purpose



grooves or channels on a line with the aforesaid slots, the said tube being tapered at one end and reamed out at the other, substantially as shown and for the purpose set forth.

No. 65,160. Water Gauge. (Jauge à eau.)

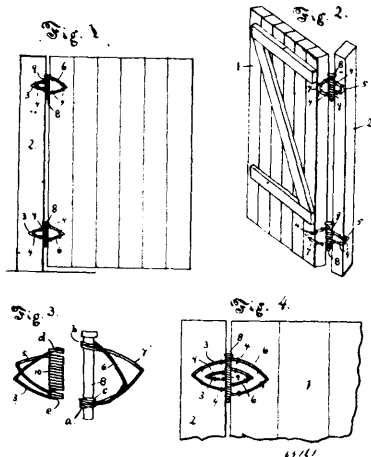


Alexander Lumsden Schram, Woodstock, Ontario, Canada, 1st December, 1899; 6 years. (Filed 15th March, 1899.)

Claim.—1st. The combination with the gauge tube and the two gauge cocks and the extension plugs leading from the cocks into the boiler and provided with enlargements, of the hollow cylindrical valves provided with enlarged heads designed to form their seat upon the inner ends of the cocks and having holes in proximity to the head extending into the interior of the valve and notches in the outer ends of the valves and stems designed to be brought against the ends of the valves, as and for the purpose specified. 2nd. The combination with the gauge tube and the two gauge cocks having annular grooves at their inner ends surrounding their inner openings and the extension plugs leading from the cocks into the boiler and provided with enlargements, of the hollow cylindrical valves provided with enlarged heads having knife edge rings designed to form their seats in the annular grooves upon the inner ends of the cocks and having holes in proximity to the head, and notches in the outer ends thereof extending into the interior of the valve, and stems designed to be brought against the ends of the valves, as and for the purpose specified. 3rd. The combination with the gauge tube and the two gauge cocks and the extension plugs leading from the cocks into the boiler and provided with enlargements of the hollow cylindrical valves provided with enlarged heads designed to form their seat upon the inner ends of the cocks and having holes in proximity

to the head extending into the interior of the valve and notches in the outer ends of the valves and the spiral springs surrounding the hollow valve stem and extending between the head and the inner end of the cock and the stems designed to be brought against the ends of the valves, as and for the purpose specified. 4th. The combination with the gauge tube and the two gauge cocks and the extension plugs leading from the cocks into the boiler and provided with enlargements of the hollow cylindrical valves provided with enlarged heads designed to form their seat upon the inner ends of the cocks and having holes in proximity to the head extending into the interior of the valve, and notches in the outer ends of the valves, the cross notches in the inner end of the head designed to form passage ways for the water when the head is projected against the inner shoulder of the enlargement and the stems designed to be brought against the ends of the valves, as and for the purpose specified.

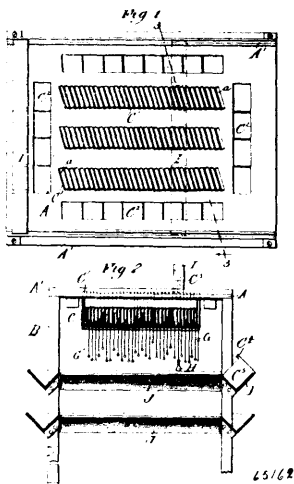
No. 65,161. Hinge. (Penture.)



Edward J. Hollenbeck, Nelson, Illinois, U.S.A., 1st December, 1899; 6 years. (Filed 12th October, 1899.)

Claim—A hinge, constructed of wire, consisting of a post fixture having a main supporting leaf, or loop, and an auxiliary loop, and a door fixture having a main supporting loop and an auxiliary loop, a sleeve formed of wire coils which are integral with said supporting and auxiliary loops, and a pintle adapted to engage such sleeve, and pivotally unite such post fixture and door fixture, substantially as shown and set forth.

No. 65,162. Type Case. (Caisse à caractères.)

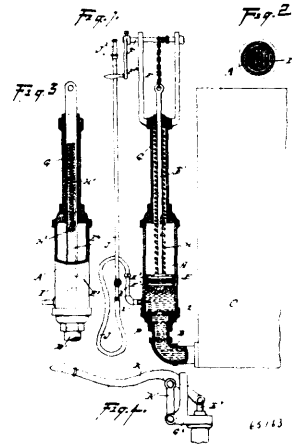


Charles Johann Botz, Sedalia, and The Botz Type Setting Machine Company, Herman, both in Missouri, U.S.A., 1st December, 1899; 6 years. (Filed 22nd June, 1899.)

Claim.—1st. A type case, comprising a table having type boxes arranged obliquely with reference to the front edge of the table. 2nd. A type case, comprising a table having type boxes arranged obliquely with reference to the front edge of the table, one side of each box projecting upwardly to form a stop for the type. 3rd. A

type case, comprising a series of type boxes, one side of each type box projecting beyond the opposite side to form a stop for the type. 4th. A type case, comprising a series of type boxes having slotted sides, an endless belt whose inner run is arranged to move in the slotted side of a box, a follower located in the box and secured to the inner run of the belt, and an actuating device connected to the outer run of the belt. 5th. A type case, comprising a series of type boxes, followers mounted to slide in said boxes, endless belts or aprons extending in the direction of the follower's movement, each follower being secured to one run of the corresponding belt, and an actuating connection secured to and depending from the other run of the belt. 6th. A type case, comprising a series of type boxes, followers mounted to slide in said boxes, endless belts or aprons extending in the direction of the follower's movement, each follower being secured to one run of the corresponding belt, and an actuating connection secured to and depending from the other run of the belt, said connection having at its lower end an attaching device adapted to hold a weight. 7th. A type case, comprising a table, a series of type boxes thereon, followers in the type boxes, means for moving the followers, a frame movable over the table into registry with any one of said type boxes, and storage boxes of proper dimension to be received between said frame and the type boxes and to receive the type discharged by the follower from the corresponding type box. 8th. A type case, comprising a table, a series of type boxes thereon, followers in the type boxes, means for moving the followers, a frame movable over the table into registry with any one of said type boxes, and storage boxes of proper dimensions to be received between said frame and the type boxes and to receive the type discharged by the follower from the corresponding type box, the lower surface of the frame, and the surface of the storage box adapted to engage said frame surface, being formed with inclines to wedge the storage box against the corresponding type box.

No. 65,163. Spraying Apparatus. (Pulvérisateur.)

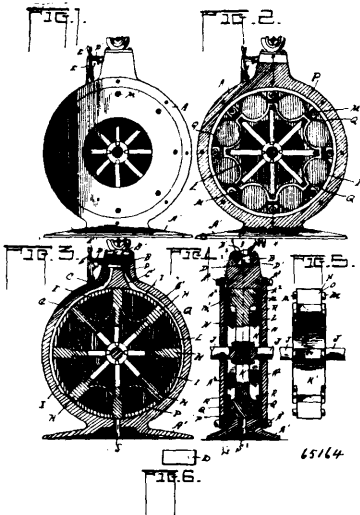


Marion Lorenzo Johnson, Mears, Michigan, U.S.A., 1st December, 1899; 6 years. (Filed 26th September, 1899.)

Claim.—1st. A spraying apparatus, comprising a cylinder arranged for connection with a supply tank, a suction valve for controlling the inflow of the liquid into the pump cylinder, a minute discharge pipe leading from the cylinder and connected with a spraying device, a piston operating in the cylinder, means carried by the cylinder for moving the piston outward on its suction stroke to draw the liquid into the cylinder, and a spring for returning the piston on its inward or discharge stroke, to force the liquid through the discharge pipe, substantially as shown and described. 2nd. A spraying apparatus, comprising a cylinder, a suction pipe connected with said cylinder, a suction valve for controlling the inflow of the liquid, a minute discharge pipe provided with a valve and leading from the cylinder above said suction valve, a piston operating in said cylinder and provided with two cup-shaped packings extending in opposite directions, manually-operated means carried by the cylinder for moving said piston on the outward or suction stroke, and a spring for moving the piston inward on the discharge stroke, substantially as shown and described. 3rd. A spraying apparatus, comprising a cylinder having a suction pipe leading from its lower end for connection with a supply vessel, a suction valve in the bottom of the cylinder, a piston in the cylinder, a spring acting upon the piston to force it downward, means carried by the cylinder and connected with the upper end of the piston rod for raising the piston against the action of the spring, and a discharge pipe leading from the lower end of the cylinder, substantially as described. 4th. A spraying apparatus, consisting of a cylinder having a pipe at its lower end for connection with a supply pipe, a suction valve in the bottom of the cylinder, a discharge pipe leading from the lower end of the cylinder, a piston in the cylinder, a spring acting on the piston to force it downward, means for lifting the piston against the action of

the spring, comprising a shaft mounted in supports on the upper end of the cylinder and provided with a crank, and a chain secured to the shaft and to the piston rod, substantially as herein shown and described.

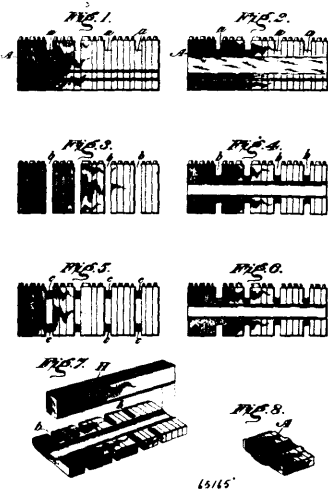
No. 65,164. Rotary Engine. (*Machine rotatoire.*)



Charles T. Fonda, Wheatland, Missouri, U.S.A., 1st December, 1899; 6 years. (Filed 13th September, 1899.)

Claim.—The combination with the cylinder and the hub with its spokes, of the piston heads on the outer ends of the spokes, lugs projecting laterally from the said heads, follower plates on the sides of said spokes, means engaging the said lugs for securing said plates, a ring upon one side of said lugs and bearing against the inner periphery of the cylinder, and springs in the spaces formed between the inner sides of the piston heads and the said lugs and bearing against said ring, and means as set screws bearing on the springs to keep the same extended outward, substantially as shown and described.

No. 65,165. Type Line Bars.
(*Ligne pour barres de caractères.*)

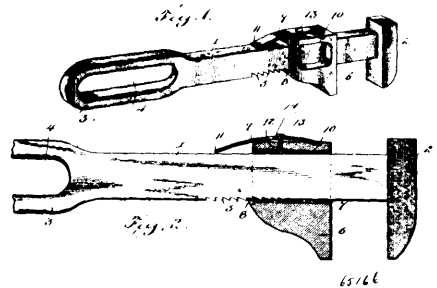


John Hewitt, Chicago, Illinois, U.S.A., assignee of Arthur E. Dowell, Washington, Columbia, U.S.A., 1st December, 1899; 6 years. (Filed 16th March, 1899.)

Claim.—1st. A type line bar consisting of a series of individual types having their bodies partially unified out of the metal thereof whereby the types are firmly united, substantially as and for the purpose described. 2nd. As an article of manufacture, a line of type, or type bar, formed of a series of individual types rigidly united by partially melting their bodies, for the purpose and substantially as described. 3rd. The herein described method of form-

ing type line bars from individual type, consisting in first assembling the type and then uniting the same by partially unifying their own bodies out of the metal thereof, substantially as described. 4th. The herein described method of forming type line bars from single type, consisting in first composing the type in line, and then partially melting the bodies thereof, for the purpose and substantially as described. 5th. The herein described method of forming justified type bars, consisting in assembling the type in line, separating the words or characters, and then partially melting the type bodies so as to bond the type together and cause the molten metal to partially fill the spaces between the words, substantially as described. 6th. In an apparatus for forming type bars, the combination of means for holding a line of type, with means for partially melting the type bodies so as to bond the types together, substantially as described. 7th. In a type bar making machine, the combination of a channel or holder to contain a line of type, with means for moving a line of type therein, means for partially melting the bodies of the type while held in said channel, and means for removing the unified line therefrom, substantially as described. 8th. In an apparatus for forming type bars, the combination of means for holding a line of type, with means for partially melting the type bodies at a plurality of points, so as to bond the types together lineally at a plurality of points, substantially as described.

No. 65,166. Wrench. (*Clé à écrou.*)



William H. Preston, Valley Junction, Wisconsin, U.S.A., 1st December, 1899; 6 years. (Filed 19th September, 1899.)

Claim.—1st. In a sliding jaw wrench, the combination with the shank thereof, of a movable jaw having a frictional locking engagement with the shank, a bowed leaf spring carried by the movable jaw, located exteriorly thereof, and slidably engaging the shank, and a tension screw carried by the movable jaw, engaging the bowed leaf spring intermediate of the ends thereof, and accessible from the outer side of the sliding jaw and the spring whereby the said spring may be regulated, substantially as shown and described. 2nd. In a sliding jaw wrench, the combination with the shaft thereof, of a movable jaw having a frictional locking engagement therewith, a bowed leaf spring having one end fitted in a socket or recess provided in the exterior of the back of the movable jaw and the opposite end of the spring engaging and projecting beyond one side of the jaw, the free end of the spring having a slidable engagement with the adjacent edge of the shank, and a tension screw carried by the movable jaw and passing loosely through an opening formed in the bowed spring intermediate of its points of contact or engagement with the jaw and accessible from the outer side of the sliding jaw and the spring, substantially as shown and described.

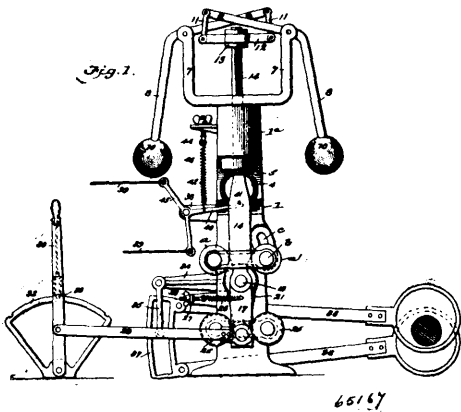
No. 65,167. Cut-off Steam Engine.
(*Détente de machine à vapeur.*)

Martin Olson Arnegard, Hillsboro, North Dakota, U.S.A., 1st December, 1899; 6 years. (Filed 1st April, 1899.)

N.B.—Patent No. 65,167 is a re-issue of Patent No. 58,595, dated the 7th day of January, 1898.

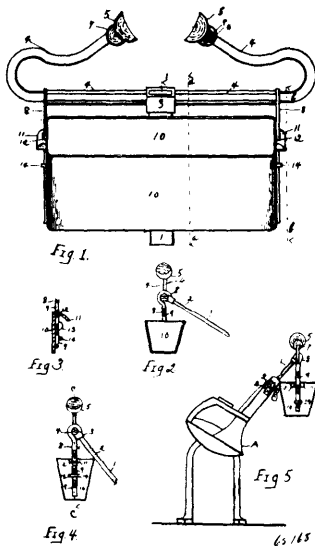
Claim.—1st. In an automatic variable governor cut-off for steam engines, the combination of the standard 1, the sleeve 6, vertically journaled therein, the governor levers 8, 8, fulcrumed in the upper end thereof, the vertical shaft 14, journaled in said sleeve and in operative connection with said levers, the connecting bar 17 pivoted to the lower end of said shaft 14 in combination with the rock shaft 23, the crank 21 fixed thereon, the bar 24 carried by the crank, and having guide rollers, and means substantially as described for operatively connecting the aforesaid rock shaft with the valve gear and governing the latter, as set forth. 2nd. In an automatic variable governor cut-off for steam engines, the combination of the standard 1, the sleeve 6 journaled therein and means substantially as described for imparting motion to said sleeve, the governor levers 8, 8, carried by said sleeve, the shaft 14 journaled in said sleeve, and in operative connection with said levers, in combination with the shaft 23, its crank 21, the arm 24, fixed thereon, the rollers 25, 25, mounted thereon, the connecting bar 17, pivoted to the lower end of the shaft 14, the arm 34 fixed on said shaft 23 and in operative connection with the valve gear, substantially as and for the purpose

set forth. 3rd. In an automatic variable governor cut-off for steam engines, the combination of the standard 1, the vertical



sleeve 6, journaled therein and terminating at its upper end in the vertical parallel arms 7, 7, the governor levers 8, 8, fulcrumed in the upper ends of said arms, the vertical cylindrical shaft 14 journaled in said sleeve 6, the horizontal cross head 12, pivoted on the upper end of said shaft, and the rods 11, 11, connecting the outer ends of said cross head to the inner ends of the levers 8, 8, in combination with the bar 17 pivoted at its upper end to the lower end of the shaft 14, the rock shaft 23 provided with the crank 21, the bolt connecting said bar 17 and rod 29, and the horizontal arm 34 fixed on said rock shaft and in operative connection with the link 37, and means substantially as described for imparting motion to said link independently of the movement communicated to it by the governor levers 8, 8, as and for the purpose set forth. 4th. In an automatic variable governor cut-off for steam engines, the combination of governor proper, including a vertically slidable shaft, a bar 17, which is pivoted to the lower end of said shaft, and means for manually adjusting the angle of said bar to the shaft, with a rock shaft having a crank 21, carrying a guide for such pivoted bar, means for operatively connecting said rock shaft with the valve gear the spring 42, means for adjusting the tension of said spring, and the lever 40, substantially as described.

No. 65,168. Shampoo Head Rest. (Support de têtes.)

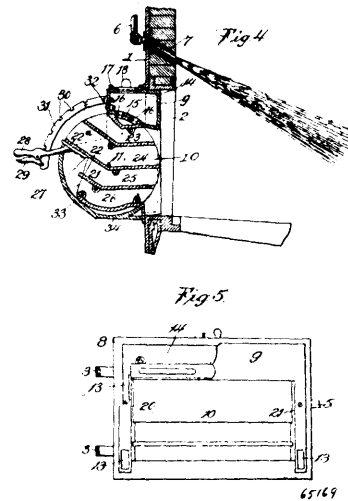


Charles Orren Bailiff and Abraham Lincoln Stafford, Almena, Michigan, U.S.A., 2nd December, 1899; 6 years. (Filed 11th October, 1899.)

Claim.—1st. In a device for the purpose described, a head rest provided with a suitable head support, the head supporting end of said head support being adapted to be suitably padded or cushioned. A receptacle for holding water adapted to be detachably attached to said head rest, said water receptacle being provided with suitable means for adjustment and holding said receptacle in an upright position and proper relation to said head rest, a post or standard attached to said head rest, said standard being adapted to be adjust-

ably attached to chairs and other supports, substantially as described for the purpose set forth. 2nd. A head rest provided with one or more head supporting arms, said head supporting arms being adapted to being suitably cushioned or padded at the head supporting ends, a receptacle for holding water or other material adapted to be detachably attached to said head rest, by means of rods or other suitable connections, said receptacle being provided with suitable handles and means for adjusting and holding said receptacle in an upright position and in proper relation to said head rest, a standard suitably attached to said head rest, said standard being adapted to be adjustably attached to chairs and other desirable means of support substantially set forth. 3rd. A device for the purpose described, comprising one or more arms of suitable shape adapted to form a suitable head rest, said arm or arms being centrally connected to this standard, the head supporting end of said arm being adapted to be padded or cushioned in a suitable manner, a receptacle for holding water adapted to be detachably attached to said head rest, said water receptacle being provided with suitable means for adjustment and for holding said receptacle in an upright position, and in proper relation to said head support, a standard attached to said head rest, said standard being adapted to be adjustably attached to chairs and other desirable support, substantially as described an set forth.

No. 65,169. Smoke Preventing Device. (Arrête fumée.)

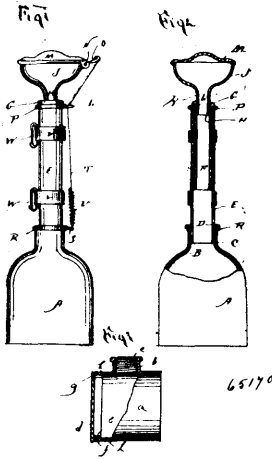


William Riley Mills, Jackson, Michigan, U.S.A., 2nd December, 1899; 6 years. (Filed 31st October, 1899.)

Claim.—1st. A smoke preventer, comprising a casing, a liner in said casing, a perforated rotary damper in said liner having partitions therein, and means for regulating the flow of air through the damper and liner. 2nd. A smoke preventer comprising a casing, a liner in said casing, provided with a register, a perforated rotary damper having partitions therein and means for regulating the flow of air through the damper. 3rd. A smoke preventer comprising a casing, a liner in said casing, a perforated rotary damper having partitions therein, and means comprising a rack and lever for operating the damper. 4th. A smoke preventer comprising a casing, a liner in said casing, provided with a register, a perforated rotary damper having partitions therein, and means for operating the same, comprising a segmental rack and lever, attached to the damper. 5th. A smoke preventer comprising a casing, a liner in said casing provided with air ducts, a register connecting with said ducts, a perforated rotary damper below the register, and means for operating the damper. 6th. A smoke preventer comprising a casing, a liner in said casing, provided with air ducts, a register in said liner perforations in the liner, adapted to register with the air partitions in the damper and means for controlling the flow of air from the damper to the furnace. 7th. A smoke preventer, comprising a casing, a liner therein, provided with air ducts, a register connecting with said air ducts, perforations in the bottom of the liner below the register adapted to register with the air partitions in the rotary damper and means for controlling the flow of air from the damper to the furnace. 8th. A smoke preventer comprising a casing, a liner therein, provided with air ducts, a register connecting with said air ducts, perforations in the bottom of the liner below the register adapted to register with the air partitions on the rotary damper and means for controlling the flow of air from the damper to the furnace, comprising a lever secured to the damper, and engaging with a rack. 9th. A smoke preventer comprising a door, a casing, a liner therein, provided with air ducts, a register located above and connecting with said air ducts, perforations in the bottom of the liner below the register adapted to register with the air partitions in the damper and means for controlling the flow of air to the furnace comprising a segmental rack

secured to the door and an operating lever attached to the damper. 10th. In a smoke preventing apparatus the combination of a furnace door, containing a perforated rotary damper having partitions therein, with steam jets directed upon the area of combustion of the grates.

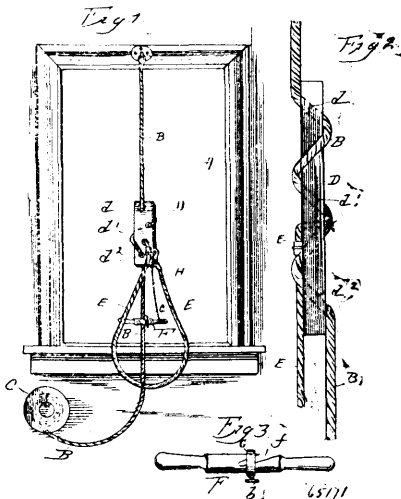
No. 65,170. Pocket Cuspidor. (*Crochir pour poches.*)



Isa Belle Hodgerney, Lebanon, New Hampshire, U.S.A., 2nd December, 1899; 6 years. (Filed 2nd November, 1899.)

Claim.—1st. In a cuspidor, a receptacle, a receiving tube telescoping therein and provided with a pivoted cover and devices connected with said receptacle and with said cover for moving said cover to open said receiving tube upon the outward movement of said receiving tube, substantially as shown and described. 2nd. In a cuspidor, a receiving tube telescoping therein and provided at its outer end with a mouthpiece, a cover pivoted to said mouthpiece and devices connected with said receptacle and with said cover for moving said cover to open said mouthpiece upon the outward movement of said receiving tube, substantially as shown and described. 3rd. In a cuspidor, a receptacle, a main tube secured thereto, a supplemental tube telescoping therein a mouthpiece secured to said supplemental tube, a cover pivoted to said mouthpiece, a projection rigidly secured to said cover and devices secured to said projection and to said receptacle whereby said cover is automatically operated to open said mouthpiece upon the outward movement of said supplemental tube, substantially as shown and described. 4th. In a cuspidor, a receptacle, a main tube removably secured thereto, a supplemental tube telescoping therein and provided with a mouthpiece, removably secured thereto, a cover pivoted to said mouthpiece, a projection rigidly secured to said projection at one end and a spring to which the other end is connected, said spring being connected to said receptacle, devices for retaining said cord in proximity to said main tube, and devices for securing said cuspidor to an article of wearing apparel, substantially as shown and described.

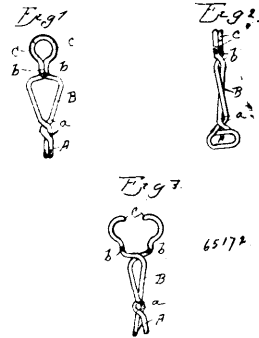
No. 65,171. Fire Escape. (*Sauveteur d'incendie.*)



Frederick Minster, Marshville, New York City, New York, U.S.A., 2nd December, 1899; 6 years. (Filed 2nd November, 1899.)

Claim.—The combination with the escape wire, of the friction block having apertures therein through which apertures and around the edges of the block the wire is passed, the carrying loop secured to the block, a hand bar having the inclined channel therein in which the wire is placed and provided with a sliding collar G having fastening means and the flexible connection between the hand bar and the friction block, substantially as described.

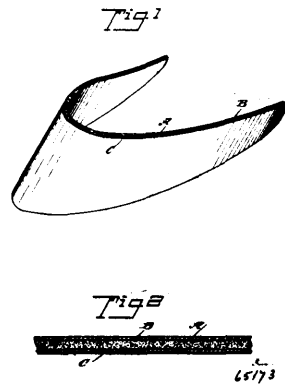
No. 65,172. Snap Hook. (*Crochet à ressort.*)



Edwin Watkins, Bad Axe, Michigan, U.S.A., 2nd December, 1899; 6 years. (Filed 2nd November, 1899.)

Claim.—The herein described snap hook, formed from a single piece of wire bent at its central portion to form two coils, the two branches of the wire leaving the coils being each laterally deflected to cross the other branch, upon the opposite side of the snap hook from the coil from which it proceeds, then given a twist at about right angles and diverged to form a compression loop, the arms of said loop extending out each upon the same side of the snap hook as the coil from which it proceeds, and terminating at their extremities in overlapping hooks, substantially as specified.

No. 65,173. Cap Visor. (*Visiere de casque.*)



Max Mattes, New York City, New York, U.S.A., 2nd December, 1899; 6 years. (Filed 3rd November, 1899.)

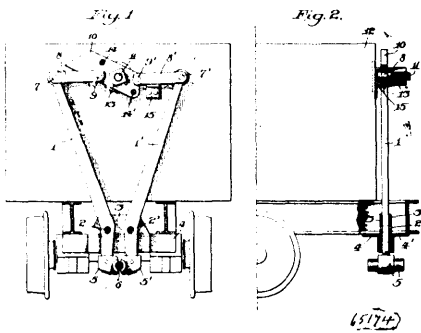
Claim.—1st. A visor, consisting of a body of felt and an upper and a lower covering of enamel. 2nd. As an improved article of manufacture, a material for visors and similar articles, consisting of a body of felt having its exposed surfaces covered and protected by enamel.

No. 65,174. Cable Gripper. (*Grippe pour cables.*)

Simon A. Fraser, New Glasgow, Nova Scotia, Canada, 2nd December, 1899; 6 years. (Filed 4th November, 1899.)

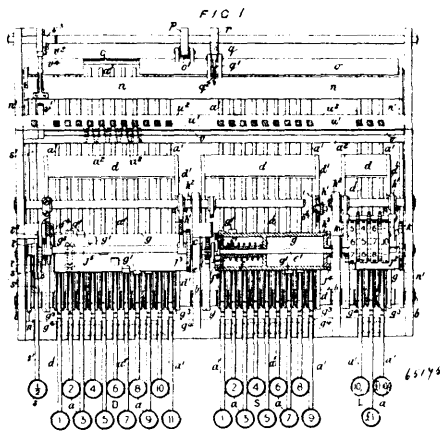
Claim.—1st. In a gripper, a pair of pivoted gripping levers, a pair of links each connected to one of said gripping levers, a rocking lever connected to each of said links, and means for locking said gripper, substantially as specified. 2nd. In a gripper, a pair of pivoted levers, a pair of links each pivoted to one of said gripping levers, a rocking lever pivoted to each of said links and having means for varying its pivotal connections with said links, and a stop co-acting with said mechanism for locking the same, substantially as specified. 3rd. In a gripper, a pair of independently fulcrumed gripping levers, a pair of links each pivoted to one of said gripping levers, a rocking lever pivoted to each of said links and fulcrumed intermediate of its pivotal connections with said

links, and means for holding said gripper in closed position, substantially as specified. 4th. In a gripper, a pair of independently



fulcrumed gripping levers, a fulcrumed rocking lever, and means for connecting said rocking lever with each of said gripping levers, substantially as specified.

No. 65,175. Cash Register. (Registre de monnaie.)



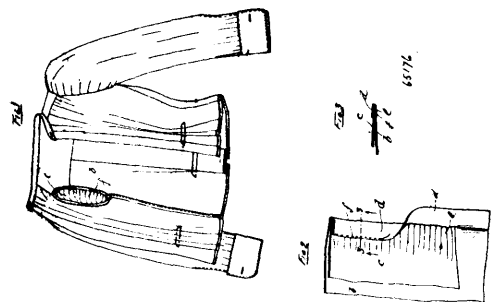
The Empire Cash Register, assignee of Charles James Fauval and Norman Collins, all of London, England, 2nd December, 1899; 6 years. (Filed 9th December, 1899.)

Claim.—1st. In a cash registering machine, the combination with a set of keys, of a spring actuated barrel having peripheral studs set at angular distances from the zero point proportional to the values represented by the corresponding keys and of mechanism whereby the winding up of the spring to a constant extent and the release of the barrel from the zero position are effected by the depression of any one key of the set, each key when depressed being adapted to engage with its corresponding stud and arrest the barrel after a partial revolution corresponding in extent to the value of the key depressed, substantially as and for the purpose specified. 2nd. In a cash registering machine the combination with a set of keys of a spring actuated barrel, having peripheral studs set at angular distances from the zero point proportional to the values represented by the corresponding keys, and of mechanism whereby the winding up of the spring to a constant extent and the release of the barrel from the zero position are affected by the depression of any one key, each key when depressed being adapted to arrest the barrel after a partial revolution corresponding in extent to the value of the key depressed and of mechanism actuated by the depression of any one key, whereby registering mechanism is geared with the barrel so as to be actuated thereby to an extent corresponding to the partial revolution of the barrel and whereby the registering mechanism is disengaged when the barrel is permitted to complete one revolution, substantially as specified. 3rd. In a cash registering mechanism comprising a set of key levers and a spring actuated barrel having studs angularly spaced around the barrel for engagement by respective key levers, the combination with each key lever, of a stop so acted on by the key lever as to be presented in the path of the corresponding stud early in the stroke of the key lever in the one direction, and be withdrawn from engagement with said stud late in the stroke of the key lever in the other direction so as to enable the mechanism controlling the release of the barrel from the zero position and its re-arrest in that position to be operated by part of the stroke of the key lever, as specified. 4th. In a cash registering mechanism comprising a set of key levers and a spring actuated

barrel having studs for engagement by respective keys, the studs being angularly spaced around the barrel in proportion to the respective values of the keys, and means whereby the spring is wound and the barrel released from zero position by the depression of any one key, the combination with the stud barrel, of registering mechanism and of means whereby the registering mechanism is geared with the barrel only during that part of its revolution between the zero position and its arrest by the key, so that the registering mechanism will be actuated to an extent corresponding to the value represented by the key which has been depressed, substantially as specified. 5th. In a cash registering machine the combination with a set of key levers, of a bar adapted to be raised by the oscillation of any one lever of the set and of a locking bar hinged thereto and adapted to engage the levers of the set, and of a stationary guide cam adapted by its form to act on the locking bar and cause the latter to enter into locking engagement only with the lever operated immediately after said lever commences to move, and to remain in engagement therewith throughout its stroke and to release it only on its return to normal position, substantially as specified. 6th. In a cash registering machine the combination with a set of key levers, of a bar adapted to be raised by the oscillation of any one lever of the set and of a locking bar hinged thereto and adapted to engage the levers of the set, and of a stationary guide cam adapted by its form to act on the locking bar and cause it to enter into locking engagement only with the lever operated immediately after it commences to move and to remain in engagement therewith throughout its stroke and to release it only on its return to normal position, and of means whereby the return of the locking bar and lever engaged thereby is prevented until the completion of the stroke, substantially as specified. 7th. In a cash registering machine comprising two or more sets of key levers, said sets being respectively appropriated to register the receipt of sums of a particular denomination the combination with the two or more sets of key levers, of a presser bar common to all and adapted to be raised by any lever of either set and of a locking bar hinged to such presser bar and adapted to engage such of the levers of all the sets as may be oscillated at one time and of a guide cam adapted to act on the locking bar and to cause it to enter into locking engagement with the levers of different sets which may be simultaneously oscillated, to the exclusion of the others, and to remain in engagement therewith throughout the stroke and to release them only on return to normal position so that the stroke of all the keys simultaneously depressed to a partial extent will be completed by the complete depression of anyone of them, substantially as specified. 8th. In a cash registering machine comprising two or more sets of key levers, said sets being respectively appropriated to register the receipt of sums of a particular denomination, the combination with the two or more sets of key levers, of a presser bar common to all and adapted to be raised by any lever of either set, and of a locking bar hinged to such presser bar and adapted to engage such of the levers of all the sets as may be oscillated at one time and of a guide cam adapted to act on the locking bar and to cause it to enter into locking engagement with the levers of different sets which may be simultaneously oscillated, to the exclusion of the others, and to remain in engagement therewith throughout the stroke and to release them only on return to normal position so that the partial stroke of all the keys simultaneously depressed will be completed by the complete depression of any one of them, substantially as described, and of means whereby the return of the locking bar and lever engaged thereby is prevented until the completion of the stroke, as specified.

No. 65,176. Garment Manufacture.

(Fabrication de vêtement.)

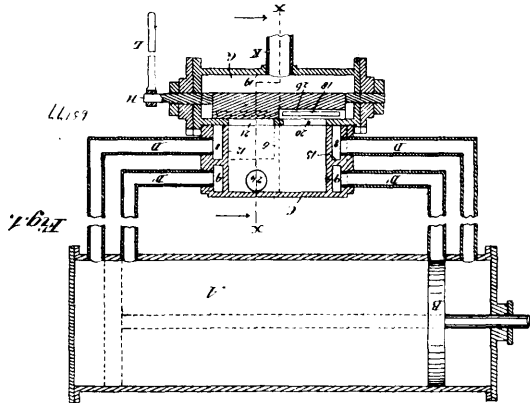


Anthony Haig Sims, assignee of Alan Judah Hart, both of Montreal, Quebec, Canada, 2nd December, 1899; 6 years. (Filed 9th November, 1899.)

Claim.—1st. In a shirt waist or upper body garment, the seams connecting the body portion with the sleeves being formed by a portion of the body fabric overlapping the edge of the sleeve fabric and a line of stitching passing through the sleeve fabric and the overlapping portion of the body fabric on one side thereof and the

adjoining portion of such body fabric on the other side thereof, substantially as described. 2nd. In a shirt waist, the combination of the edge *c*, of the sleeve fabric *a*, the overlapping portion *d*, and the portion of the body fabric *b*, adjoining said overlapping portion, and the line of stitching *f*, substantially as described and for the purpose set forth.

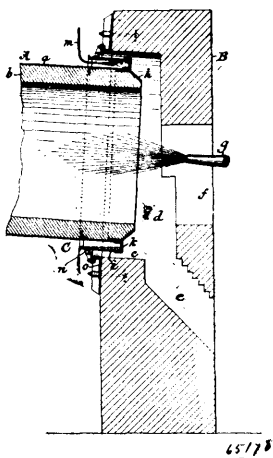
No. 65,177. Valve. (Soupape.)



The William Hamilton Manufacturing Company, Peterborough, assignee of Isaac N. Kendall, Ottawa, both in Ontario, Canada, 2nd December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. A reversing steam valve, comprising a tubular valve cylinder having a feed inlet and feed and exhaust ports, a valve rocking therein and having feed and exhaust passages from opposite ends alternating as described and adapted to close the feed port near one end and open the exhaust port at the other end and vice versa, a steam chest connecting with said ports and having steam passages agreeing with said feed and exhaust ports, and feed and exhaust pipes from opposite ends of said steam chest and connecting with said steam passages and with a piston cylinder near opposite ends, substantially as set forth.

No. 65,178. Rotary Furnace. (Fournaise rotatoire.)

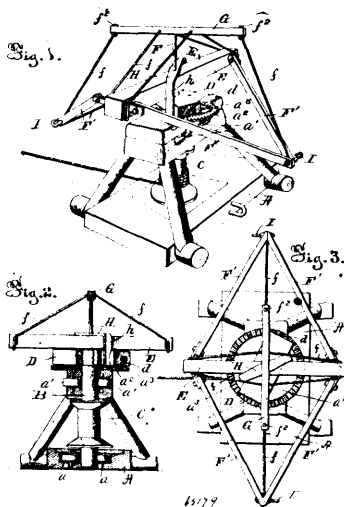


Edward H. Hurry, Bethlehem, and Harry J. Seaman, Catasauqua, both places in Pennsylvania, U.S.A., 2nd December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. The herein described tubular structure provided adjacent its end with a jacket closed at its end nearest the end of said structure, open and unobstructed at the other end and having its annular inclosing wall extending toward the rear of the furnace, inclined from the closed end upwardly with reference to a horizontal line, and a water feed pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 2nd. The herein described rotary furnace provided adjacent its end with a jacket closed at its end nearest the end of said furnace, open and unobstructed at the other end and having its annular inclosing wall extending toward the rear of the furnace inclined from the closed end upwardly with reference to a horizontal line, and a water feed

pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 3rd. The herein described downwardly inclined furnace, provided adjacent its lower end with a surrounding jacket closed at its end nearest the end of said furnace, open and unobstructed at the other end, and having its annular inclosing wall extending toward the rear of the furnace, inclined from the closed end upwardly with reference to a horizontal line, and a water feed pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 4th. The herein described downwardly inclined rotary furnace, provided adjacent its lower end with a surrounding jacket closed at its end nearest the end of said furnace, open and unobstructed at the other end and having its annular inclosing wall extending toward the rear of the furnace inclined from the closed end upwardly with reference to a horizontal line, and a water feed pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 5th. Coating the firebrick lining of a rotary cement furnace with a refractory skin or shell of cement material, substantially as described. 6th. The herein described method of coating the firebrick lining of a rotary cement furnace with a refractory skin or shell of cement material, which consists in heating the furnace to such a point that the face of the lining begins to fuse, and thus becomes viscid, plastic or sticky, and while such surface is in this condition applying thereto a layer of cement material which adheres to the surface of the firebrick, and forms a protective skin or shell thereto. 7th. The herein described method of coating the firebrick lining of a rotary cement furnace with a refractory skin or shell of cement material which consists in coating the lining with a layer of salt or other suitable fusible mineral, which is brought into a state of fusion by the action of heat, thus causing the surface to become viscid, plastic or sticky, and while the surface is in this condition applying thereto a layer of cement material which adheres to the surface of the firebrick lining and forms a protective skin or shell thereto.

No. 65,179. Capstan. (Cabestan.)

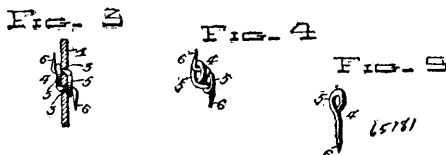
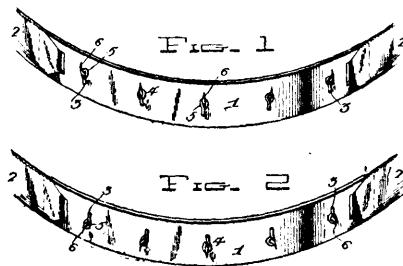


Thomas Huntbatch, Hampton, Iowa, U.S.A., 2nd December, 1899; 6 years. (Filed 7th November, 1899.)

Claim.—1st. In a capstan, the combination with a suitable supporting frame, of a vertical shaft, a winding drum and a head, a power beam movable horizontally on the said head, and a pivoted horizontally swinging capstan driver carried by the said power beam and adapted to be automatically brought into engagement by the power beam with the capstan head to revolve it in one direction and to be again automatically brought into engagement by the power beam with the said head to revolve it in the opposite direction in the event of the cable breaking or slipping, a partial revolution of the power beam in the reverse direction being permitted during the changing of the engaging position, substantially as described. 2nd. In a capstan, the combination with a suitable supporting frame, of a vertical shaft, a winding drum and a head, a power beam movable horizontally on the said head, sweeps attached to the power beam and extending from the same in opposite directions, and a capstan driver carried by the said power beam and adapted to be automatically brought into engagement with the capstan head to revolve it in one direction, and to be again automatically brought into engagement with the said head to revolve it in the opposite direction in the event of the cable breaking or slipping, a partial revolution of the power beam in the reverse direction being permitted during the changing of the engaging positions, substantially as described. 3rd. In a capstan, the combination with a

suitable supporting frame, of a vertical shaft, a winding drum and a head, a power beam movable horizontally on the said head, triangular sweeps attached to the power beam and extending from the same in opposite directions, a capstan driver carried by the said power beam, the said capstan driver comprising an approximately U-shaped member, the depending arms of which engage the capstan head on its opposite sides but which are adapted to be turned automatically to engage the opposite ends of the capstan head in the event of the cable breaking or slipping, a partial revolution of the power beam in the reverse direction being permitted during the changing of the engaging positions of the arms, substantially as described. 4th. In a capstan, the combination with a suitable supporting frame, of a vertical shaft, a winding drum and a head, a power beam movable horizontally on the said head, triangular sweeps attached to the power beam and extending from the same in opposite directions, a capstan driver carried by the said power beam, the arms of which engage opposite sides of the capstan head, a sweep stay supported above the power beam by means of a vertical rod, and stay rods connecting the sweeps with the sweep stay for supporting and regulating the former, substantially as described. 5th. In a capstan, the combination of a suitable supporting frame, anti-friction rollers carried by said frame, a vertical shaft, a winding drum and a head, said shaft having a bearing contact with said rollers, a power beam movable horizontally on the said head, triangular sweeps attached to the power beam and extending from the same in opposite directions, a capstan driver carried by the said power beam, the arms of which engage opposite sides of the capstan head and a sweep stay supported above the power beam by means of a vertical rod which extends through the capstan driver, the power beam and into the vertical shaft, the said rods connecting the sweeps with the sweep stay for supporting and regulating the former, substantially as described. 6th. In a capstan, the combination with a suitable supporting frame, of a vertical shaft provided with a head, a winding drum, a power beam movable horizontally and independently of said shaft, and a centrally pivoted vertically movable capstan driver which engages opposite sides and ends of the head of the vertical shaft, which driver is adapted to be disengaged from the power beam, and the head of the vertical shaft, substantially as described. 7th. In a capstan, the combination with a suitable supporting frame, of a vertical shaft, a winding drum, and a head, a power beam movable horizontally and independently of said shaft, a vertically movable capstan driver having depending arms, which are adapted to engage the head of the vertical shaft, when in a lowered position and to be raised so as not to engage said head or be engaged by the power beam, substantially as described.

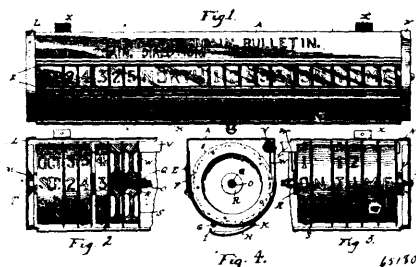
No. 65,181. Skirt Support. (Support de jupes.)



George L. Blackman, Whitesville, New York, U.S.A., 2nd December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. In a combined shirt waist or basque holder and skirt supporter, the combination with a metallic strip having two longitudinal rows of holes, the holes of one row being above those of the other, of hooks extending through said holes and interlocked with each other, the prongs of said hooks projecting in opposite directions, substantially as and for the purpose set forth. 2nd. In a combined shirt waist or basque holder and skirt supporter, the combination with the metallic strip having two longitudinal rows of holes, the holes of one row being above those of the other, of hooks extending through said holes, each of said hooks consisting of a prong and an eye which extend in opposite directions, the prongs of one set of hooks engaging the eyes of the other set of hooks, and the prongs of one set of hooks projecting in a direction opposite to that of the prongs of the other set of hooks, substantially as and for the purpose set forth.

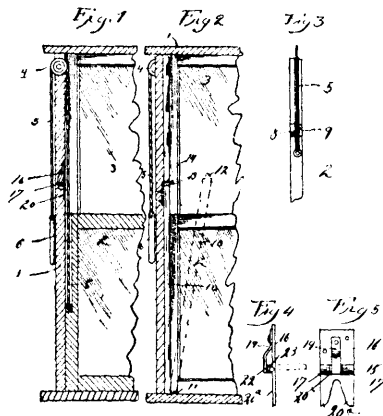
No. 65,180. Bulletin. (Bulletin.)



Emerson, S. Brooks, Toledo, Ohio, U.S.A., 2nd December, 1899; 6 years. (Filed 8th November, 1899.)

Claim.—1st. The combination in a bulletin, constructed substantially as described, of a piece of metal A, a curved piece of metal C, strips of metal B B riveted to the ends of elements A and C, covers L and N, fitting over the ends of elements A and C, a door H hinged to element A, and the shaft O, engaging the covers and supporting rollers, in substance as set forth. 2nd. The combination in a bulletin, constructed substantially as described, of a casing, a shaft, rollers on the shaft discs, each having a series of notches, and looped wire springs secured to the casing at one end and adapted to engage the notches in the discs at the other end. 3rd. The combination in a bulletin, constructed substantially as described, of a casing, a shaft supported by the casing, rollers having symbols mounted on the shaft, washers between the rollers, and notched discs and springs engaging the discs. 4th. The combination in a bulletin, constructed substantially as described, of a casing having a longitudinal opening, a door, a permanent end cover L, a removable end cover N, a shaft supported by the end covers, and rollers on the shaft. 5th. The combination in a bulletin, constructed substantially as described, of a casing, end covers L and N, a metallic piece M having an angular hole secured to the cover L, a shaft having an angular end, rollers on the shaft, and a screw P for supporting the opposite end of the shaft.

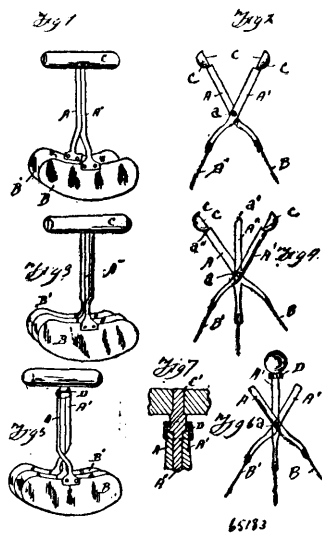
No. 65,182. Window Sash. (Châssis de fenêtres.)



William A. Davis, George S. Idell and Elmer E. Davis, all of Jeffersonville, Indiana, U.S.A., 2nd December, 1899; 6 years. (Filed 8th November, 1899.)

Claim.—1st. In a device of the character set forth, the combination with a sash and a sash weight cord, of a sash weight cord holding device consisting of a securing plate carrying a spring, and a bifurcated holding plate at the lower end of the securing plate adapted to receive and hold the sash weight cord, substantially as described. 2nd. A sash weight cord holding device, comprising a securing plate carrying a depending spring, and bifurcated plate pivotally attached to the lower portion of the said securing plate and having oppositely positioned bearing surfaces adapted to be engaged by the said spring, substantially as described. 3rd. A sash cord holder comprising a securing plate, a bifurcated plate pivotally connected thereto and provided with flat bearing surfaces adjacent to its pivotal connection with the securing plate, and a spring attached at one end to the securing plate and arranged to bear at its free end against the flat bearing surfaces of the bifurcated plate.

No. 65,183. Chopping Knife. (Couteau.)

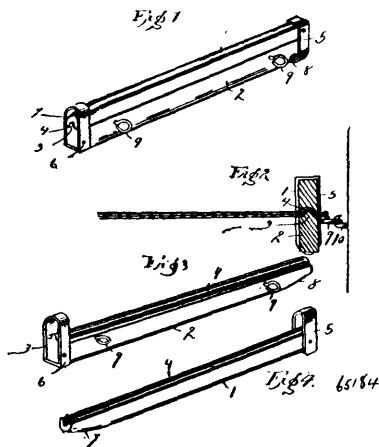


John W. Lohr, Lamanda, California, U.S.A., 2nd December, 1899; 6 years. (Filed 8th November, 1899.)

Claim.—1st. In a chopping knife, the combination with a plurality of intersecting members pivotally secured together intermediate their ends to form a shank, the lower end of each outer member being bowed outward, of a blade secured to the lower end of each member, said blades being parallel with each other and at a distance apart, and a handle at the opposite end of said members, said handle being in a line with the pivot and transversely of the shank and substantially parallel with the blades. 2nd. In a chopping knife, the combination of a plurality of members pivotally secured together intermediate their ends and fitted together above the pivot to form a unitary shank, the portion of each outer member below the pivot being bent outward, of blades respectively secured one to the lower end of each member, the blades being parallel with each other and at a distance apart, and a handle for said members arranged transversely of the upper end of the said shank. 3rd. In a chopping knife, the combination set forth of two complementary members pivoted together intermediate their ends and each provided at its lower end with a blade, an intermediate member arranged between the two members and provided at its top with a tongue or lug, one-half a handle secured to the top of each of the outside members, and a seat arranged to seat the lug and to hold the central member in line with the two outside members when the blades are in their operative position. 4th. A chopping knife consisting of a shank comprising three complementary members pivoted together intermediate their ends and fitted together above the pivot to form a unitary shank, blades respectively secured one to the lower end of each member, a handle secured to one or more of the members at the upper end thereof and extending transverse the shank, and means for detachably securing the members together in the unitary shank.

No. 65,184. Device for Stretching Table Cloths.

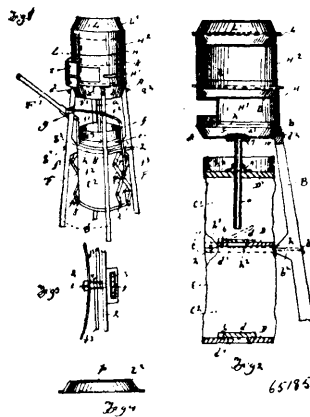
(Appareil à tendre les couvertures de tables.)



Eliza M. Steward, Ashville, Ohio, U.S.A., 2nd December, 1899; 6 years. (Filed 8th November, 1899.)

Claim.—A device of the class described, comprising the relatively slidable bars or sections 1 and 2 adapted to receive between them the fabric to be stretched, an interior tongue on one section and an interior groove in the other to provide proper engaging faces for the fabric and also guides for the sliding movement of the sections, and rigid keepers in the form of loops attached permanently to one end of each section, and engaging the contiguous end of the other section, substantially as described.

No. 65,185. Portable Fireplace. (Foyer portatif.)

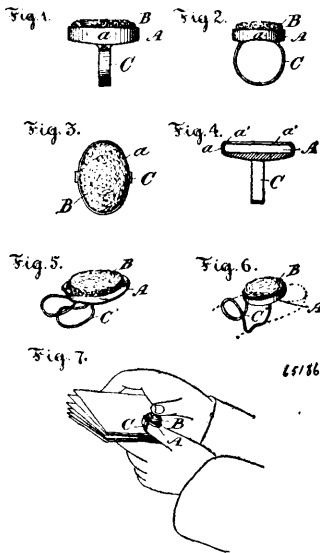


Gottlieb Weibel, Seattle, Washington, U.S.A., 2nd December 1899; 6 years. (Filed 8th November, 1899.)

Claim.—1st. In a device of the class described, having a suitable fireplace, a stove body therefor comprising a plurality of shells of unequal diameter and covers for the shells, the lower of said shells having a doorway and a door and suitable draft apertures, said shells adapted to telescope when said stove body is collapsed, substantially as set forth. 2nd. In a device of the class described, having a suitable fireplace, a separable stove body therefor comprising a plurality of shells of unequal diameter and dished covers for the shells, said shells adapted to telescope when said stove body is collapsed, substantially as set forth. 3rd. A combined forge and stove, comprising a supported fireplace, means for supplying a forced draft thereto, and a separable stove body thereon comprising a plurality of shells of unequal diameter and dished covers for the shells, said shells adapted to telescope when said stove body is collapsed, substantially as set forth. 4th. A combined forge and stove, comprising a supported fireplace, means for supplying a forced draft thereto, and a separable stove body thereon comprising a plurality of shells of unequal diameter and dished covers therefor, said shells adapted to telescope when said stove body is collapsed, and the lower one of said shells having a fire door and draft apertures, substantially as set forth. 5th. A portable combined forge and stove, comprising a supported fireplace, means for supplying a forced draft thereto, and a separable stove body comprising a plurality of shells of unequal diameter and dished covers therefor, said shells adapted to telescope when said stove body is collapsed, and the lower one of said shells having a fire door and draft apertures, substantially as set forth. 6th. A portable combined forge and stove, comprising a supported fireplace, a bellows thereunder and a blast conduit therebetween, toggle gearing to operate said bellows comprising hanging links, steadying links and diagonal crossed links pivoted together and to the hanging and steadying links, and a separable stove body over said fireplace, substantially as set forth. 7th. A portable combined forge and stove, comprising a supported fireplace, a bellows thereunder and a blast conduit therebetween, toggle gearing to operate said bellows comprising hanging links, steadying links and diagonal crossed links pivoted together and to the hanging and steadying links, and a separable stove body thereon comprising a plurality of shells with dished covers thereon and steadying rings therein, substantially as set forth. 8th. A portable stove, comprising a supported fireplace, a lower shell thereon having a door and suitable draft apertures, and a steadying ring therein upon said fireplace, a dished cover on said shell, a second shell of less diameter than the first steadied on said cover, and a plurality of dished covers thereover, said shells adapted to telescope when said stove is collapsed, substantially as set forth. 9th. A forge, comprising a supported hearth, a blast conduit thereto, a double bellows thereunder consisting of a flexible casing, a sustained intermediate head, a movable lower head, with an air valve to each, and an upper head adapted to reciprocate upon said conduit, and toggle gearing intermediate said intermediate and lower heads, comprising hanging links, steadying links and diagonal crossed links pivoted together and to the hanging and steadying links, and means to operate said toggle gearing, substantially as set forth. 10th. In a forge having a double bellows to provide a forced draft thereto and comprising a flexible body, opposite movable heads therefor and an intermediate stationary head therein, toggle gearing intermediate said heads comprising hanging links, steadying links and diagonal crossed

links pivoted together and to the hanging and steadying links, and means to operate said gearing to collapse and expand said bellows, substantially as set forth. 11th. In a forge having a bellows provided with a movable head, the means for operating said bellows comprising hanging links supported from a stationary pivot, steadying links pivoted to said head with a space between the pivots, cross links pivoted together centrally and to the ends of opposite hanging and steadying links, and means to operate said links from said central pivot, substantially as set forth.

No. 65,186. Moistener. (Humecteur.)

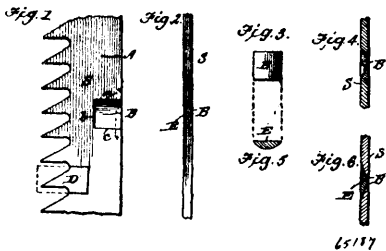


David Anderson, Springhill, Nova Scotia, Canada, 2nd December, 1899; 6 years. (Filed 6th February, 1899.)

Claim.—1st. In a moistener, the combination of an open tray consisting of a plate and low rim, a moisture carrying pad secured upon said tray having its outer edge encircled by the rim, and a fastener or holder at the bottom or back of said tray, substantially as set forth. 2nd. In a moistener, the combination of a rimmed rubber tray, a sponge secured upon said tray and having its outer edge encircled by the rim, a rubber loop secured to the back of said tray and adapted to hold it upon a finger, substantially as set forth. 3rd. A moistener, consisting of a flat tray adapted to hold and being provided with a moisture carrying pad confined within its edges, and having a fastener or holder at the bottom or back by means of which it may be held on a finger or the wrist, substantially as set forth.

No. 65,187. Saw Patching Process.

(Procédé pour réparer les scies.)



Michael Daniel Ahearn, Green Bay, Wisconsin, U.S.A., 2nd December, 1899; 6 years. (Filed 11th November, 1898.)

Claim.—The metal of repairing fractures in metal plates, consisting in cutting away the metal of the plate on one side of the same directly across the line of fracture to form a lateral recess and reduce the edges of the fracture to feather's edge, then inlaying and brazing a corresponding splice piece within this recess and across the fracture, substantially as and for the purpose described.

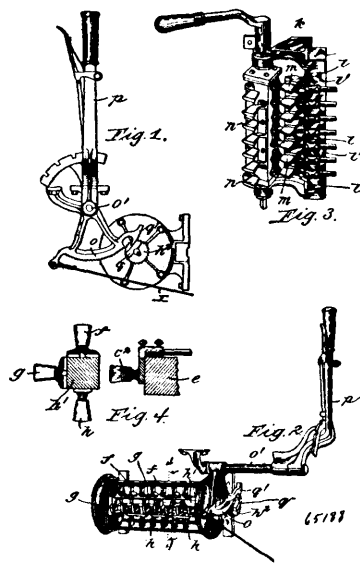
No. 65,188. Motor Controlling Apparatus.

(Appareil à contrôler les moteurs.)

Clinton Edgar Woods, Chicago, Illinois, U.S.A., 2nd December, 1899; 6 years. (Filed 7th September, 1898.)

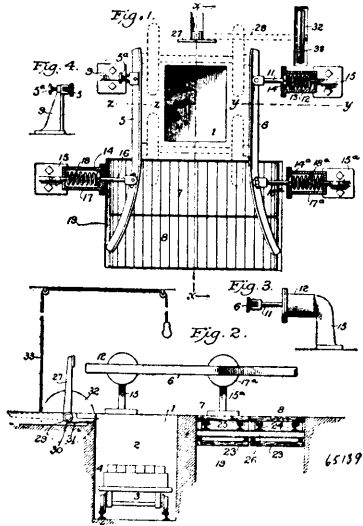
Claim.—1st. The combination with a controller for varying the condition of a circuit including a motor, of a brake for engaging and

checking the motor of a portion driven by said motor, operating mechanism for actuating the brake and controller said controller



being adapted to open or render ineffective the circuit through said motor, said operating mechanism being adapted, after having actuated the controller to open or render ineffective the circuit through said motor, to disengage itself from the controller and in its further operation, to apply the brake, and means for locking the controller in the position it occupies when the motor circuit is opened or rendered ineffective thereby, substantially as described. 2nd. The combination with a rotating member of a controller, of a pinion mounted thereon, an operating lever, an actuating gear connected therewith and adapted through a portion of its range of movement to actuate said member to effect the required changes in circuit conditions, and braking mechanism also operated by said lever, said actuating gear during the remainder of its movement being adapted to be operatively disengaged from said pinion, the operating lever in moving the actuating gear through the remainder of its range being adapted to operate the braking mechanism, substantially as described. 3rd. The combination with a rotating member of a controller, of a pinion mounted thereon, an operating lever, an actuating gear connected therewith and adapted throughout a portion of its range of movement to actuate said member to effect the required changes in circuit conditions, braking mechanism also operated by said lever, said actuating gear during the remainder of its movement being adapted to be operatively disengaged from said pinion, the operating lever in moving the actuating gear through the remainder of its range being adapted to operate the braking mechanism, a lug fixedly mounted with relation to the rotatable member, and a shoe fixedly mounted with relation to the actuating gear adapted to engage the lug during the operation of the mechanism, substantially as described. 4th. The combination with the pivotally mounted swing lever *p*, of the segmental gear portion *o*, operated by the lever, a pinion or gear portion *h*², operatively connected with the controller of a motor and rotated by the gear *o*, as the latter is moved through a portion of its range of movement and a brake adapted to engage a motor driven portion also operated by said lever upon its continued move, substantially as described. 5th. The combination with the pivotally mounted swinging lever *p*, of the segmental gear portion *o*, carried by the lever, a pinion *h*² for operating a motor controller, said pinion and gear having separable engagement, and a brake, cable or chain *r*, connected between the lever and a brake, the said pinion and gear portion being separated upon the application of the brake, substantially as described. 6th. The combination with a swinging lever *p*, of a motor controller, a multiplying gear, all of whose members are rotatable, interposed between said controller and lever for increasing the speed of the controller relative to the speed of the actuating lever, and a brake adapted to engage a motor driven portion also operated by said actuating lever, substantially as described. 7th. The combination with a swinging lever *p*, of a motor controller, a multiplying gear, all of whose members are rotatable, interposed between said controller and lever for increasing the speed of the controller relative to the speed of the actuating lever, and a brake adapted to engage a motor driven portion also operated by said lever, said lever serving to adjust the multiplying gear to relieve the controller of the actuating influence thereof, when the lever has been shifted through a predetermined range of movement, the lever in its continued movement serving to apply the brake, substantially as described.

No. 65,189. Motor Vehicle. (Véhicule moteur.)



George Herbert Condit, New York City, New York, U.S.A., 2nd December, 1899; 6 years. (Filed 20th March, 1899.)

Claim.—1st. An automatic positioning apparatus for vehicles comprising a pair of guide bars and a laterally movable floor or support between said bars, whereby the vehicle is automatically carried laterally into position while passing longitudinally between the guide bars. 2nd. The combination with a vehicle to be loaded, of a pair of guide bars, one on each side of the vehicle, and between which the vehicle is guided into the desired position, and a laterally movable sectional support between the bars and upon which the vehicle is carried laterally into the desired position. 3rd. The combination with a vehicle to be placed in position of a pair of guide bars, one on each side of the vehicle and between which it is positioned, of a movable floor composed of a plurality of endless belts upon which the vehicle travels into position between the bars, the belts supporting the vehicle moving with the vehicle as the same is guided into position between the bars. 4th. The combination with longitudinally disposed guide bars, of a table or platform comprising a plurality of endless belts arranged transversely of the bars, end rollers carrying said belts, and intermediate anti-frictional supports arranged to sustain the upper part of the belt in horizontal position. 5th. The combination with a vehicle to be loaded, of a pair of guide bars parallel along a portion of their length and curving outwardly, laterally yielding spring supports for the bars, and an end stop adjacent to the parallel portion of said bars. 6th. The combination with a loading pit, guide bars at each side thereof, a radially movable stop and a spring detent for holding the same in operative position, means for moving the stop into operative position from a distance. 7th. The combination with a vehicle to be loaded and an opening through which the load is moved vertically, of a pair of guide bars arranged parallel to said opening on either side thereof and flaring outwardly, laterally adjustable supports for the bars and a laterally movable table under the flaring ends of the guide bars.

No. 65,190. Chrome Brick. (Brique chromique.)

Harbison & Walker Company, Pittsburg, assignee of Niven McConnell, Munsall, both in Pennsylvania, U.S.A., 4th December, 1899; 6 years. (Filed 29th May, 1897.)

Claim.—1st. A composition for bricks, consisting of chrome ore, refractory clay, and an alkali, substantially as described. 2nd. A brick, composed of chrome ore, about 25 per cent, of refractory clay, and less than 3 per cent of alkali, substantially as described.

No. 65,191. Fish Food Preparation.

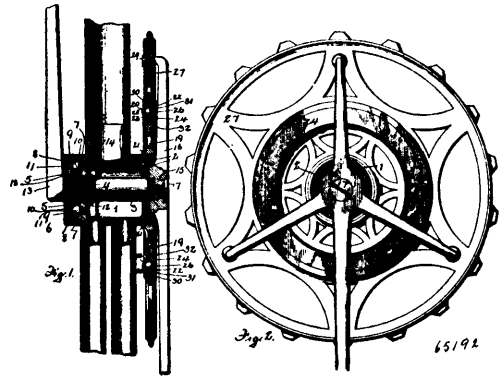
(Préparation d'aliments de poisson.)

John Davidson, East Dulwich, London, England, and George Davidson, Wick, Scotland, 4th December, 1899; 6 years. (Filed 19th November, 1898.)

Claim.—1st. A food preparation in the form of powder ready for use by the addition of boiling water, consisting of fish cooked and powdered, and flour or like starchy powder mixed together, the flour thickening the water to keep the fish powder in suspension during use. 2nd. A food preparation in the form of powder adapted to be made ready for use by the addition of boiling water, consisting of six parts of fish cooked and powdered, and four parts of flour mixed together as set forth.

No. 65,192. Cycle Propelling Mechanism.

(Mécanisme de propulsion de cycles.)



Cecil Maynard and Earnest Frederick, both of Campbellford, Ont., Canada, 4th December, 1899; 6 years. (Filed 23rd July, 1898.)

Claim.—1st. A bicycle propelling mechanism, comprising a crank hanger, a removable stationary section located thereon, a rotatable section carrying sprocket teeth mounted on said stationary section, the centre of said sections being on the same vertical plane, a pedal crank removably connected to said rotatable section, a crank shaft removably connected to said pedal crank, a bearing removably located on the opposite side of said crank hanger a section rotatably mounted on said bearing, and a pedal crank removably connected to said rotatable section, and said crank shaft, whereby said pedal cranks and said crank shaft may be removed from said crank hanger independent of said bearings, substantially as described. 2nd. The combination with a crank hanger, having its end reduced, said being provided with inwardly extending incisions, of a ball bearing casing removably located on the outer periphery of said reduced portion, and means for adjustably forcing said reduced end into close contact with said casing, substantially as described. 3rd. The combination with a crank hanger, of a sprocket wheel rotatably mounted thereon, a section rotatably mounted on the opposite end of said hanger, a crank shaft, and pedal cranks removably connected to said sprocket wheel and said section and to said crank shaft, whereby said pedal cranks and said crank shaft may be removed from said crank hanger without disturbing the operative position of said sprocket wheel and section, substantially as described. 4th. The combination with a crank hanger, having its end reduced, said reduced end being split longitudinally, of an angular support removably located on said reduced end portion, and an angular expanding ring mounted within said reduced portion, said ring being adapted to adjustably expand said reduced end, whereby said support will become fixed on said reduced end, substantially as described. 5th. The combination with a crank hanger, having its end split longitudinally, of an angular support removably located on the outer periphery of said crank hanger, and an angular expanding ring removably secured to the inner periphery of said end, said ring serving to expand the end of said crank hanger into close contact with said support, whereby said support will be held fixedly on said crank hanger, substantially as described. 6th. The combination with a crank hanger, of a crank axle removably located within said crank hanger, said axle being supported solely from without said hanger, and pedal cranks removably secured to the end of said crank axle, substantially as described. 7th. A ball bearing comprising a race way, said raceway being provided with five contact points, and a series of balls mounted in said raceway and adapted to contact with each of said points. 8th. A ball bearing comprising two sections having three contact points and adapted to enclose three sides of a raceway, and a removable ring section secured between said sections, said ring section having two contact points for the balls in said raceway, said section also completing said race way. 9th. A propelling mechanism, comprising a crank hanger, bearings formed without the periphery of said crank hanger, and a plurality of crank arms having a removable positive connection with said bearings and with each other.

No. 65,193. Method of Reducing the Bulk of, and Consolidating Finely Divided Substances.
(Méthode de réduire et compresser des substances.)

Archibald Anderson Dickson, Toronto, Ontario, Canada, 4th December, 1899; 6 years. (Filed 31st December, 1897.)

Claim.—1st. The method of reducing the bulk of finely divided animal, vegetable and mineral substances and compounds thereof, which consists, essentially in, first, drying the material until all but the atmospheric degree of moisture has been eliminated, and allowing it to stand until it is cold; second, reducing such dry and cold material to a finely divided condition; and finally disposing such dry, cold and disintegrated material in successively gravitating charge, and subjecting each of such charges to pressure applied (on compression to each charge) against a yielding resistance, whereby

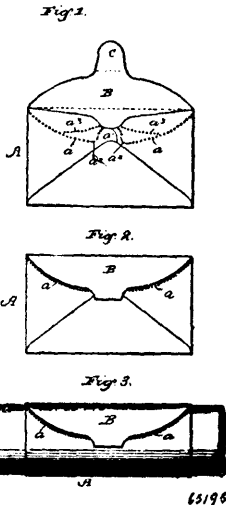
the initial pressure upon each charge forms same into a block, and whereby such formative pressure upon a succession of blocks shall always be the same irrespective of varying density in the charges, and whereby the formation (one upon the other) of evenly hard separate blocks may be continuously carried on contemporaneously with the feed of material, substantially as and for the purposes specified.

No. 65,194. Paint. (Peinture.)

Christen Nicolaz Nielsen, Frisenborg, Denmark, 4th December, 1899; 6 years. (Filed 14th February, 1899.)

Claim.—A paint or coating material for pasteboard roofing material and the like, consisting of coal tar, waterground chalk, pulverized phosphate of lime, pulverized burnt clay and turpentine, in or about the proportions named and intimately mixed.

No. 65,195. Envelope. (Enveloppe.)



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Mortimer L. Hinchman, Brooklyn, New York, U.S.A., 4th December, 1899; 6 years. (Filed 31st January, 1899.)

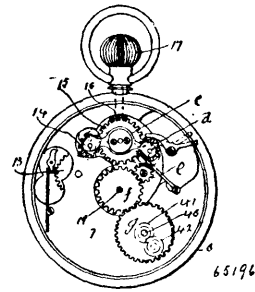
Claim.—1st. A safety envelope or wrapper, comprising a body portion and a sealing flap, the former being provided with lines or perforations or indentations along the line the edge of said flap will occupy when secured down over the same and also along lines at right angles to the first mentioned lines to the edge of the body portion so that said body portion will be torn along said lines of perforations or indentations when the closing flap of the envelope is opened. 2nd. In a safety envelope or wrapper, the combination with a suitable sealing flap, of a body portion connected thereto and provided along the line the edge of the sealing flap will occupy when secured to said body and also at right angles to said line to the edge of the body portion, with a plurality of perforations or indentations, and a split portion at the junction of said lines of perforations or indentations, the construction being such that the body portion will be torn along the line of perforations or indentations when the closing flap is opened, substantially as described. 3rd. In a safety envelope or wrapper, the combination with a sealing flap, of a body portion connected to the same and provided with a plurality of perforations or indentations that extend in a line along the position the edge of the sealing flap will occupy when secured to the body to a point near the middle of said body and then up to the upper edge of said body, thus leaving a central unimperfected or unindented portion, and also a plurality of perforations or indentations extending across the corners formed by said before-mentioned perforations or indentations, substantially as described.

No. 65,196. Metronome. (Métronome.)

Robert Anderson Becket and William Archibald Wood, both of Montreal, Quebec, Canada, 4th December, 1899; 6 years. (Filed 24th February, 1898.)

Claim.—1st. In a pocket metronome, a pendant, a vibrating indicator, an indicator adapted to indicate the frequency of the vibrations of said vibrating indicator, a train of gears including a scape wheel 33 for operating said vibrating indicator, a pair of pinions 41 and 42 intermeshing with one another and independent of said train of gears, a pair of pins 44, 44, carried one by each of said pinions and near the periphery thereof, pallets 35 in operative engagement with said scape wheel, a resilient tailpiece 39 and formed integrally with said pallets and extending between said pins, and a train of gears 15, 16, d, e, f and g, extending between the pendant and said pinions, the gear d being mounted in a swinging bracket c, to make or brake an operative connection between said pendant and pinions and vibration indicator, a spring adapted to

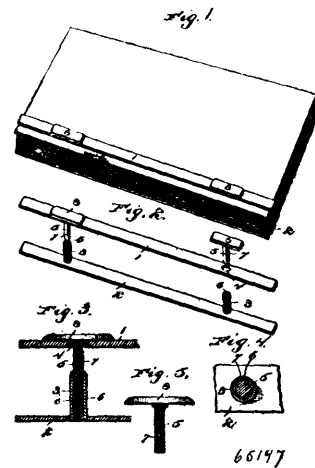
act upon said swinging bracket and keep the gear d normally out of contact with the remainder of the train and a bell crank lever



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fulcrumed to the frame plate of the movement and adapted to swing said bracket and cause said gear d to engage said train, substantially as and for the purpose set forth. 2nd. In a pocket metronome, a pendant, a vibrating indicator, an indicator adapted to indicate the frequency of the vibrations of said vibrating indicator, a train of gears including a scape wheel 33 for operating said vibrating indicator, a pair of pinions 41 and 42 intermeshing with one another and independent of said train of gears, a pair of pins 44, 44, carried one by each of said pinions and near the periphery thereof, pallets 35 in operative engagement with said scape wheel, a resilient tailpiece 39 weighted at its free end as at 40 and formed integrally with said pallets and extending between said pins, and a train of gears 15, 16, d, e, f and g, extending between the pendant and said pinions, the gear d being mounted in a swinging bracket c, to make or break an operative connection between said pendant and pinions and vibration indicator, a spring adapted to act upon said swinging bracket and keep the gear d normally out of contact with the remainder of the train and a bell crank lever fulcrumed to the frame plate of the movement and adapted to swing said bracket and cause said gear d to engage said train, substantially as and for the purpose set forth.

No. 65,197. Temporary Binder. (Reliure temporaire.)

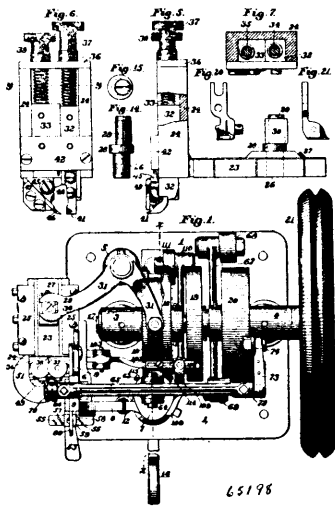


65197

Nial Van Sickle, Sioux City, Iowa, U.S.A., 4th December, 1899; 6 years. (Filed 10th November, 1899.)

Claim.—A temporary binder comprising opposite strips, socket tubes carried by one of the strips, openings in the other strip with which said tubes are adapted for alignment, said tubes having corrugated inner surfaces with the corrugated portions non-continuous around the same, and locking pins adapted to be passed through the openings in one strip and into the tubes of the other strip and having corrugations upon their outer surfaces adapted for engagement and disengagement with the corrugations of the tubes as the pins are rotated, said corrugated surfaces being non-continuous around the pins, and a head carried by each pin and adapted to lie upon the strip having the openings, and flush with the sides thereof, when the corrugations of the pins are engaged with the corrugations of the tubes, and said heads being adapted to lie transversely of the strip having the openings, and project beyond the side edges thereof when the corrugated portions are disengaged, whereby when the corrugations are engaged, accidental displacement of the pins may be prevented, and when the corrugated portions are disengaged, that fingers may be inserted beneath the heads to withdraw the pins.

No. 65,198. Insole Channelling and Lip Turning Machine. (*Machine à canneler et tourner le bout des chaussures-semelles.*)



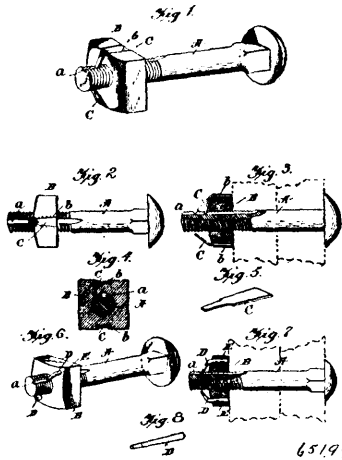
The Economy Machine Company, Portland, Maine, assignee of Albert Edward Johnson, 4th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. In an insole channelling machine, the combination of a work support, a vibratory feed arm provided with a feed point to engage the sole to feed the same, means for imparting to said feed point a four motion movement, a horizontally movable slide, a vertically yielding tool stock carried by said slide, a cutter carried by said stock and having a cutting edge parallel to the work support and at right angles to the line of direction of the feed, a pressure surface also carried by said stock and arranged in close proximity to said cutter and parallel to said work support, and means for imparting to said slide and the tools carried thereby a succession of series of rapid reciprocations with a stand still after each series. 2nd. In an insole channelling machine, the combination of a work support, a horizontally movable slide, a pair of vertically yielding tool stocks carried by said slide, a cutter carried by one of said stocks and arranged with its cutting edge parallel to the work support and at right angles to the line of direction of the feed, a cutter carried by the other of said stocks with its cutting edge inclined to the upper surface of said work support and substantially at a right angle to the line of direction of the feed, a pressure surface carried by each of said stocks and movable vertically therewith and arranged in front of, and in close proximity to the cutting edges of said cutters, means for imparting to said slide and the tools carried thereby a succession of series of rapid reciprocations in the direction of the line of feed, with a stand still after each series, a feed bar provided with a feed point arranged to enter the sole and to be vibrated between the ends of said pressure surfaces, and means for imparting to said feed point a four motion movement to feed the material. 3rd. In an insole channelling machine, the combination with a work support, of a work feeding mechanism comprising the following elements, viz: the longitudinally slotted feed arm 79 provided with feed point 81, a vertically adjustable fulcrum about which said feed arm may be vibrated, the swivelling forked stud 64, the lever 65, the cam path 66, the lever 67 operated by said path, the link 69, the cam path 78, the lever 74 vibrated by said path, the link 78 pivoted at one end to the upper end of said lever 74, and ball and socket joints connecting the feed arm, and the links 69 and 73 to said lever 65. 4th. In an insole channelling machine, the combination with a work support and suitable pressure devices for holding the work to the work support, of a feed arm provided with feed points to engage the sole, means for imparting to said feed points a four motion movement to feed the work, and means for automatically pressing said feed points in a direction at right angles to the line of direction of the feed while said points are feeding the sole. 5th. In an insole channelling machine, the combination with a work support and pressure devices for holding the sole to the work support, of an adjustable gauge arranged to overhang said work support, the feed arm 79, provided with the longitudinal slot 80, and feed points 81, the vertically adjusted fulcrum pin 82, the disc 96, provided with the flat sided hub 97, to fit said slot 80, and on its outer face with the inclined or cam surfaces 101, and mounted loosely upon said pin 82, the disc 98, provided on its inner face with inclined or cam surfaces to match those on the disc 96, and secured in a non-revoluble position to the pin 82, and means for imparting to said feed points a four motion movement to feed the sole. 6th. In an insole channelling machine, the combination with a work support, of the reciprocating slide 23, 24, the vertically yielding tool stock 32, carried by said slide, the cutter 41 carried by said stock, and

arranged with its cutting edge parallel or nearly so to the surface of the work support and at right angles to the line of direction of the feed, a pressure surface adjustably secured to said stock and arranged in front of and in close proximity to the cutting edge of said cutter, the feed arm 79, provided with the feed points 81, to engage the sole, means for imparting a six motion movement to said feed points, said feed points being located contiguous to the front of said pressure surface, means for imparting to said slide 23, 24, a succession of series of rapid reciprocations, with a stand still after each series, a curved ploughshare-like surface, contiguous to the upper surface of said cutter, for turning the lip, cut by said cutter, upward, a hammer for completing the turning of, and setting said lip, located in close proximity to said cutter, and means for imparting to said hammer a succession of rapid upward and downward strokes. 7th. In an insole channelling machine, the combination of a work support, a horizontally reciprocating slide, a vertically yielding tool carrying stock carried by said slide, the cutter 41 carried thereby and provided with a curved ploughshare surface to turn the lip cut thereby, pressure surface arranged in front of and in close proximity to the edge of said cutter and adjustably secured to and movable with said stock, a hammer to act upon the channell lip, the lever 102 for operating said hammer, the block 106 adjustably secured to said lever, and provided on its under surface with a series of steps or bearing surfaces at different levels to receive the upward thrust for giving the blow of said hammer upon said channell lip, the link 108 provided at its upper end with the slot 107, to receive said block and lever, the lever 110 connected at its movable end to said link, and the cam 112 for vibrating said lever. 8th. An insole channelling machine, comprising the following means for setting the channell lip, viz: a vibrating hammer arranged to strike a succession of rapid blows thereon in combination with a pivoted lever for operating the same, the block 106 adjustably secured to said lever and provided on its under side with a series of bearing surfaces at different levels, the link 108 provided at its upper end with the slot 107, to receive said block and lever, the slotted arm 113, the forked end of which embraces said link above its slot, and is adjustably secured to the block 106, a cushion of leather 115 between the bottom of the fork of the arm 113 and the upper end of the slot 107, the spring 116 inserted in the lower end of said slot and bearing against the under side of the block 106, the lever 110 pivoted at its movable end to the lower end of said link 108, the bearing 109 for the upper end of said link, and the cam path 112 to act upon and vibrate said lever 110. 9th. In an insole channelling machine, the combination with a work support mounted upon a fixed stand, of a vertically movable bracket comprising the hub 7, the arm 8, plates 9 and 10, and the shank 11 fitted to and vertically movable in a bearing in an upright of the machine frame, the slide 23, 24, fitted and movable horizontally in a bearing in the plate 10, the tool stocks 32 and 33 fitted to and movable vertically in bearings in said slide, the cutter 41 carried by the lower end of the stock 32 with its cutting edge parallel to the upper surface of the work support and at right angles to the line of direction of the feed, a pressure surface supported by and movable with said stock 32, the block 45 secured to and adjustable transversely of the lower end of the stock 33, the obliquely arranged cutter 46 carried by said block 45, a pressure surface supported by and movable with said stock 33, the spring 12 connected at its upper end to said bracket and at its other end to the bed of the machine, and the lever 14 pivoted to the ears 16, and engaging the lower end of the shank 11 to raise it and the cutters and pressure surfaces for the insertion and removal of the sole. 10th. In an insole channelling and lip turning machine, the combination with a work support, of the lever 53 pivoted to a fixed part of the machine by a vertical pivot pin, the gauge 60 formed upon or secured to said lever and extending over the upper surface of the work support, the bracket 54 arranged to support the movable end of said lever, and provided in its upper surface with a series of ratchet teeth extending transversely thereof, and with two series of holes, the two pins 57 and 58 set in two of said holes to limit the extreme movement of said lever, and the pawl 59 secured in a fixed position on said lever in position to engage with said ratchet teeth as set forth. 11th. In an insole channelling machine, the combination of a work support, a vibratory feed arm provided with a feed point to engage the surface of the sole, to feed the same, means for imparting to said feed point a four motion movement, a horizontally movable slide, a vertically movable tool stock carried by said slide, a cutter carried by said stock, and having a cutting edge incline to the upper surface of the work support, and approximately at a right angle to the line of direction of the feed, a pressure surface also carried by, adjustable on, and vertically movable with said stock, and arranged in close proximity to said cutter, and parallel to the upper surface of said work support, and means for imparting to said slide, and the tools carried thereby, a succession of rapid reciprocations, with a stand still after each series. 12th. The combination in an insole channelling machine of a channell cutter constructed and arranged to split the edge of the sole, means for feeding the sole against said cutter, a vertically reciprocating cutter constructed and arranged to cut an incision in the surface of the sole from its edge toward its centre, in advance of the action of the channell cutter upon the sole, and a work support. 13th. The combination in an insole channelling and lip turning machine, of mechanism for cutting a series of incisions in the outer portions of the surface of the sole, said incisions extending from the outer edge of said sole towards its center, or at right angles to the line of direction of the feed, a

channell cutting mechanism, a lip turning means, a lip setting mechanism, said several mechanisms being constructed, arranged and operated to perform their several operations in the order in which they are herein named, and a work support.

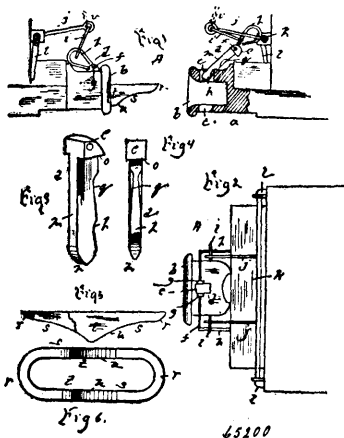
No. 65,199. Nut Lock. (*Arrêt-écrou.*)



Stephen S. Roszell and John R. Allen, both of Lexington, Kentucky, U.S.A., 4th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. In a nut lock, the combination with a screw threaded bolt having a locking shoulder in its threaded portion, of a nut thereon, said nut having a pliable locking member directly attached to said nut against axial movement thereon, the locking member projecting beyond the outer face of the nut a distance sufficient to permit it to be bent inward towards the outer face of the nut, substantially as shown with its extremity in engagement with said locking shoulder of the bolt, substantially as described. 2nd. A nut lock comprising a nut having a transverse locking member passage way, and a locking member having an elongated tapered portion adapted to fit and wedge within said passage way by longitudinal movement of the locking face of the nut a distance sufficient to permit it to be bent inward substantially as shown in engagement with a shoulder upon a bolt, substantially as described. 3rd. A nut lock comprising a nut having a transverse groove in its edge thereof, and a locking member consisting of an outwardly tapered strip of sheet metal adapted to be wedged in said groove and the projecting end adapted to be bent inward for engagement with a locking shoulder upon a bolt, substantially as described. 4th. A nut lock comprising a nut having a transverse dovetailed groove in its edge, and a locking member consisting of an outwardly tapered strip of sheet metal having a short projecting end extending in a direction in a line with the said groove, and its projecting end adapted to be bent inward in engagement with a locking shoulder upon a bolt, substantially as described.

No. 65,200. Car Coupler. (*Attelage de chars.*)

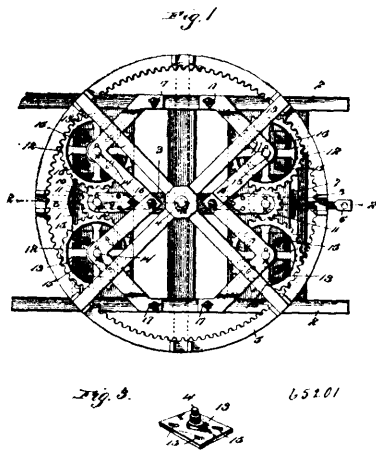


John C. Yeiser and Edwin B. Hancock, both of Austin, Texas, U.S.A., 4th December, 1899; 6 years. (Filed 8th November, 1899.)

Claim.—1st. In a car coupling, the combination with the drawhead bar *f*, arms *j j*, a bar *k*, having end handles, links *i i*, and

coupling link, of the coupling pin constructed with the bevelled notch *p*, and rounded portion *q*, all substantially as described. 2nd. In a car coupling, the combination with the transverse handle bar *k*, of the arms *j j*, bar *f*, links *i i*, pin *d*, constructed with the notch in its rear edge and the coupling link, all substantially as described. 3rd. In a car coupling, the within described coupling consisting of the draw head, having upper and lower slots, the pin entering these slots and provided with the rounded point, a rounded rear face and shoulder, and a notch in the rear face thereof, and pivoted to the cross bar *j*, said bar having its ends bent at right angles to the body, and forming loops *h h*, the split links *i i*, and the operating pivoted handle bar *k*, having lifting arms *g g*, said split links interposed between said loops and the outer ends of the lifting arms, and the coupling link constructed with bevelled ends and expanded side portions, the longer portion of said expanded sides being midway between the bevelled ends of the links, all as shown and described.

No. 65,201. Horse Power. (*Manège.*)

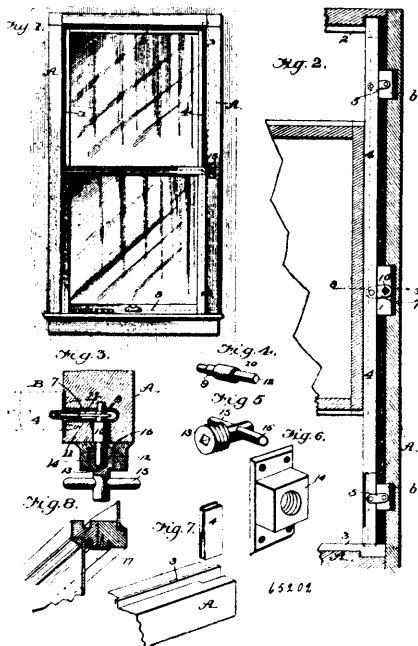


George D. Wilson, Pomeroy, Washington, U.S.A., 4th December, 1899; 6 years. (Filed 10th November, 1899.)

Claim.—1st. In a horse power, substantially such as described, the combination with a suitable base, a master wheel journaled thereon and a line shaft, of a vertical shaft supported on the base independently of the master wheel and geared to the line shaft, bearing plates fixed to the base on opposite sides of the vertical shaft, and a pair of transmitting pinions journaled on the bearing plates independently of the master wheel and disposed on opposite sides of the vertical shaft, said pinions intermeshing directly with the master wheel and the vertical shaft, whereby the pair of pinions equalize the strain of the master wheel on the vertical shaft and maintain the axes of the shaft and master wheel in parallel relation. 2nd. In a horse power, substantially as described, the combination with a suitable bed, a master wheel, and a line shaft, of a vertical shaft supported on the bed independently of the master wheel and geared to the line shaft, and a pair of transmitting gears disposed on opposite sides of the vertical shaft, supported independently of the master wheel, and intermeshing directly with said wheel and the vertical shaft to equalize the strain on the latter, each transmitting gear being adjustable in an oblique path between the toothed faces of the master wheel and the shaft, whereby the transmitting gear may be moved to mesh uniformly with the wheel and shaft pinion, as set forth. 3rd. In a horse power, substantially such as described, the combination with a suitable bed, an internally toothed master wheel, and a line shaft, of a vertical shaft journaled on the bed within the master wheel, independently thereof, and geared to the line shaft and provided with a spur pinion, bearing plates provided with stub axles and adjustably fastened on the bed on opposite sides of the vertical shaft, and transmitting gears mounted on said stub axles to intermesh directly with the master wheel, and with the shaft pinion, such transmitting gear being adjustable with its bearing plate in an oblique direction for uniformly meshing with both the master wheel and pinion, as set forth. 4th. In a horse power, substantially as described, the combination with a suitable bed, an internally toothed master wheel and a line shaft, of vertical shafts supported on the bed at diametrically opposite points within the wheel, geared to the line shaft in different points along its length, and having gear pinions at the upper ends, and pairs of transmitting wheels to mesh directly with the master wheel and with the gear pinions of said vertical shafts, each pair of transmitting wheels being supported on the bed on opposite sides of the shaft pinion to equalize the strain on the shaft and each transmitting pinion being adjustable in an oblique path to secure uniformity in the intermeshing of its teeth with said master wheel and the shaft pinion, substantially as described. 5th. In a horse power, the combination with a bed having a cross tree, an internally toothed master wheel, a line shaft, the vertical shafts supported in the bed

at diametrically opposite points of the master wheel and geared to the line shaft, the slotted plates fastened adjustably to the bed on opposite sides of the vertical shafts and provided with the stub axles, the brace plates, each connected loosely with the stub axle of one plate, attached at one end to the cross tree and fastened adjustably to the other end to the base, and pairs of transmitting gears journaled on the stub axles on opposite sides of the vertical shafts and meshing directly with the master wheel and with the vertical shafts to equalize the strain on the latter, substantially as described.

No. 65,202. Sash Holder and Weather Strip.
(*Porte-châssis et bourrelet de porte.*)

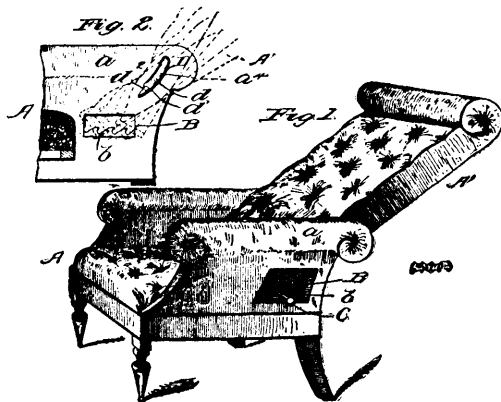


George Stirrett, Brandon, Manitoba, Canada, 4th December, 1899; 6 years. (Filed 8th November, 1899.)

Claim.—1st. A sash stop, comprising a movable metal strip adapted to engage the side of the sash, links by which the strip is pivotally but permanently attached to the window frame, a lever pivotally connected with such strip, and a rotary device by which the lever is operated, substantially as shown and described. 2nd. A sash stop, comprising a movable metal strip adapted to engage the side of the sash, links by which strip is pivotally but permanently attached to the window frame, a lever pivotally connected with such strip, and a rotary device on which said lever is pivoted, and by which it is operated, substantially as shown and described. 3rd. The combination with a slidable window sash having a slide groove, of a movable strip arranged in a slot of the window frame and adapted to enter the sash groove, links which pivotally connect the strip with the window frame, a lever which is pivoted to the strip intermediately of the links, a rotary shaft which engages the lever and is adapted to throw the latter, and means for operating said lever substantially as specified. 4th. The combination with a slidable window sash having a side groove, of a movable strip arranged in a slot of the window frame and adapted to enter the sash groove, links which pivotally connect the strip with the window frame, a lever which is pivoted to the strip intermediately of the links, a rotary shaft which passes through the lever and serves as a pivot therefor, and means for rotating said shaft, substantially as shown and described. 5th. The combination with a slidable window sash having a side groove, of a movable strip arranged in a slot of the window frame and adapted to enter the sash groove, links which pivotally connect the strip with the window frame, a lever which is pivoted to the strip intermediately of the links, a rotary shaft which passes through the lever and serves as a pivot therefor, a nut adapted for engagement with the outer end of the rotary shaft, a screw socket for the nut, which is secured to the window frame, and a lever attachment of the nut for rotating it, substantially as shown and described. 6th. The combination with a slidable window sash having a side groove, of a movable strip arranged in a slot of the window frame and adapted to enter the sash groove, links which pivotally connect the strip with the window frame, a lever which is pivoted to the strip intermediately of the links, a rotary shaft which passes through the lever and serves as a pivot therefor, a nut adapted for engagement with the outer end of the rotary shaft, and for frictional engagement with a fixed surface, and a screw socket for the nut which is fixed in place, substantially as shown and described. 7th. The combination with a movable strip serving as

a sash stop and weather strip, pivoted links and an intermediate lever pivoted to the strip, of a rotary shaft having a polygonal portion which detachably engages the lever, a nut having a socket adapted to fit upon the polygonal outer end of the shaft and suitably constructed to provide for convenient rotation manually, and a screw socket for said nut which is fixed in position, as shown and described. 8th. The combination with a window frame having fixed metal strips at one side and both ends, a sash having grooves in its edges, a movable metal strip having slots in its ends to receive the fixed end strips, and means for operating such movable strip, as shown and described.

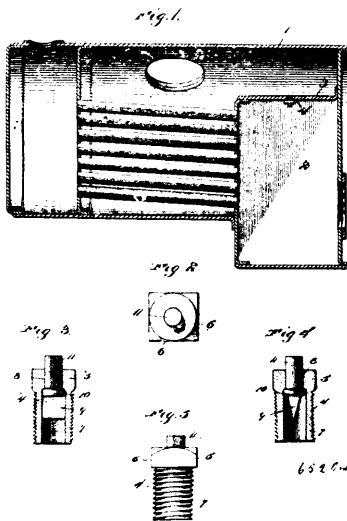
No. 65,203. Chair. (*Fauteuil.*)



Philias Charbonneau, Montreal, Quebec, Canada, 4th December, 1899; 6 years. (Filed 10th November, 1899.)

Claim.—1st. In a chair, the combination with the seat portion, a notched plate mounted in each arm thereof, and a guide plate secured upon the inner side of each arm, of an adjustable back, a lug secured to each side of said back and adapted to slidably engage said guide plate, and a rod removably secured to each side of the lower portion of said back and adapted to engage the said notched plate, substantially as described. 2nd. In a chair, the combination with the next portion, a notched plate mounted in each arm thereof, a guide plate secured upon the inner side of each arm, said guide plate having a surrounding flange provided with an opening in its lower portion, of an adjustable back, a lug secured to each side of said back and adapted to slidably engage said guide plate and to pass through said recess, and a rod removably secured to each side of the lower portion of said back and adapted to engage said notched plate, substantially as described.

No. 65,204. Boiler Safety Plug. (*Bouchon de sûreté.*)

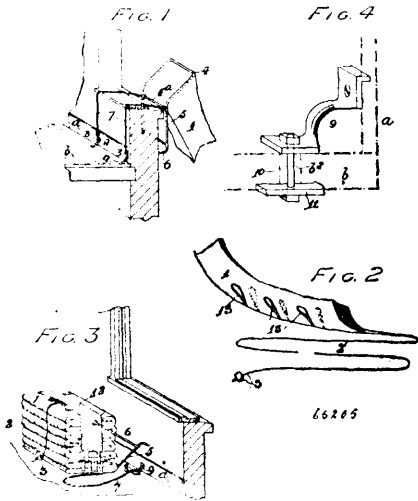


Charles E. Rhoades, Fostoria, Ohio, U.S.A., 4th December, 1899; 6 years. (Filed 11th November, 1899.)

Claim.—1st. In a device of the character set forth, comprising a shell having a head with a bore therethrough at one end and enclosing a chamber, a transverse bridge in the chamber adjacent the terminal of the bore, a fusible plug adapted to be inserted in the bore and have its one end bear on and be upset against the bridge.

2nd. A device of the character set forth, comprising a shell with a head, the said head enclosing a chamber and a bore tapered and opening into said chamber, a transverse, wedge shaped bridge mounted in the shell adjacent the point of communication of the bore therewith, and a fusible tapered stem adapted to be driven into the said bore and swaged against the bridge. 3rd. A device of the character set forth, comprising a shell with a bridge therein, and a fusible stem adapted to be driven into a part of the shell and have one end swaged by the bridge.

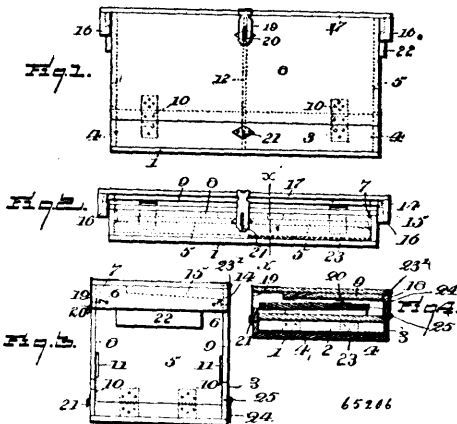
No. 65,205. Fire Escape. (*Sauveteur d'incendie.*)



Frank Scott Dobson, Vancouver, British Columbia, Canada, 4th December, 1899; 6 years. (Filed 11th November, 1899.)

Claim.—1st. A tube of suitable strong textile having a cord and weight at its lower end, and loops 13 to manipulate the same, in combination with a frame 4 around the mouth of the tube, depending supports 5 secured to and depending from the corners of the frame 4, tie bars 6 and 4a connecting the supports together and cables 7 securing the tie bars 4a with suitable fastenings 9 within the room to which the escape is attached, as specified. 2nd. In combination with a tube 1 arranged to communicate from an elevated window with the ground, a rigid frame surrounding the mouth of tube, downwardly deflected supports fixed to said frame, far engaging the outer wall of the building, tie rods connecting the supports together, and cables securing one of the tie rods to the fastening 9, secured within the room, as and for the purpose set forth

No. 65,206. Folding Crate. (*Boite pliante.*)

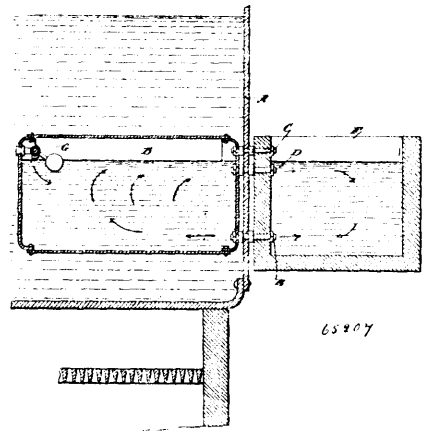


George A. Jones, Richmond, Virginia, U.S.A., 4th December, 1899; 6 years. (Filed 11th November, 1899.)

Claim.—In a folding crate, the combination of the bottom, side and end strips secured to the upper face of said bottom, said side strips being of greater depth than the end strips, sides 8 and 9, hinged to the inner face of said side strips, ends 5, hinged to the inner face of said end strips, lugs formed on the side 9, at each upper corner of its ends, a sliding lid or cover, cleats secured to the underneath face of said lid or cover at each end thereof, said cleats being provided with grooves or runways to receive the lugs of the side 9, for holding the said lid, a hasp secured to the upper face of the lid,

a swivelled hook secured to the side 8, to receive said hasp when the grate is in the built up form, a separate swivelled hook secured to the front side strip to receive said hasp when the grate is folded, and means secured to the rear side strip for engagement with the lid when the grate is folded, substantially as described.

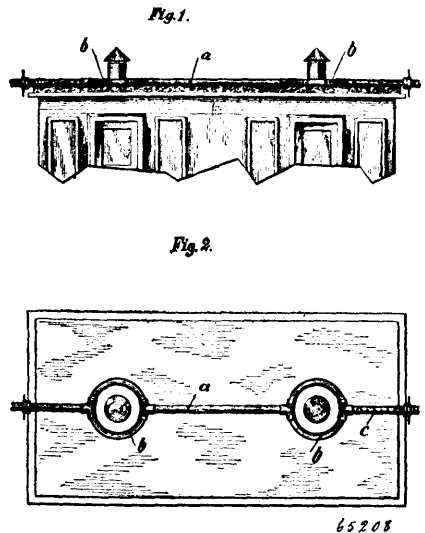
No. 65,207. Water Feed Apparatus. (*Appareil d'alimentation d'eau.*)



John Morrison, Dubuque, Iowa, U.S.A., 4th December, 1899; 6 years. (Filed 11th November, 1899.)

Claim.—1st. A water feed apparatus, having a primary container or reservoir adapted to be heated, a chamber situated within the container or reservoir and supplied with heated water therefrom, and a delivery receptacle situated exteriorly of the container or reservoir, the said chamber and the delivery receptacle having a circulating communication with each other. 2nd. A water feed apparatus having a primary container or reservoir adapted to be heated, a chamber situated within the container or reservoir, a valve commanding a communication between the container and chamber, the valve serving automatically to maintain the water in the container at a normal elevation, and a delivery receptacle exterior of the container, the said chamber and the delivery receptacle having a circulating communication with each other. 3rd. A water feed apparatus, comprising a primary container or receptacle, a chamber situated within the same, an automatic valve commanding a communication between the chamber at a predetermined elevation, two hollow stay bolts situated one above the other and below the said predetermined water elevation in the chamber, the stay bolts establishing communication between the chamber and the delivery receptacle to permit the circulation of water between the two, and a third hollow stay bolt extending between the chamber and the delivery receptacle above the water level to form a vent for the chamber.

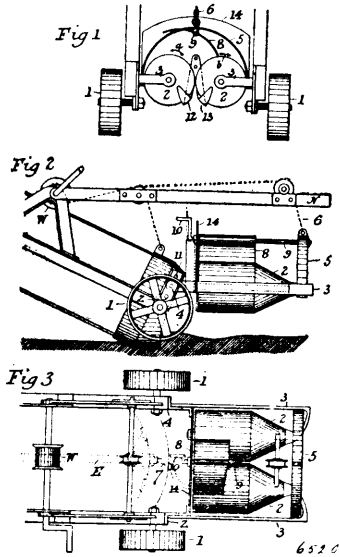
No. 64,208. Apparatus for Cooling Railway Carriages. (*Appareil pour rafraichir les voitures de chemin de fer.*)



Berthold Fuchs, Charlottenberg, Germany, 4th December, 1899 years. (Filed 13th November, 1899.)

Claim.—Apparatus for keeping cool railway carriages and other vehicles characterized by the fact that by means of a pipe which is arranged on the carriage and is provided with small holes, the several carriages are irrigated with water, for the purpose of effecting the cooling of the roof of the carriage by the evaporation of the liquid.

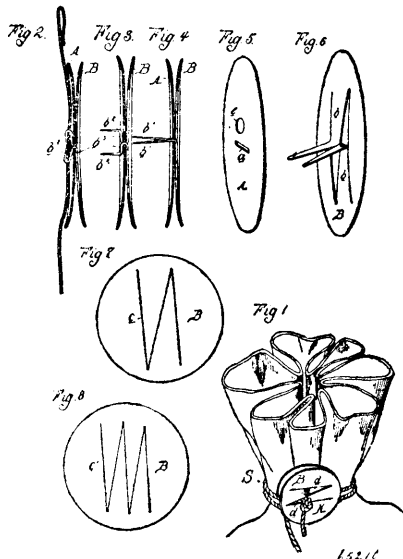
No. 65,209. Potato Digger. (*Arrache patates.*)



David Buchanan, Victoria, Australia, 4th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. In a potato digger, the combination with the frame thereof of a pair of adjustable revoluble rollers, each having a tapered front, and a fork under said rollers, all substantially as and for the purposes set forth. 2nd. In a potato digger, the combination with the frame thereof of a pair of rollers 2, each having a tapered front, attached to a frame 3, and pivoted or hinged at the rear 4 to one of a series of holes 11, a carrier 5 and a chain or connection 6 to a windlass as W or the like, all substantially as and for the purposes set forth. 3rd. In a potato digger, the combination with the frame thereof of a pair of adjustable revoluble rollers, each having a tapered front, means (as a flexible shaft) for causing revolution of one of said rollers as the machine advances, a fork beneath and an adjustable guard above the said rollers, and a vertical sheet metal guard at the rear of the rollers, all substantially as and for the purposes set forth.

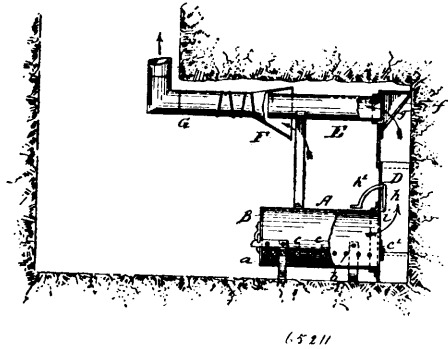
No. 65,210. Bag Fastener. (*Attache de sac.*)



John H. Kirkland, Comber, Ontario, Canada, 4th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. As a new article of manufacture, a bag fastener, composed of two concavo-convex metal discs united to each other independently of the bag by spring tongues integrally formed with one of the discs and constituting a spring tension device elastically holding the discs together free to separate under tension. 2nd. In a bag fastener, the combination of the disc A formed with a slot a, and the disc B having tongues b integrally formed with the disc and overlapping each other in the centre of the disc, said overlapping portion engaging into the slot a, and forming the means for securing the disc together independently of the bag, and project outwardly to form spurs for fastening to the bag. 3rd. In a bag fastener, the combination of the disc A formed with the slot a, and the disc B formed with spring tongues b, said tongues engaging into the slot a and having the bent over portions b³ and spurs b².

No. 65,211. Apparatus for Thawing Frozen Ground. (*Appareil à dégeler la terre.*)



John Wilson Livermore and Clarence J. Berry, both of Selma California, U.S.A., 5th December, 1899; 6 years. (Filed 7th April, 1898.)

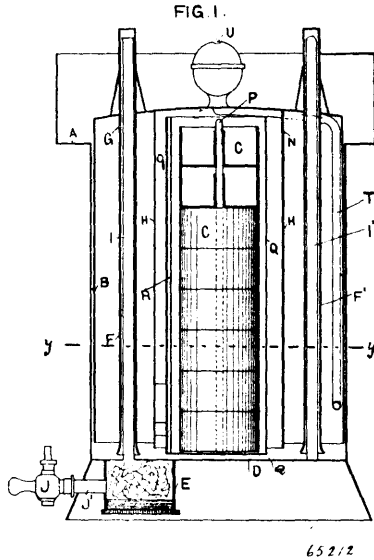
Claim.—1st. In a thawing apparatus, the combination with a furnace of a heating chamber having a closed back, an opening in the back communicating with the furnace, a hinge connection between said furnace and chamber whereby the chamber can be adjusted from vertical to horizontal, and a hood to cover said back opening when the chamber is horizontal, substantially as described. 2nd. In a thawing apparatus, the combination with a furnace of a heating chamber communicating therewith and hinged thereto, and formed of separate sections, one of which is capable of sliding on another, a perforated bar on one section and a perforated guide on the other, the said bar and guide being adapted to receive a pin for locking said sections at any adjustment. 3rd. In a thawing apparatus and in combination a furnace, a heating chamber adapted to be placed against the surface to be thawed, and draft openings in the chamber and near opposite sides thereof and communicating with a common escape pipe, substantially as and for the purpose set forth. 4th. In a thawing apparatus and in combination a furnace, a heating chamber adapted to be placed against the surface to be thawed, a plate connecting the sides and end of the chamber and forming a draft space, a draft near each end of said plate, and an escape pipe communicating with said draft space.

No. 65,212. Acetylene Generator. (*Générateur acétylène.*)

The S. C. Acetylene Gas Company, Liverpool, assignee of Evan Evans, Llanrust, Denbigh, Wales, both in England, 5th December, 1899; 6 years. (Filed 1st March, 1898.)

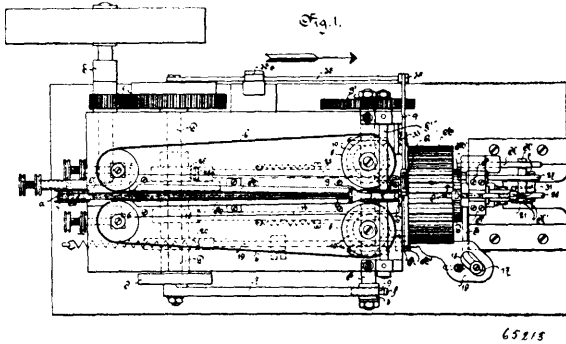
Claim.—1st. In an acetylene generator, the combination of a water tank, a gasometer, a series of superimposed generating trays, and a movable cylinder with opening therein whereby water can be supplied to each of these trays in succession, and the supply of water be regulated so that it only reaches one tray at a time, and each tray is exhausted before the next is attacked. 2nd. In an acetylene generator, the combination of a series of perforated superimposed carbide holding trays and a removable chamber, a gasometer surrounding and supporting said chamber and an orifice for the entrance of water from the gasometer near the top of said chamber, substantially as described. 3rd. The combination of the cylinder Q, orifice S, channel R, and orifice q, so arranged that the water entering shall have to take a circuitous course. 4th. The combination of the gasometer B, with chamber A, nearly fitting it for the greater part of its height, but of considerably larger diameter above, substantially as described. 5th. The combination of the chamber A, gasometer B, tubes F and F', and tubes I and I', for the purposes described. 6th. The combination of the chamber A, gasometer B, tube F, having an opening near the top of the gasometer and extending above the gasometer, with delivery pipe I. 7th. The combination of the chamber A, gasometer B, tube F, having an opening near the top of the gasometer and extending above the gasometer with the delivery pipe I, a filter E and exit J. 8th. The combination of the chamber A, of the gasometer B, and the syphon T, having one open end near the top of the gasometer, and the other end extending to the top of chamber A, when the gasometer is

down. 9th. The combination with a gasometer B, of an interior chamber H containing the generator, an opening Y, and a valve Y¹,



by means of which the gas can escape into the outer gasometer, but cannot return, substantially as described. 10th. The combination of the removable chamber Q, brackets W¹, slot W and pins V, for the purposes described. 11th. The safety appliance consisting of a tube L, reaching nearly to the top of the gasometer when the latter is down, a valve K placed thereon, and an attachment M on the gasometer, so placed as to come into contact with the valve K when it rises, substantially as and for the purposes described.

No. 65,213. Cigarette Making Machine.
(Machine à cigarettes.)

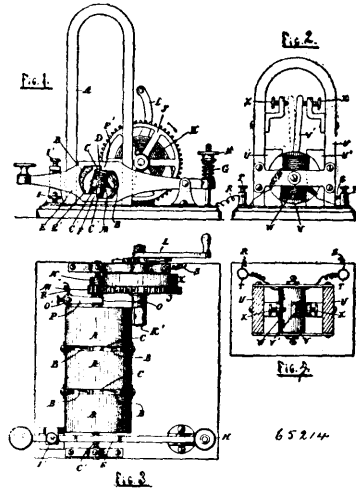


Otto Bergstrasser, Dresden, Germany, 5th December, 1899; 6 years. (Filed 20th July, 1898.)

Claim.—1st. A cigarette making machine characterized by a groove A, B, with intermittently driven bands a, b, b, a mouth piece C, at the end of the groove with a device for holding fast the finished paper tube, and a cutting off device Q, in front of the mouth of the mouth piece, the action being that the tobacco rope formed by the groove and the mouth piece, and cut before being introduced into the paper tube, is caused to move by the bands by friction and thus introduced through the mouth piece into the finished paper tube, whereupon the cigarette produced is severed by the cut which at the same time again shapes the end of the rope, substantially as specified. 2nd. A cigarette making machine provided with a groove A, B, with intermittently driven bands a, b, b, a mouth piece C, at the end of the groove with a device for holding fast the finished paper tube, and a cutting off device Q, in front of the mouth of the mouth piece, and characterized by an intermittently rotated revolving head H, with longitudinal cells on its circumference, and with a flange H¹ provided with holes corresponding to cells, a driver M, with a conical point and a counter holder M¹ co-operating with it, a slide N, moving in the imaginary continuation of the mouth piece, a tubular branch 11 on the mouth piece C, and tongs 12, 12, surrounding the branch 11, and an injector R, the action being that during the intermittent rotation of the revolving head the paper tube advanced by the driver M, co-operating with the counter holder M¹, is brought in front of the mouth piece C, that then during the time that the head stands still, the paper tube is pushed by the slide N, on to the branch and clamped fast by the tongs during the introduction of the tobacco rope, then again

released, whereupon after the finished cigarette has been severed, the revolving head which now continues to rotate, takes it further until it is forced out from the flange H¹, by an injector R and dropped. 3rd. Cigarette making machine characterized further by a finger O, which during the return of the rod 28, carrying the slide N, is lowered by the wedges 31 into the cell of the head situated at the mouth opposite the mouth piece, in order to afford a stop to the front end of the cigarette when this latter together with the tobacco rope moves forward in the last stage of the movement of the bands, and after the tongs 12 have been opened for the purpose of enabling the cutting to be effected behind the paper tube therefore only through the tobacco rope. 4th. In a cigarette making machine, the mouth piece C, having the tubular branch 11 formed therein, in combination with the tongs S, adapted to clasp the rear end of a paper tube upon the said branch and release it when desired, substantially as and for the purpose specified.

No 65,214. Magneto-Electric Telegraph.
(Télégraphe magneto-électrique.)



The National Magneto-Electric Telegraph Company, assignee of Leonidas Gorham Woolley, Kenton, both in Ohio, U.S.A., 5th December, 1899; 6 years. (Filed 16th August, 1899.)

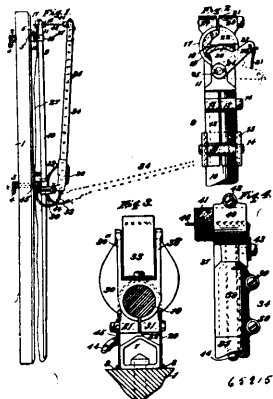
Claim.—1st. In a magneto-electro generator, a revolving armature, and a mechanism for causing it to revolve, combined with a pivoted key, and means attached to the armature shaft for controlling the partial revolutions of the armature, substantially as shown. 2nd. In a magneto-electro generator, a revolving armature, a shaft connected thereto, and means for causing the shaft to revolve, combined with a lug or stop secured to the armature shaft, and a key provided with shoulders against which the lug or stop strikes for the purpose of controlling the revolutions of the armature, substantially as described. 3rd. In a magneto-electro generator, a permanent magnet provided with pole pieces, a revolving armature placed between the pole pieces, a shaft to which the armature is secured, and a lug or stop for controlling the revolutions of the armature, combined with a mechanism for causing the shaft and the armature to revolve, a key provided with shoulders against which the lug or stop alternately strikes an insulated sleeve upon the shaft, a brush, and suitable conducting wires, substantially as set forth. 4th. In a magneto-electro generator, a spring actuated mechanism, a revolving shaft operated thereby and provided with a spring at one end, and an insulated sleeve, a revolving armature secured to the shaft, and a lug or stop, combined with a brush which operates in connection with the insulated sleeve, a fixed magnet provided with pole pieces, and a pivoted spring actuated key provided with shoulders against which the lug or stop alternately strikes as the shaft and the armature revolves, substantially as specified. 5th. In an electro-magneto generator, a pivoted spring actuated key having an opening made therethrough, and suitable shoulders formed upon opposite sides of the opening, combined with a revolving armature, means for causing the armature to revolve, and fixed magnets provided with pole pieces between which the armature revolves, and a lug or stop secured to one end of the shaft upon which the armature is placed, and which lug or stop is made to revolve within the opening formed in the key, and to alternately engage with the shoulders at the opposite sides of said opening, substantially as shown.

No. 65,215. Electrical Circuit Breaker.
(Frein de circuit électrique.)

The Westinghouse Electric and Manufacturing Company, assignee of Harry P. Davis, Pittsburg, Pennsylvania, U.S.A., 5th December, 1899; 6 years. (Filed 6th September, 1899.)

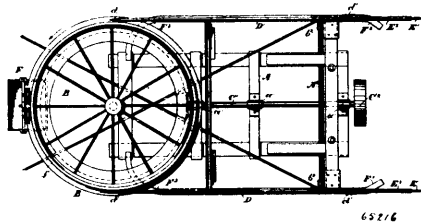
Claim.—1st. A circuit breaker comprising two hinge connected members, one of which has contact pieces, in combination with

stationary circuit terminals the heads of which are in position to be engaged by said contact pieces, and with means for so supporting



the circuit breaker as to prevent downward or lateral displacement, but permitting ready removal when moved upwardly. 2nd. The combination with a suitable base plate having stationary circuit terminals, of a detachable circuit interrupting device having a hook and eye connection with one stationary terminal head and frictional connection with both stationary terminal heads. 3rd. The combination with a supporting base, of a circuit breaker, a stationary member having a detachable frictional and hook and eye connection with said base, a movable member hinged at one end to the stationary member, and a fuse connecting the ends of the two members opposite the hinge and constituting the sole means for supporting the movable member in operative position. 4th. A circuit breaker comprising a stationary member having a substantially infusible terminal block, a hinged movable member having a substantially infusible terminal block at its free end, and a fuse normally interposed between the two terminal blocks. 5th. A circuit breaker comprising a non-conducting rod having a perforated carbon block at one end, and a movable member hinged or pivoted to said rod, and having a perforated carbon block at its free end, a fuse extending through the two carbon blocks and means for clamping its ends to the respective terminals. 6th. A circuit breaker comprising a detachable, but normally stationary member having a carbon terminal block and an adjacent fuse clamp, a movable member hinged or pivoted at one end to the stationary member and provided with a carbon terminal block and a binding or clamping device at its other end, and a fuse interposed between said carbon blocks and fastened in position by the said clamping devices. 7th. A circuit-breaker comprising a hinged or pivoted member having a carbon terminal block and a fuse clamping device, in combination with a stationary member having a carbon terminal block and a fuse clamping device, and a cord attached to the movable member to the last named clamping device for releasing the fuse to open the circuit. 8th. The combination with a supporting base provided with circuit terminals, of a circuit breaker stationary member removably attached to and supported by said terminals and provided with a carbon terminal block, a movable member hinged or pivoted at one end to said stationary member and provided with a carbon terminal block at its outer end and a fuse interposed between said carbon blocks.

No. 65,216. Rope Tramway System.
(Système de tramway à câble.)

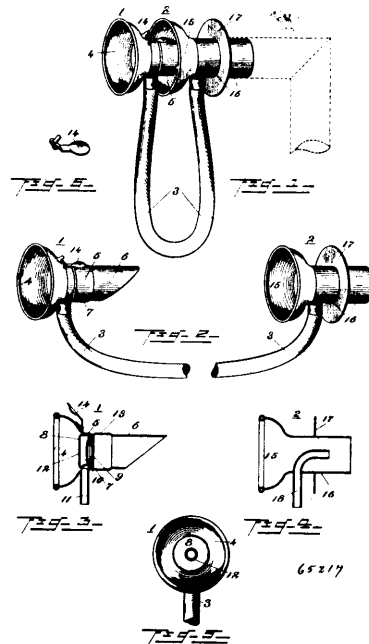


The Vulcan Iron Works, assignee of James T. Ludlow, all of San Francisco, California, U.S.A., 5th December, 1899; 6 years. (Filed 14th November, 1899.)

Claim.—1st. In a rope tramway system, the combination with the track ropes, of a transfer device located at the terminal or transfer end of the system, the switch rails leading onto the said transfer device, a switch movably attached to each switch rail, connection between each switch and the track ropes, and of means for imparting rotary motion to the transfer device. 2nd. In a rope tramway system, the combination with the track rope, of a transfer device located at the terminal or transfer end of the system, of devices for guiding the carriers from one track rope onto the transfer device and from said device onto the opposite track rope, mechanism for impart-

ing rotation to the transfer device and of independent means for conveying the carriers onto the transfer device and removing same therefrom, whereby the said carriers are automatically shifted from one track rope to the opposite one. 3rd. In a rope tramway system, the combination with the track ropes for the carriers, an endless haulage rope for propelling the carriers, connection between the carriers and the haulage rope, a turntable located at the transfer end of the system, mechanism for imparting rotary motion to the turntable, switch rails leading onto the turntable, of a switch movably connected to the outer end of each rail, and of connection between each switch and the track ropes.

No. 65,217. Speaking Tube. (Cordon acoustique.)



Charles Edward Ormsby, William Charles Kennedy and John Knox Leslie, all of Toronto, Ontario, Canada, 5th December, 1899; 6 years. (Filed 27th February, 1899.)

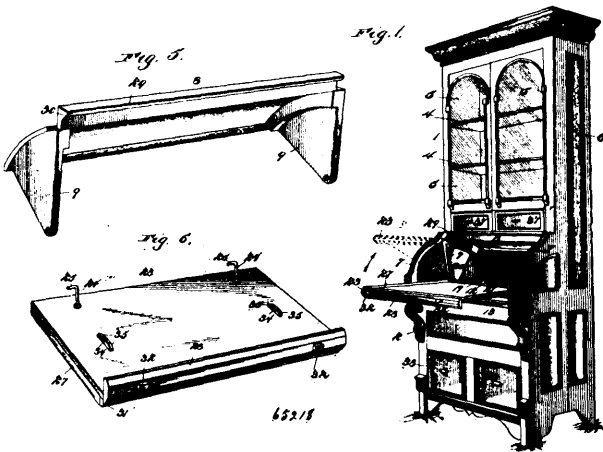
Claim.—1st. In a combined receiver and transmitter for speaking tube termini, a receiver consisting of a spherical shaped cup having a cylindrical projecting sleeve, a sound chamber and whistle within the interior of said sleeve, a branch pipe connecting with said sound chamber, a transmitter consisting of a spherical shaped cup having a cylindrical projecting sleeve, a sound collecting branch pipe leading from the interior of said sleeve, the sleeve of said receiver adapted to pass within the cylindrical interior of the sleeve of said transmitter, a flexible sound conduit connected to the branch pipes of said receiver and transmitter, substantially as shown and described. 2nd. In a combined receiver and transmitter for speaking tube termini, the combination of a receiver consisting of a spherical shaped cup having a cylindrical projecting sleeve, a sound chamber and whistle located within the interior of said sleeve, a branch pipe connecting with said sound chamber, and a transmitter consisting of a spherical shaped cup having a cylindrical projecting sleeve, a sound collecting branch pipe leading from the interior of said sleeve, the said branch pipes of said receiver and transmitter connected by a flexible sound conduit, substantially as shown and described.

No. 65,218. Kitchen Cabinet. (Cabinet de cuisine)

George M. Leforge and Noah A. Kinworthy, both of Heppner, Oregon, U.S.A., 5th December, 1899; 6 years. (Filed 14th November, 1899.)

Claim.—1st. In a cabinet, a rotatory top, a slidable board operatively connected to move simultaneously with the top, and having an independent tilting movement, at its inward limit and when the rotatory top is open. 2nd. In a cabinet, a slidable board, having angular swivelled catches, and a board bar supporting the board, slidable therewith, and provided with slots detachably receiving the catches. 3rd. In a cabinet, a rotatory top, a slidable board, pulleys mounted independently of the top and the board, and flexible connections passing over the respective pulleys, having their opposite ends connected to the top and board, respectively, and forming means for simultaneously operating both members, by a movement of either member. 4th. The combination with a support, of a reciprocatory board bar, a rotatory top operatively connected therewith, and a kneading board detachably connected to the board bar substantially as specified. 5th. In a kitchen cabinet, the combi-

nation with opposite rails and a rotary top thereabove, a board bar movably carried by the rails, a kneading board detachably carried



by the bar, a roller located adjacent to the front ends of the rails and supporting the board, and a flexible connection intermediate of the board bar and rotary top, substantially as specified. 6th. In a kitchen cabinet, the combination with horizontal rails extending parallel to the side walls of said cabinet and provided with slots, a board bar provided with trunnions engaging the slots in the rails, a kneading board detachably supported at its rear end by said bar, a rotary top having its ends located beyond the rails, rollers located beyond the rails adjacent to their rear ends and flexible bands passed around said rollers and connecting the rotary top and board bar, substantially as specified. 7th. In a kitchen cabinet, the combination with a pair of slotted rails parallel with and adjacent to the side walls of the cabinet, a slotted horizontal board bar provided with trunnions extending through the rails, a kneading board provided with angular swivelled catches extending through the slots in the board bar, a roller journaled between the front ends of the rails and supporting the board, a rotary top, rollers located adjacent to the rear ends of the rails, and flexible bands passed around the rollers and connected at their opposite ends to the rotary top and board bar, respectively, substantially as specified. 8th. In a cabinet, a slidable board, a roller supporting the forward end thereof, and turn buttons provided upon the lower side of the board and in rear of the roller, said turn buttons forming stops for engagement with the front of the cabinet, to limit the forward movement of the board, and each turn button having opposite ends bevelled upon the lower side thereof, to pass over the roller. 9th. The combination with a sliding board provided with an inclined face, of a rotary top provided with an inclined face, in a position to the inclined face of the board, substantially as specified. 10th. The combination with a sliding board provided with an inclined face, at one end, of a rotary top provided with a co-operating inclined face and mechanism operatively connecting the board and top at their ends opposite the inclined faces, substantially as specified. 11th. In a cabinet, a rotary top, a slidable board, operative connecting means for simultaneously moving the top and the board, and means for imparting an initial movement to the rotary top, prior to the action thereon of the operative connection between the latter and the board.

No. 65,219. Method of Rendering Iron Castings Malleable. (*Méthode de rendre la fonte malléable.*)

John Collins Bradley, Buffalo, New York, U.S.A., 5th December, 1899; 6 years. (Filed 13th November, 1899.)

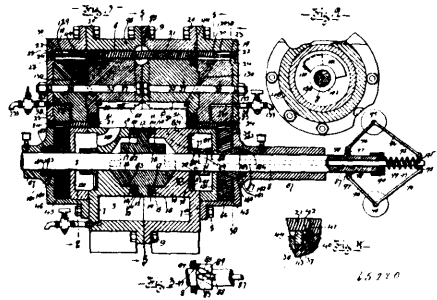
Claim.—The herein described method of annealing iron castings which consists in packing the castings in pulverized furnace slag which is rich in iron oxid and subjecting such packed castings to the annealing heat, substantially as set forth.

No. 65,220. Rotary Engine. (*Machine rotatoire.*)

Victor Filteau, Montreal, Quebec, Canada, 5th December, 1899; 6 years. (Filed 21st January, 1899.)

Claim.—1st. In a rotary engine, a cylinder having a radial extension, a piston revoluble within said cylinder, a rotary abutment located within said radial extension, and consisting of a sleeve having an opening in its side of sufficient area to accommodate the piston in its revolution, a stationary core extending through said sleeve from end to end thereof and having a portion milled away on the periphraetic line of the cylinder, means for causing said sleeve to rotate in an opposite direction to the piston, and a steam supply to and exhaust from said cylinder, for the purpose set forth. 2nd. In a rotary engine, a cylinder having a radial extension with an interior peripheral groove, a piston revoluble within said cylinder, a rotary abutment located within said radial extension, and consisting of a sleeve having an opening in its side of sufficient area to accommodate the piston in its revolution, the said groove extending

from one line of junction of said cylinder and extending to a point distant from the other line of junction greater than the width of



the opening in the side of the abutment, a stationary core extending through said sleeve from end to end thereof and having a portion milled away on the periphraetic line of the cylinder and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first mentioned groove, means for causing said sleeve to rotate in an opposite direction to the piston, and a steam supply to and exhaust from said cylinder, for the purpose set forth. 3rd. In a rotary engine, a cylinder having a radial extension, a shaft extending through said cylinder from end to end thereof, a piston revoluble within said cylinder, a stationary partitioning sleeve enclosing approximately the complete portion of the shaft within said cylinder, means for connecting the piston to the portion of the shaft within the cylinder not enclosed by said sleeve, a rotary sleeve located within said radial extension, said sleeve having an opening in its side of sufficient area to accommodate the piston in its revolution, a stationary core extending through said sleeve from end to end thereof and having a portion milled away on the periphraetic line of the cylinder, means for causing said sleeve to rotate in an opposite direction to the piston, for the purpose set forth. 4th. In rotary engine, a cylinder having a radial extension of greater length than the interior of the cylinder, a shaft extending through said cylinder from end to end thereof, a piston revoluble within said cylinder, a rotary sleeve located within and extending from end to end of said radial extension, said sleeve having an opening in its side of sufficient area to accommodate the piston in its revolution, a stationary core extending through said sleeve from end to end thereof and having a portion milled away on the periphraetic line of the cylinder, and a portion adjacent to each end milled away at the opposite side, and a steam passage extending from said first mentioned milled away portion to each of said last mentioned milled away portion, means for causing said sleeve to rotate in an opposite direction to the piston, for the purpose set forth. 5th. In a rotary engine, a cylinder having a radial extension of greater length than the interior of the cylinder, a shaft extending through said cylinder from end to end thereof, a piston revoluble within said cylinder, a stationary sleeve enclosing approximately the complete portion of the shaft within said cylinder, means for connecting the piston to the portion of the shaft within the cylinder not enclosed by said sleeve, a rotary sleeve located within and extending from end to end of said radial extension, said sleeve having an opening in its side of sufficient area to accommodate the piston in its revolution, a stationary core extending through said sleeve from end to end thereof and having a portion milled away on the periphraetic line of the cylinder, and a portion adjacent to each end milled away at the opposite side, and a steam passage extending from said first mentioned milled away portion to each of said last mentioned milled away portion, means for causing said sleeve to rotate in an opposite direction to the piston, for the purpose set forth. 6th. In a rotary engine, the combination of a cylinder, a shaft extending concentrically through said cylinder and having a radial extension with an interior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a piston completely bisecting the space between said sleeve and the walls of the cylinder, means for originally connecting the piston to that portion of the shaft not enclosed by said partitioning sleeve, means for closing the space between the inside ends of the divided partitioning sleeve, a rotary abutment located within the extension of the cylinder, and consisting of a sleeve extending axially through the cylinder and having an opening in its side equal in length to the axial length of the interior of the cylinder and of sufficient width to accommodate the piston in its revolution, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder, a core extending through said sleeve from end to end thereof and having a portion milled away on the periphraetic line of the cylinder and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first-mentioned groove which extends from one line of junction of said cylinder and radial extension to a point distant from the other line of junction greater than the width of the opening in the abutment, a steam inlet port to said cylinder, an automatic cut

off valve for said port, and an exhaust port from said cylinder, substantially as described and for the purpose set forth. 7th. In a rotary engine, the combination of a cylinder, a shaft extending concentrically through said cylinder, and having an extension with an exterior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a disc secured rigidly to said shaft and corresponding in diameter to that of the exterior of the sleeve, a piston secured rigidly to the periphery of said disc, and completely bisecting the space between said sleeve and the walls of the cylinder, a rotary abutment located within the extension of the cylinder, and consisting of a sleeve extending axially through the cylinder, and having an opening in its side equal in length to the axial length of the interior of the cylinder and of sufficient width to accommodate the piston in its revolution, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder, a core extending through said abutment sleeve from end to end thereof, and having a portion milled away on the periphatic line of the cylinder, and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first-mentioned groove which extends from one line of junction of said cylinder and radial extension to a point distant from the other line of juncture greater than the width of the opening in the abutment, a steam inlet port to said cylinder, an automatic cut off valve for said port, and an exhaust port from said cylinder, substantially as described and for the purpose set forth. 8th. In a rotary engine, the combination of a cylinder, a shaft extending concentrically through said cylinder, the interior whereof is rectangular in axial plane, and circular in contour transversely of said axial plane and having an axial extension with an interior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a disc secured rigidly to said shaft and corresponding in diameter to that of the exterior of the sleeve, a piston secured rigidly to the periphery of said disc, and completely bisecting the space between said sleeve and the walls of the cylinder, a rotary abutment located within the extension of the cylinder, and consisting of a sleeve extending axially through the cylinder and having an opening in its side equal in length to the axial length of the interior of the cylinder, and of sufficient width to accommodate the piston in its revolution, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder, a core extending through said sleeve from end to end thereof and having a portion milled away on the periphatic line of the cylinder and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first mentioned groove which extends from one line of junction of said cylinder and radial extension to a point distant from the other line of juncture greater than the width of the opening in the abutment, a steam inlet port to said cylinder, an automatic cut-off valve for said port, and an exhaust port from said cylinder, substantially as described and for the purpose set forth. 9th. In a rotary engine, the combination of a cylinder, a shaft extending concentrically through said cylinder, the interior whereof is rectangular in axial plane and circular in contour transversely of said axial plane, and having a radial extension with an interior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a disc corresponding in diameter to that of the exterior of the sleeve and secured rigidly to said shaft by a hub weighted at one side, a piston secured rigidly to the periphery of said disc at a point diametrically opposite to the weight and completely bisecting the space between said sleeve and the walls of the cylinder, a rotary abutment located within the extension of the cylinder and consisting of a sleeve extending axially through the cylinder and having an opening in its side equal in length to the axial length of the interior of the cylinder and of sufficient width to accommodate the piston in its revolutions, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder, a core extending through said sleeve from end to end thereof and having a portion milled away on the periphatic line of the cylinder and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first mentioned groove, which extends from one line of junction of said cylinder and extension to a point distant from the other line of juncture greater than the width of the opening in the abutment, a steam inlet port to said cylinder, an automatic cut-off valve for said port consisting of a disc having one or more ports therein and mounted upon and rotatable with the shaft in close proximity to the said inlet port, and an exhaust port from said cylinder, substantially as described and for the purpose set forth. 10th. In a rotary engine, the combination of a cylinder, a shaft extending concentrically through said cylinder, the interior whereof is rectangular in axial plane and circular in contour transversely of said axial plane, and having a radial extension with an interior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a disc secured

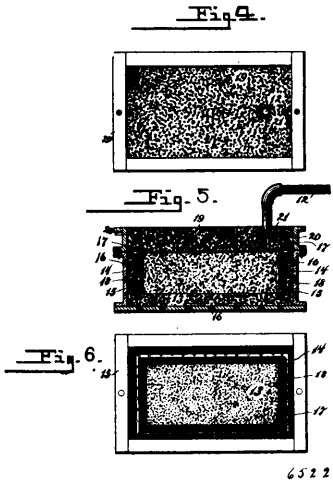
rigidly to said shaft and corresponding in diameter to that of the exterior of the sleeve, a piston secured rigidly to the periphery of said disc and completely bisecting the space between said sleeve and the walls of the cylinder, a rotary abutment located within the extension of the cylinder and consisting of a sleeve extending axially through the cylinder, and having an opening in its side equal in length to the axial length of the interior of the cylinder and of sufficient width to accommodate a piston in its revolution, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder, a core extending through said sleeve from end to end thereof and having a portion milled away on the periphatic line of the cylinder, and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first mentioned groove, which extends from one line of junction of said cylinder and extension to a point distant from the other line juncture greater than the width of the opening in the abutment, a steam inlet port to said cylinder, an automatic cut-off valve for said port, and an exhaust port from said cylinder and means for controlling said exhaust port, substantially as described and for the purpose set forth. 11th. In a rotary engine, the combination of a cylinder, a shaft extending concentrically through said cylinder, the interior whereof is rectangular in axial plane, and circular in contour transversely of said axial plane, and having a radial extension with an interior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a disc secured rigidly to said shaft and corresponding in diameter to that of the exterior of the sleeve and secured rigidly to said shaft by a hub weighted at one side, a piston secured rigidly to the periphery of said disc at a point diametrically opposite to the weight and completely bisecting the space between said sleeve and the walls of the cylinder, a rotary abutment located within the extension of the cylinder and consisting of a sleeve extending axially through the cylinder and having an opening in its side equal in length to the axial length of the interior of the cylinder and of sufficient width to accommodate the piston in its revolution, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder, a core extending through said sleeve from end to end thereof and having a portion milled away on the periphatic line of the cylinder and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first mentioned groove which extends from one line of junction of said cylinder and extension to a point distant from the other line of juncture greater than the width of the opening in the abutment, a steam inlet port to said cylinder, an automatic cut off valve for said port concentric of a disc having one or more ports therein, and mounted upon and rotatable with the shaft in close proximity to the said inlet port, and an exhaust port from said cylinder and means for controlling said exhaust port, substantially as described and for the purpose set forth. 12th. In a rotary engine, the combination of a cylinder, a shaft extending concentrically through said cylinder, the interior whereof is rectangular in axial plane, and circular in contour transversely of said axial plane and having a radial extension with an interior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a disc secured rigidly to said shaft and corresponding in diameter to that of the exterior of the sleeve, a piston secured rigidly to the periphery of said disc, and completely bisecting the space between said sleeve and the walls of the cylinder, a rotary abutment located within the extension of the cylinder, and consisting of a sleeve extending axially through the cylinder, and having an opening in its side equal in length to the axial length of the interior of the cylinder and of sufficient width to accommodate the piston in its revolution, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder a core extending through said sleeve from end to end thereof and having a portion milled away on the periphatic line of the cylinder and having a peripheral groove extending around the cylindrical portion from one milled end of the first mentioned groove which extends from one line of junction of said cylinder and extension to a point distant from the other line of juncture greater than the width of the opening in the abutment, a steam cushion adapted to partially support the abutment sleeve, a steam inlet port to said cylinder, an automatic cut-off valve for said port, and an exhaust from said cylinder, substantially as described and for the purpose set forth. 13. In a rotary engine the combination of a casing comprising a main chamber and an auxiliary chamber, the auxiliary chamber having its ends closed by cylindrical caps, a shaft extending concentrically through said main chamber, said auxiliary chamber having an interior peripheral groove, a divided partitioning sleeve carried rigidly by the cylinder heads and enclosing approximately the complete portion of the shaft within said cylinder, a disc secured rigidly to said shaft and corresponding in diameter to that of the exterior of the sleeve, a piston secured rigidly to the periphery of said disc and completely bisecting the space between said sleeve and the walls of the cylinder, a rotary abutment located within the extension of the cylinder and consisting of a sleeve extending

axially through the auxiliary chamber and into the caps at the ends thereof and having an opening in its side equal in length to the axial length of the interior of the main chamber and of sufficient width to accommodate the piston in its revolution, means for causing said shaft to rotate the abutment in an opposite direction to itself, means for establishing steam tight relation between the ends of the sleeve and the body of the cylinder a core extending through said sleeve from end to end thereof and having a portion milled away on the peripheral line of the main chamber and having a peripheral groove extending around the cylindrical portion from one milled edge to a point in the radial plane of the corresponding end of the first mentioned groove, which extends from one line of junction of said main and auxiliary chambers to a point distant from the other line of juncture greater than the width of the opening in the abutment, a steam cushion adapted to partially support the abutment sleeve and consisting of a recess formed in the cylindrical surface of the portion of said core within the cups on a line diametrically opposite to the forward half (relatively to the "going ahead" travel of the piston) of the portion of the abutment sleeve that intersects the cylinder, a communicating passage connecting said recess with the abutment chamber, and an expansible packing ring carried by the interior of said sleeve and bearing upon one side of the circumferential recess cut in said core at the inner end of the recess just mentioned and a pair of expansible stripes extending axially one along each side edge of said first mentioned recess and from said packing ring to the adjacent end of the core, expansible steam packing strips, a steam inlet port to said main chamber, an automatic cut off valve for said port and an exhaust port from said main chamber, substantially as described and for the purpose set forth. 14th. In an engine, a valvular plate having a recess formed in its outer face, a second valvular plate facing the steam supply and having the portion thereof located over said recess perforated and adapted to slide across the face of said first mentioned plate. 15th. In combination with the cylinder of a rotary engine, an automatically variable cut-off consisting of a plate having one or more ports therein and the portion adjacent to said port or ports recessed on its outer face, said port or ports at intervals registering with the steam inlet port to the engine, means for connecting said plate to a rotating part of the engine to rotate therewith, a valvular plate movable over the face of said first mentioned plate to control the ports therein and having the portion thereof located over said recess or recesses perforated, and means under the influence of the variance of the resistance to the engine for moving said last mentioned plate, substantially as described and for the purpose set forth. 16th. In combination with the cylinder of a rotary engine, an automatically variable cut-off, consisting of a valvular plate having a recess formed in the outer face, means for connecting said plate to a rotating part of the engine to rotate therewith, the steam inlet port to said cylinder being located in the path of said plate, a second valvular plate having the portion thereof located over the recess perforated and adapted to slide across the face of said first mentioned plate, and means under the influence of the variance of the resistance to the engine for moving said last mentioned plate and said cut-off being movable to and from the cylinder head in which said inlet port is cut, said movement of the cut-off being automatically effected by the reversal of the direction of travel of the steam fed to the engine, substantially as described, for the purpose set forth. 17th. In combination with the cylinder of a rotary engine, an automatically variable cut-off consisting of a plate having a series of ports therein the body pieces between said ports having recesses formed in their outer faces, said ports at intervals registering successively with the steam inlet port to the engine, means for connecting said plate to a rotating part of the engine to rotate therewith, a perforated valvular plate movable over the face of said first mentioned plate to simultaneously control the ports therein, and means under the influence of the variance of the resistance to the engine for moving said last mentioned plate and said cut-off being movable to and from the cylinder head in which said inlet port is cut, said movement of the cut-off being automatically effected by the reversal of the direction of travel of the steam fed to the engine, substantially as described and for the purpose set forth. 18th. In combination with the cylinder and shaft of a rotary engine, of an automatically variable cut off consisting of a plate having a series of ports of different area therein, said plate overlapping the steam inlet port to the cylinder, means for connecting said plate to the shaft to rotate therewith, a segmental plate having a series of valvular bridge pieces to control said series of ports, and formed in one with an interiorly off set sleeve taking over said shaft and said first mentioned sleeve, said last mentioned sleeve being formed with a pair of diametrically opposite diagonal slots, the shaft having an axial slot extending diametrically therethrough and intersecting said diagonal slots, and an axial boring extending from the adjacent end of the shaft to said axial slot, a spindle extending through said boring and having a transverse piece on the inner end thereof, and projecting through said axial slot and taking into said diagonal slots, a stuffing box closing the outer end of said shaft, a collar secured rigidly upon the outer end of said spindle, a coiled spring bearing between said collar and stuffing box, a pair of lugs projecting radially from diametrically opposite sides of said collar, a collar secured rigidly upon the shaft adjacent to the outer end thereof, a pair of governor balls, two pairs of rods pivotally connecting said governor balls to the lugs upon said respective collars, a steam chest encircling said shaft and enclosing said plates, a stuffing box

for packing the point at which the shaft passes out of the steam chest, a steam supply to said steam chest, a segmental valvular plate for controlling the exhaust port from said cylinder, and means for connecting said latter plate to the shaft, substantially as described and for the purpose set forth. 19th. In combination with the cylinder and shaft of a rotary engine, of an automatically variable cut off, consisting of a plate having a series of ports of different area therein, the bridge piece between said ports having recesses formed in their outer faces, said plate overlapping the steam inlet port to the cylinder, means for connecting said plate to the shaft to rotate therewith, a segmental plate having a series of perforated valvular bridge pieces to control said series of ports, and formed in one with an interiorly off-set sleeve taking over said shaft and said first mentioned sleeve, said last mentioned sleeve being formed with a pair of diametrically opposite diagonal slots, the shaft having an axial slot extending diametrically therethrough and intersecting said diagonal slots, and an axial boring extending from the adjacent end of the shaft to said axial slot, a spindle extending through said boring and having a transverse piece on the inner end thereof and projecting through said axial slot and taking into said diagonal slots, a stuffing box closing the outer end of said shaft, a collar secured rigidly upon the outer end of said spindle, a coiled spring bearing between said collar and stuffing box, a pair of lugs projecting radially from diametrically opposite sides of said collar, a collar secured rigidly upon the shaft adjacent to the outer end thereof, a pair of governor balls, two pairs of rods pivotally connecting said governor balls to the lugs upon said respective collars, a steam chest encircling said shaft and enclosing said plates, a stuffing box for packing the point at which the shaft passes out of the steam chest, a steam supply to said steam chest, a segmental valvular plate for controlling the exhaust port from said cylinder, and means for connecting said latter plate to the shaft, substantially as described and for the purpose set forth. 20th. In combination with the cylinder and shaft of a rotary engine, of an automatically variable cut-off consisting of a plate having a series of ports of different area therein, said plate overlapping the steam inlet port to the cylinder, and being formed in one with an axially slotted sleeve adapted to take over said shaft, a pin carried rigidly by the shaft and taking into the slot in said sleeve, a segmental plate having a series of valvular bridge pieces to control said series of ports and formed in one with an interiorly off-set sleeve taking over said shaft and said first mentioned sleeve, said last mentioned sleeve being formed with a pair of diametrically opposite diagonal slots, the shaft having an axial slot extending diametrically therethrough and intersecting said diagonal slots, and an axial boring extending from the adjacent end of the shaft to said axial slot, a spindle extending through said boring and having a transverse piece on the inner end thereof, and projecting through said axial slot and taking into said diagonal slots, a stuffing box closing the outer end of said shaft, a collar secured rigidly upon the outer end of said spindle, a coiled spring bearing between said collar and stuffing box, a pair of lugs projecting radially from diametrically opposite sides of said collar, a collar secured rigidly upon the shaft adjacent to the outer end thereof, a pair of governor balls, two pairs of rods pivotally connecting said governor balls to the lugs upon said respective collars, a steam chest encircling said shaft and enclosing said plates, a stuffing box for packing the point at which the shaft passes out of the steam chest, a steam supply to said steam chest, a segmental valvular plate for controlling the exhaust port from said cylinder, and means for connecting said latter plate to the shaft, substantially as described and for the purpose set forth. 21st. In combination with the cylinder and shaft of a rotary engine, of an automatically variable cut-off consisting of a plate having a series of ports of different area therein, the bridge piece between said ports having recesses formed in their outer faces, said plate overlapping the steam inlet port to the cylinder and being formed in one with an axially slotted sleeve adapted to take over said shaft, a pin carried rigidly by the shaft and taking into the slot in said sleeve, a segmental plate having a series of perforated valvular bridge pieces to control said series of ports and formed in one with an interiorly off-set sleeve taking over said shaft and said first mentioned sleeve, said last mentioned sleeve being formed with diagonal slots, the shaft having an axial slot extending diametrically therethrough and intersecting said diagonal slots, and an axial boring extending from the adjacent end of the shaft to the said axial slot, a spindle extending through the said boring and having its inner end off-set and projecting through said axial slot and taking into said diagonal slots, a stuffing box closing the outer end of said shaft, a collar secured rigidly upon the outer end of said spindle, a coiled spring bearing between said collar and stuffing box, a pair of lugs projecting radially from diametrically opposite sides of said collar, a collar secured rigidly upon the shaft adjacent to the outer end thereof, a pair of governor balls, two pairs of rods pivotally connecting said governor balls to the lugs upon said respective collars, a steam chest encircling said shaft and enclosing said plates, a stuffing box for packing the point at which the shaft passes out of the steam chest, a steam supply to said steam chest, a segmental valvular plate for controlling the exhaust port from said cylinder and means for connecting said latter plate to the shaft, substantially as described and for the purpose set forth. 22nd. An expansible steam packing ring consisting of a carrying ring L shaped in cross section secured rigidly to one of the parts between which steam tight relation is required and having a series of sockets in the axial fac

thereof adjacent to the other part, a bearing ring located in the recess of said L piece in contact with said other part, and a series of expansil springs located in said sockets and bearing upon said bearing ring, substantially as described and for the purpose set forth.

No. 65,221. Manufacture of Inflammable Paste for Matches (*Fabrication de soufre pour allumettes.*)



65221

Henri Sévène and David Emil Cahen, both of Paris, France, 5th December, 1899; 6 years. (Filed 31st January, 1899.)

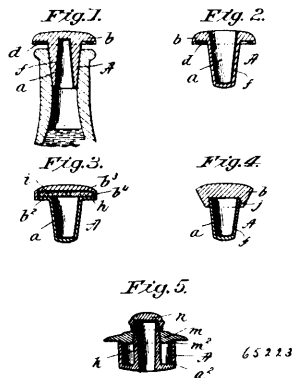
Claim.—1st. In the manufacture of inflammable pastes suitable for matches the substitution of sesquisulphide of phosphorus for white or yellow phosphorus. 2nd. An inflammable paste suitable for matches comprising sesquisulphide of phosphorus, oxidizing material, frictional matter, and binding material. 3rd. An inflammable paste suitable for matches comprising sesquisulphide of phosphorus, chlorate of glue, and water, substantially in the proportions hereinbefore stated.

No. 65,222. Process for Drying Sand Moulds. (*Procédé pour sécher les moules de sable.*)

Noah Shaw, Eau Clair, Wisconsin, U.S.A., 5th November, 1899; 6 years, (Filed 13th November, 1899.)

Claim.—1st. A process for drying closed sand and loam moulds, which consists in forcing heated air under pressure directly into the interior mould cavity, and from thence out through the pores in the walls of the mould. 2nd. A process for drying sand moulds which consists in forcing heated air under pressure into and outward uniformly through all the porous walls of a finished and closed mould, substantially as described.

No. 65,223. Bottle Stopper. (*Bouchon de bouteille.*)



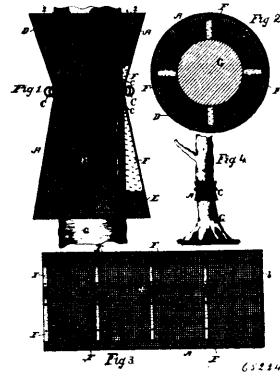
65223

Francis Lucien Cook, Springfield, Massachusetts, U.S.A., 5th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. A stopper for a bottle having its plug portion which fits into the bottle neck downwardly tapering and constructed hollow and thereby flexible and yielding, and composed of wood. 2nd. A stopper for a bottle having its plug portion downwardly tapering, and constructed hollow, and thereby rendered flexible and yielding, composed of wood having the grain thereof running lengthwise of the stopper. 3rd. A stopper having a plug portion externally tapered and made hollow and thereby rendered flexible and having

its interior surface coated or treated with material for rendering it impervious to moisture. 4th. A stopper for a bottle having its plug portion externally tapered and constructed hollow for flexibility, and having a widened head flange, the same being composed of wood. 5th. A stopper for a bottle having the plug portion thereof formed annular with the intervening annular chamber a^2 , having the central member thereof constructed tubular and extended upwardly higher than the outer annular wall, the cap for closing the upwardly extended end of said tubular part, and a portion for covering the top of the annular chamber within the stopper plug.

No. 65,224. Tree Protector. (*Protecteur de bandages.*)

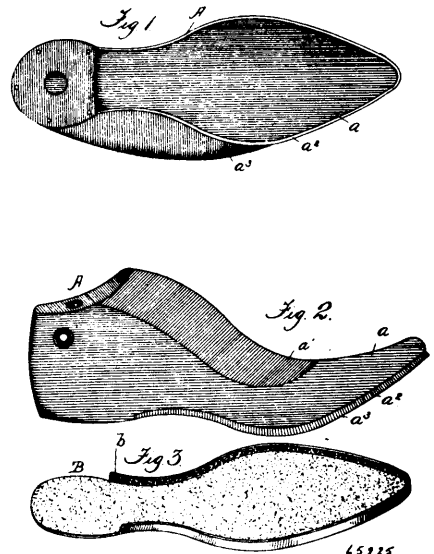


65224

Jacob Schlaefer, Mendon, New York, U.S.A., 5th December 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. A tree protector, comprising a flexible perforated sheet to encircle the tree, made flaring at its ends, and a spring for holding the sheet to the tree, substantially as set forth. 2nd. The combination, in a tree protector, of a perforated sheet bent around the tree, with tapered spacers between the sheet and the tree, and means for holding the sheet upon the tree, substantially as described. 3rd. A perforated sheet A, made to encircle the tree, reduced in diameter to touch the tree between its ends, a spiral spring passed around the sheet at said place of least diameter, and tapered spacers above and below the spring, with their pointed ends turned towards each other, all substantially as set forth.

No. 65,225. Last. (*Forme.*)

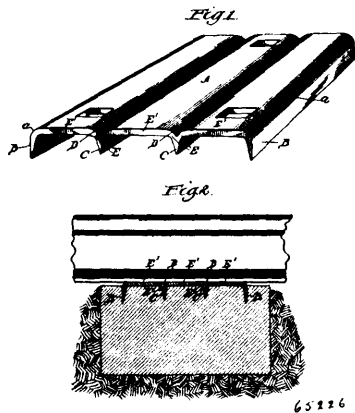


65225

Albert Many, St. Hyacinthe, Quebec, Canada, 5th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. A last, constructed with an extension extending from the toe portion of the last to and terminating at the front of the heel portion, substantially as described. 2nd. A last, constructed with an extension extending from the front portion of the last to and terminating at the front of the heel portion, the said extension projecting at substantially right angles to the bottom, forming a sharp edge.

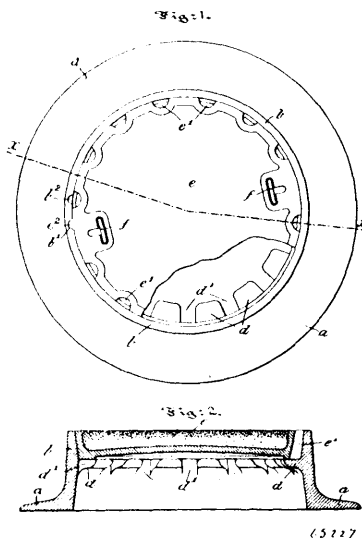
No. 65,226. Railway Tie Plate.
(*Plaque de traverse de chemin de fer.*)



Willis S. Jones, Chicago, Illinois, U.S.A., 5th December, 1899; 6 years. (Filed 14th November, 1899.)

Claim.—1st. A railway tie plate provided at its edges with tie engaging flanges adapted to enter the tie parallel with the grain thereof, and on its upper side with one or more grooves or depressions, substantially as described. 2nd. A railway tie plate provided on its underside with tie engaging flanges along each longitudinal edge and with one or more intermediate depending tie engaging flanges and one or more sand grooves on the upper sides of the plates located directly above the intermediate tie engaging flange or flanges, substantially as described. 3rd. A railway tie plate provided at its longitudinal edge with a tie engaging flange, the said edge having a convex surface which begins at the upper surface of the plate and ends in the side surface of the flange, substantially as described. 4th. A railway tie plate provided at its longitudinal edge with a tie engaging flange, said flange flared outwardly, substantially as described. 5th. A railway tie plate provided on its upper side with one or more sand grooves, the metal comprising said grooves being thinner than the body of the plate, substantially as described. 6th. A railway tie plate provided on its upper side with one or more sand grooves and on its under side with one or more tie engaging flanges directly beneath the grooves, the metal comprising the walls of said grooves being thinner than the body of the plate, substantially as described.

No. 65,227. Manhole Frame and Cover.
(*Couverture et cadre de trou d'homme.*)

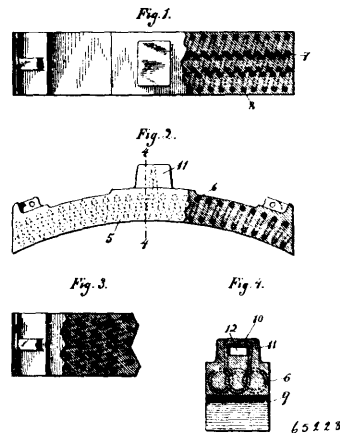


Thomas Pennington Greger, North Wales, Pennsylvania, U.S.A., 15th December, 1899; 6 years. (Filed 14th November, 1899.)

Claim.—1st. The combination with a frame having an upwardly projecting wall, an annular flange or formed on the interior of said wall, said ledge being provided with alternate recesses and projections, of a cover, the base whereof is adapted to rest upon the flange or ledge and having its rim provided at intervals with recesses reversely arranged to the recesses in said ledge, said cover adapted to be supported on said ledge so that its recesses may register alternately with the recesses or projections of the ledge substantially as

and for the purpose described. 2nd. The combination of a frame having an upwardly projecting wall, an annular flange or ledge formed on the interior of said wall, said ledge being provided with alternate recesses and projections, a cover, the base of which is adapted to rest on said ledge and having its rim provided with recesses reversely arranged with respect to the recesses of the ledge, and means for locking the cover within the frame to prevent the turning of the cover on said ledge, substantially as and for the purpose described.

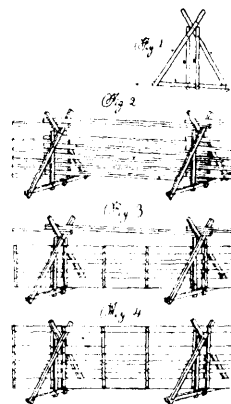
No. 65,228. Brake Shoe. (*Sabot de frein.*)



John Medway, Chicago, Illinois, U.S.A., 5th December, 1899; 6 years. (Filed 14th November, 1899.)

Claim.—1st. A brake shoe comprising a cast metal body having imbedded therein one or more inserts of approximately a coiled or twisted shape, substantially as described. 2nd. A brake shoe having a fastening lug cast integral therewith, a key opening in said lug, and a strengthening staple or insert imbedded in the metal of the shoe and the lug and extending through a portion of the body of the shoe and around said key opening. 3rd. A brake shoe comprising a cast metal body having imbedded therein a plurality of inserts of approximately coiled or twisted shape, one of the turns of one of said coils being extended out to surround the key opening in the lug of the shoe, substantially as described. 4th. A brake shoe comprising a cast metal body having imbedded therein a plurality of longitudinally disposed coils. 5th. A brake shoe comprising a cast metal body having embedded therein a plurality of longitudinally disposed coils, the turns of said coils extending past each other, substantially as described. 6th. A brake shoe comprising a cast metal body having imbedded therein a plurality of coils, the turns of said coils being interwolved or intertwisted, substantially as described. 7th. A brake shoe having a fastening lug cast integral therewith and a strengthening staple or insert imbedded in the cast metal, and extending through a portion of the shoe and the lug, substantially as described.

No. 65,229. Fence Leg. (*Appui de clôtures.*)



Benjamin Dorin, St. Vincent, Ontario, Canada, 5th December, 1899; 6 years. (Filed 22nd October, 1898.)

Claim.—A fence leg composed of scantlings A A, B B, C, arranged and fastened together, substantially as shown and described.

No. 65,230. Graphophone Blank. (*Blanc de graphophone.*)

The American Graphophone Company, Washington, D.C., assignee of Thomas H. Macdonald, Bridgeport, Connecticut, U.S.A., 6th December, 1899; 6 years. (Filed 10th November, 1898.)

Claim.—1st. In the process of making a sound recording material, the improvement consisting in partially saponifying stearic acid, and then heating the mass to a temperature of about 460° F., substantially as described. 2nd. In the process of making a sound recording material, the improvement consisting in mixing stearic acid with caustic soda lye, and then heating the mass to about 460° F. 3rd. The improvement in the process of making sound recording material which consists in heating such material to about 460° F., then cooling the same down to about 360° F., and the moulding the material into the desired shape, substantially as described. 4th. The process of making a sound recording material consisting in dissolving aluminium in soda lye, adding the solution to stearic acid, and raising the temperature of the mass to about 460° F., substantially as described. 5th. The process of making a sound recording material, said process consisting in adding to stearic acid soda lye with which a metal has been united, the lye being in such quantity as to produce partial saponification, and heating the mixture to about 460° F. A composition for receiving engraved records of sounds, comprising saponified stearic acid admixed with other ingredients as specified, and freed from water of crystallization and from objectionable impurities by being heated to the described degree.

No. 65,231. Illuminating and Heating Gas.

(*Méthode d'éclairer et chauffer les chars.*)

The Etothene Gas Company, assignee of Edward Tooth, both of Sydney, Australia, 6th December, 1899; 6 years. (Filed 21st April, 1898.)

Claim.—1st. Improved illuminating and heating gas, manufactured by the bringing into contact with water, of carbide of calcium, a rich easily volatilizable hydrocarbon, and unslaked lime, substantially as herein described and explained. 2nd. Improved illuminating and heating gas, manufactured by the bringing into contact with water, of carbide of calcium, a mixture of terebine and paraffin, and unslaked lime, substantially as herein described and explained. 3rd. Improved illuminating and heating gas, manufactured by the bringing into contact with water, of carbide of calcium coated with terebine, or a mixture of terebine and paraffin, and unslaked lime, with or without the addition of more terebine, or terebine and paraffin, substantially as herein described and explained. 4th. Improved illuminating and heating gas, manufactured in the manner and of the material in about the proportions stated, substantially as herein described and explained.

No. 65,232. Artificial Stone. (*Pierre artificielle.*)

The Oakley Stone Company, assignee of William Alexander Oakley, all of Sidney, Australia, 6th December, 1899; 6 years. (Filed 20th January, 1898.)

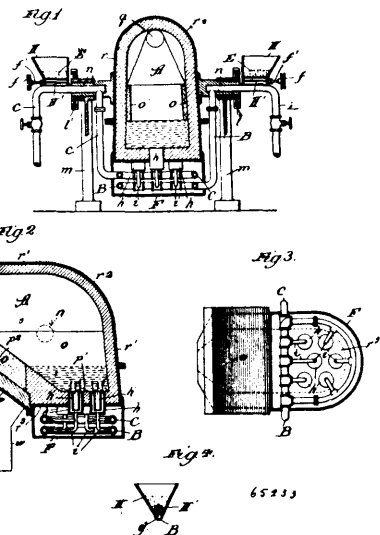
Claim.—1st. The process of manufacturing artificial stone, which consists in mixing alkaline or calcareous earthy material with acid or silicious earthy material and subjecting the said mixture to a fluxing head to cause chemical union, substantially as described. 2nd. The herein described artificial stone, composed of alkaline or calcareous earthy material and acid or silicious earthy material fused together, substantially as set forth.

No. 65,233. Process of Utilizing the Waste Products of a Blast Furnace. (*Procédé pour utiliser les rebuts des hauts fourneaux.*)

The Toronto General Trusts Company, Toronto, Ontario, assignee of Herman L. Hartenstein and Slag and Gas Co., Chicago, Illinois, U.S.A., 6th December, 1899; 6 years. (Filed 3rd January, 1899.)

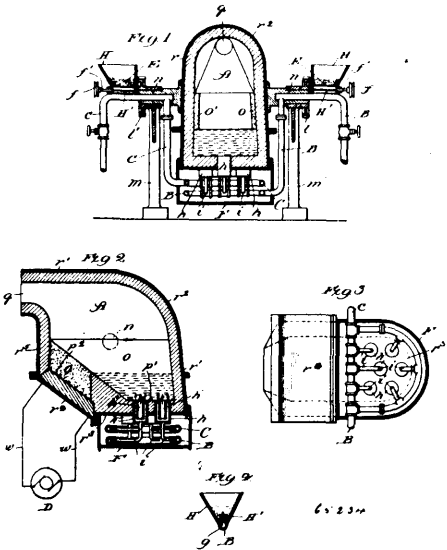
Claim.—1st. The process of utilizing the waste product of a blast furnace, which consists in melting solidified slag and mixing therewith a suitable proportion of carbonaceous material and subjecting the molten slag with its admixture to the action of an electric current by including it in the circuit thereof, substantially as described. 2nd. The process of utilizing the waste product of a blast furnace, which consists in melting solidified slag, then blowing into and thereby impregnating the molten slag with pulverulent carbonaceous material in suitable proportion and subjecting the molten slag with its admixture to the action of an electric current by including it in the circuit thereof, substantially as described. 3rd. The process of utilizing the waste product of a blast furnace, which consists in melting solidified slag, mixing with the molten slag a suitable proportion of carbonaceous material, agitating the mixture to enhance the impregnation of the slag with said carbonaceous material and subjecting the mixture to the action of an electric current by including it in the circuit thereof, substantially as described. 4th. The process of utilizing the waste product of a blast furnace which consists in melting solidified slag, forcing with gas pressure into the molten slag a suitable proportion of pulverulent carbonaceous material and subjecting the molten slag with its admixture to the action of an electric current by including it in the circuit thereof, substantially as described. 5th. The process of

utilizing the waste product of a blast furnace, which consists in melting solidified slag, forcing with gas pressure into the molten



slag a suitable proportion of pulverulent carbonaceous material, agitating the mixture to enhance the impregnation of the slag with said carbonaceous material and subjecting the molten slag with its admixture to the action of an electric current by including it in the circuit thereof, substantially as described.

No. 65,234. Process of Utilizing the Waste Product of Blast Furnaces. (*Procédé pour utiliser les rebuts des hauts fourneaux.*)

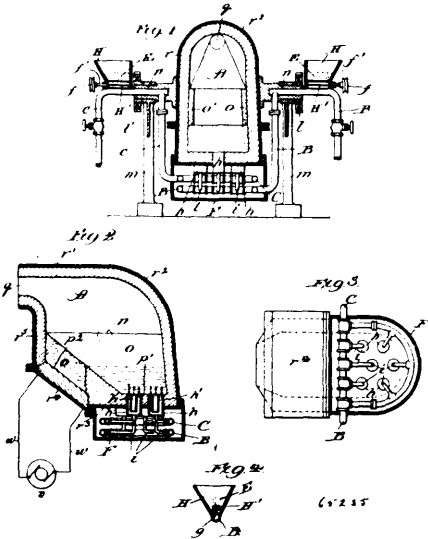


The Toronto General Trusts Company, Toronto, Ontario, Canada, assignee of Herman L. Harenstein and Slag and Gas Co., Chicago, Illinois U.S.A., December, 1899; 6 years. (Filed 3rd January, 1899.)

Claim.—1st. The process of utilizing the waste product, of a blast furnace, which consists in mixing with slag containing largely lime, silica and alumina a suitable proportion of the carbonaceous material and subjecting the mixture to the fusing action of an electric current by including it in the circuit thereof, substantially as described. 2nd. The process of utilizing the waste product of a blast furnace, which consists in diffusing through molten slag a suitable proportion of carbonaceous material and subjecting the mixture to the fusing action of an electric current by including it in the circuit thereof, substantially as described. 3rd. The process of utilizing the waste product of a blast furnace, which consists in blowing into and thereby thoroughly impregnating molten slag with finely divided carbonaceous material in suitable proportion and subjecting the molten slag with its admixture to the fusing action of an electric current by including it in the circuit thereof, substantially as described. 4th. The process of utilizing the waste product of a blast furnace, which consists in mixing with molten slag a suitable proportion of carbonaceous material, agitating the mixture to enhance the impregnation

of the slag with said carbonaceous material and subjecting the mixture to the fusing action of an electric current by including it in the circuit thereof, substantially as described. 5th. The process of utilizing the waste product of a blast furnace, which consists in forcing with gas pressure into molten slag a suitable proportion of finely divided carbonaceous material agitating the mixture to enhance the impregnation of the slag with said carbonaceous material and subjecting the molten slag with its admixture to the fusing action of an electric current by including it in the circuit thereof, substantially as described. 6th. As a new article of manufacture, the compound calcium aluminum silicon carbide ($Al^2, C^3, S^1, C, C_2, C^2$.)

No. 65,235. Method of Utilizing the Waste Product of a Blast Furnace. (*Méthode d'utiliser les rebuts des produits des hauts fourneaux.*)



The Toronto General Trusts Company, Toronto, Ontario, Canada, assignee of Herman L. Hartenstein and Slag and Gas Co., Chicago, Illinois, U.S.A., 6th December, 1899; 6 years. (Filed 3rd January, 1899.)

Claim.—1st. The process of utilizing the waste product of a blast furnace, which consists in bringing slag to a condition suitable for admixture with carbonaceous material, mixing therewith a suitable proportion of such material, injecting a reducing gas into the mixture while in a molten condition and subjecting the molten slag with its admixture to the action of an electric current by including it in the circuit thereof, substantially as described. 2nd. The process of utilizing the waste product of a blast furnace, which consists in mixing with the molten slag a suitable proportion of carbonaceous material, injecting a reducing gas into the mixture and subjecting the molten slag with its admixture to the action of an electric current by including it in the circuit thereof, substantially as described. 3rd. The process of utilizing the waste product of a blast furnace, which consists in mixing with molten slag a suitable proportion of pulverulent carbonaceous material, injecting a reducing gas into the mixture and agitating it to enhance the impregnation of the slag with said carbonaceous material and subjecting the mixture to the action of an electric current by including it in the circuit thereof, substantially as described. 4th. In an apparatus for converting blast furnace slag, a rotatably supported converter chamber having an opening and provided with a slag receiving portion, a mixing portion and an electric treatment portion, said portions having intercommunication, a partition between the mixing portion and the electric treatment portion electrodes in said electric treatment portion, and terminal wires leading from a suitable electric generator to said electrodes, substantially as described. 5th. In an apparatus for converting blast furnace slag, the combination of a rotatably supported converter chamber having an opening and provided with a mixing portion and an electric treatment portion containing electrodes having electrical connections, and provided also with tuyeres, a blast pipe leading to said tuyeres and provided with a slot, a hopper seated over said slot, and an agitating device supported in the hopper and adjacent to said slot, substantially as described. 6th. In an apparatus for converting blast furnace slag, the combination of a converter chamber A supported on trunnions and provided with an opening g , a receiving portion p , a mixing portion p^1 , and an electric treatment portion p^2 , said portions having intercommunication, electrodes o and o^1 in the portion p^2 having electrical connections, tuyeres leading into the portion p^1 , a divided blast pipe leading through a trunnion to said tuyeres and provided with an opening u , a hopper H seated over the opening in said pipe, and a fluted cylinder H^1 rotatably supported in the hopper and covering said opening, substantially as described.

No. 65,236. Production of Solid Materials from Tar.

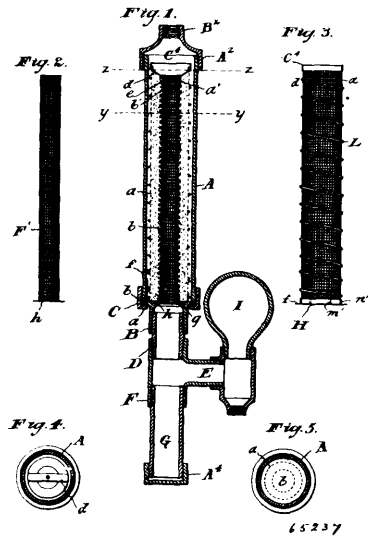
(*Production de matières solides du goudron.*)

Clemens Dörr, Germersheim, Germany, 6th December, 1899; 6 years (Filed 1st August, 1899.)

Claim.—1st. The process of production of solid bodies having hardness between that of wood and that of stone, consisting in the intimate mixture of granular or otherwise finely divided inorganic materials, such as sand, gravel or the like, or organic material, such as sawdust or the like, with from 10 to 30 per cent of tar, heating the same to from 150 to 200° C, or thereabouts, in order to remove from the tar the more volatile of the constituents and subsequent pressing or stamping of the mass before it is completely cold. 2nd. A solid material composed of a mixture of sand, gravel, or similar finely divided inorganic material with 10 to 30 per cent of tar, boiled until the mass appears as a dry mortar and subsequently pressed or stamped. 3rd. A solid material composed of a mixture of sawdust or other finely divided organic material with 10 to 30 per cent of tar, boiled until the mass appears as a dry mortar and subsequently pressed or stamped. 4th. A solid material formed of a mixture of sand, gravel, or other inorganic material with sawdust or other organic material, and 10 to 30 per cent of tar, boiled until the mass appears as a dry mortar and subsequently pressed or stamped.

No. 65,237. Water Purifying Apparatus.

(*Appareil à purifier l'eau.*)

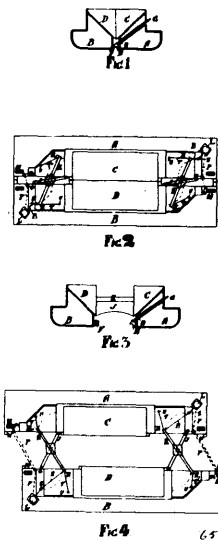


Edwin Adelbert Leland, Great Barrington, Massachusetts, U.S.A., 6th December, 1899; 6 years. (Filed 24th June, 1899.)

Claim.—1st. The combination with an external shell having inlet and outlet passages, a foraminated partition placed within said shell and having a space between itself and the shell, a foraminated partition of smaller diameter placed within the outer partition and with a space between itself and the said outer partition for the reception of a purifying material, of a disc having flanges to which adjacent ends of the two partitions are secured, and a screw clamp arranged to clamp the periphery of the disc between itself and the end of the shell to hold the partitions in position within the shell, substantially as herein set forth. 2nd. The combination with an external shell having inlet and outlet passages, a foraminated partition placed within the shell, closed at its end nearest the outlet of the shell and providing a space between itself and said shell, a foraminated partition of smaller diameter placed within the outer partition and providing a space between itself and the outer partition for the reception of a purifying material, of a disc having flanges to which the ends of the two partitions nearest the inlet of the shell are secured, a screw clamp arranged to clamp the periphery of the disc between itself and the end of the shell to retain the partitions in place, and a spiral wire wound around the outer partition to resist the radial pressure of a liquid directly through said partitions, substantially as herein set forth. 3rd. The combination with the service pipe and distributor pipe of a water supply system, of a tubular screen chamber placed between said pipes, a tubular screen placed in said chamber arranged to receive within it the inlet water and having a space between itself and the walls of the chamber, a sediment chamber between the screen, and an air-chamber interposed between the screen and the water inlet, substantially as herein set forth. 4th. A filter composed of an outer foraminated cylinder a , provided at its closed top with a cross bar having an inwardly projecting stud a^1 , an inner foraminated cylinder b , having at its top a recess to receive the stud, a^1 , a filtering material between the two cylinders, and a shell A, having a space between itself and the outer cylinder a , of a removable strainer

F¹, having a flange *h*, and located within the inner cylinder of the filter with its flange extended under the lower end thereof, and means for gripping said flange against said lower end to retain the strainer in place, substantially as herein set forth. 5th. The combination with a filter composed of an outer foraminated cylinder *a*, provided at its top with a cross bar having an inwardly projecting stud *a*¹, and constructed at its bottom with an outwardly extended flange, an inner foraminated cylinder *b*, having at its top a recess to receive the stud *a*¹, a filtering material between the two cylinders, and a shell *A*, having a space between itself and the outer cylinder, of a removable cylindrical strainer F¹, having a flange *h*, and located within the inner cylinder of the filter with its flange extended under the lower end thereof, a screw section *B*, arranged below the flanges at the outer cylinder and of the strainer against the lower end of the shell and a coupling nut for holding the said section to the shell to grip said flanges to retain the filter and the strainer in position, substantially as herein set forth.

No. 65,238. Dumping Punts or Vessels.
(*Vaisseau à bascule.*)



John James Hasan, Avondale, New Zealand, 6th December, 1899; 6 years. (Filed 4th May, 1899.)

Claim.—1st. A dumping scow comprising two separable water tight structures affording between them a hopper, means connecting said structures and limiting the movement thereof relative to each other, a roller loosely mounted in frames carried by one structure and hooks pivotally mounted on the opposite structure adapted to engage said roller to hold the structure together, and means for operating said hooks, substantially as described. 2nd. The combination of the structures *A* and *B* with the hopper *C*, *D* in their centre the shaft with hook attachment *E* and roller *F*, the rods *G*, the water tight tubes *H*, the gates or girders *J*, the beams *K*, the winches *L*, the stops *N*, the leading blocks *O*, the ring bolts *O*¹, the chain or rope *P*, the leading ropes *P*¹, the inner end *R* and outer end *R*¹ of beams *K*, the leading blocks *S*, the spring attachments *T*, and the ring bolts *U*, all connected as described herein for the purpose set forth and as illustrated by the accompanying drawings.

No. 65,239. Artificial Whalebone. (*Balcine artificielle.*)

Wilhelm Anton Casper Hunkemöller, Amsterdam, Netherlands, 6th December, 1899; 6 years. (Filed 5th December, 1898.)

Claim.—Proceeding for the production of a whalebone like substance, consisting in the treating of sinews, ligaments, urethrae, or bones of cattle or big fishes, the latter after dissolving their phosphor salts in acids, with tanning solutions of any kind, preferably of chrome alum, to which may be added a small percentage of common salt.

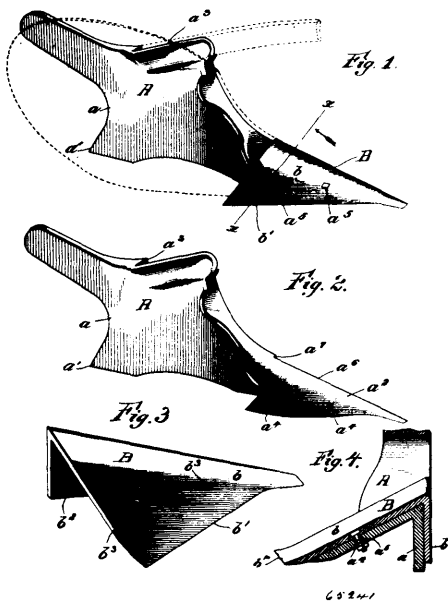
No. 65,240. Plaster Compound. (*Composé de plâtre.*)

Thomas A. Robinson, Lima, Ohio, U.S.A., 6th December, 1899; 6 years. (Filed 9th December, 1898.)

Claim.—1st. A binder for plaster, mortar, or other adhering substance, consisting of long wood fiber, which not only acts as a binder, but gives said plaster an elastic or yielding property or characteristic, substantially as set forth. 2nd. The combination of long wood fiber with plaster mortar, or other adhering substance, substantially in the portions and for the purpose set forth. 3rd. A composition for plaster consisting of long wood fiber and calcined gypsum or plaster of Paris, substantially in the proportions and for the purpose set forth. 4th. A composition for plaster consisting of

long wood fiber, calcined gypsum, and hydraulic cement, substantially in the proportions and for the purpose set forth. 5th. A composition for plaster consisting of long wood fiber, calcined gypsum, hydraulic cement and salt, substantially in the proportions and for the purpose set forth. 6th. A composition for plaster consisting of long wood fiber, calcined gypsum, hydraulic cement and borax, substantially in the proportions and for the purpose set forth. 7th. A composition for plaster consisting of long wood fiber, calcined gypsum, hydraulic cement, salt and borax, substantially in the proportions and for the purpose set forth.

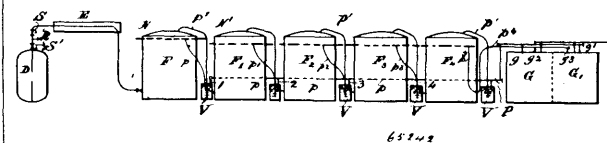
No. 65,241. Plough. (*Charrue.*)



Joseph Omer Lamoureux, Sorel, Quebec, Canada, 6th December, 1899; 6 years. (Filed 14th December, 1898.)

Claim.—1st. A poughshare, comprising a body portion, a plough point, and an auxiliary plough point detachably secured to said plough point, substantially as described. 2nd. A ploughshare, comprising a body portion, a plough point having a recess formed upon its inner edge terminating in a shoulder, and bolt holes formed in the body portion of said plough point, an auxiliary plough point having a depending flange adapted to be received in said recess and abutting against said shoulder, the body portion of said auxiliary plough point terminating in a cutting edge and having bolt holes, whereby the said auxiliary plough point may be detachably secured to the main plough point, substantially as described.

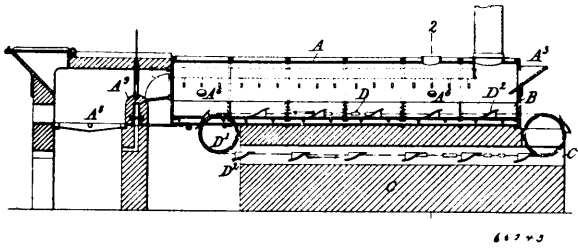
No. 65,242. Process of Manufacturing Alcohol.
(*Procédé pour la fabrication d'alcool.*)



Auguste Collette, Son, and Auguste Boidin, Seclin Nord, France, 6th December, 1899; 6 years. (Filed 10th October, 1898.)

Claim.—1st. The process, which consists in saccharifying and fermenting by means of suitable mucedineae a fermentable sterilized mash under exclusion of adventitious micro-organisms, while said mash is flowing continuously or substantially continuously from a receiver to a holder for the fermented mash, substantially as set forth. 2nd. The process, which consists in saccharifying and fermenting by means of suitable mucedineae a fermentable sterilized mash under exclusion of adventitious micro-organisms, while said mash is flowing continuously or substantially so from a receiver to a still, substantially as set forth. 3rd. The process, which consists in saccharifying and fermenting by means of suitable mucedineae a fermentable sterilized mash under exclusion of adventitious micro-organisms, while said mash is flowing continuously or substantially so from a receiver to a holder for the fermented mash, and adding thereto before fermentation is completed a small quantity of a pure ferment, substantially as set forth.

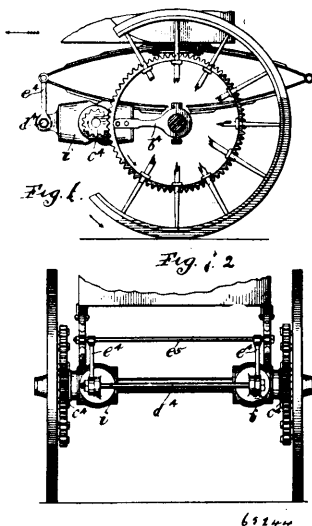
No. 65,243. Ore Treatment. (Traitement de minerai.)



Elizabeth Barnston Parnell, Carshalton, Surrey, England, 6th December, 1899; 6 years. (Filed 11th February, 1899.)

Claim.—1st. In the treatment of refractory ores, subjecting them to an oxidizing and decomposing agent as a preliminary to roasting, for the purpose described. 2nd. In the treatment of refractory ores, boiling the roasted ore with water under pressure greater than that of the atmosphere, for the purpose described. 3rd. A process of treatment for refractory ores in which they are first oxidised or decomposed, next roasted, and then boiled in water under pressure, for the purpose described. 4th. In a concentrator for the treatment of metalliferous ore or deposit, the combination with one or more amalgamated plates and one or more quick-silver wells, of one or more water wells with or without a douche, substantially as described. 5th. The complete process for the treatment of metalliferous ore by which the ore is first crushed, then concentrated, then oxidised or decomposed, then roasted, then boiled under high pressure, and lastly subjected to a solution treatment, substantially as described. 6th. In a concentrator for the treatment of metalliferous ore or deposit, the combination with a water well, of an air, water or other douche, substantially as described. 7th. In an amalgamator for the treatment of metalliferous ore or deposit, an amalgamating plate having depressions such as *h*, substantially as and for the purpose described and illustrated in the accompanying drawings. 8th. In the treatment of refractory ores, a furnace divided by the hearth into flues and adapted for use either as a muffle or as a reverberatory furnace, or as a half muffle, substantially as described. 9th. In the treatment of refractory ores, a furnace of substantially triangular form in cross section divided by the hearth into flues, and adapted for use either as a muffle or as a reverberatory furnace or as a half muffle, substantially as described. 10th. In the treatment of refractory ores, a furnace hearth curved transversely. 11th. The combination and arrangements of parts constituting the complete furnace, substantially as described, and comprising housing *A*, suitably mounted and provided with lining *a*¹ and sight holes *A*², the hearth *B* curved in cross section and forming with housing *A*, the flues *A*¹ and *A*², the grate *A*³, the bridge *A*⁴, hopper *A*⁵, endless chain *D*, chain wheels *D*¹, ploughs *D*² with wings *d*¹, steam pipe *A*⁶, and nozzle *A*⁷. 12th. In the treatment of refractory ores, the combination with a furnace hearth of one or more ploughs or conveyors such as *D*², constructed and operating, substantially as and for the purpose described.

No. 65,244. Motor Wheel. (Roue d'Automobiles.)

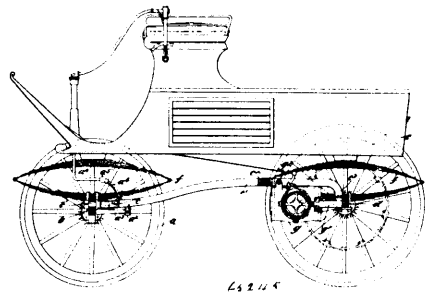


Clinton Edgar Woods, Chicago, Illinois, U.S.A., 6th December, 1899; 6 years. (Filed 7th September, 1898.)

Claim.—1st. In a motorcycle or vehicle, the combination with a vehicle body, of a flexible support therefor composed in part of an

elliptic spring interposed between the vehicle body and the driving wheels, and a motor in engagement with the running gear of the vehicle and flexibly supported by a movable part of the said elliptic springs, substantially as described. 2nd. In a motorcycle or vehicle, the combination with a vehicle body, of a flexible support therefor composed in part of an elliptic spring interposed between the vehicle body and the driving wheels, a motor, a gear wheel engaging and adapted to rotate a wheel shaft of the vehicle, a second gear wheel upon the motor, the motor with its gear wheel being mounted bodily to rotate about the axis of the second gear wheel, said motor being attached by a practically rigid link or connection to a movable part of said elliptic springs, substantially as described. 3rd. In a motorcycle or vehicle, the combination with a vehicle body, of a flexible support therefor, composed in part of two elliptic springs interposed between said body and a pair of driving wheels, and two motors each in engagement with a driving wheel independently of the other and flexibly supported by a movable part of an elliptic spring, substantially as described. 4th. In a motorcycle or vehicle, the combination with a vehicle body, of a flexible support therefor composed in part of a full elliptic spring interposed between the vehicle and body and the driving wheels, and a motor in engagement with the running gear of the vehicle and secured at or near the end of said elliptic spring by a practically rigid link or connection, substantially as described. 5th. In a motorcycle or vehicle, the combination with a vehicle body, of a flexible support therefor composed in part of two full elliptic springs interposed between the vehicle body and the driving wheels, two motors, each having a gear wheel, and two additional gear wheels, one in engagement with each driving wheel and one of the aforesaid gear wheels, said motors being bodily mounted to rotate upon axes coincident with the axes of the second aforesaid gear wheels, and each attached at or near one end of each of said elliptic springs by a practically rigid link or connection, substantially as described.

No. 65,245. Vehicle. (Vehicule.)



Clinton, Edgar Woods, Chicago, Illinois, U.S.A., 6th December, 1899; 6 years. (Filed 29th October, 1898.)

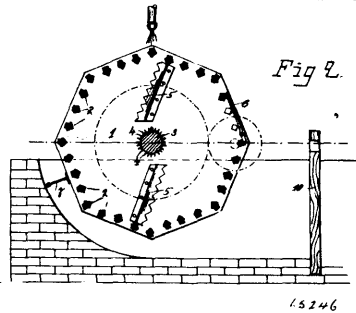
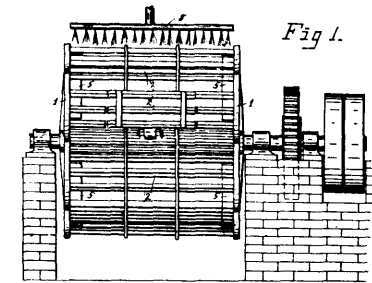
Claim.—1st. In a vehicle, the combination with a front vehicle axle, of a rear vehicle axle, a perch uniting said axes and upon which one of the axes is pivotally mounted to swing in a plane substantially perpendicular to the roadway, and an auxiliary coupling uniting said axes, said coupling being yielding in a perpendicular direction to permit the pivoted axle to swing in the perpendicular plane, and practically unyielding or rigid in a longitudinal direction, substantially as described. 2nd. In a vehicle, the combination with a front vehicle axle, of a rear vehicle axle, a perch uniting said axes and upon which one of the axes is mounted to swing in a plane substantially perpendicular to the roadway, a vehicle body carried by the axes, and vehicle springs uniting the vehicle body directly with the axes, substantially as described. 3rd. In a vehicle, the combination with a front vehicle axle, of a rear vehicle axle, a perch uniting said axes and upon which one of the axes is pivotally mounted to swing in a plane substantially perpendicular to the roadway, a vehicle body carried by the axes, and springs mounted upon the pivoted axle, one spring being disposed upon each side of the pivoted mounting, said vehicle body being supported by said springs, substantially as described. 4th. In a vehicle, the combination with a front vehicle axle, of a rear vehicle axle, a perch coupling uniting said axes and upon which one of the axes is pivotally mounted to swing in a plane substantially perpendicular to the roadway, extensions of the latter axle pivoted thereto, a vehicle wheel upon each extension, a link uniting said extensions, and an auxiliary coupling uniting the axes, said auxiliary coupling comprising the vehicle body (a spring mounting interposed between the pivoted axle and the vehicle body), and a suitable connection between the vehicle body and the remaining axle, substantially as described. 5th. In a vehicle, the combination with a front vehicle axle, of a rear vehicle axle, a perch uniting said axes and upon which one of the axes is pivotally mounted to swing in a plane substantially perpendicular to the roadway, the other axle being practically rigid with relation to the perch, a vehicle body suitably connected with the latter axle, and a spring mounting interposed between the vehicle body and the pivoted axle, and serving to support said vehicle body directly upon the pivoted axle, independently of the perch, substantially as

described. 6th. In a vehicle, the combination with a front vehicle axle, of a rear vehicle axle, a perch uniting said axles and upon which one of the axles is pivotally mounted to swing in a plane substantially perpendicular to the roadway, and a spring mounting interposed between the vehicle body and the pivoted axle and serving to support said vehicle body directly upon the pivoted axle, independently of the perch, said vehicle body being suitably connected with the remaining axle, substantially as described. 7th. In a vehicle, the combination with a perch having side members $c^1 c^1$, which converge at one end, of an axle b , pivotally mounted upon the converged ends of the members $c^1 c^1$, to swing in a plane substantially perpendicular to the roadway, a second axle d secured to the perch at the diverged ends of the members $c^1 c^1$, a vehicle body, (and a spring mounting interposed between the vehicle body and the pivoted axle and serving to support the body directly upon the pivoted axle, independently of the perch), said vehicle body being suitably connected with the remaining axle, substantially as described. 8th. In a vehicle, the combination with a perch having side members $c^1 c^1$, which converge at one end, of an axle b , pivotally mounted upon the converged ends of the members $c^1 c^1$, to swing in a plane substantially perpendicular to the roadway, a second axle d , secured to the perch at the diverged ends of the members $c^1 c^1$, a vehicle body (a spring mounting interposed between the vehicle body and the pivoted axle and serving to support the body directly upon the pivoted axle independently of the perch), said vehicle body being suitably connected with the remaining axle, and a spring mounting interposed between the remaining axle and the vehicle body, substantially as described. 9th. In a vehicle, the combination with a perch having side members $c^1 c^1$, which converge at one end, of an axle b , pivotally mounted upon the converged ends of the members $c^1 c^1$, to swing in a plane substantially perpendicular to the roadway, a second axle d , secured to the perch at the diverged ends of the members $c^1 c^1$, a vehicle body, and a pair of vehicle springs interposed between the vehicle body and the pivoted axle, one spring being placed upon each side of the pivotal mounting, said springs serving to support the vehicle body directly upon the pivoted axle independently of the perch, said vehicle body being suitably connected with the remaining axle, substantially as described. 10th. In a vehicle, the combination with a perch having side members $c^1 c^1$ which converge at one end, of an axle b , pivotally mounted upon the converged ends of the members $c^1 c^1$, to swing in a plane substantially perpendicular to the roadway, an extension pivoted to each end of said axle, a wheel upon each extension, a the body directly upon the pivoted axle independently of the perch, said vehicle body being suitably connected with the remaining axle, substantially as described. 11th. In a motor vehicle, the combination with a perch having side members $c^1 c^1$ which converge at one end, of an axle b pivotally mounted upon the converged ends of the members $c^1 c^1$ to swing in a plane substantially perpendicular to the roadway, an extension pivoted to each end of the said axle, a vehicle wheel upon each extension, a link uniting the extensions, a steering lever connected with said link and extensions, the diverging portions of said perch members $c^1 c^1$ being curved upwardly and provided with downward extensions $e^3 e^3$, a second axle d united with said extensions, vehicle wheels upon the latter axle, motors $g g$ fixed attached to the axle d and to the perch members $c^1 c^1$, and gearing interposed between said motors and the wheels upon the axle d , said vehicle being suitably connected with the latter axle, substantially as described. 12th. In a motor vehicle, the combination with a perch having side members $c^1 c^1$ which converge at one end, of an axle b pivotally mounted upon the converged ends of the members $c^1 c^1$ to swing in a plane substantially perpendicular to the roadway, an extension pivoted to each end of said axle, a vehicle wheel upon each extension, a link uniting the extensions, a steering lever connected with said link and extensions, the diverging portions of said perch members $c^1 c^1$ being curved upwardly and provided with downward extensions $e^3 e^3$, a second axle d united with said extensions, vehicle wheels upon the latter axle, motors $g g$ fixedly attached to the axle d and to the perch members $c^1 c^1$, gearing interposed between said motors and the wheels upon the axle d , and a spring mounting interposed between the vehicle body and the latter axle, substantially as described. 13th. In a running gear for motor vehicles, the combination with a perch having side members $c^1 c^1$ which converge at one end, of an axle b pivotally mounted upon the converged ends of the members $c^1 c^1$ to swing in a plane substantially perpendicular to the roadway, a second axle d secured to the perch at the diverged ends of the members $c^1 c^1$, motors $g g$ secured to the axle d and the perch members $c^1 c^1$, vehicle wheels upon the axle d , and gearing interposed between the motors and said vehicle wheels, substantially as described. 14th. In a running gear for motor vehicles, the combination with a perch having side members $c^1 c^1$ which converge at one end, of an axle b pivotally mounted upon the converged ends of said perch members, the pivotal axis being located in the same horizontal plane with the portion of the perch contiguous to said axle, the diverging portions of said perch members being curved upwardly and provided with downward extensions $e^3 e^3$, a second axle d united with said extensions, vehicle wheels upon axle d , motors $g g$ fixedly attached to the axle d and to the perch members $c^1 c^1$, and gearing interposed between said motors and the wheels upon axle d , substantially as described. 15th. In a running gear for vehicles, the combination with a front vehicle axle, of a rear vehicle axle, and a perch uniting the axles, one of the axles being provided

with a pivotal connection with said perch, serving to permit it to swing in a plane substantially perpendicular to the roadway, the pivotal axis lying in the same horizontal plane with that portion of the perch contiguous to the pivoted axle, substantially as described.

No. 65,216. Apparatus for Barking Wood.

(Appareil pour décortiquer le bois.)

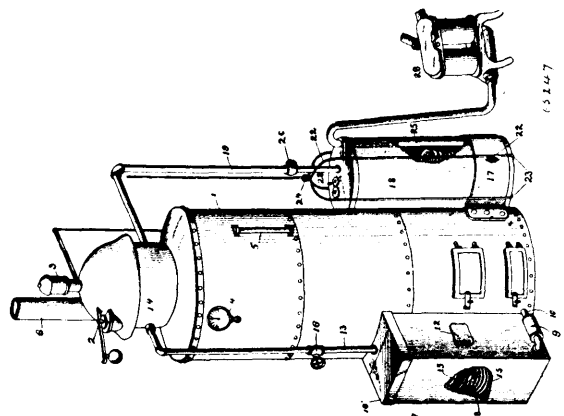


Leopold Wertheim, Cassel, Prussia, German Empire, 6th December, 1899; 6 years. (Filed 24th December, 1898.)

Claim.—1st. In a machine for rossing bark, a drive shaft having a drum rigid thereon, consisting of a pair of end discs united by a plurality of angular rods 2, which form the periphery of the drum, an opening in said periphery for charging and discharging the drum, with a suitable closure therefor, the agitators 5, secured to said end discs, studs radiating from the shaft within the drum, and a water supply located above the drum, substantially as and for the purpose set forth. 2nd. The herein described machine for rossing bark, comprising a horizontal drive shaft journaled in a suitable supporting frame, a drum fast upon said shaft, having its periphery formed of a series of parallel angular rods 2, arranged equally distant from each other, an opening fashioned in said periphery for charging and discharging the drum, with a lid 6 for closing the same, the agitators 5 secured to said end discs and having their edges oppositely arranged relatively to each other, studs radiating from that part of the shaft within the drum, a water supply located above the drum and means such as gate 10 for retaining the water below the drum, substantially as described.

No. 65,217. Portable Mining Device.

(Appareil de mine portatif.)

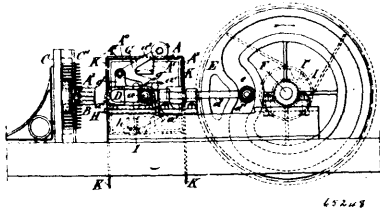


Edwin Hubbell and Adamantine Johnson, jr., both of Watson Missouri, U.S.A., 7th December, 1899; 6 years. (Filed 12th May, 1898.)

Claim.—A portable mining device comprising the steam generator 1, the longitudinally expansible live steam pipe coil 21 communicat-

ing with said generator and provided with the hand valve 26, the hood 18 encompassing said coil, the agitator or rotary rake 27 carried by said hood, and the crank 28 adapted to rotate said agitator, substantially as and for the purpose set forth.

No. 65,248. Mechanism for Electrically Operated, Illuminated Signs, and Advertising Media.
(*Mécanisme pour actionner par l'électricité les enseignes illuminées.*)



The Universal Electrical Advertising Syndicate, assignee of William Thomas Bell, all of Nottingham, England, 7th December, 1899; 6 years. (Filed 31st October, 1898.)

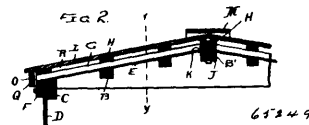
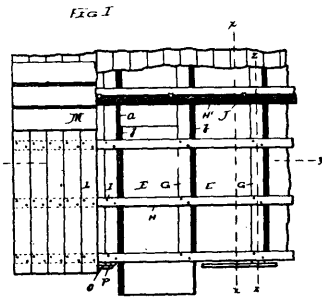
Claim.—1st. An apparatus for operating electrically illuminated signs and the like, comprising as its essentials a switch board provided with a series of contact pins, one for each lamp, a jacquard pattern card having in it apertures which register with a part only of the said contact-pins, a carrier for said pattern card adapted to be moved toward from said switch board, and means for moving said carrier and guiding it in its movements, substantially as set forth. 2nd. In a device for automatically operating electrically illuminated signs and the like, the combination with an intermittently rotating and horizontally reciprocating drum having on each of its several faces an insulated contact plate of conducting material, and a vertically disposed stationary switch board carrying a series of yielding contact makers or terminals connected respectively with the lamps on the lamp boards, and in position to touch a contact plate on the drum when the latter moves up thereto, of a series of jacquard cards of insulating material about said drum and adapted to cover the respective contact plates thereof and interpose between them and the contact terminals, means for closing the lamp circuit through the operating contact plate, and means for automatically breaking the lamp circuit a moment before the contact plate moves out of touch with said contact terminals. 3rd. In a device for automatically operating electrically illuminated signs and the like, the combination with the stationary switch board C, provided with yielding contact terminals B, and the rotatively mounted drum A, having on its respective faces imperforate contact plates A', of conducting material of the slotted guides D, in which said drum is mounted, the thrust bars d, connecting the cams with the respective journals of said drum, and means for imparting an intermittent motion to said drum as it is moved to and fro in its guides, substantially as set forth. 4th. In a device for automatically operating electrically illuminated signs and the like, the combination with the horizontally reciprocating and intermittently rotating drum having imperforate contact plates on its respective faces, and the stationary switch board provided with a series of yielding contact terminals, of means for preventing sparking upon the breaking of contact between the contact plate on the drum and the said contact terminals, said means comprising a rotating circuit breaker which breaks the lamp circuit at the moment before the said drum recedes, substantially as set forth. 5th. In a device for automatically operating electrically illuminated signs and the like, the combination with the reciprocating and intermittently rotating drum, having on its faces insulated contact plates each having on it a contact piece, as A¹, the fixed contact piece A², adapted to contact electrically with the piece A¹, when the drum is moved into operative position, the switch board C, provided with contact terminals as described, and an electric circuit including the said terminals, and the contact pieces A¹ and A², whereby, when operating, only the operative contact plate on the drum shall be included in the circuit. 6th. In a device for the purpose specified, the combination with stationary switch board C, provided with contact terminals of the respective lamp circuits, and the rotably and slidably mounted drum A, provided on each of its several faces with an insulated contact plate adapted to be put in contact with said terminals, of the rotating shaft F, means between said shaft and drum for converting the rotary motion of the former into reciprocating motion of the latter, an electric circuit having the terminals on the switch board C for one terminal, and the operative contact plate on the drum for the other terminal, and a rotary breaker for said circuit at the shaft F, said breaker comprising a disc on the said shaft and two brushes in the circuit bearing thereon, said disc having a recess which breaks the circuit when it passes under the brush, substantially as set forth.

No. 65,249. Double Car Roof. (*Double toiture pour chars.*)

C. B. Hutchins & Sons, assignee of William D. Thompson, all of Detroit, Michigan, U.S.A., 7th December, 1899; 6 years. (Filed 28th August, 1899.)

Claim.—1st. In a double car roof, the combination of a main roof frame supported upon the car sides and comprising purlins and car-

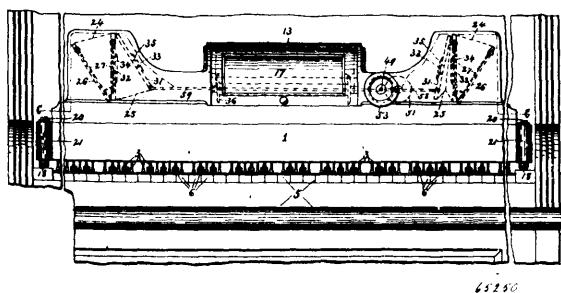
lines, a continuous sheet metal covering laid upon said carlines and formed of a series of plate sections extending from the eaves to the



ridge, standing joints formed at edges of the sections which form sliding connections between the same, and an upper roof frame having carlines resting upon said plates directly above the carlines of the main frame, purlins connecting said carlines, a roof covering the purlins, and a detachable fascia at the outer ends of the super-roof, the sections of the sheet metal covering being removable upon the removal of said fascia. 2nd. In a double car roof, the combination of a main roof frame supported upon the sides of the car and comprising purlins and carlines, a continuous sheet metal covering laid upon said carlines and formed of a series of plate sections extending from the eaves to the ridge, standing joints formed at the edges of the sections which form sliding connections between the same, an upper roof frame having carlines resting upon said metal plates vertically above the carlines of the main roof frame and adjacent to said standing joint, purlins connecting said carlines, a roof covering on the purlins, and a detachable fascia at the outer ends of the super-roof, the sections of sheet metal being removable upon the removal of the fascia. 3rd. In a car the combination with a main roof frame united to the frame of the car and comprising carlines and purlins and a ridge purlin, of a super-roof frame comprising carlines and purlins and a ridge purlin, a board roof secured to said superframe, and a longitudinally continuous sheet metal roof composed of independently removable plates extending from the eaves to the ridge between said main frame and superframe, said metal plates being joined directly together at their adjacent side edges by loose standing joints adapted to permit the necessary lateral movement of the plates in respect to each other to prevent injury thereto or to the roof as a whole by the straining of the car or variations in temperature and also to permit each metal plate to be independently removed or inserted without disturbing the others or said wood roof or superframe, substantially as specified. 4th. In a car, the combination with a main roof united to the frame of the car and comprising carlines and purlins and a ridge purlin, of a super-roof frame comprising carlines and purlins and a ridge purlin, a board roof secured to said superframe, and a longitudinally continuous sheet metal roof composed of a series of independently removable flat metal plates extending from the eaves to the ridge between said main frame and superframe, said metal plates being joined directly together at their adjacent side edges by loose standing joints adapted to permit the necessary lateral movement of the plates in respect to each other to prevent injury thereto or to the roof as a whole by the straining of the car or variations in temperature and also to permit each metal plate to be independently removed or inserted without disturbing the others or said wood roof or superframe, said loose standing joints consisting each of a high upright flange on the edge of one sheet and a high inverted U-fold on the meeting edge of the adjacent sheet, substantially as specified. 5th. In a car, the combination with a main roof frame united to the frame of the car and comprising carlines and purlins and a ridge purlin, of a super-roof frame comprising carlines and purlins and a ridge purlin, a board roof secured to said superframe, and a longitudinally continuous sheet metal roof composed of a series of independently removable metal plates extending from the eaves to the ridge between said main frame and superframe, said metal plates being joined directly together at their adjacent edges by loose standing joints adapted to permit the necessary movement of the plates in respect to each other to prevent injury thereto or to the roof as a whole and also to permit each metal plate to be removed or inserted without disturbing the others or said wood roof or superframe, and bolts extending centrally through said main ridge purlin and said super-ridge purlin between the meeting or adjacent ends of the oppositely inclined metal plates, substantially as specified. 6th. In a car, the combination with a main roof frame united to the frame of the car and comprising carlines and purlins and a ridge purlin, of a super-roof frame comprising carlines and purlins and a

ridge purlin, a board roof secured to said superframe, and a longitudinally continuous sheet metal roof composed of a series of independently removable flat metal plates extending from the eaves to the ridge between said main frame and superframe, said metal plates being joined directly together at their adjacent edges by loose standing joints adapted to permit the necessary movement of the plates in respect to each other to prevent injury there-to or to the roof as a whole and also to permit each metal plate to be removed or inserted without disturbing the others or said wood roof or superframe, and bolts extending centrally through said main ridge purlin and said super-ridge purlin between the meeting or adjacent ends of the oppositely inclined metal plates, said loose standing joints consisting each of a high upright flange on the edge of one sheet and a high inverted U-fold on the meeting edge of the adjacent sheet, substantially as specified. 7th. The double car roof inclined in two planes from eaves to ridge comprising a main frame and a superframe, the superframe being covered by boards and the main frame covered by a series of loose metal sheets unconnected with said frames and each extending from the eaves to the ridge and joined together by means of loose standing joints formed of a high upright flange on one sheet and a high inverted U-fold on the adjacent sheet, whereby the sheet metal forms a continuous waterproof sheathing, the sheets of which are given opportunity to expand and contract under varying temperatures and to move laterally in respect to each other, and are held from disengagement from each other under shock and strains to and of the car when in use, and are rendered capable of each being easily and independently removed by sliding the same out at the eaves to facilitate repair, substantially as specified. 8th. The sheet metal subroof for railroad cars consisting of a series of sheets each extending from the eaves to the ridge, each sheet being connected to the adjacent sheet by means of the joint shown, and which consists of a high upright flange on the edge of one and a high inverted U-shaped fold on the edge of the adjacent sheet, making a watertight joint which is loose to permit sliding movement to remove the sheets for repairs, and loose to permit lateral movement of the sheets in respect to each other under strains and expansion and contraction and the parts of which will not be disengaged by shocks and strains to which the car is subjected in ordinary use, substantially as specified. 9th. The double car roof comprising a main frame, a superframe covered with roof boards, and a continuous loose flexible sheet metal roof fitting between said main and superframes and extending continuously from end to end of the car and from eaves to ridge without bracing connection with either of said frames and composed of a series of independently removable plates loosely and flexibly joined together at their meeting side edges by high standing joints consisting each of a high upright integral flange on one sheet and an integral open inverted U-fold on the adjacent sheet, substantially as specified. 10th. The double car roof comprising a main frame, a superframe covered with roof boards, and a longitudinally continuous loose flexible sheet metal roof fitting between said main and super frames and extending continuously from end to end of the car and from eaves to ridge without bracing connection with either of said frames and composed of a series of independently removable flat plates loosely and flexibly joined together at their meeting side edges by high standing joints consisting each of a high upright integral flange on one sheet and an integral open inverted U-fold on the adjacent sheet, substantially as specified.

No. 65,250. Game. (Jeu.)



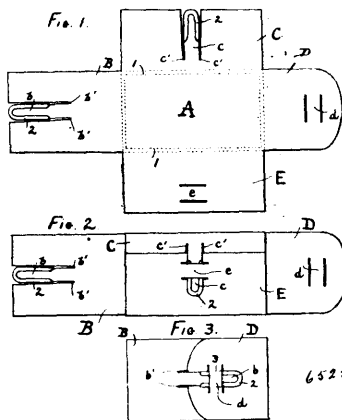
65250

William Cyrus Ranney, assignee of Lewis Benjamin Doman, both of Elbridge, New York, U.S.A., 7th December, 1899; 6 years. (Filed 28th October, 1899.)

Claim.—1st. A playing apparatus comprising a frame, operating members movable in the frame, passages leading from corresponding sides of the operating members, and additional passages leading from opposite sides of the operating members, a music sheet having perforations movable into registration with the first passages, and an air circulating device connected to the first passages between the portions thereof adjacent to the operating members and the music sheet and also connected to the additional passages, substantially as and for the purpose described. 2nd. A playing apparatus, comprising a frame provided with a plurality of pockets, passages leading from corresponding sides of the pockets, and additional passages leading from the opposite sides of the pockets, a music sheet having

perforations movable into registration with the first passages operating members movable in the pockets between said sides thereof, and an air circulating device connected to the first passages between the pockets and the music sheet and also connected to the additional passages, substantially as and for the purpose specified. 3rd. A playing apparatus, comprising a frame provided with a plurality of pockets, passages leading from corresponding sides of the pockets, and additional passages leading from the opposite sides of the pockets, a music sheet having perforations movable into registration with the first passages, operating members movable in the pockets between said sides thereof, said operating members consisting of yielding diaphragms, and engaging pieces movable in the additional passages and having corresponding ends extended beyond the frame and their other ends provided with enlarged extremities movable in the pockets and engaged with the operating members, substantially as and for the purpose set forth. 4th. A playing apparatus, comprising a frame provided with a plurality of pockets, passages leading from corresponding sides of the pockets, and additional passages leading from the opposite sides of the pockets, a music sheet having perforations movable into registration with the first passages, operating members movable in the pockets between said sides thereof, a conduit, ducts connected to the first passages between the pockets and the music sheet, said ducts being of less cross sectional area than the first passages, and an air circulating device connected to said additional passages and to the conduit, substantially as and for the purpose described. 5th. In a playing apparatus, the combination of a pair of rollers, a perforated music sheet, means for winding the music sheet upon one of the rollers, a motor for winding the music sheet upon the other roller, a stop for preventing the movement of one of the rollers, the movement of said stop being controlled by the music sheet, substantially as and for the purpose specified. 6th. In a playing apparatus, the combination of a roller, means for revolving the roller, a stop secured to the roller for preventing revolution thereof, a spring for forcing the stop to its operative position, an engaging piece for holding the stop in its inoperative position, and a second engaging piece detachably secured to the roller for holding the former engaging piece in its operative position, substantially as and for the purpose described. 7th. The combination with a keyboard, of a playing apparatus detachably mounted on the keyboard and having a plurality of engaging pieces normally resting on the keys, and means for adjusting the frame of the playing apparatus toward and away from the keyboard independently of the engaging pieces for varying the stroke of said engaging pieces, substantially as and for the purpose specified. 8th. In a playing apparatus, the combination of a frame having a socket provided with a shoulder, a longitudinally movable post having one end inserted into the socket and separated from the shoulder, a nut engaged with said shoulder, and a screw engaged with the post and nut and movable lengthwise of the socket, substantially as and for the purpose set forth.

No. 65,251. Reversible Envelope. (Enveloppe réversible.)



65251

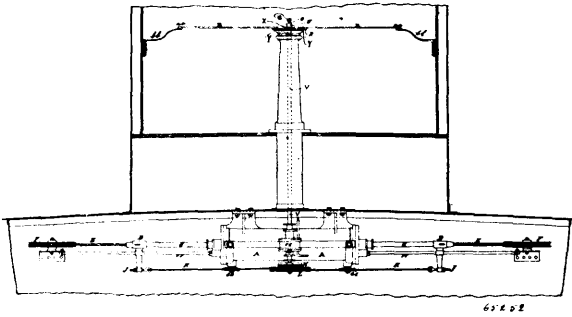
Nellie Phelps Packard, Centralia, Washington, U.S.A., 7th December, 1899; 6 years. (Filed 16th November, 1899.)

Claim.—1st. In a reversible envelope, the combination of a rectangular or other shaped sheet, and integrally-formed square-cornered flaps, extending from its four edges, these flaps being supplied with oppositely located tongues and straps for engagement with each other when the envelope is folded, said tongues being reinforced and having parallel edges, so that they may be bent upon themselves in variable relation with the said straps, to increase or decrease the capacity of the envelope, whereby bulky packages may be contained therein, substantially as shown and described. 2nd. In a reversible envelope, the combination of a rectangular or other shaped sheet, and integrally-formed square-cornered flaps extending from its four edges, the flaps being supplied with oppositely located tongues and straps for engagement with each other when the

envelope is folded, said tongues being located within recesses of their respective flaps, and being reinforced by malleable sheet metal binding and having parallel edges, so that they may be bent upon themselves in variable relation with the said straps, to increase or decrease the capacity of the envelope, whereby bulky packages may be contained therein, substantially as shown and described.

No. 65,252. Steam Steering Gear.

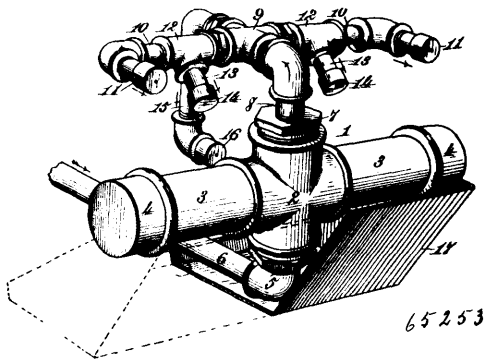
(Appareil à gouverneur à la vapeur.)



Anseleme Hippolyte Larochelle, Levis, Quebec, Canada, 7th December, 1899; 6 years. (Filed 22nd September, 1899.)

Résumé.—1er. La combinaison de la tige du maître tiroir V, du disque T, de la boîte à bourrage U, et du levier de mise en mouvement X, tel que décrit et pour les fins indiquées. 2em. La combinaison du tiroir contrôleur P, de la tige de ce dernier O, du quadrans de transmission N, et de l'indicateur Q, tel que décrit et pour les fins indiquées. 3em. La combinaison du quadrans de transmission N, de la poulie commandante L, du pignon M, du câble contrôleur K, et des poulies de guide EE, tel que décrit et pour les fins indiquées. 4em. La combinaison de la tige du piston C, du guide de cette même tige ff, des brides de raccordement D, des câbles de traition E, des poulies de renvois F, du quadrans du gouvernail dd, des boulons d'ancrage ee, des boulons d'appels hh, tel que décrit et pour les fins indiqués. 5em. La combinaison du levier de mise en mouvement X, des boutons d'arrêts Y, de la tige de raccordement Z, et des leviers auxiliaires AA, tel que décrit et pour les fins indiquées.

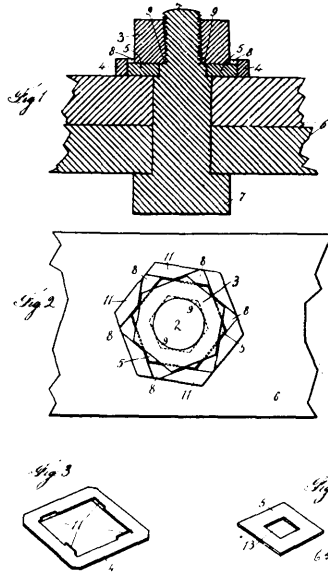
No. 65,253. Fluid Burner Fire Log. (Brûleur de fluide.)



George Washington White, Chattanooga, Tennessee, U.S.A., 7th December, 1899; 6 years. (Filed 15th November, 1899.)

Claim.—1st. A fluid burner fire log comprising a horizontal cylinder affording a generator, an oil supply pipe leading from the same, an escape pipe leading from said generator and connected with a horizontal distributing pipe, a series of pipe sections communicating with said distributing pipe and having jet orifices and a pipe leading from said distributing pipe and having its free end directed toward said generator and provided with a jet orifice, substantially as described. 2nd. A fluid burner fire log comprising a four-way coupling having pipes screwed into opposite sides thereof, caps on the outer ends of said pipes, a supply pipe leading into said coupling, an escape pipe leading therefrom, said supply and escape pipe engaging respectively into tap-nuts screwed into opposite sides of said coupling, a horizontal distributing pipe communicating with said escape pipe and having pipe sections leading therefrom provided with jet orifices, and a pipe communicating with said distributing pipe and having its free end directed toward said generator and provided with a jet orifice, substantially as described.

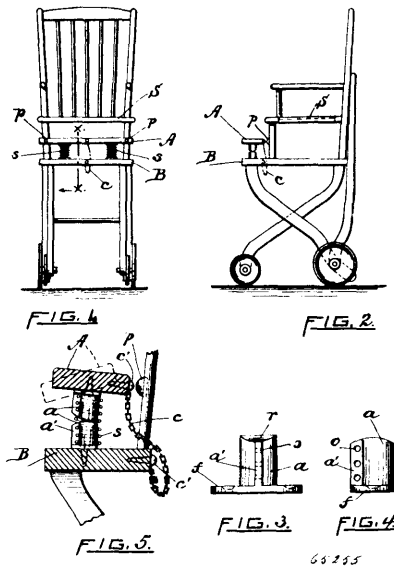
No. 65,254. Nut Lock. (Arrêt-écrou.)



John Pearson, Omaha, Nebraska, U.S.A., 7th December, 1899; 6 years. (Filed 16th October, 1899.)

Claim.—1st. In a nut lock, a keeper adapted to work over a bolt and be removably held, in combination with a holder adapted to be locked upon said keeper, and a nut working upon said holder and in turn being locked against said holder. 2nd. The combination with a keeper adapted to work over a suitable bolt and be locked, of a holder working over said keeper, said holder being provided with one or more upwardly projecting lips. 3rd. The combination with a suitable bolt, of the keeper 5, of the holder 4 locking upon said keeper, said holder being provided with upwardly extending lips 11, all arranged, substantially as and for the purpose set forth.

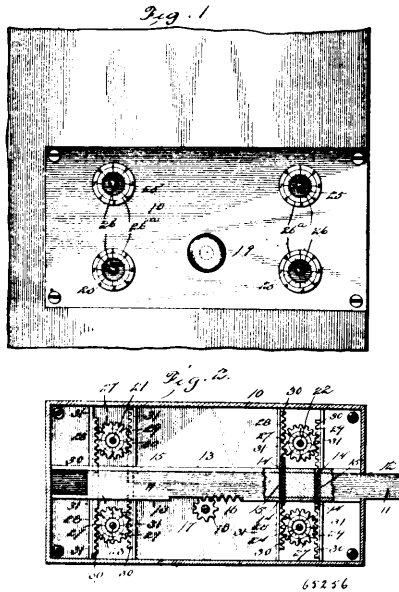
No. 65,255. Foot Rest. (Appui pieds.)



James A. Moore, Central Falls, Rhode Island, U.S.A., 7th December, 1899; 6 years. (Filed 28th October, 1899.)

Claim.—1st. The herein described foot rest, consisting of the combination of the footboard A, the supporting members aa having a projecting flange f formed on one end thereof, the opposite adjoining ends of said members having rounded surfaces, each of said members having a vertical rib a' provided with a series of perforations, the coil spring s passing through said perforations and surrounding both of said members, with means for securing each top and bottom member to the footboard and frame of the chair, and the chain with a means for connecting the footboard and frame of the chair respectively, as shown and described.

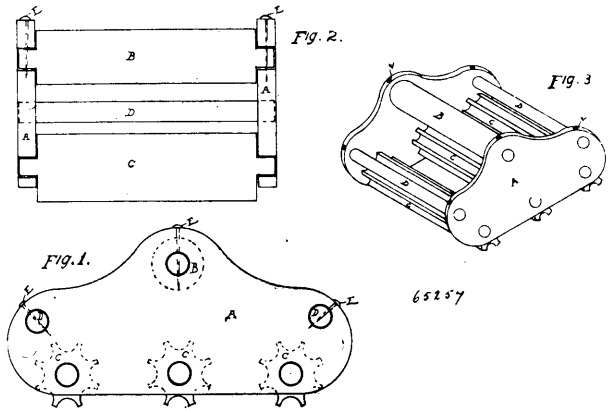
No. 65,256. Permutation Lock. (Serrure à permutation.)



Arthur S. Winston, Covington, Tennessee, U.S.A., 7th December, 1899; 6 years. (Filed 30th October, 1899)

Claim.—1st. In a permutation lock, the combination with a slidable bolt, and means for adjusting said bolt, of a series of individual operable spindles each having an index associated therewith, and a pair of tumbler rods connected operatively with each spindle and movable simultaneously thereby in opposite directions into operative relation with the locking bolt, substantially as described. 2nd. In a permutation lock, the combination with a slidable bolt, guides therefor and means for manually adjusting the bolt endwise, of a series of individually operable spindles, a pair of oppositely movable rack formed tumbler rods contiguous to each spindle, a gear pinion on each spindle meshing with the tumbler rods and adapted to project the same into or from engagement with the bolt, guides which confine the tumbler rods to slidable movement in paths at right angles to the bolt, dial plates concentric with each spindle, and pointers carried by the spindles, the pointers on the several spindles arranged to register with different index characters on the dials in withdrawing the pairs of tumbler rods from the bolt, substantially as described. 3rd. In a permutation lock, the combination of a bolt having the transverse tumbler passages, means for adjusting said bolt, a series of individually operable spindles each having a gear pinion and an index, a pair of rack formed tumbler slides disposed on opposite sides of each spindle and its gear and arranged to enter the passages in said bolt, and means for confining each pair of tumbler rods in slidable relation to the gear and to the bolt, substantially as described. 4th. A permutation padlock comprising a casing having a shackle receiving slot 34, the shackle confined slidably on the casing, and extension arm pivoted to the unconfined end of the shackle and adapted to pass through the slot in the casing, a bolt, tumbler rods slidably confined with relation to the bolt, and spindles geared to said tumbler rods, substantially as described. 5th. In a permutation lock, the combination with locking bolt, of a group of oppositely movable locking elements, and an actuating device common to said locking elements and connected therewith to make all the elements, in one position, thereof, free from said slot, said actuating device and the locking elements arranged for movement of the actuating device in either direction to shift at least one locking element into interlocking engagement with the bolt, substantially as described. 6th. In a permutation lock, the combination with a locking bolt, of a pair of locking elements, and an actuating spindle common to and connected operatively with said locking elements to shift the latter simultaneously in opposite directions, said locking elements being so related to the spindle as to be simultaneously retracted thereby from engagement with the bolt and also adapted on a movement of the spindle in either direction to be shifted in directions for at least one locking element to have interlocking engagement with the bolt, substantially as described.

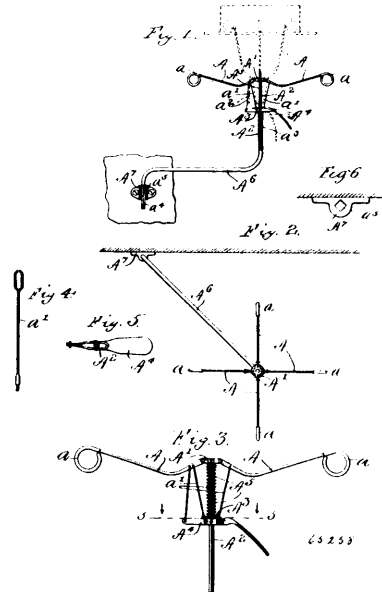
No. 65,257. Clothes Washer. (Machine à laver.)



Theodore Albert Simonds, St. Thomas, Ontario, Canada, 7th December, 1899; 6 years. (Filed 3rd November, 1899.)

Claim.—A hand clothes washer having fluted wooden rollers revolving in two wooden sides with wooden handle, all substantially as set forth.

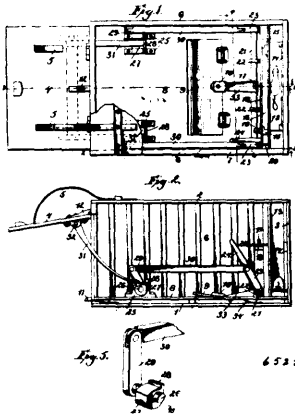
No. 65,258. Hat Stand. (Porte-chapeau.)



Edwin B. Magill, Chicago, Illinois, U.S.A., 7th December, 1899; 6 years. (Filed 24th April, 1899.)

Claim.—1st. In a hat stand, the combination of a rod, arms, an end of each of which is pivoted to said rod, a spring or springs for maintaining said arms normally extended, means connecting said arms to cause simultaneous movement thereof, a lever pivoted between its ends to said rod, and a link connecting one end of the lever with an arm between the free and pivoted end of the latter, substantially as described. 2nd. In a hat stand, the combination of a rod, arms pivoted at one end to said rod, a sleeve longitudinally movable on the rod, links connected at one end to the sleeve, and at their other ends to the arms at points between their pivoted and free ends, a spring normally maintaining the sleeve distant from said arms and the arms extended, a lever pivoted between its ends to said rod and a link connecting one end of the lever to an arm between the pivoted and free ends of the latter, substantially as described. 3rd. In a hat stand, the combination of a rod, arms pivoted thereto, a spring or springs applied to said arms and adapted to maintain the same normally extended, a sleeve longitudinally movable on said rods, links which connect said sleeve with said pivoted arms at points a distance from their points of pivotal attachment to said rod, a lever pivoted to said rod in position to arrest the movement of said sleeve and the outward pivotal movement of the pivoted arms under the influence of the spring or springs applied thereto, and a link which connects said lever to an arm, substantially as described.

No. 65,259. Trap. (Piège.)



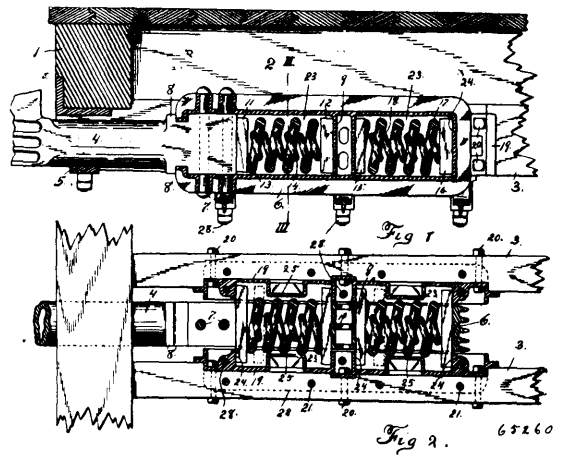
Ezra Carpenter, Sebastapol, California, U.S.A., 7th December 1899; 6 years. (Filed 28th August, 1899.)

Claim.—1st. In a trap, the combination with a body, an inlet door at its front end, a partition within the body forming a decoy chamber at its rear end and having an opening near its lower edge, upright guides adjacent said opening, and a gravity door sliding in the guides, of devices for holding both said doors open, and victim-actuated mechanism for tripping said devices simultaneously, as and for the purpose set forth. 2nd. In a trap, the combination with the body having a mirror across its rear end, a door near said mirror and forming a decoy chamber within the body at the rear end, and an inlet door at the front end of the body, of devices for holding both said doors open, and victim actuated mechanism for tripping said devices simultaneously, as and for the purpose set forth. 3rd. In a trap, the combination with a body having a decoy chamber at its rear end, a transverse partition forward of said chamber having an opening near its lower edge, upright guides alongside said opening, a gravity door moving in said guides, and a pin in said door, of a lever pivoted between its extremities with its inner end adapted to engage the pin in the door, a fixed pin beneath which its outer end slides, an inlet door in the front of the body, devices for holding this door open, and victim actuated mechanism for tripping said devices and simultaneously moving the outer end of said lever to the rear to release the gravity door, as and for the purpose set forth. 4th. In a trap, the combination with a body having a decoy chamber at its rear end, a transverse partition forward of said chamber having an opening near its lower edge, upright guides alongside said opening, a gravity door moving in said guides, and a pin in said door, of a lever pivoted between its extremities with its inner end adapted to engage the pin in the door, a rock shaft across the body forward of the partition, means for normally turning this shaft to the rear, a finger thereon adapted to strike the outer arm of said lever, victim actuated mechanism for tripping said shaft, an inlet door in the front end of the body, devices for holding it open, and connections between said shaft and devices, as and for the purpose set forth. 5th. In a trap, the combination with a body having slatted sides and a false bottom with an opening in the latter, a trap door hinged in the opening and having a finger projecting from its hinge line, a rock shaft journaled across the body and having a trigger adapted to be engaged by said finger, and a spring turning the rock shaft normally to the rear of an inlet door in the front of the body, devices for holding said door open, and connections between said rock shaft and devices for tripping the latter when the trap door is depressed, as and for the purpose set forth. 6th. In a trap, the combination with a body having a manual door in its side and an inlet door in its front end, a false bottom within the body, a trap door hinged to said bottom and having a finger projecting over its hinge line, a rock shaft journaled across the body and having a trigger adapted to be engaged by said finger, and a spring turning said trigger turning the shaft normally to the rear, of a catch between the true and false bottom projecting beyond its front to engage the inlet door when closed, devices for holding said inlet door open, and connections between the rock shaft and said devices for tripping the latter when the trap door is depressed, substantially as described. 7th. In a trap, the combination with a body having an open front, an inlet door hinged at its upper end therein and having a stop adjacent to its hinge line, springs for throwing said door normally closed, and a catch for holding it in closed position, of a trap door hinged within the body remote from its front end and having a finger, a trigger adapted to be engaged by said finger when the trap door is raised, devices for holding the front door open against the tension of its spring, and connections between said trigger and devices for tripping the latter when the trap door is depressed, substantially as described. 8th. In a trap, the combination with a body having a spring actuated inlet door in its front end, a trigger within the body near its rear end, a spring normally raising said trigger, and victim actuated devices for holding said trigger depressed, of a cam journaled in

bearings within the body and having a notch in its upper side, a push bar on the door whose extremity engages said notch when the door is open, an elbow on one shaft of the cam, and connections between said trigger and elbow for moving the latter when the trigger is released, substantially as described. 9th. In a trap, the combination with a body, a spring closed door in its front end, a rock shaft journaled across the body near its rear end and provided with elbows at its extremities, a spring turning this shaft normally to the rear, and victim actuated devices for holding the shaft against the tendency of its spring, of two pairs of bearings mounted within the body near its front end, a cam having stub shafts journaled in each pair of bearings and a forwardly facing notch in its body, push bars pivoted to the interior of the door with their tips engaging said notches when the door is open, elbows rising from the outer stub shafts on the cams, and links connecting these elbows with those on the rock shaft, as and for the purpose set forth.

No. 65,260. Draft Device for Carriages.

(Appareil de tirage pour voitures.)

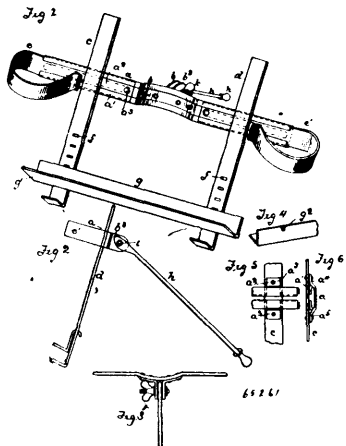


Sylvester H. Jansen, Buffalo, New York, U.S.A., 7th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. The combination with the draft timbers and the draft plate secured thereto, of a draw bar having a yoke provided between its ends with a cross piece or abutment which divides the same into two pockets or compartments, and two sets of follower plates arranged in said pockets respectively, and a spring interposed between the follower plates of each set, substantially as set forth. 2nd. The combination with the draft timbers and the draw bar provided with a yoke, springs and follower plates arranged in said yoke, springs and follower plates arranged in said yoke, draft plates applied to the inner sides of the draft timbers, and provided at their lower edges with outwardly extending flanges which bear against the under side of said draft timbers, horizontal bolts passing through said draft plates and timbers, and vertical bolts passing through the draft timbers, and the flanges of the draft plates, substantially as set forth. 3rd. The combination with the draft timbers, the draw bar provided with a yoke, and follower plates and springs arranged in the yoke, of draft plates secured to the draft timbers, and having stop or shoulders against which said follower plates abut, and provided between said stops with inwardly projecting bosses, which resist buckling of the springs, substantially as set forth. 4th. The combination with draft timbers, the draw bar provided with a yoke, and follower plates and springs arranged in the yoke, of draft plates secured to the draft timbers, and provided on their inner sides with integral stops or abutments for said follower plates, and about midway between said abutments with integral bosses which project into close proximity to said springs for preventing buckling thereof, substantially as set forth. 5th. The combination with the draft timbers, the draw bar provided with a yoke, and the follower plates and springs arranged in the yoke, of draft plates secured to the draft timbers, longitudinal bars, secured to the lower edges of said draft plates, and cross pieces or the bars connecting said longitudinal bars, substantially as set forth. 6th. The combination with the draft timbers, the draw bar provided with a yoke, and the follower plates and springs arranged in the yoke, of draft plates secured to the draft timbers, and having upright inwardly projecting abutments forming stops or shoulders for the follower plates, and provided at their upper edges with an inwardly extending flange which holds the follower plates against upward displacement, longitudinal bars secured to the lower ends of said stops or abutments, and supporting the follower plates and transverse tie bars connecting said longitudinal bars, substantially as set forth. 7th. The combination with the draft timbers, the draw bar provided with a yoke, and the follower plates and springs arranged in the yoke, of draft plates secured to the draft timbers and a tie frame, connecting said draft plates, and composed of longitudinal

bars secured to the lower edges of the draft plates, and transverse tie bars formed integral with said longitudinal bars, substantially as set forth.

No. 65,261. Book Support. (*Support de livres.*)



Marion Estelle Welch, Denver, Colorado, U.S.A., 7th December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. As a new article of manufacture, a book support comprising, in combination, a horizontal strip having folded edges forming grooves, as a^1 , and the central portion of said strip being adapted to receive the back of a book, extension arms having spring clamps at their extremities, which arms slide in said grooves, means limiting the outward motion of said arms, standards affixed to the ends of said strips, ears at the central portion of said strip, and an adjustable leg pivoted between the ears, substantially as described. 2nd. As a new article of manufacture, a book support comprising, in combination, a horizontal strip having folded edges forming grooves, as a^1 , and the central portion of said strip being adapted to receive the back of a book, extension arms having spring clamps at their extremities, which arms slide in said grooves, means limiting the outward motion of said arms, standards affixed to the end of said strip, ears at the central portion of said strip, an adjustable leg pivoted between said ears, and a movable bracket, as g , provided with tongues, g^2 the said standards having perforations for removably receiving the tongues of said bracket, substantially as described. 3rd. As a new article of manufacture, a book support comprising, in combination, a horizontal back strip, having folded edges forming grooves, as a^1 , and the central portion of said strip being adapted to receive the back of a book, extension arms, slidably held in said grooves and provided with spring clamps at their extremities, means limiting the outward motion of said arms, standards affixed to both ends of said back strip, the lower extremities of which are bent outward, ears affixed to the central portion of said back strip, an adjustable leg pivoted between said ears, by means of a threaded bolt and nut, and tongues, as a^2 , cut out of the folded edges of said back strip and turned back, and whereby said back strip is riveted to the standards, substantially as described.

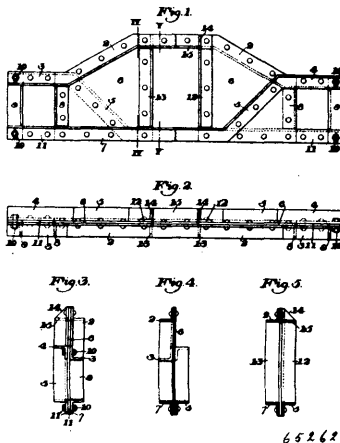
No. 65,262. Side Frames for Car Trucks.

(*Cadre de châssis de chars.*)

Frederick Henry Kindl, Pittsburg, Pennsylvania, U.S.A., 7th December, 1899; 6 years. (Filed 10th November, 1899.)

Claim.—1st. An arch bar side frame having upwardly and downwardly extending arch shaped members of angle bar material, substantially as described. 2nd. An arch bar side frame having the arch bars formed of angle iron, the end portions of which are secured together and form the tops of the pedestals, substantially as described. 3rd. An arch bar side frame, in which the arch bars are formed of angle irons, in combination with vertically extending angle irons secured between the arch bars, substantially as described. 4th. An arch bar side frame having the upper arch bar made of angle iron material, and a removable outer pedestal portion detachably secured to the angle iron arch bars, substantially as described. 5th. An arch bar side frame, having upper and lower arches formed of angle bar material, the ends of these angle bars being secured together above the pedestal, and a lower horizontal extending angle iron forming the base of the pedestals and secured to the lower arch bar, substantially as described. 6th. An arch bar side frame having an upper and lower arch bar, each formed of angle iron material, web plates secured thereto between the central opening and the pedestals, and vertically extending angle irons secured to the arch bars and to the web plates, substantially as described. 7th. An arch bar side frame, comprising an upper and lower arch bar, each formed of angle iron material and having their ends secured together above the pedestals, a lower horizontal angle iron forming the base of the pedestals and the central opening,

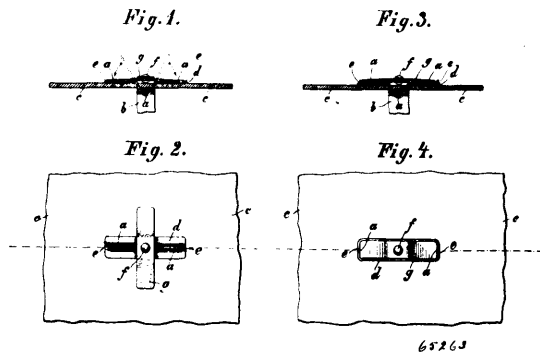
web plates secured to the arch bars and the horizontal angle and extending between the central opening and the pedestals, and



vertical angle irons forming the sides of the pedestal and the sides of the central opening, substantially as described. 8th. An arch bar side frame, comprising an upper and lower arch bar, each formed of angle irons with their flanges extending in opposite directions, and having their ends secured together above the pedestals, a lower horizontal angle iron forming the base of the pedestals and of the central opening, vertical connecting members between the parts and detachable outer side members for the pedestals removably secured to the arch bars and the lower horizontal angle irons, substantially as described.

No. 65,263. Buckle or Fastening Device.

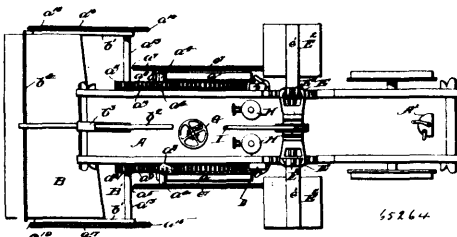
(*Boucle ou attache.*)



Christian Marquard Von der Wehl, Olderup, Germany, 7th December, 1899; 6 years. (Filed 15th December, 1899.)

Claim.—A buckle or fastening device, which consists of a perforated and grooved plate d , with a covering strip g adapted to turn thereon, and a U-shaped pin a , the whole combined, arranged and operating substantially as hereinbefore described.

No. 65,264. Street Sweeper. (*Balayeuse de rue.*)



Alphonse Piton, St. Sauveur de Quebec, Quebec, Canada, 7th December, 1899; 6 years. (Filed 25th May, 1899.)

Claim.—1st. The combination with a car, of a rotary ice cutter, a rotary broom, and intermediate gearing connecting said cutter and said broom with the car wheels for operating the same, substantially as described. 2nd. The combination with a car, of a rotary ice cutter, a rotary broom, a chute operatively connected with said broom, a train of gearing connected with said cutter and said broom and meshing with a gear fixed to the car wheel, substantially as

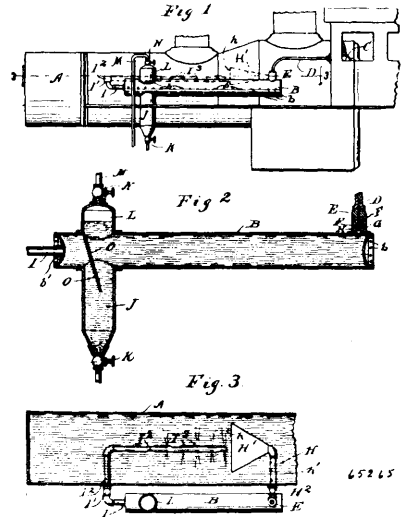
described. 3rd. The combination with a car, of an adjustable rotary cutter, a fixed rotary cutter, a broom, a train of gearing operatively connected therewith and meshing with a gear fixed to the car wheel and a suitable adjusting mechanism for said adjustable cutter, substantially as described. 4th. The combination with a car, of an adjustable rotary cutter, a fixed rotary cutter, a broom, a chute operatively connected with said broom, a train of gearing operatively connected with said cutters and said broom and meshing with a gear fixed to the car wheel, an adjusting bar secured to said adjustable cutter and an operating lever secured to said adjusting bar, substantially as described. 5th. The combination with a car, of a rotary broom, a train of gearing operatively connecting said broom with the car wheel, a hood covering said broom and a chute arranged in said hood in position to receive the sweepings from said broom, substantially as described. 6th. The combination with a car, of a rotary broom, a train of gearing operatively connecting said broom with the car wheel, a hood secured to the car frame and covering said broom, an inclined chute arranged in said hood and communicating by an open passage with said broom in position to receive the sweepings of said broom, the spout of said chute extending to one side of the car body, whereby the said sweepings are carried away and deposited at one side of the car track, substantially as described. 7th. The combination with a car, of an adjustable rotary cutter, a chain and sprocket connection between said cutter and the car wheel, an adjusting bar secured to said adjustable cutter and an operating lever pivoted upon the car for raising said cutter up out of its operative position, substantially as described. 8th. The combination with a car, of an adjustable rotary cutter, a chain and sprocket connection between said cutter and the car wheel, a protecting cover attached to said cutter, an adjusting bar secured to said hood and an operating lever pivoted upon the car for raising said cover and cutter up out of their operative position, substantially as described. 9th. The combination with a car, of an adjustable rotary cutter, a chain and sprocket connection between said cutter and the car wheel, an adjusting bar secured to said cutter, an operating lever pivoted upon the car for raising said cutter up out of its operative position, a fixed rotary cutter, and a train of gearing operatively connecting said fixed rotary cutter with the car wheel, substantially as described. 10th. The combination with a car, of a shaft journalled in vertically adjustable bearings, a chain and sprocket connection between said shaft and the car wheel, adjusting bars mounted upon each side of the car and attached to each end of said shaft, an operating lever pivoted upon the car for raising said shaft and a series of cutter hooks mounted upon said shaft, substantially as described. 11th. The combination with a car, of a shaft journalled in vertically adjustable bearings, means for adjusting said bearings, a series of cutter hooks mounted upon said shaft, a shaft journalled in fixed bearings, a series of cutter hooks mounted on said shaft and extending along its entire length, and a train of gearing connecting each of said shafts to the car wheel, substantially as described. 12th. The combination with a car, of a series of rotary cutter hooks mounted in adjustable bearings, means for adjusting said bearings, a series of rotary cutter hooks mounted in fixed bearings, a train of gearing operatively connecting said cutter hooks with the car wheel, a rotary broom, and a train of gearing operatively connecting said broom with the car wheel, substantially as described. 13th. The combination with a car, of a rotary shaft mounted in adjustable bearings, a series of cutter hooks fixed on said shaft, a rotary shaft mounted in fixed bearings and arranged behind said adjustable shaft, a series of cutter hooks fixed on said shaft, a train of gearing operatively connecting said shafts with the car wheel, a rotary broom journalled in the rear end of said car, a train of gearing operatively connecting said broom with the car wheel, a hood arranged to cover said broom and a chute transversely arranged in said hood and in operative connection with said broom, substantially as described. 14th. The combination with a car, of a rotary shaft mounted in independently adjustable bearings and arranged one on each side of the car, a series of cutter hooks fixed on each of said shafts, a rotary shaft mounted in fixed bearings and arranged behind said adjustable shafts, a series of cutter hooks fixed on said shaft, a train of gearing operatively connecting said shafts with the car wheel, a rotary broom journalled in the rear end of the car, a train of gearing operatively connecting said broom with the car wheel, a hood arranged to cover said broom, and a chute transversely arranged in said hood and in operative connection with said broom, substantially as described.

No. 65,265. Water Purifier. (Purificateur d'eau.)

Herbert B. Wright, Chicago, Illinois, U.S.A., 7th December, 1899; 6 years. (Filed 15th July, 1899.)

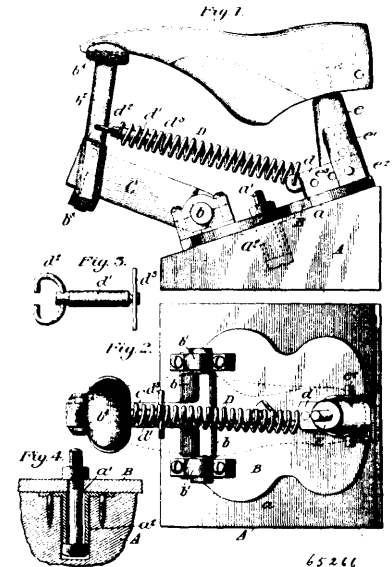
Claim.—1st. A receptacle for liquid, consisting of a horizontal cylinder, an injector discharging into the receptacle at one end of the cylinder on the upper side thereof, a pipe extending to the injector from an ordinary feed water injector, a second pipe provided with a check valve, extending to the injector from the boiler, and a collector on such second pipe, whereby hot and cold water are forced into the receptacle, a discharge pipe through the center of the head of the discharge end of the receptacle extending therefrom back to the boiler, and a check valve therein, a distributing pipe in the boiler extending back from the last named check valve to discharge near the collector, a dome near the discharge end of the receptacle

and a well in the receptacle between the dome and the discharge end, substantially as described. 2nd. A receptacle for liquid con-



sisting of a horizontal cylinder, an injector discharging into the receptacle at one end of the cylinder on the upper side thereof, a pipe extending to the injector from an ordinary feed water injector, a second pipe extending to the injector from the boiler whereby hot and cold water are forced into the receptacle, a discharge pipe through the center of the head of the discharge end of the receptacle extending therefrom back to the boiler, a dome near the discharge end of the receptacle, and a well in the receptacle between the dome and the discharge end, with a deflector plate extending from the upper side of the cylinder adjacent to the dome into the well and near to the bottom thereof, substantially as described.

No. 65,266. Lasting Jack. (Cric à enformer.)



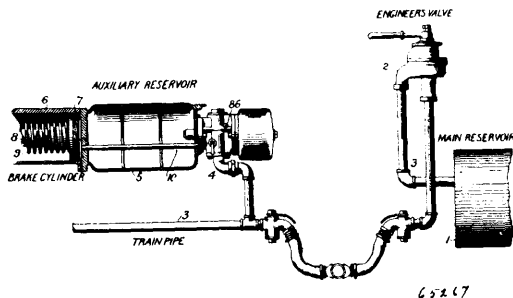
Horace H. Donovan, North Abington, Massachusetts, U.S.A., 7th December, 1899; 6 years. (Filed 15th November, 1899.)

Claim.—1st. A lasting jack having a stationary heel rest, a pivoted arm carrying a toe rest, a coil spring, held at one end, a plate extended longitudinally within said spring and connected at one end to said arm, an a swiveled button on the other end of said plate, substantially as set forth. 2nd. The combination with a base plate having a block, of an arm pivotally mounted on said base plate having a carrying branch a toe rest, a heel rest adjustably connected to said block, and a spring secured at one end to said block and at its other end adjustably connected to said arm, substantially as set forth. 3rd. The combination with the inclined base, of the plate set on said base, the pivoted arm mounted on said plate and carrying a toe rest, the adjustable heel rest mounted on said plate, the spring, held at one end, and the adjusting device connecting said spring to said arm, said spring tending to draw said arm toward said heel rest, substantially as set forth. 4th. A lasting jack having a base plate

provided with a block formed with a series of holes, a heel rest having side plate hugging said block, of bolt passed through coincident holes of said plates and any one of the holes of said block, a pivoted arm carrying a toe rest, and a spring held at one end and connected at its other end to said arm, substantially as set forth. 5th. The combination with the base having an inclined surface, of the base plate axially mounted on said base and fitting against said inclined surface, a heel rest rigidly secured to said base plate, a pivotally mounted toe rest carried by said base plate, and a spring held at one end and connected at its other end to said toe rest, substantially as set forth.

No. 65,267. Valve for Air Brakes.

(*Sompne pour freins à air.*)



Edward G. Shortt, Carriage, New York, U.S.A., 7th December, 1899; 6 years. (Filed 16th November, 1899.)

Claim.—1st. In a fluid pressure brake mechanism, the combination with means for conducting train pipe pressure to the brake cylinder in service applications of the brakes and for conducting auxiliary reservoir air to the brake cylinder only at emergency times, said reservoir pressure being retained unused except when it flows to the brake cylinder in emergency action, at which time it is used exclusively, of means for causing the said applying of the brakes to result from a reduction of train pipe pressure. 2nd. In a fluid pressure-brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of valve mechanism for conducting train pipe pressure to the cylinder in graduation applications of the brakes and for conducting reservoir air to the cylinder only at emergency times, said reservoir pressure being retained unused except when it flows to the brake cylinder in emergency action, at which time it is used exclusively, and means whereby the reduction of train pipe pressure actuates said valve mechanism in applying the brakes. 3rd. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of valve devices, an abutment exposed to train pipe pressure, and means whereby reductions of pressure on one side of said abutment actuate the valve devices and transfer train pipe pressure to the cylinder in graduation applications, reservoir air to the cylinder in emergency applications only, and train pipe air to atmosphere in emergency action. 4th. In a fluid pressure-brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of valve devices controlling communication between the train pipe and the brake cylinder and between the auxiliary reservoir and the brake cylinder, and also controlling an emergency outlet to atmosphere, a piston or abutment exposed to train pipe pressure, and means whereby reductions of pressure on one side of the piston actuate the valve devices to admit train pipe pressure to cylinder in graduation applications, and reservoir pressure to the cylinder in emergency applications only, and also to vent the train pipe air to atmosphere in emergency action. 5th. In a fluid pressure-brake mechanism, in combination with valve devices for controlling the flow of train pipe air to the brake cylinder in graduation applications and of reservoir air to the cylinder in emergency applications only, a reserve volume of air, and an abutment operating said valve devices, which abutment in applying the brakes is moved by the expansive action of said volume of air on one side thereof and the reduction of train pipe pressure on the opposite side thereof. 6th. In a fluid pressure brake mechanism, in combination with valve devices for controlling the flow of train pipe air to the brake cylinder in graduation applications and of reservoir air to cylinder in emergency applications only, a piston or abutment exposed on one side to train pipe pressure, a reserve volume of air at train pipe pressure and acting expansively against the other side of the piston, said piston in applying the brakes being moved by said expansion of the air volume on one side thereof and the reduction of train pipe pressure on its opposite side, and means for transmitting the impulses of the piston to the valve devices. 7th. In a fluid pressure-brake mechanism, the combination with a train pipe, brake cylinder, and auxiliary reservoir, of valve devices controlling communication between the train pipe and the brake cylinder in graduation applications of the brakes, and between the auxiliary reservoir and the brake cylinder in emergency applications only, a piston exposed to train pipe pressure on one side and receiving its impulses in consequence of reductions in said pressure, means for transmitting the impulses of the piston to the valve devices, and a storage of air on

the other side of the piston and communicating with the brake cylinder through the aforesaid valve devices, said air storage being entirely separate and distinct from the auxiliary reservoir. 8th. In a fluid pressure brake mechanism, the combination with a train pipe, brake cylinder, and auxiliary reservoir, of valve devices for controlling the flow of train pipe air to the brake cylinder in graduation applications and of reservoir air to the cylinder in emergency applications only, a piston exposed to train pipe pressure on one side and receiving its impulses in consequence of the reductions in said train pipe pressure, means for transmitting the impulses of the piston to the valve devices, a storage of air on the other side of the piston at train pipe pressure and having its feed automatically regulated by the piston, said air storage acting expansively against the piston, and communicating with the brake cylinder through the aforesaid valve devices. 9th. In a fluid pressure-brake mechanism, the combination with the train pipe, auxiliary reservoir, brake cylinder, and main piston exposed to train pipe pressure, of a storage chamber receiving its supply of air from the train pipe and applying it as a motive power to the piston for controlling the flow of reservoir air to the cylinder in emergency applications only, and for controlling the flow of train pipe air to the cylinder in all service applications, and a discharge port for the venting of the storage air in emergency action. 10th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of valves for controlling the flow of train pipe air to the cylinder in all service applications and the flow of reservoir air to the cylinder in emergency applications, and a storage of air taken from the train pipe, a piston on which said air acts expansively to actuate the valves, and a discharge port for said air storage which is opened by the piston, itself operating as a valve, when in its emergency position to permit the escape of the storage air. 11th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of valves for controlling the flow of train pipe air to the cylinder in all service applications and the flow of reservoir air to the cylinder only in emergency applications, a special storage of air separate and distinct from the auxiliary reservoir and taken from the train pipe, a piston or abutment on which said storage of air acts expansively during reductions of train pipe pressure to actuate the valves, said storage of air regulating the automatic closing of the graduation valve after graduation action. 12th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of a valve mechanism for controlling the delivery of train pipe air to the cylinder in all graduation applications, and the delivery of reservoir air to the cylinder in emergency applications only, a piston or abutment exposed to train pipe pressure and communicating its movements to the valve mechanism, and an emergency valve separate and independent from the aforesaid valve mechanism for venting to the atmosphere the entire train pipe air during emergency applications. 13th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of a valve mechanism for controlling the delivery of train pipe air to the cylinder in all graduation applications, and the delivery of reservoir air to the cylinder in emergency applications only, a piston exposed to train pipe pressure, an air storage acting to move said piston and regulating the automatic closing of the graduation valve after graduation action, and an emergency valve separate and independent from the aforesaid valve mechanism for discharging to the atmosphere in emergency action the entire train pipe air and the volume of storage air. 14th. In a fluid pressure-brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of a valve controlling the flow of air from the reservoir to the cylinder, a valve regulating the flow of air from the train pipe to the cylinder, a piston exposed normally on one side to train pipe pressure and receiving its impulses in consequence of the reductions in said train pipe pressure, a special volume of air separate and distinct from the auxiliary reservoir and taken from the train pipe and acting against the other side of the piston to move the same during said reductions of train pipe pressure, and means whereby the movements of the piston shift the valves so that train pipe air will be used in all service applications and reservoir air reserved intact for emergency action. 15th. In a fluid pressure brake mechanism, means for employing train pipe pressure in graduation or service applications of the brakes, and reserving the auxiliary reservoir supply intact for emergency uses only, said means consisting essentially in the combination with the main parts of such a brake mechanism, of a reserved volume or storage of air having the functions of controlling the movements of the air between the several parts of the mechanism through suitable valve devices, and also co-operating with the train pipe air in service applications of the brakes, and also regulating the outflow of the train pipe pressure at emergency times. 16th. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder and auxiliary reservoir, of a valve mechanism for conducting train pipe pressure to the cylinder in graduation applications of the brakes and for conducting reservoir air to the cylinder only at emergency times, and a reserved volume or storage of air having the function of actuating the said valve mechanism, and also the functions of co-operating with the train pipe air in service applications of the brakes and regulating the outflow of the train pipe pressure at emergency times. 17th. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of valve devices, a piston exposed to train pipe pressure,

means whereby the fluctuations of pressure on said piston actuate the valve devices and transfer train pipe pressure to the cylinder in graduation applications and reservoir air to the cylinder in emergency applications only, and a reserved volume of air at train pipe pressure acting expansively against the side of the piston opposite to the train pipe pressure, and having the functions of imparting movement to said piston, furnishing a quantity of air to co-operate with the train pipe air in service applications of the brakes, and of controlling the outlet of the train pipe air at emergency times. 18th. In a fluid brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of valve devices controlling communication between the train pipe and the brake cylinder, and between the auxiliary reservoir and the brake cylinder, a piston exposed to train pipe pressure on one side, and means whereby the fluctuations of pressure on the piston actuate the valve devices to admit train pipe pressure to the cylinder in graduation applications and reservoir pressure to cylinder in emergency applications only, and a reserved volume of air on the opposite side of the piston and having the function of acting expansively against the piston, said air volume having also the functions of co-operating in service applications of the brakes with the train pipe air in its action in the brake cylinder, and of controlling the outflow to the atmosphere of the train pipe air at emergency times. 19th. In a fluid pressure brake mechanism, in combination with valve devices for controlling the flow of the train pipe air to the brake cylinder in graduation applications and of reservoir air to the cylinder in emergency applications only, a reserved volume of air, a piston, means whereby the piston actuates the valve devices, a port leading from the said air volume through the valve devices to the brake cylinder, a vent port for said air volume, all arranged so that the air volume may discharge the functions of moving the piston, of co-operating with the train pipe air in the brake cylinder in service applications of the brakes, and of controlling the outflow and disposition to atmosphere of the train pipe air at emergency times. 20th. In a fluid pressure brake mechanism, in combination with the valve devices for controlling the flow of train pipe air to the brake cylinder in graduation applications and of reservoir air to the cylinder in emergency applications only, a piston exposed on one side to train pipe pressure, a reserved volume of air taken from the train pipe through a suitable feed port which is controlled by the aforesaid piston acting as a valve, said reserved volume of air acting expansively against the other side of the piston and performing the duty of furnishing a supply of air to co-operate with the train pipe air in the brake cylinder during graduation applications of the brakes, in addition to the duty of imparting impulses to the piston, and means for transmitting the impulses of the piston to the valve devices. 21st. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder and auxiliary reservoir, of valve devices controlling communication between the train pipe and the brake cylinder and between the auxiliary reservoir and the brake cylinder, a piston exposed to train pipe pressure on one side, means for transmitting the impulses of the piston to the valve devices, a storage of air on the other side of the piston, a port leading from said air storage to the cylinder and controlled by the aforesaid valve devices, said air storage having the several functions of acting expansively against the piston, transmitting pressure to the brake cylinder to co-operate with the train pipe pressure in service applications of the brakes, and regulating the outflow and discharge of the train pipe air at emergency times. 22nd. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of valve devices for controlling the flow of train pipe air to the brake cylinder in graduation applications and of reservoir air to the cylinder in emergency applications only, a piston exposed to train pipe pressure on one side, means for transmitting the impulses of the piston to the valve devices, a storage of air on the other side of the piston at train pipe pressure, a feed port for said storage covered and controlled automatically by the edge of the piston acting as a valve, therefore, said storage acting expansively against the piston, a port leading from the storage through and controlled by the valve devices to the brake cylinder for conveying pressure from the said storage to the brake cylinder to co-operate with the train pipe pressure in service applications of the brakes. 23rd. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of a valve controlling the flow of air from the reservoir to the cylinder, a valve regulating the flow of air from the train pipe to the cylinder, a piston exposed normally on one side to train pipe pressure, a volume of air taken from the train pipe and acting against the other side of the piston to move the same during reduction of train pipe pressure, a port leading from said air volume through the valve devices to the brake cylinder, said air volume having the function of supplying an amount of air to assist the train pipe pressure in its action in the brake cylinder during graduation applications, and also of regulating the outflow of the train pipe pressure at emergency times, and means whereby the movements of the piston shifts the valves so that train pipe air will be used in all graduation applications and reservoir air reserved intact for emergency application. 24th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of a valve controlling the flow of air from the reservoir to the cylinder, a valve controlling the flow of air from the train pipe to the cylinder, a piston exposed on one side to train pipe pressure, a volume of air taken from the train pipe and acting against the other side of the piston to move the same during reductions of train

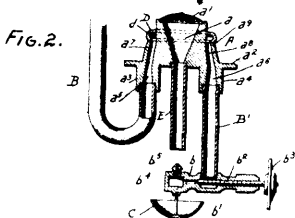
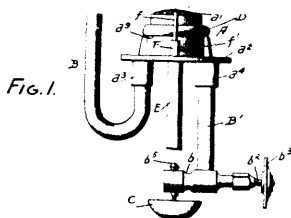
pipe pressure, and means whereby the movements of the piston shift the valve so that train pipe air will be used in all graduation applications, and reservoir air reserved intact for emergency action, said means consisting of a vibratory lever. 25th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of a valve controlling the flow of air from the reservoir to the cylinder, a valve controlling the flow of air from the train pipe to the cylinder, a piston exposed on one side to train pipe pressure, a volume of air taken from the train pipe and acting against the other side of the piston to move the same during reductions of train pipe pressure, and means whereby the movements of the piston shift the valves so that train pipe air will be used in all graduation applications and reservoir air reserved intact for emergency action, said means consisting of a vibratory lever engaged by the piston stem between the bearing of said lever and its free end which is applied to move the valves. 26th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of a valve controlling the flow of air from the reservoir to the cylinder, a valve controlling the flow of air from the train pipe to the cylinder, a piston exposed on one side to train pipe pressure, a volume of air taken from the train pipe and acting against the other side of the piston to move the same during reductions of train pipe pressure, and means whereby the movements of the piston shift the valves so that train pipe air will be used in all graduation applications and reservoir air reserved intact for emergency application, said means consisting of a vibratory lever passing through a slot in the piston stem, one end of said lever being applied to move the valves while the opposite end is mounted in a bearing, together with means for holding the bearing end of said lever within its bearing. 27th. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir, and a graduation port in communication with the train pipe, said ports being adapted to register at times with a brake cylinder supply port, a graduation valve arranged axially within the slide valve controlling the slide valve graduation port, and a piston exposed to train pipe pressure, and the reciprocations of which actuate the valves. 28th. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir, a graduation port in communication with the train pipe, and an exhaust port, said emergency port being adapted to register with a brake cylinder supply port during emergency action, said graduation port being adapted to register with the brake cylinder port during graduation action, and said exhaust port adapted to connect the brake cylinder with the atmosphere during release, and a graduation valve arranged axially within the slide valve and controlling the slide valve graduation port, and a piston exposed to train pipe pressure for actuating the valves. 29th. In a fluid pressure brake mechanism, the combination with a train pipe, brake cylinder, and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir and a graduation port in communication with the train pipe, said ports being adapted to register at times with a brake cylinder supply port, a graduation valve arranged axially within the slide valve and controlling the slide valve graduation port, a piston exposed to train pipe pressure and the reciprocations of which actuate the valves, and means for closing the graduation valve after graduation without disturbing the position of the slide valve. 30th. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir, a graduation port in communication with the train pipe, and an exhaust port, said emergency port being adapted to register with a brake cylinder supply port during emergency action, said graduation port being adapted to register with the brake cylinder port during graduation action, said exhaust port adapted to connect the brake cylinder with the atmosphere during release, a graduation valve arranged axially within the slide valve controlling the slide valve graduation port, a piston exposed to train pipe pressure and the reciprocations of which actuate the valves, and means for closing the graduation valve after graduation without disturbing the position of the slide valve. 31st. In a fluid brake mechanism, the combination with a train pipe, a brake cylinder and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir, and a graduation port in communication with the train pipe, said ports being adapted to register at times with a brake cylinder supply port, a graduation valve axially within the slide valve and controlling the slide valve graduation port, a piston controlled by variations of train pipe pressure, and means consisting of a vibratory lever for transmitting the movements of the piston to actuate the valves. 32nd. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of a slide valve having an emergency port in constant communication with the reservoir, and a graduation port in intermittent communication with the train pipe, said valve having a reservoir pressure on one side and train pipe pressure on the other side thereof, the aforesaid ports being adapted to register at times with a brake cylinder supply port, a graduation valve axially within the slide valve, a release port from the brake cylinder likewise controlled by the slide valve, and a piston under train pipe pressure for operating the valves. 33rd. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary

reservoir, of a slide valve having an emergency port in communication with the reservoir, and a graduation port in communication with the train pipe, said ports being adapted to register at times with a brake cylinder supply port, a graduation valve arranged axially within the slide valve and controlling the graduation slide valve port, a piston exposed to fluctuations of train pipe pressure for actuating the valves, and a reserved volume of air acting expansively against the opposite side of the piston. 34th. In a fluid pressure brake mechanism, the combination with the train pipe, a brake cylinder, and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir, and a graduation port in communication with the train pipe, said ports being adapted to register at times with a brake cylinder supply port, a graduation valve arranged axially within the slide valve and controlling the slide valve graduation port, a release port controlled by the slide valve, a piston exposed on one side to fluctuations of train pipe pressure, and a reserved storage of air acting expansively against the opposite side of the piston and likewise furnishing a part of the brake cylinder supply of air in graduation as well as permitting an automatic closing of the graduation valve after graduation. 35th. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir, and a graduation port in communication with the train pipe, said ports being adapted at times to register with a brake cylinder supply port, a graduation valve arranged axially within the slide valve and controlling the slide valve graduation port, a release port from the brake cylinder controlled by the slide valve, a piston exposed on one side to train pipe pressure, a storage of air on the opposite side of the piston which acts expansively against the latter for actuating the valves, and a port leading from the stored air to the brake cylinder which port is controlled by the aforesaid slide valve. 36th. In a fluid pressure brake mechanism, the combination with the train pipe, a brake cylinder, and auxiliary reservoir, of a slide valve having an emergency port in communication with the reservoir, and a graduation port in communication with the train pipe, said ports being adapted at times to register with a brake cylinder supply port, a graduation valve arranged axially within the slide valve and controlling the slide valve graduation port, a release port from the brake cylinder controlled by the slide valve, a piston exposed on one side to train pipe pressure, a storage of air on the opposite side of the piston which acts expansively against the latter for actuating the valves, a port leading from the stored air to the brake cylinder through the slide valve and controlled by the slide valve as to its opening at the beginning of graduation and controlled by the graduation valve as to its closing after graduation. 37th. In a fluid pressure brake mechanism, the combination with the train pipe, brake cylinder, and auxiliary reservoir, of valve devices consisting of slide and graduation valves for regulating the delivery of air from the train pipe to the cylinder for all graduation purposes and from the reservoir to the cylinder only in emergency action, a piston operated by the variations of train pipe pressure, a vibratory lever engaging the piston stem and also engaging the valve devices in such a manner as to impart an initial impulse to the graduation valve and a secondary impulse to the slide valve, substantially in the manner, at the time, and for the purpose specified. 38th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of valve devices for regulating the flow of air from the train pipe to the cylinder during all graduation applications of the brakes and from the reservoir to the cylinder only during emergency applications, a piston operated by reductions of train pipe pressure, means whereby the movement of the piston is transmitted to operate the valve devices, elastic means for limiting the travel of the valve devices, and independent elastic means for limiting the travel of the piston, said elastic means having the function in each instance of more accurately defining the position to be assumed by the said parts for a graduation application of the brakes, and the same means being adapted to be compressed by the contact of the said parts therewith during emergency applications. 39th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of valve devices for regulating the flow of air from the train pipe to the cylinder during all graduation applications of the brakes, and from the reservoir to the cylinder during emergency applications only, a piston operated by reductions of train pipe pressure, means whereby the movement of the piston is transmitted to operate the valve devices, elastic means for limiting the travel of the valve devices and thus more accurately define their position for a graduation application of the brakes, the same means being compressed by the further movement of the valve devices during emergency action, and other independent elastic means performing in connection with the travel of the piston the same duty as that performed by the aforesaid elastic means in reference to the valve devices, and an emergency valve normally held to its seat by a spring, the stem of which valve serves as the aforesaid elastic device for affecting the travel of the piston. 40th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of means for eliminating the service valves of one or more triple valves from the train series of triple valves without eliminating the emergency valves of the same triple valves, which consists of a common abutment for operating both the service and emergency valves, and means for disconnecting the abutment operatively from the service

valves. 41st. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of a triple valve having a piston exposed on one side to train pipe pressure, service valves, an emergency valve, an air storage, which acts expansively against the other side of the piston, and means for eliminating one or more service valves from the train series of valves without eliminating the emergency valves, which means consists of means for disconnecting the piston operatively from the service valves. 42nd. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of means for utilizing the train pipe pressure for all graduation applications of the brakes, and the reservoir pressure for emergency applications only, and means for eliminating the service valves of one or more triple valves from the train series of triple valves without eliminating the emergency valves of the same triple valves, which means consists of a common abutment for operating both the service and emergency valves, and means for disconnecting the abutment operatively from the service valves. 43rd. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of a piston exposed on one side to train pipe pressure and on its opposite side to a stored volume of air taken from the train pipe, said piston being operated by the reductions of train pipe pressure, valve devices actuated by the piston for controlling the flow of air to the cylinder in all graduation applications, and from the reservoir to the cylinder in emergency applications only, and an emergency valve for delivering train pipe air to the atmosphere, said valve having stem aligned with the piston stem and opened by the mechanical contact of the one with the other, the stem serving when the valve is closed as a stop to determine graduation position for the piston, and a graduating stop for the valve devices, which also has the function of an elastic abutment in emergency action. 44th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir, and brake cylinder, of a triple valve having a piston exposed on one side to train pipe pressure a slide valve, a graduating valve and an emergency valve, an air storage which acts expansively against the opposite side of the piston, and means for eliminating one or more service valves from the train series of valves without eliminating the emergency valves, which consists of means for disconnecting the piston operatively from the service valves, and a port connecting the air storage with the train pipe air so that reductions of pressure will be equal on both sides of the piston. 45th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of a triple valve having a piston exposed on one side to train pipe pressure, a slide valve, a graduating valve, and an emergency valve, an air storage which acts expansively against the opposite side of the piston, and means for eliminating one or more service valves from the train series of valves without eliminating the emergency valves, which consists of means for disconnecting the piston operatively from the service valves, a port connecting the air storage with the train pipe air so that reductions of pressure may be equal on both sides of the piston, and a spring actuated pin valve in said port for controlling a lateral opening belonging thereto. 46th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of a triple valve having a piston operated by reductions of train pipe pressure, a slide valve, a graduating valve, an emergency valve, and a reserved volume of air which acts expansively against the piston, and means for eliminating one or more service valves from the train series of valves without eliminating the emergency valves, said means consisting of a cam shaft that supports the mechanism for connecting the piston with the valves, which cam shaft is susceptible of rotation, so as to operatively disconnect the said piston. 47th. In a fluid pressure brake mechanism, the combination with the train pipe, auxiliary reservoir and brake cylinder, of a triple valve having a piston exposed to train pipe pressure, a slide valve, a graduating valve, a storage of air which acts expansively against the said piston, a lever whereby the piston in its movements shifts the aforesaid valves, and a fulcrum bearing for said lever, consisting of a rigid seat and a rotatable device for keeping the lever in its seat during the normal operation of the air brake mechanism but permitting the release of the lever from its bearing when it is desired to eliminate the triple valve from operative connection with the train series of valves. 48th. The combination with the train pipe, auxiliary reservoir and brake cylinder, of a triple valve having a piston exposed on one side to train pipe pressure, a slide valve, a graduating valve, an emergency valve, a reserved volume of air which acts expansively against the other side of the piston, a lever whereby the piston in its movement shifts the said valves, a bearer for said lever, consisting of a rigid seat, and a rotatable shaft having a cutaway portion adjacent to the bearing end of the lever into which said bearing end of the lever may drop when the shaft is rotated for the purpose of operatively disconnecting the lever from the piston, in case of an elimination of the service valves of one or more triple valves from the train series of triple valves without eliminating the emergency valves. 49th. The combination with the train pipe, auxiliary reservoir, and brake cylinder, of a feed port leading from the train pipe to the reservoir, a check valve operating in connection with said port, a piston operated by reductions of train pipe pressure, a slide valve, a graduating valve, an emergency valve, a storage of air having the functions of acting expansively against the piston, of supplying air in service applications to the brake cylinder to unite with the train pipe air in its

action in said cylinder, and of controlling the venting of the train pipe air to atmosphere in emergency action, a lever whereby the pistons communicates its movements to the valves, and cut out devices for eliminating one or more service valves from the train series of valves without eliminating the emergency valves. 50th. In a fluid pressure brake mechanism, the combination with means for transferring train pipe pressure directly from the train pipe to the brake cylinder in service applications of the brakes without the intervention of an intermediate receiver, and for simultaneously transferring pressure to the cylinder from a reserved store of air which is separate and independent from the auxiliary reservoir, and which receives its supply from the train pipe, of means for causing the said applying of the brake to result from a reduction of train pipe pressure. 51st. In a fluid pressure brake mechanism, in combination with valve devices for controlling the flow of train pipe air to the brake cylinder in graduation applications, valve devices for simultaneously controlling the flow of pressure to the brake cylinder from a reserved volume of air which is separate and independent from the auxiliary reservoir, and an abutment operating said valve devices, which abutment is actuated by the reduction of train pipe pressure when the brakes are applied.

No. 65,268. Gasoline Burner. (*Bouleur de gazoline.*)



Antoine Emil Vézina and Albert Laurendeau, both of St. Gabriel de Brandon, and Cléophas Beausoleil, Montreal, Quebec, Canada, 9th December, 1899; 6 years. (Filed 11th October, 1899.)

Claim.—1st. A gasoline burner, comprising a body portion having a combustion chamber, an inlet passage, a supply pipe connected with said passage, an outlet passage, a feed pipe connected therewith, and an annular ring mounted upon said body portion and provided with a groove communicating with each of said passages, substantially as described. 2nd. A gasoline burner, comprising a body portion having a combustion chamber, an annular shoulder formed on said body portion, an inlet passage passing through said shoulder, a supply pipe connected with said passage, an outlet passage extending through said shoulder, a feed pipe connected with said passage, an annular ring mounted upon said body portion and closely fitting said shoulder, and a groove formed in said ring communicating with each of said passages, substantially as described. 3rd. A gasoline burner, comprising a body portion having a combustion chamber, an inlet passage, a supply pipe connected with said passage, an outlet passage, a feed pipe connected therewith, an annular ring mounted upon said body portion and provided with a groove communicating with each of said passages, a cross pipe secured to said feed pipe, having a valved passage communicating with a chamber located in the end of said cross pipe, a tube secured to the body portion of said burner and projecting downwardly over a restricted opening formed in said cross pipe communicating with said chamber, substantially as described.

No. 65,269. Recovery of Zinc from Slags or Residues. (*Procédé pour obtenir les zinc des débris.*)

The Smelting Corporation, assignee of Henry Ernest Fry, all of London, England, and Robert Addie, Llanusantlet, South Wales, 9th December, 1899; 6 years. (Filed 11th November, 1898.)

Claim.—1st. The process of recovering zinc from slags or residues, consisting in mixing them with carbonaceous matter, melting the

mixture at a high temperature, and condensing the fumes substantially as described. 2nd. The process of recovering the zinc from slags or residues consisting in mixing them with carbonaceous matter, melting the mixture in a regenerative furnace at a high temperature and condensing the fumes, substantially as described. 3rd. The process of recovering zinc from slags or residues consisting in mixing them with carbonaceous matter, melting the mixture in a basic lined furnace at a high temperature and condensing the fumes, substantially as described. 4th. The process of recovering zinc from slags or residues consisting in mixing them with carbonaceous matter, melting the mixture in a furnace lined with dolomite at a high temperature and condensing the fumes, substantially as described. 5th. The process of recovering zinc from slags or residues consisting in mixing them with carbonaceous matter, melting the mixture at a high temperature, stirring with a green wood poles and condensing the fumes, substantially as described.

No. 65,270. Process of Purifying Acetylene Gas.

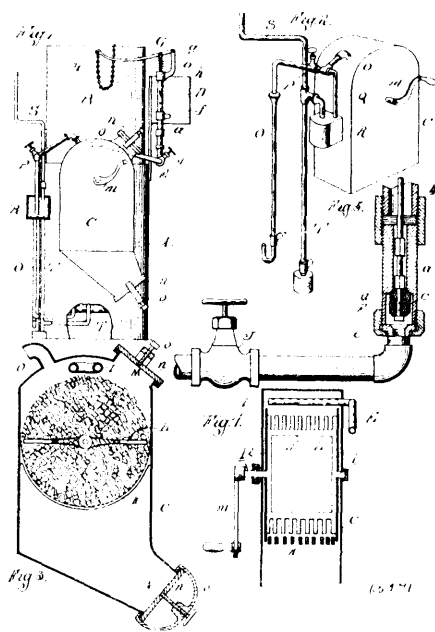
(*Procédé pour purifier le gaz acétylène.*)

Aron Landsberger, Berlin, assignee of Dr. Fritz Ullman, Feurth, Bavaria, all in Germany, 9th December, 1899; 6 years. (Filed 19th October, 1898.)

Claim.—The process of purifying acetylene gas consisting in treating impure acetylene gas with oxidizing chromic compounds, in which the chrome is present as an acidifier, for instance, with chromic acid or aqueous or acidified chromic acid solution or acidified bichromate solution for the purpose of oxidizing and absorbing the impurities of the acetylene.

No. 65,271. Acetylene Gas Apparatus.

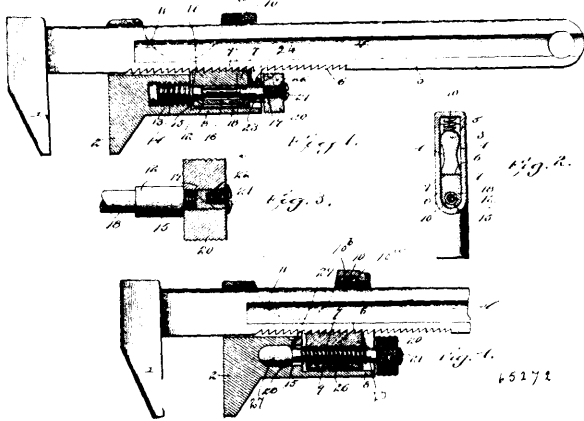
(*Appareil à gaz acétylène.*)



Henry W. Shaw, Frank P. Cleveland, and Charles W. Cadwell, all of Detroit, Michigan, U.S.A., 9th December, 1899; 6 years. (Filed 17th December, 1898.)

Claim.—1st. In an acetylene gas apparatus, a gas generator consisting of a casing having a water inlet connection near its top, a rotary rake for overturning a portion of the carbide, and a curved grating arranged beneath the rake and in proximity thereto, adapted to support the carbide, said grate comprising a series of independent, longitudinally curved bars curved in the plane of the movement of the rake and separated from one another to form unrestricted longitudinal openings in the grating from end to end for the purpose set forth. 2nd. In an acetylene gas apparatus, the combination with the generator casing having a water inlet connection near its top, a grating in said casing supporting the carbide, a rectangular frame having a hollow centre mounted for rotary movement above the grating, and outwardly extending rigid teeth upon the opposite ends of the frame adapted to engage with and overturn a portion of the carbide. 3rd. In an acetylene gas apparatus, the combination with the generator casing, a valve controlled water supply pipe arranged without and in a plane parallel with the casing, a pipe extending within the casing, said pipe communicating with and extending upwardly from an acute angle to the supply pipe and a transverse pipe within the casing communicating with the extending pipe within the casing at its upper end, said transverse pipe being provided with a series of perforations formed in its upper side.

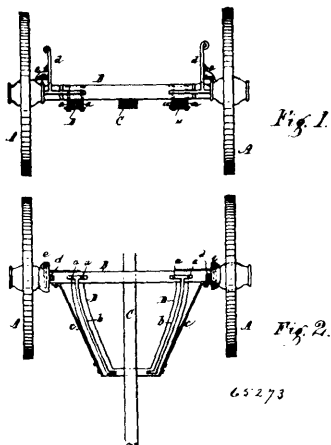
No. 65,272. Wrench. (*Clé à écrou.*)



Frederick W. Stewart, Coldwater, Michigan, U.S.A., 9th December, 1899; 6 years. (Filed 20th February, 1899.)

Claim.—1st. In a wrench, the combination of a shank, a sliding jaw, a dog mounted on the sliding jaw and engaging the shank and provided with an opening, an adjusting screw having a threaded portion to engage the jaw, and provided with a smooth portion passing through the opening of the dog, said screw having a shoulder to engage the inner end of the latter, a sleeve arranged on the outer end of the screw and engaging the dog, and a head fitting against the sleeve, substantially as described. 2nd. In a wrench, the combination of a shank, a sliding jaw having a hollow casing and capable of a limited movement transversely of the shank, a dog housed within the casing and carried by the jaw in its transverse movement, a screw swivelled to the dog and engaging the jaw, and a fastening device passing through the sides of the casing and located at the outer end of the dog, substantially as described. 3rd. In a wrench, the combination of a toothed shank, a sliding jaw mounted thereon and capable of a limited lateral movement and provided with a cylindrical socket 28, a screw provided with a smooth bearing portion or head fitting in the said socket, a fastening device mounted on the sliding jaw and engaging the screw at the inner end of the head and retaining the latter in the said socket, and a dog having a threaded opening to receive the screw and capable of movement longitudinally of the jaw and held against movement in any other direction independent of the said jaw, substantially as and for the purpose described.

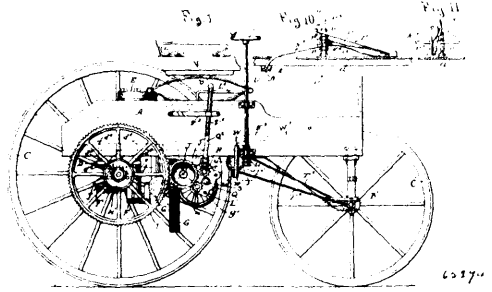
No. 65,273. Waggon. (*Wagon.*)



John Watkins Bowman, Hamilton, Ontario, Canada, 9th December, 1899; 6 years. (Filed 2nd August, 1899.)

Claim.—1st. In combination with waggons, the hounds bolted under the rear axle, and top braces secured at one end to the inner portion of the hounds and the other end to the top of the axle, substantially as and for the purpose specified. 2nd. In combination with waggons, the hounds D D, bolted to the under side of the rear axle B, curved top braces h h, secured at one end to the inner portion of the hounds D, and the other end to the upper side of the axle B, side braces c c, secured to the inner portion of the hounds D D, and to the axle B, to resist side strain, all constructed for convenience and strength, substantially as and for the purpose specified,

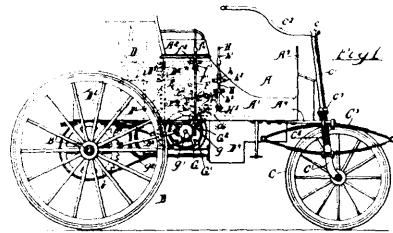
No. 65,274. Motor Vehicle. (*Automobile.*)



George Washington Lewis, Philadelphia, Pennsylvania, U.S.A., 9th December, 1899; 6 years. (Filed 12th May, 1899.)

Claim.—1st. The combination with vehicle driving wheels and a prime mover of a speed changing, reversing and power disconnecting mechanism comprising a friction disc, a shaft extending across the face of the disc, said shaft consisting of two parts or sections connected by a universal or flexible joint and one of which sections is mounted in fixed bearings on the machine frame, gearing connecting said last named section of the shaft with the vehicle driving wheel, a pulley mounted on the movable section of the shaft and movable endwise thereon from one side of the disc to the other across the face of the disc, a movable bearing for the free end of the movable section of the shaft, means for giving movement to the said bearing and an actuating device connected with said pulley for moving it endwise on the shaft. 2nd. The combination with vehicle driving wheels and a prime mover of a speed changing, reversing and power disconnecting mechanism comprising a friction disc, a shaft extending across the face of the said shaft consisting of two parts or sections connected by a universal or flexible joint and one of which sections is mounted in fixed bearings on the machine frame, gearing connecting said last mentioned section of the shaft with the driving wheels, a pulley mounted on the movable section of the shaft and movable endwise thereon from one side of the disc to the other across the face of the disc, a movable bearing for the free end of the movable section of the shaft, an oscillating arm supporting said bearing, means connected with said arm for actuating the bearing comprising a foot lever having rigid attachment to said arm and an actuating device connected with said pulley for moving it endwise on the shaft, substantially as described. 3rd. The combination with vehicle driving wheels and a prime mover of driving gear comprising a friction disc and a pulley adapted for contact with said disc, a movable shaft with which the pulley has longitudinally sliding but non-rotative connection, a movable bearing for said shaft, a spring applied to throw the shaft away from the friction disc, an actuating lever for forcing the shaft toward the disc and a locking device acting on said lever with spring pressure, substantially as described. 4th. The combination, with vehicle driving wheels and a prime mover, of a driving gear comprising a friction speed changing, reversing, and power disconnecting mechanism, and a spur gear speed changing mechanism interposed between the said friction, speed changing, reversing, and disconnecting mechanism, and the vehicle driving wheels, substantially as described. 5th. The combination with vehicle driving wheels and a prime mover, of driving connections, comprising a friction disc, a pulley adapted for contact with the face of the disc, which pulley is movable to either side of the center of the same, and a spur gear speed changing mechanism consisting of an oscillating frame carrying two pinions, gearing driving the same at different speeds, and a single gear wheel adapted to be engaged by either pinion, substantially as described. 6th. The combination with vehicle driving wheels and a prime mover, of driving connections comprising a friction disc, a pulley adapted for contact with the face of the disc, which pulley is movable to either side of the center of the disc and is also movable toward and from the face of the disc, and a spur gear speed changing mechanism consisting of an oscillating frame carrying two pinions, gearing driving the same at different speeds, and a single gear wheel adapted to be engaged by either pinion, substantially as described. 7th. The combination with vehicle driving wheels and a prime mover, of a driving gear, comprising a stationary gear wheel through which motion is transmitted to the driving wheels, an oscillating frame, two pinions mounted on the frame either of which may be engaged with the said gear wheel by oscillation of the frame, and gearing on the frame by which one of said pinions is driven faster than the other, substantially as described. 8th. A driving gear comprising an oscillating frame, a driving shaft mounted on said frame, a pinion attached to said shaft, a shaft carrying a second pinion, a stationary gear wheel with which either of said pinions may be engaged by oscillation of the frame, an intermediate shaft mounted on the frame, and gear wheels and pinions attached to said shafts whereby motion is transmitted from the driving shaft through the medium of the intermediate shaft to the shaft which carries the second pinion, substantially as described. 9th. The combination with vehicle driving

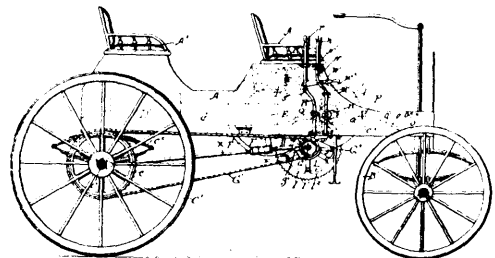
wheels and a prime mover of a driving gear comprising a friction disc, a pulley adapted for contact with the face of the disc, a shaft supporting said pulley with which said pulley has longitudinally sliding but non-rotative connection, said shaft consisting of two parts connected by a flexible joint, a movable bearing engaging the part of the shaft on which the pulley is mounted, an oscillating frame in which the other part of said shaft is mounted, gear pinions on said frame which are driven from said shaft by gearing giving greater speed to one pinion than to the other and a gearing wheel with which either of said pinions may be engaged by oscillation of said frame, substantially as described. 10th. The combination with vehicle driving wheels and a prime mover, of driving connections comprising a friction disc, a pulley adapted for contact therewith, a shaft with which the pulley has longitudinally sliding but non-rotative connections, said shaft consisting of two parts united by a universal joint on one of which parts the pulley is mounted, a movable bearing for the part of the shaft on which the pulley is mounted, an oscillating frame supporting the other part of said shaft, a pinion on the part of said shaft carried by said oscillating frame, a second pinion mounted on said frame, gearing on the frame by which the said second pinion is driven and a gear wheel with which either of said pinions may be intermeshed by the rocking of the oscillating frame, substantially as described. 11th. The combination with vehicle driving wheels and a prime mover of a driving gear comprising a stationary gear wheel, an oscillating frame, two pinions mounted on the frame either of which may be engaged with the gear wheel, gearing on the frame by which one of said pinions is driven faster than the other and an actuating lever attached to the said frame and provided with a locking device for holding the frame in a desired position, substantially as described. 12th. The combination with vehicle wheels and a prime mover, of driving connections comprising an oscillating frame, two pinions mounted on the frame, gearing driving said pinions at different speeds, a gear wheel which either of said pinions may be engaged by oscillation of the frame, a friction disc, a pulley adapted for contact with the face of the disc, a shaft with which said pulley has longitudinally sliding but non-rotative connection, said shaft consisting of two parts united by a flexible joint one of which parts is mounted in said oscillating frame, a movable bearing for the part of said shaft which carries said pulley, an actuating lever connected with said bearing for moving the same, a spring applied to throw the pulley away from the disc and a locking device for engaging the actuating lever to hold the pulley in contact with the disc, said locking device embracing a spring by which the actuating lever is held with yielding pressure, substantially as described. 13th. The combination with vehicle driving wheels, of a prime mover, the crank shaft of which is arranged at right angles with the axis of rotation of the driving wheels, a friction disc mounted on said shaft, a friction pulley adapted for contact with the face of the disc, a shaft with which said pulley has longitudinally sliding but non-rotative connection, said shaft being arranged parallel with the axis of rotation of the driving wheels and movable toward and from the face of the disc, a spur gear speed changing device embracing an oscillating frame adapted to rotate or swing on a horizontal axis parallel with axis of rotation of the driving wheels gearing connecting said speed changing device with the driving wheels, substantially as described. 14th. The combination with vehicle driving wheels and a prime mover, the crank shaft of which is arranged at right angles with the axis of the driving wheels, of a friction disc attached to said shaft, a pulley adapted for contact with the face of the friction disc, a horizontal shaft with which said pulley has sliding but non-rotative engagement said shaft being movable toward and from the disc, an actuating lever for moving the pulley endwise on the shaft, an actuating lever for moving the shaft toward and from the disc, an oscillating frame carrying two pinions, gearing on the frame actuated by said shaft and driving said pinions at different speeds, a gear wheel with which either of said pinions may be engaged by oscillation of said frame, an actuating lever attached to the frame for moving the said frame, and a gear wheel on the driving wheel axle intermeshing with said gear wheel last-mentioned, substantially as described. 15th. The combination with vehicle driving wheels, a frame and a prime mover, of a revolving axle through which motion is transmitted to the driving wheel, and bearings for said axle comprising a shell or casing attached to the vehicle frame, anti-friction rollers mounted in said shell and engaging the upper surface of the axle bearing, pins for the rollers resting in sockets in the frame, a cap holding the axle in place in the bearing, and flanges or collars on the axle bearing against the side faces of the rollers and the cap, substantially as described. 16th. The combination with vehicle driving wheels, a frame and a prime mover, an axle through which motion is transmitted to the driving wheels, bearings for the axles located beneath the frame, bolts for connecting the said bearings with the frame, said bolts being arranged vertically and passing loosely through the said bearings, and coiled springs interposed between the bearing boxes and the frame, substantially as described. 17th. The combination with a vehicle body, driving wheels at the rear of the body and a motor for actuating driving wheels, supporting wheels in front of the body, an axle for the same pivotally connected with the body, and a steering gear comprising a transverse shaft provided with two drums, ropes connecting the axle with the drums, and means for turning said shaft on which the drums are mounted, one of said drums being adjustably connected with the shaft whereby the ropes may be tightened, substantially as described.

No. 65,275. Motor Vehicle. (Automobile.)

65275

George Washington Lewis, Philadelphia, Pennsylvania, U.S.A.,
9th December, 1899; 6 years. (Filed 21st June, 1899.)

Claim.—1st. The combination with vehicle driving wheels, the vehicle body and the motor, of a driving wheel comprising a friction disc mounted to turn on horizontal axle arranged longitudinally of the vehicle body, a shaft extending across the vehicle body parallel with the face of the disc, a pulley mounted to slide endwise on the shaft and adapted for contact with the face of the disc, and means for moving said pulley endwise on the shaft, embracing an arm which is pivoted to the body at one end and is connected with the pulley at its opposite or free end, a hand lever pivoted to the side of the body at its lower end so as to swing in a plane transverse to the side of the body, said hand lever being provided with a spring actuated detent adapted to engage a notched segment, and a link connected at one end with said lever above its pivot and at its opposite end with said arm at a point between the ends of the latter, substantially as described. 2nd. The combination with the vehicle driving wheels and a motor, of a rotary friction disc driven by the motor, a shaft arranged substantially parallel with the face of the disc and movable toward and from the same, a friction pulley mounted to rotate with said shaft but movable endwise thereon and adapted to engage the face of said disc, an actuating arm pivotally connected at one end to the vehicle by means of a universal joint and connected at its free end with said pulley, said universal joint affording lateral movement of said arm with the shaft when the latter is shifted toward and from the disc, a hand lever provided with a spring actuated detent adapted to engage a notched segment, a link connecting said hand lever with said actuating arm at a point intermediate of the ends of the latter, and gearing connecting said shaft with the driving wheels, substantially as described.

No. 65,276. Motor Vehicle. (Automobile.)

65276

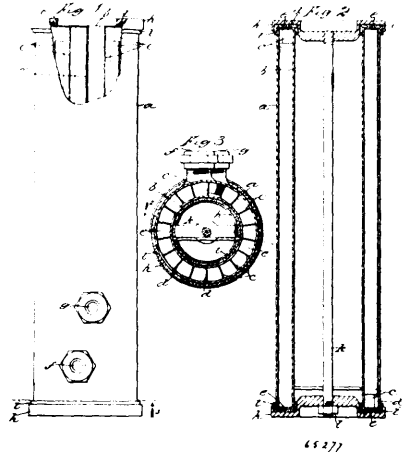
George Washington Lewis, Philadelphia, Pennsylvania, U.S.A.,
9th December, 1899; 6 years. (Filed 12th May, 1899.)

Claim.—1st. The combination with vehicle driving wheels and a prime mover, of a friction driving gear comprising a shaft which is actuated by the prime mover, two friction pulleys of different sizes on said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from the same, two friction pulleys on the second shaft which are movable in a direction endwise of the shafts relatively to the pulleys on the first shaft, the pulleys on the two shafts being located at different distances apart, and means applied to the second shaft for giving lateral movement to the same, substantially as described. 2nd. The combination with vehicle driving wheels and a prime mover, of a friction driving gear, comprising a shaft which is actuated by the prime mover, two friction pulleys of different sizes on said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from the same, two friction pulleys mounted to slide endwise on the second shaft and rigidly connected with each other, and means applied to move laterally the second shaft, substantially as described. 3rd. The combination with vehicle driving wheels and a prime mover, of a friction driving gear, comprising a shaft which is actuated by the prime mover, two friction pulleys of different sizes mounted on said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from the same, two friction pulleys mounted to slide endwise on said second shaft, actuating means connected with said pulleys for moving them endwise on the shaft, and means applied to the second shaft for

giving lateral movement to the same, substantially as described. 4th. The combination with vehicle driving wheels and a prime mover, of a friction driving gear, comprising a shaft which is actuated by the prime mover, two friction pulleys of different sizes mounted on the said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from same, two friction pulleys arranged to slide endwise on said second shaft and rigidly connected with each other, and means for moving said pulleys on the shaft, comprising an oscillating arm connected with a ring which engages a groove in the hub of one of the pulleys, a hand lever and a connecting bar uniting the hand lever with said oscillating bar, substantially as described. 5th. The combination with vehicle driving wheels and a prime mover, of a friction driving gear, comprising a shaft which is actuated by the prime mover, two friction pulleys of different sizes mounted on said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from same, two friction pulleys on said second shaft which are movable relatively to the pulleys on the first shaft, a laterally movable bearing for one end of said second shaft, an upright arm at the free end of which said bearing is attached, and an actuating device connected with said bearing for giving lateral movement to the said second shaft, substantially as described. 6th. The combination with vehicle driving wheels and a prime mover of a friction driving gear, comprising a shaft which is actuated by a prime mover, two friction pulleys of different sizes mounted thereon, a second shaft arranged parallel with the first shaft and movable laterally toward and from the same, two friction pulleys of said second shaft which are movable relatively to the pulleys on the first shaft, a movable bearing for one end of the said second shaft, and means connected with said movable bearing for shifting said shaft laterally, consisting of a rock shaft provided with a crank arm which is connected with said shaft bearing and with an actuating lever, and a spring applied to one of said bars to throw the second shaft away from the first shaft, substantially as described. 7th. The combination with vehicle driving wheels and a prime mover, of a friction driving and brake gear, comprising a shaft which is actuated by a prime mover, two friction pulleys of different sizes on said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from the same, two friction pulleys of different sizes mounted on the second shaft and movable relatively to the pulleys on the first shaft, a friction strip arranged parallel with the said shafts in position for contact therewith of the larger of the pulleys on the second shaft, and means for giving lateral movement to said second shaft, substantially as described. 8th. The combination with vehicle driving wheels and a prime mover, of a friction driving and brake gear, comprising a shaft which is actuated by a prime mover, two friction pulleys of different sizes on said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from the same, two friction pulleys of different sizes mounted on the second shaft and movable relatively to the pulleys on the first shaft, a friction strip arranged parallel with the said shafts in position for contact therewith of the larger of the pulleys on the second shaft, a laterally movable bearing for one end of said second shaft, and means for moving laterally the second shaft, comprising a rock shaft provided with a crank arm which is connected with the bearing and provided also with two foot levers, one for throwing the friction pulleys into engagement with each other, the other for throwing the larger friction pulley into contact with the said friction strip, substantially as described. 9th. The combination with vehicle driving wheels and a prime mover, of a combined friction and spur gear driving device, comprising a shaft which is actuated by the prime mover, two friction pulleys of different sizes on said shaft, a second shaft arranged parallel with the first shaft and movable laterally toward and from the first shaft, two friction pulleys on the said second shaft which are movable relatively to the pulleys on the first shaft, a third shaft having operative connection with the driving wheels, two spur gears of different sizes on said third shaft, two spur gears of different sizes mounted on said second shaft and movable relatively to those on the third shaft, and means for giving lateral movement to said spur gears on the second shaft, substantially as described. 10th. The combination of vehicle driving wheels and a prime mover, of a combined friction and spur gear driving device, comprising a shaft which is driven by the prime mover, two friction pulleys of different sizes on said shaft, a second shaft arranged parallel with the first shaft and movable both laterally and endwise, two friction pulleys of different sizes mounted to move endwise on the second shaft, a third shaft having operative connection with the driving wheels, two spur gears of different sizes on said third shaft, two spur gears of different sizes secured to the second shaft and adapted for engagement with the spur gears on the third shaft by endwise movement of said second shaft, and means for giving endwise movement to said second shaft, substantially as described. 11th. The combination with vehicle driving wheels and a prime mover, of a combined friction and spur gear driving device, comprising a shaft which is driven by the prime mover, two friction pulleys of different sizes on said shaft, a second shaft arranged parallel with the first shaft and movable both endwise and laterally, two friction pulleys mounted to slide endwise on said second shaft, said pulleys being rigidly connected with each other, a third shaft having operative connection with the driving wheels, two spur gears of different sizes on said third shaft, two spur gears of different sizes rigidly attached to said second shaft, a laterally movable bearing for one end of said second shaft, an actu-

ating lever connected with said movable bearing for giving lateral movement to the said second shaft, an actuating lever connected with said pulleys on the second shaft for moving them endwise on said shaft, and an actuating lever connected with said second shaft for give endwise movement of the latter, substantially as described. 12th. The combination of vehicle driving wheels and a prime mover, of friction driving and reversing gear comprising a shaft which is actuated by the prime mover, a second shaft arranged parallel with the first shaft and movable toward and from the same, two friction pulleys of unequal sizes on the first shaft, two friction pulleys of different sizes mounted on the second shaft and movable thereon relatively to the pulleys on the first shaft, gearing connecting said second shaft with the driving wheel, means applied to the said second shaft for moving it toward and from the first shaft, and a laterally movable reversing pulley adapted for contact with the said friction pulleys for reversing the direction of rotation of the second shaft, substantially as described. 13th. The combination with vehicle driving wheels and a prime mover, of a friction driving and reversing gear, comprising a shaft which is actuated by the prime mover, a second shaft arranged parallel with the first shaft and movable toward and from the same, friction pulleys on said shafts, a laterally movable reversing pulley, a shaft on which said reversing pulley is mounted, a pivotal arm affording a bearing for one end of said reversing pulley shaft, and means for giving lateral movement to the reversing pulley, comprising a lug or projection on said pivotal arm provided with a holding notch, and a rock shaft provided with a cam arm adapted for engagement with said lug or projection, substantially as described.

No. 65,277. Liquid Cooler. (Réfrigérant de liquides.)



Christian Strobel, Waterbury, Connecticut, U.S.A., 9th December, 1899; 6 years. (Filed 28th September, 1899.)

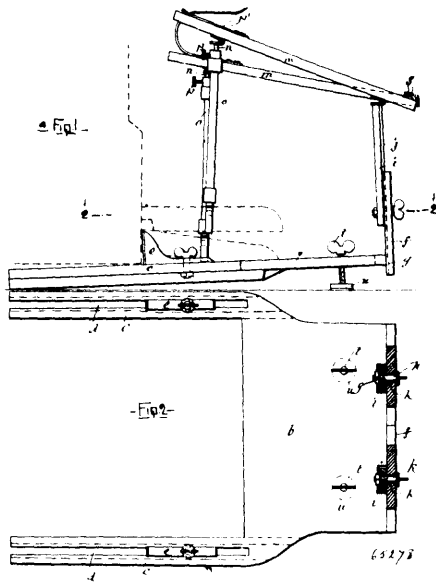
Claim.—1st. In combination the outer cylinder, the inner cylinder bearing the longitudinal partitions having openings alternately at the ends and extending radially to the outer cylinder, and the plates closing the opening between the two cylinders at the ends, all substantially as described and for the purposes set forth. 2nd. In combination the outer cylinder, the inner cylinder bearing the longitudinal partitions having openings alternately at the ends and extending radially to the outer cylinder, and the plates closing the opening between the two cylinders at the ends and borne by the inner cylinder, all substantially as described and for the purposes set forth. 3rd. In combination the outer cylinder, the inner cylinder bearing the longitudinal partitions having openings alternately at the ends, the plates closing the opening between the two cylinders at the ends, and the two end cups with their cup packings, all substantially as described and for the purposes set forth.

No. 65,278. Piano Pedal. (Pedale de pianos.)

William Bohrer and Theobald Messmer, both of Montreal, Quebec, Canada, 9th December, 1899; 6 years. (Filed 11th July, 1899.)

Claim.—1st. An attachment for pianos, consisting of a pair of auxiliary pedals and means for detachably connecting said auxiliary pedals to the pedals proper, substantially as described and for the purpose set forth. 2nd. A portable attachment for pianos, consisting of a pair of auxiliary pedals and means for detachably connecting said auxiliary pedals to the pedals proper, substantially as described and for the purpose set forth. 3rd. A portable attachment for pianos, consisting of a pair of auxiliary pedals and means for detachably connecting said auxiliary pedals to the pedals proper, and means for detachably setting said auxiliary pedals rigidly at the foot of the piano, substantially as described and for the purpose set forth. 4th. A portable attachment for pianos, consisting of a carrier frame, a pair of auxiliary pedals, adjustable means for connecting said auxiliary pedals to said carrier frame, and adjustable means for connecting said auxiliary pedals to the

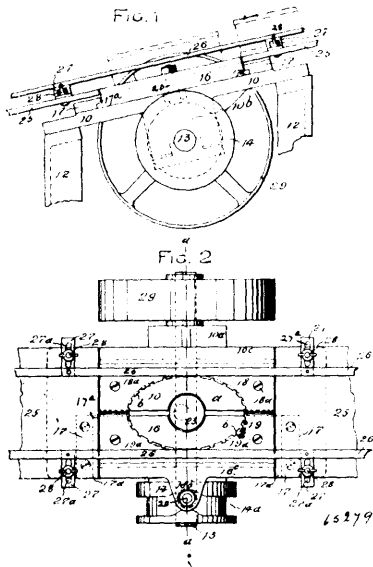
pedals of the piano, substantially as described and for the purpose set forth. 5th. A portable attachment for pianos, comprising a



carrier frame, consisting of a vertical portion and a portion to extend beneath the foot of the piano, a vertically adjustable bracket piece carried by said vertical portion, a pair of auxiliary pedals hinged at their heels to said bracket piece, a pair of extensible rods pivotally connected at their ends to the toes of said pedals and having their lower ends forked, a pair of blocks carried by and adjustable longitudinally of the horizontally extending portion of said carrier frame, a pair of vertical screws carried by said horizontal portion and projecting downwardly therethrough, and a pair of bearing blocks rotatably carried by the lower ends of said screws, substantially as described and for the purpose set forth.

No. 65,279. Can Crimping Machine.

(Machine à gaufrer les boîtes en fer blanc.)



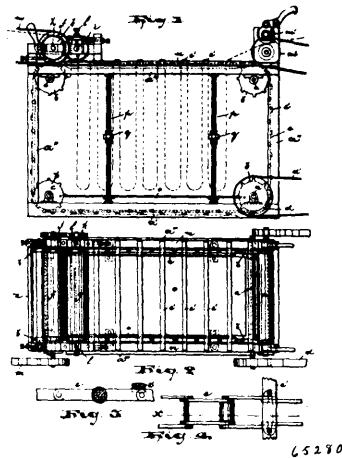
Bertram Harris Short, Vancouver, British Columbia, Canada, 9th December, 1899; 6 years. (Filed 16th March, 1899.)

Claim 1st. In a can crimping machine, a frame 10 having a fixed jaw on one side made to embrace one half the periphery of a can, in combination with a jaw fixed to a movable plate arranged to engage the remaining half of a can, a shaft suitably journaled in hangers beneath the frame 10, a cam wheel fixed on one end of the said shaft, a roller mounted to a depending stud fixed to a movable

plate and engaging in an irregular groove in said cam wheel, whereby, as the said cam wheel is rotated, the jaw in the movable plate will be moved towards the fixed jaw and back, substantially as specified. 2nd. In a machine for crimping the tops or covers on cans, having a frame 10 carrying a fixed jaw on one side, a movable jaw fixed in a plate arranged to move on a horizontal plane to a fixed jaw on the opposite side, and supported by said frame 10, a stud fixed to said plate and depending downwards, a roller on said stud, a cam wheel fixed on a horizontal shaft beneath the frame 10 engaging said roller, its combination with a knock out disc lying between the fixed and movable jaws, and a collar fixed on the horizontal shaft having ribs to engage stem of the knock out disc, causing an upward movement of such disc at intervals, and such movement to the knock out being alternate with the movement of the movable jaw, substantially as and for the purposes set forth. 3rd. A frame 10 carrying a fixed jaw 18 on one side, a slidable plate 16 arranged on the other side of the frame 10 and a jaw 19 fixed to said plate, such jaws having their gripping peripheries a contour to correspond with the peripheries of the cans operated upon, and serrations *b* surrounding such jaws, in combination with a shaft 13 arranged to turn in suitable hangers beneath the frame 10, a cam wheel fixed to such shaft, a stud fixed to the slidable plate 16, and a roller on such stud made to operate by the cam wheel, substantially as specified.

No. 65,280. Looping Machine.

(Machine à suspendre le papier goudronné.)

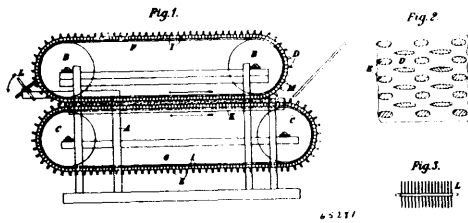


Louis Wimmer, Elizabeth, New Jersey, U.S.A., 9th December, 1899; 6 years. (Filed 6th May, 1899.)

Claim 1st. In a looping machine, the combination with a frame, and a pair of endless belts or chains connected by a series of looping slats or bars, and means for operating said belts or chains and bars, of a pair of feed rolls arranged above the upper horizontal portion of the series of connected slats or bars approximately in the line of movement of said bars, to occasion a close approach of said bars successively to the periphery of one of said rolls and effect a contact of the web lying on said bar with said periphery, substantially as set forth. 2nd. In a looping machine, the combination with a frame and a pair of endless chains, and sprocket wheels for driving said chains, of bars or slats permanently fixed upon said chains at regular intervals, a pair of feed rolls arranged above said slats adjacent to the upper plane of movement thereof, and operating means, the feed rolls and slats co-operating to retard and bend the paper preparatory to the formation of loops, substantially as set forth. 3rd. In a looping machine, the combination with a frame and a feed roll, of a series of slats passing in a plane beneath said feed roll and into close contiguity thereto to effect a contact of the web with said feed roll and the formation of a new loop, and operating means, substantially as set forth. 4th. In a looping machine, the combination with a frame and feed roll, of endless chains and sprocket wheels arranged to return the chain and slats beneath the series of loops, slats arranged permanently in a series upon said chains, the said slats being arranged and adapted to move horizontally backward beneath said feed roll and bend the paper beneath said roll preliminary to forming a loop, and driving means, substantially as set forth. 5th. In a looping machine, the combination with a frame, horizontally moving chains and slats, of feed rolls arranged above the slats and adapted to direct the paper downward towards said slats, and means for adjusting one of said rolls with relation to said horizontally moving slats, substantially as set forth. 6th. In combination the frame, endless chain, connecting slats and sprocket wheels, feed rolls arranged above said chains, means for adjusting said rolls with relation to one another and means for adjusting one of said feed rolls with relation to the slats, driving means and means for drawing the paper from said slats, substantially as set forth.

No. 65,281. Machine for Treating Peat.

(Machine pour le traitement de la tourbe.)

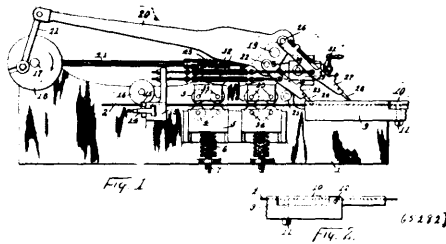


Adolf Rom, Lian, near Christiania, Norway, 9th December, 1899; 6 years. (Filed 23rd March, 1899.)

Claim.—1st. Machine for obtaining peat fibres having two bands running in the same direction but with unequal velocity, said bands being provided with spikes or knives, and between which the peat is fed, whereby the knives or spikes on the band that moves with the greatest velocity the upper one fetch the fibres from the peat, which fibres afterwards are taken off from the knives by means of a fan, a comb, or some other suitable apparatus. 2nd. In a machine of the kind specified, the arrangement that the knives on the band moving with the greatest velocity is given an approximately lenticular section for the purpose of facilitating their passage through the bulk of the reduced peat, and of facilitating the release of the fibres from the knives.

No. 65,282. Rasp Cutting Machine.

(Machine à tailler les râpes.)



William Nicholas Rumely, Laporte, Indiana, U.S.A., 9th December, 1899; 6 years. (Filed 16th October, 1899.)

Claim.—1st. In a rasp cutting machine, the combination, substantially as set forth, of a frame, a channelled anvil supported thereby, feed rolls supported by the frame to the rear of and in line with the channel of the anvil, a lever pivoted to the frame above and to the rear of the anvil, tool holders pivoted to the lever and carrying cutters presenting themselves forwardly over the anvil, a crank shaft journaled in the frame, a link connecting the crank thereof with said lever, and positively transmitting gearing connecting said crank shaft with said feed rolls and serving to turn the feed rolls regularly in a forward direction and prevent their being turned irregularly by the action of said cutters. 2nd. In a rasp cutting machine, the combination, substantially as set forth, of a frame, a channelled anvil supported thereby, feed rolls supported by the frame in line with the channel of the anvil, a lever pivoted to the frame above the plane of the anvil, tool holders pivoted to the lever and carrying cutters presenting themselves over the anvil, a crank shaft journaled in the frame, a link connecting the crank thereof with said lever, mechanism for transmitting forward rotary motion to the feed rolls, and trimming cutters supported by the frame to the rear of the feed rolls and in the planes of the edges of the channel in the anvil constructed and arranged to act as a resistance to the advance of the strip. 3rd. In a rasp cutting machine, the combination, substantially as set forth, of a frame, a channelled anvil supported thereby, feed rolls supported by the frame in line with the channel of the anvil, a lever pivoted to the frame above the plane of the anvil, tool holders pivoted to the lever and carrying cutters presenting themselves over the anvil, a crank shaft journaled in the frame, a link connecting the crank thereof with said lever, mechanism for imparting forward motion of rotation to said feed rolls, rollers supported under said tool holders by the frame, and a carrier for one of said rollers arranged for adjustment in the frame to move the roller carried by it to selected positions closer to or further from the vertical plane of the other roller.

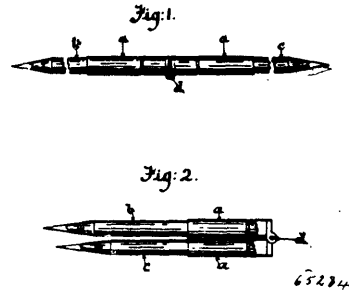
No. 65,283. Paper Charging and Sizing Process.

(Procédé à coller et appliquer.)

Louis Capazza, Brussels, Belgium, 9th December, 1899; 6 years. (Filed 31st October, 1899.)

Claim.—1st. Precipitating calcic carbonate upon fibre by chemical reaction, substantially as and for the purpose set forth. 2nd. For the purpose of charging and sizing paper, injecting carbonic acid gas or a mixture of gases containing carbonic acid gas into a cell, tank or the like containing fibre, lime water and resinous soap, substantially as set forth. 3rd. The double decomposition method, substantially as and for the purpose set forth.

No. 65,284. Pencil Case or Holder. (Porte-crayon.)

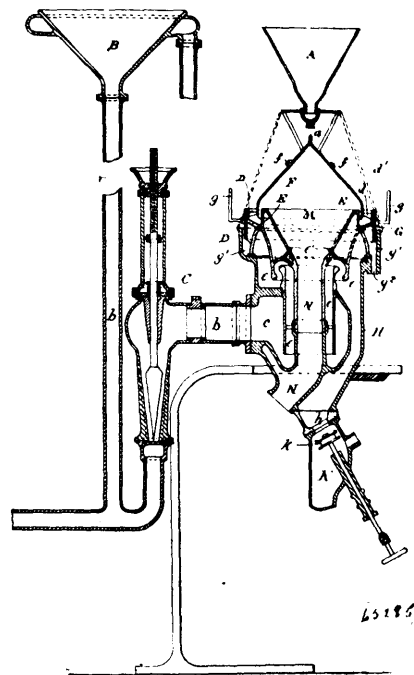


Edwin Turner Cothingham, Thrapston, Northamptonshire, England, 9th December, 1899; 6 years. (Filed 25th May, 1899.)

Claim.—Two casings or holders pivotally connected together for the purpose of carrying pencils or pens and the like which may be used when required substantially as described and illustrated herein, for the purpose set forth.

No. 65,285. Hydraulic Ore Separator.

(Separateur hydraulique de minerai.)

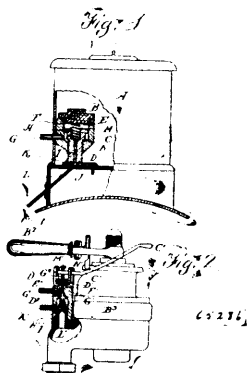


William Stronach Lockhart, London, England, 9th December, 1898; 6 years. (Filed 3rd June, 1899.)

Claim.—1st. In combination in a hydraulic gravity separator, an annular chamber, receiving the material to be separated and in communication with the water supply of separation, a vertically adjustable ring connected to the outer edge of said annular chamber adapted to adjust height of local head of still water in said annular chamber to control speed of adjacent separation current, an annulus chamber beneath the upper receiving chamber admitting gravity separated particles through a contracted annular neck, a contracted

annular overflow orifice forming a vertical extension of said contracted neck, and an annular circuitous water supply passage leading to the said lower chamber, substantially as described. 2nd. In combination, the cone for receiving at its point and spreading by its coned surface the material to be separated, the annular receiving chamber at the base of the cone adapted to discharge outwardly any excess of water with material having a lateral communication with a narrow, adjacent, annular and vertical water exit passage between its inner wall and the edge of the said cone, a chamber to receive the separated material beneath the said contracted annular passage between the cone and inner wall of upper chamber and an annular circuitous water supply passage to said lower chamber, substantially as described. 3rd. In combination, the cone for receiving and distributing the material to be separated, the annular chamber beneath having a narrow exit channel between its inner wall and the edge of said cone, and forming a dead water space between the cone and its outer wall, a vertically adjustable sleeve forming an adjustable edge for said outer wall, a lower chamber having a narrow channel communicating with the upper chamber, and a circuitous water supply leading to said lower chamber, substantially as described. 4th. A self contained hydraulic gravity separator, consisting of, in combination, a hopper for mixed wet material to be separated with central discharge, a cone spreader with apex upwards supporting said hopper or skeleton supports, an annular receiving trough at base of cone adapted to discharge outwardly free from apparatus excess water with material, to receive and maintain a constant head of water from other constant supply to interior of apparatus and to transmit into an adjacent upward current annulus the particles to be separated, a downward means of exit to locked receptacles from base of upward current of heavy gravity separated particles, and a free unrestricted exit inwardly towards centre of apparatus of the light waste particles and separating current of water, substantially as described.

No. 65,286. Track Sanding Machine.
(Machine à sabler les rails.)

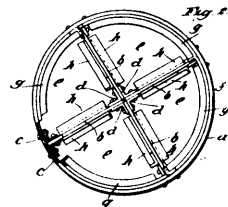
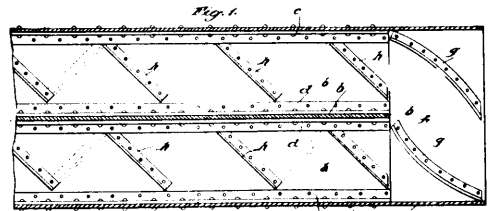


John Henry Watters, William Robert Howdon and William Albert Jacobs, all of Anniston, Alabama, U.S.A., 9th December, 1899; 6 years. (Filed 13th November, 1899.)

Claim.—1st. In a track sanding device, the sand box having a discharge opening, a flat gate valve over said discharge opening within said sand box and perforated correlatively to the discharge opening, a cylinder suspended thereover, a piston movable therein, a piston rod thereon extending to said valve and adapted to close over the opening in same when the piston is depressed, and means for introducing air under pressure below said piston, for the purpose specified. 2nd. In a track sanding device, the sand box and a cylinder, a discharge opening and a valve governing same, a piston in said cylinder in operative relation to said sand valve, a groove in the wall of said cylinder adapted to pass air around the piston when same is at its ultimate point of elevation, a passage leading from the upper end of said cylinder to the said sand discharge opening, an air supply pipe leading from a source of air supply to the lower end of said cylinder, and means for admitting the passage of air through said pipe under graduated tensions, for the purpose specified. 3rd. In a track sanding device, the sand box, having a discharge opening, a flat gate valve over said discharge opening within said sand box and perforated correlatively to the discharge opening, a cylinder suspended thereover, a piston movable therein, a piston rod thereon extending to said valve and adapted to close over the opening in same when the piston is depressed, said rod and piston having an air passage therein communicating with the interior of said cylinder above said piston and opening through the end of said piston rod in registry with the perforation in said gate valve, and a by-pass groove in the wall of said cylinder to permit the passage of air around the piston when same is at its upper limit of motion, and means for introducing air under pressure below said piston, for the purpose specified. 4th. In a track sanding device,

the combination of the engineer's air brake valve, the sand box and a fluid actuated sand valve therein, with a cylinder secured to the said engineer's valve and connected internally with the air supply pipe thereof, a pipe leading from said cylinder near its top and said sand valve, a valve moving in said chamber, and adapted by its seating to close communication through the said air pipe G and opening in graduated capacities, and a lever adapted to operate said valve and so set as to intersect the plane of partial revolution of the engineer's air brake lever so as to be depressed a short distance by the movement of the said engineer's air brake valve lever to the point at which it is located on service application, and extended at substantially the same angle a proper distance and direction to be further depressed upon the movement of said lever into emergency application position, for the purpose specified. 5th. In a track sanding device, the combination of the sand box with a discharge pipe entering its bottom, a sand valve working in said sand box covering said discharge pipe opening, revoluble edgewise and perforated in registry with said discharge pipe, and a fluid actuated valve adapted to seat over said aperture when same is in registry with said discharge pipe, for the purpose specified.

No. 65,287. Drier. (Sechoir.)



John Bishop, Barton, and Andrew Peter Jerguson, Hull, Florida, U.S.A., 9th December, 1899; 6 years. (Filed 6th November, 1899.)

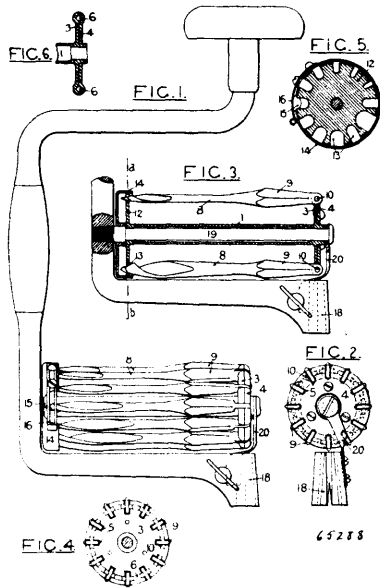
Claim.—1st. A drum drier provided with a solid continuous diaphragm or partition extending longitudinally through the same to form the drum into a plurality of independent passages, said passages extending from the centre of the drum to the sides thereof, and through which the material to be dried is passed, thereby increasing the effective heating or radiating surface of the drum, means located at the feed end of the drum for feeding the material to the said passages, substantially as described. 2nd. A drier drum having a solid partition fitted therein to form the drum into a plurality of passages, through which the stock may be passed, and spirally disposed flanges mounted at the feed end of the drum to advance the stock to the passages in the drum. 3rd. A drier drum, having a solid continuous partition extending longitudinally through the same to form the drum into a plurality of independent passages, through which the material to be dried may be passed, flanges attached to said partition to advance the stock along the passages, and flanges arranged spirally at the feed end of the drum to advance the stock to said passages in the drum, substantially as described. 4th. A drier drum having solid partitions arranged radially with respect to the drum, angle irons securing the partitions to the sides of the drum, and angle irons securing the partitions to each other at the centre of the drum, the feed end of the drum being provided with a series of angle irons arranged spirally on the inner surface of the feed end of the drum and serving as the drum revolves to feed the material into the passages, the said partitions being provided with angle iron flanges to move the stock along the drum, substantially as described.

No. 65,288. Multiple Tool Holder for Braces.
(Porte-outil multiple.)

William Henry Craine Harrison, Woodville, South Australia, 9th December, 1899; 6 years. (Filed 5th July, 1899.)

Claim.—1st. In a tool driving instrument having a socket to receive the tools when the same are to be driven, the tools hinged

by their tang ends to a rotatable sleeve mounted upon the tool driving instrument, the tang of the tool being at the end of the sleeve



adjacent to the socket and capable of being turned thereinto through an opening in the side thereof, substantially as described. 2nd. In combination with a tool driving instrument, a rotatable sleeve mounted upon a tool driving instrument with a socket having an opening in the side thereof, said sleeve having a plurality of tools hinged thereto by their tang ends so that the tang ends of the tools are adjacent to the socket and may be turned thereinto, substantially as described. 3rd. In combination with a tool driving instrument a plurality of tools hinged at the tang end to a rotatable sleeve mounted upon a tool driving instrument, the hinge being so formed and situated adjacent to the tool socket that the tangs of the tools may be turned thereinto through an opening in the side thereof as desired, and the points of the tools being protected or secured by a cap at the other end of the sleeve, substantially as described. 4th. The combination with a tool driving instrument having a socket to receive the tools when the same are to be driven, of a sleeve mounted to turn on said instrument, and a plurality of tools pivoted to and turning with the sleeve and capable each of swinging from a position alongside the sleeve to a position within the socket, substantially as described. 5th. The combination with a brace for driving tools, of the brace having a socket for receiving the tools when they are to be driven, of a sleeve mounted to turn on the brace, and a plurality of tools permanently pivoted to the sleeve and capable of swinging from a position alongside of the sleeve to a position within the socket, substantially as described. 6th. The combination with a tool driving instrument having a socket for receiving the tools when they are to be driven, the socket being open at one side so that the tools may be moved sidewise thereinto, of a tool holder mounted to turn on the instrument, and a number of tools pivoted on the holder and normally carried alongside thereof, the tools being capable of swinging through the said open side of the socket and into the same, to hold the tool in operative position, substantially as described. 7th. The combination with a brace having a socket therein, the socket having an opening in its outer side so that the tools may be moved sidewise into the socket, of a sleeve mounted to turn on an axis at an angle to the socket, one end of the sleeve terminating at the upper end of the socket, and a number of tools pivoted to said end of the sleeve and normally lying alongside of the sleeve to turn therewith, the tools having straight shanks and being capable of swinging outward from the sleeve and into the socket through the open side thereof, substantially as described. 8th. The combination with a brace having a tool socket, a sleeve mounted to turn on the pin, and a number of tools mounted to swing on the sleeve and normally lying alongside of the sleeve to turn therewith, the tools being capable of swinging outward from the sleeve and into the socket, to hold the tools in operative position, substantially as described.

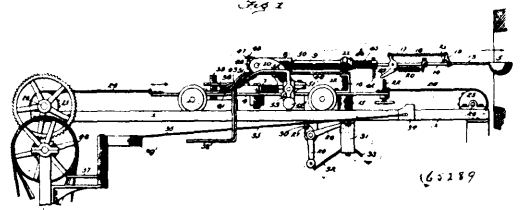
No. 65,289. Machine for Ladling Glass.

(Machine à couler le verre.)

George Beatty Dunkirk, Indiana, assignee of William Francis Altenbaugh, Tiffin, Ohio, U.S.A., 11th December, 1899; 6 years. (Filed 15th April, 1899.)

Claim.—1st. For gathering and conveying glass from a melting chamber to a mould, the combination with a reciprocating carriage,

a rod pivotally mounted thereon and a ladle pivotally jointed on said rod, of means connecting said rod and ladle to maintain them



in alignment, a device on the carriage arranged to be engaged by the ladle connections, to cause the ladle to dip on its pivot on the advance movement of the carriage, means constructed and arranged to cause said ladle connections to effect such engagement, means constructed and arranged to cause the ladle carrying rod to have a laterally swinging movement, and means on the carriage for engaging the ladle carrying rod on its outward swing whereby to cause the ladle to be tilted. 2nd. In a machine for gathering glass and conveying it from a melting chamber to a mould, the combination with a reciprocating carriage, a rod pivotally mounted thereon, and a ladle jointed upon said rod, of means connecting the ladle and the rod to maintain them in alignment under yielding tension, a device on the carriage arranged to be engaged by said ladle connections, and means for depressing said rod on the advance movement of the carriage whereby to effect the engagement of the ladle connections with the said carriage device to cause the dipping of the ladle on its joint in the operation of gathering a measured charge. 3rd. In a machine of the class described and in combination with a reciprocating carriage, a swing head pivotally mounted on said carriage, and a rod carried by said swing head, of a ladle jointed to flex on said rod, a bearing 22, on the carriage and a pivotally mounted device on said rod arranged to engage said bearing on the forward movement of the carriage to cause the ladle to dip to gather a charge and means on the carriage arranged to engage means 42 on the rod whereby to tilt the ladle to deliver the charge. 4th. In a machine of the class described, the combination, of a pivotally mounted ladle, a carrying rod therefor and a swing head for said carrying rod, a lever pivoted on said rod, a link connection for the ladle and said lever, a spring connecting said lever and rod for elevating the ladle, a stop for limiting such elevation, means for operating said lever, whereby the descent of the ladle is effected and determined, and a reciprocating carriage on which said swing head is pivotally mounted. 5th. In a machine of the class described, the combination of a pivotally mounted ladle, a carrying rod therefor, and a swing head for said carrying rod, a lever pivoted on said rod, a link connecting the ladle and said lever, a spring connecting said lever and rod, a stop on the carriage co-acting with said lever to limit the descent of the ladle, a stop on the ladle co-acting with the rod to limit the ascent of the ladle, and a reciprocating carriage upon which the swing head is pivotally mounted. 6th. In a ladling machine, and in combination with a reciprocating carriage, a rod pivotally mounted on said carriage, a ladle pivotally mounted on said rod, means including a bearing or projection on said carriage and a device pivoted on said rod for engaging the ladle and said carriage bearing for causing the ladle to dip and for limiting the dip, and means including said pivoted device for effecting and for limiting the ascent of the ladle, the means for effecting said movements of the ladle being controlled by the reciprocation of the carriage. 7th. In a machine for automatically ladling glass in the manufacture of glassware, and in combination with a reciprocating carriage, a ladle, a rod to which said ladle is pivoted, a swing head for said rod pivotally mounted on the carriage, means including a pivoted device on said rod and a bearing on the carriage co-acting with said pivoted device to tilt the ladle on the forward movement of the carriage and means arranged and actuated to cause the weight of said swing head to effect such dipping of the ladle. 8th. In combination, in a machine of the class described, with a reciprocating carriage, of a ladle, a rod to which the ladle is pivoted, a pivotally mounted swing head on said carriage carrying said rod, means including a pivoted device on said rod connecting the rod and the ladle for maintaining their alignment, and means arranged and constructed to engage said connecting means on the forward movement of the carriage whereby the ladle is caused to advance into the working chamber with an automatically controlled dipping skimming movement. 9th. The combination with a reciprocating carriage, of a ladle, a rod to which the ladle is pivoted, a pivotally mounted swing head carrying said rod, a turntable upon said carriage carrying said swing head, means connecting the rod and the ladle for maintaining their alignment, a bearing part rising on the carriage, means constructed and arranged to cause the ladle and rod connection to engage said carriage bearing part, means operating to turn said rod upon its longitudinal axis to tilt the ladle, a torsion spring connecting the rod and swing head for returning the ladle from its tilted position and means operating to swing out the ladle to its point of tilting. 10th. In a machine for gathering glass in the manufacture of glassware, and in combina-

tion with a reciprocating carriage, a ladle, a rod on which it is pivotally mounted, a lever on the rod connecting the ladle, a spring connecting the lever and rod, a screw 22 on the carriage for engagement with said lever and a stop carried by the ladle arm for engagement with its carrying rod, a lifting and a depressing device for the ladle mounted on the carriage and a fixed device co-acting with said lifting device, the several elements connected and arranged for operation by the reciprocation of the carriage. 11th. The combination of a ladle, a rod upon which it is pivotally mounted, said rod mounted to automatically turn upon its longitudinal axis for the purpose of tilting the ladle to deliver the glass, means for holding the ladle and its carrying rod in alignment during such movements, means constructed and arranged to turn said rod to tilt the ladle, means constructed and arranged to swing the ladle from the glass containing chamber to deliver the glass, means constructed and arranged to limit the tilting of the ladle, and means constructed and arranged to return the ladle to a level position. 12th. In a machine for gathering glass in the manufacture of glassware and in combination with a reciprocating carriage, and turntable thereon, a swing head on said turntable, a ladle, a rod journaled in said swing head and on which the ladle is pivotally jointed, a lever pivoted on said rod, means for connecting the lever and ladle, a screw on the carriage, means constructed and arranged to cause said lever to engage with the screw, a torsion spring connecting the rod and swing head, a stop 46 on the rod engaging the swing head against the torsional action of the spring, a pin 42 on the rod, means for laterally swinging the ladle, and an arm 43 on the carriage adapted to engage the rod pin 42 whereby to tilt the ladle against the torsional action of the spring, the said elements constructed and arranged to be actuated by the reciprocation of the carriage. 13th. In combination, in a machine for gathering glass in the manufacture of glassware, a reciprocating carriage, a turntable thereon, a swing head pivotally mounted on the turntable, a rod adapted to turn in its longitudinal axis within said swing head, a ladle pivotally mounted on said rod, means constructed and arranged to actuate said ladle to gather a charge in the way described, means whereby the ladle is swung out at the side of the machine, means constructed and arranged to tilt the ladle to deliver the charge, a cooling bath, and means constructed and arranged to turn down the ladle into and carry it through said bath in its return movement. 14th. In a machine for gathering glass in the manufacture of glassware, and in combination with a carriage and a ladle pivotally mounted thereon, mechanism whereby the ladle is caused to be presented to take up a charge, mechanism whereby it is swung out at the side of the machine, mechanism whereby it is tilted to deliver the charge, a cooling bath in the return path of the ladle and a cam on said carriage adapted to engage and actuate the ladle to cause it to be swung down into the cooling bath and permit it to resume its normal position in leaving said bath. 15th. In combination in a machine for gathering glass in the manufacture of glassware, a gathering ladle and means constructed and arranged to operate the ladle to gather glass in a measured quantity from a working chamber, and to swing the ladle out at the side of the machine to deliver the gather, a cooling bath located in the path of the laterally swinging ladle, and means constructed and arranged to operate to cause the empty ladle to be swung down into said bath, and to be returned to its normal position on its way to receive a charge. 16th. In a machine for gathering glass in the manufacture of glassware, and in combination with a carriage, a ladle carrier pivotally mounted thereon, a ladle pivotally mounted on said carrier, mechanism whereby the ladle is caused to be presented to take up a charge, swung out at the side of the machine, and tilted to deliver the charge, a cooling bath in the return path of the empty ladle, a lever device connecting the ladle and its carrier, a cam device pivotally mounted on said carriage in the path of the lever device, whereby the ladle is caused to be swung down into said bath and to its normal position in the way described. 17th. In a machine for gathering glass in the manufacture of glassware, and in combination with a carriage, a ladle carrier pivotally mounted thereon, a ladle pivotally mounted on said carrier, mechanism whereby the ladle is caused to be presented to take up a charge, swung out at the side of the machine and tilted to deliver the charge, a cooling bath in the path of the empty ladle, and mechanism whereby it is caused to be swung down into said bath and returned to its normal position, consisting of the weighted cam device 50, pivotally mounted on the carriage, the lever arm 23, pivotally mounted on the ladle carrier and connected to the pivoted ladle, and the spring 20, connecting said lever arm and the ladle carrier, the said weighted cam device being adapted to yield to prevent actuating said lever arm in the outward swinging movement of the ladle. 18th. In a lading machine and in combination with a carriage, a rod pivotally mounted thereon, a ladle provided with a handle having direct pivot connection with said rod, means pivoted on said rod having direct connection with the pivoted end of the ladle handle, means for rocking said rod on its axis to tilt the ladle and for limiting such rocking movement, and mechanism connecting the carriage and its actuating power whereby the said means for dipping and tilting the ladle are actuated and controlled by the movements of the carriage. 19th. In a lading machine, a pair of ladles geared together, means to reciprocate them and to gather in each a quota from a working chamber, means to swing them from and toward each other, and means to tilt them whereby the swinging movements of one ladle are effected and controlled by the swinging movements of the other

20th. In a machine for gathering glass in the manufacture of glassware, a pair of ladles each supported on an independent pivot and geared together for synchronous swinging from and toward each other, a carriage upon which the pair of ladles is mounted, and mechanism to cause the reciprocation of the carriage to carry the pair of ladles into and from the chamber to gather and bring away each a measure and mechanism to cause the ladles to swing out from each other and to be tilted to deliver the measures in the continuous operation of the machine. 21st. In a machine for gathering glass in the manufacture of glassware and in combination with a frame, a carriage, means for reciprocating it, a pair of ladles, a swing head carrier for each ladle, a turn table for each swing head, a pair of equal gears engaging said turn tables, mechanism including engaging devices on its swing head and frame operating to swing said swing head carriers laterally toward and from each other and mechanism for tilting the ladles at the limit of their outward swinging movements, whereby the ladles are moved together in parallel relation to a skimming gathering action and outwardly swung and tilted to deliver the charges. 22nd. In a lading machine, and in combination with a ladle a rod, to which the ladle is pivotally mounted, a pivotally mounted swing head within which said rod is fitted to rock, and a support for said swing head, a torsion spring connecting said rod and swing head and a lug on said rod engaging said swing head to hold the ladle in position to fill against the tension of the spring, mechanism constructed and arranged to reciprocate the ladle, mechanism constructed and arranged to swing the ladle laterally, and mechanism constructed and arranged to tilt the ladle against the torsion of said spring. 23rd. In a machine for gathering glass and conveying it from the melting chamber to the mold, a ladle and a carrying rod to which it is pivoted, in combination with means to reciprocate the ladle, means pivotally connecting a second pivot joint of the ladle with its carrying rod and means co-operating with said second joint connections to cause the ladle to dip in moving forward and to rise in moving backward, and means co-operating with said carrying rod to cause it to swing laterally, to tilt the ladle and to cause it to resume its normal holding position, all the said functions of the ladle being effected and controlled by the reciprocating movements of the carriage through the ladle connections. 24th. In a machine for gathering and delivering glass, a spring sustained ladle pivotally mounted, means constructed and arranged to cause the ladle to dip upon its pivot against the tension of its sustaining spring, and means constructed and arranged for reciprocating said ladle into and from a working chamber. 25th. In a machine for gathering glass and in combination with a reciprocating carriage, a spring sustaining ladle pivotally mounted on said carriage, and means connecting the ladle at its pivot with said spring, means constructed and arranged and co-operating whereby on the advance of the carriage to the working chamber, the ladle by its connections, is caused to dip in the operation of gathering a charge and to be returned on the retreat of the carriage to its normal position by the tension of its connected spring. 26th. In a lading machine and in combination with a reciprocating carriage, a rod pivoted at one end to said carriage, a ladle provided with a handle having direct pivot connection with the other end of said rod, means supporting the ladle carrying end of the rod, a lever device pivoted directly on said rod, means pivotally connecting the ladle handle to said pivoted device, means fixed on the carriage for engaging the pivoted device, means whereby such engagement is effected, and mechanism for reciprocating the carriage whereby in its advance movement of the ladle carrying rod is caused to engage the pivoted device with the fixed device of the carriage to effect the dipping function of the ladle in the operation of gathering the charge. 27th. In an organized machine for gathering glass and in combination with a reciprocating carriage, of a rod pivotally mounted on said carriage, a ladle pivoted to flex on the end of said rod, a device pivotally mounted on said rod and connected to the ladle and having a spring connection with said rod, means on the carriage arranged to engage the pivoted ladle connecting device, and means including a pivotally mounted carrier for said rod, arranged and constructed to actuate by the pressure of said pivoted carrier upon the pivoted ladle connecting device to cause the ladle to dip to gather a measured charge from a working chamber in the way described. 28th. In a machine of the class described, the combination of a reciprocating carriage, a rod deviated pivotally mounted thereon, a ladle pivotally mounted on said rod device, connections constructed and arranged to engage the rod device and the ladle to maintain the latter normally horizontal, means constructed and arranged to engage the said rod device to hold the ladle from tilting, a vertically yielding device on the carriage for supporting the ladle device, means for depressing said yielding device, a fixed device on the carriage arranged to be engaged by the ladle connection when depressed whereby to cause the ladle to dip in its forward movement, means arranged and constructed to cause the carriage to swing laterally, and means constructed and arranged to engage said rod device in its outward swing whereby to cause it to tilt the ladle. 29th. In a lading machine and in combination with a reciprocating carriage, a ladle pivotally mounted on said carriage, and mechanism including connections with the pivoted end of the ladle whereby it is caused to dip with a gathering function, means whereby the ladle is caused to have a lateral swinging movement, means connected to the ladle and including a fixed part of the frame, whereby the ladle is caused to tilt, and means connected to the ladle whereby to limit its dipping movement, the said movements of the ladle being

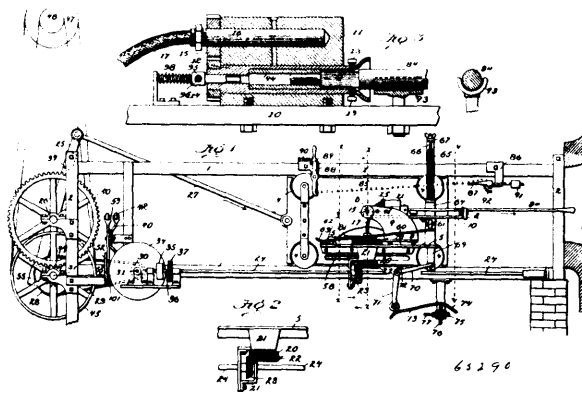
effected by the reciprocating movements of the carriage. 30th. In a ladling machine and in combination with a reciprocating carriage, a ladle pivotally mounted thereon, means arranged to hold the ladle level with a yielding force, means on the ladle rod connect it with the ladle and arranged to push it in dipping movement against such force, means to cause the ladle to swing laterally, and means to cause the ladle to tilt, the said several means being connected with the ladle, and means on the carriage arranged to impart a pushing force on said ladle connections to cause the ladle to dip, the several movements of the ladle being effected and controlled solely by the movements of the carriage. 31st. In a ladling machine and in combination a reciprocating carriage a rod normally parallel with said carriage and pivoted thereon and a ladle provided with a handle pivoted normally in alignment with and on said rod, a device pivoted on said rod and connected to the ladle handle above said rod and a separate projection arranged on the carriage for engaging said pivoted device and means for reciprocating the carriage to effect such engagement to cause the ladle to dip in its movement to gather the charge. 32nd. In a machine of the character described and in combination with a reciprocating carriage, a rod pivoted at one end thereon, a ladle provided with a handle pivoted directly on the other end of said rod, means constructed and arranged on the rod connecting it with the ladle handle, and a fixed device on the carriage arranged to engage said rod connection to cause the ladle to drop on the forward movement of the carriage. 33rd. In a machine for gathering glass and conveying it from a melting chamber to a mould, and in combination with a carriage, a ladle provided with a handle having direct pivotal connection with the carriage, means constructed and arranged to be actuated by the forward movement of the carriage to cause the ladle to dip in gathering the charge, means constructed and arranged to be operated by the rearward movement of the carriage to cause the ladle to swing into position to discharge the gather, and means also constructed and arranged to be operated by said rearward movement to cause the ladle to tilt the empty charge, and means for reciprocating the carriage whereby to effect the several functions stated. 34th. In a machine of the class described and in combination with a reciprocating carriage, a rod pivoted at one end thereon, a ladle pivoted directly on the other end of said rod, means constructed and arranged to cause the descent of the rod on its pivot, and means constructed and arranged to cause the ladle to have separate dipping movement on its pivot as the carriage moves forward. 35th. In a machine of the character described and in combination with a reciprocating carriage, a rod pivoted at one end thereon, a ladle pivoted directly on the other end of said rod, means constructed and arranged to cause the descent of the rod upon its pivot, means constructed and arranged to be actuated by the descent of the rod to cause the ladle to dip on its pivot, as the carriage moves forward and means constructed and arranged to separately cause the ascent of the rod and the ascent of the ladle at the same time as the carriage moves back to bring the rod and ladle to their normal position. 36th. In a machine of the class described and in combination with a reciprocating carriage, a rod mounted to rock axially on said carriage, a ladle pivotally mounted on said rod, a spring to hold the ladle level, a torsion-spring to hold the ladle from tilting, and means to cause the said rod to rock and tilt the ladle against the action of said torsion-spring. 37th. In a machine of the character described and in combination with a reciprocating carriage, a rod pivoted at one end thereon, a ladle pivoted directly on the other end of said rod, means constructed and arranged to cause the descent of the rod, means constructed and arranged to cause the ladle to dip on its pivot at an inclination greater than that of the rod, as the carriage moves forward, and means constructed and arranged to cause the rod and the ladle to resume their relation of alignment as the carriage moves back. 38th. In a ladling machine, a carriage, a rod pivoted thereon, a ladle provided with a handle pivoted at its end directly on said rod, means pivoted on said rod directly connecting with the pivoted end of the ladle handle, and means actuated by the movements of the carriage whereby said pivoted means is actuated to cause the ladle to dip as the carriage moves forward.

No. 65,290. Machine for Gathering and Delivering Glass. (*Machine à recueillir et transférer le verre.*)

George Beatty, Dunkirk, Indiana, assignee of William Francis Altenbaugh, Tiffin, Ohio, U.S.A., 11th December, 1899; 6 years. (Filed 15th April, 1899.)

Claim.—1st. In a machine for gathering glass in the manufacture of glassware, and in combination with a gathering iron holder, means constructed and arranged to move the holder toward and from the glass, means automatically to advance the holder under a slow movement in contact with the glass and means automatically to cause said holder to have a rapid rotation while under its slow limited advance, whereby the gathering action of the gathering iron is quickened to take up the proper quantity of glass within the period of contact movement of the iron therewith. 2nd. For gathering and delivering glass in the manufacture of glassware, a gathering iron and a carriage therefor, and mechanism automatically for moving said carriage to carry the iron rapidly to a chamber containing the glass, slowing the carriage while gathering the glass, and rapidly swinging the iron while moving to deliver the glass, means automatically to operate said iron to gather the glass by a rapid rotating action upon the surface of the glass, and means auto-

matically to slow the rotation of the iron while moving to deliver the gather. 3rd. For gathering and delivering glass in the manu-



facture of glassware, a gathering instrument, means for reciprocating it, a flexible shaft connecting it and gear mechanism connecting and rotating said flexible shaft for rotating the gathering instrument. 4th. For gathering and delivering glass in the manufacture of glassware, a gathering instrument, a chuck therefor, means for rotating said chuck, a reciprocating carriage for said instrument, gear mechanism on said carriage connecting the driving power, and a flexible shaft intermediately connecting the chuck gearing and the power driving gear. 5th. For gathering and delivering glass in the manufacture of glassware, and in combination with a gathering instrument, a reciprocating carriage and a laterally swinging device for said instrument mounted upon said carriage, a rotating line shaft, flexible shaft connected to rotate said instrument, and gear mechanism connecting said flexible shaft and line shaft, the mounting for the gathering instrument and the mounting for the swing device being concentric with each other. 6th. For gathering and delivering glass in the manufacture of glassware, the combination with a carriage, and a line shaft, a gathering instrument mounted upon said carriage and gear mechanism connecting the gathering instrument with said line shaft, the said connection having a free sliding movement on said shaft, means for reciprocating said carriage and means for rotating the line shaft whereby to effect the rotation of the gathering instrument. 7th. For gathering and delivering glass in the manufacture of glassware, and in combination with a gathering instrument, a reciprocating carriage therefor, and a chuck for said instrument mounted upon said carriage, a rotating line shaft, gear mechanism connecting the line shaft and carriage and having sliding connection with said shaft and a flexible shaft connecting said gear mechanism and chuck whereby to rotate the same. 8th. For gathering and delivering glass in the manufacture of glassware, and in combination with a gathering instrument, and a reciprocating carriage therefor, a line shaft, a gear 23 splined to slide thereon, a swing carriage for said instrument and a chuck thereon for said instrument, having a gear 14 and gear mechanism connecting the line shaft and chuck, consisting of the gear 19, 20, 22 connecting the line shaft gear 23, the flexible shaft 17 connecting the gear 19, and the gear 15 on the swing carrier connecting the said chuck gear 14 with the flexible shaft for operation in the way described. 9th. For gathering and delivering glass in the manufacture of glassware, and combination with a gathering instrument, a chuck shaft 12 therefor, a plug pin 16, gear 14, 15, engaging said chuck shaft and plug pin, the flexible shaft 17 fixed to said plug pin, the shaft 18 connecting the flexible shaft, and gear mechanism connecting the said shaft 18, and the driving power as a means for rotating the gathering instrument. 10th. In a machine for gathering and delivering glass in the manufacture of glassware and in combination with a gathering instrument, a carriage therefor, and a crank arm for reciprocating said carriage and an arm on the crank shaft in line with said crank of cams on the crank arm, a shifting lever arranged to receive the action of said cams in a revolution of the crank, and a clutch device connecting said lever whereby to control the movements of the carriage in the way and for the purpose stated. 11th. In a machine for gathering and delivering glass in the manufacture of glassware, and in combination with a gathering instrument, a carriage therefor, and a crank for reciprocating said carriage and an arm on the crank shaft in line with said crank, of cams or crank arms, a shifting lever arranged to receive the action of said cams in a revolution of the crank, a clutch device, connecting the driven power, and a latch bar connecting the said shifting lever and clutch for controlling the movements of the carriage. 12th. In a machine for gathering and delivering glass in the manufacture of glassware, and in combination a gathering instrument, a carriage therefor, the crank shaft connecting said carriage having an arm in line with said crank, cams on the crank arm, a shifting lever, a line shaft, means connecting it with the gathering instrument and means connecting the said shifting lever and line shaft, whereby to effect and control the rotation of the gathering instrument by the rotating action of said cams. 13th.

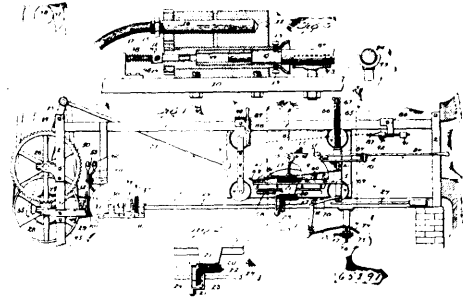
In a machine for gathering and delivering glass in the manufacture of glassware, and in combination with a gathering instrument, a carriage therefor, the crank shaft having cams carried by arms at opposite sides of said shaft, shifting levers arranged to receive the action of said cams, a line shaft, a clutch device connecting one of said shifting levers, a shifting shaft driven from the clutch shaft and connecting the other of said shifting levers, gear mechanism connecting the shifting shaft and the line shaft and gear mechanism connecting the line shaft and the gathering instrument whereby the reciprocation of the carriage and the rotation of the gathering instrument are controlled. 14th. In a machine for gathering and delivering glass in the manufacture of glassware, and in combination with a gathering instrument, a pivotally mounted swing carrier therefor, a spring sustained shelf for said carrier, a lever device for engaging said shelf and an adjustable incline, whereby the dipping movement of the gathering instrument is regulated to the level of the glass in a chamber. 15th. In a machine for gathering and delivering glass in the manufacture of glassware and in combination with a gathering instrument, a pivotally mounted swing carrier therefor, and a reciprocating carriage and a track on said carriage, of a spring suspended shelf 64 arranged to form a junction with said track, a lever device on the carriage for engaging said shelf and an incline, for the purpose stated. 16th. In apparatus for the manufacture of glassware, the combination with a swing carrier provided with an instrument for gathering a quota of glass, and a fast and a slow actuating mechanism, of operating mechanism for the gathering instrument including a changeable speed gearing, a clutch device and means for shifting the clutch device, and simultaneously actuating the changeable speed gearing whereby the gathering instrument is advanced slowly when nearing the limit of its forward movement and at the same time rotated at a higher rate of speed in its gathering function. 17th. In apparatus for the manufacture of glassware the combination with a swing carrier, an instrument for collecting a quota of glass by a skimming and a rotary action a fast and a slow operating mechanism therefor, and actuating mechanism for the gathering instrument including a changeable speed gearing, of a clutch, and means for simultaneously shifting the clutch and changing the relation of the aforesaid speed gearing whereby the gathering instrument is advanced more slowly when nearing the limit of its forward movement and is at the same time rotated at a higher rate of speed, in its gathering function. 18th. In apparatus for the manufacture of glassware, the combination with a swing carrier provided with an instrument for gathering a quota of glass by a rotary and a skimming action, a fast and a slow mechanism therefor, and actuating mechanism for the gathering instrument including a changeable speed gearing, of a clutch device, a clutch shifter and a cam operatively connected with the actuating mechanism for simultaneously shifting the clutch and the changeable speed gearing to accelerate the rotation of the gathering instrument and at the same time diminish the relative speed of its advance when picking up a quota of glass. 19th. In apparatus for the manufacture of glassware, the combination with a swing carrier, an instrument for gathering a quota of glass by a combined rotary and skimming action, a fast and a slow actuating mechanism therefor and operating mechanism for the gathering instrument including a changeable speed gearing, of a clutch device, a pivoted arm 41 connecting and actuating the aforesaid speed gearing, a cam for simultaneously operating the clutch and the aforesaid pivoted arm to cause the gathering instrument to rotate more rapidly and advance more slowly when nearing the limit of its forward travel, and a second cam for operating the said clutch device to throw the gathering instrument out of action when it reaches the limit of its backward movement. 20th. In apparatus for the manufacture of glassware, the combination with a gathering instrument, means for advancing and withdrawing said gathering instrument and causing it to pick up a quota of glass by a combined rotary and skimming action, a fast and a slow mechanism therefor, operating mechanism including a changeable speed gearing for rotating the gathering instrument, of a clutch device an operating arm 41 for shifting the changeable speed gearing, a cam in connection with the operating mechanism for simultaneously shifting the clutch device and the said operating arm to accelerate the rotation of the gathering instrument and simultaneously diminish the speed of its forward movement when gathering the glass, and a second cam for throwing the gathering instrument and its carrying means out of action. 21st. In apparatus for the manufacture of glassware, the combination with a swing carrier bearing a gathering instrument, and actuating mechanism, of a line shaft, actuating mechanism therefor, and a train of gear connections between the gathering instrument and the line shaft and movable with reference to the latter whereby a rotary motion is imparted to the gathering instrument from the line shaft at all stages of movement of the swing carrier. 22nd. In apparatus for the manufacture of glassware, the combination with a swing carrier, a gathering instrument and a line shaft and actuating mechanism therefor, of a train of connections between the gathering instrument and the line shaft and including a gear element slidably mounted upon said line shaft and rotatable therewith to transmit motion from the line shaft to the gathering instrument. 23rd. In apparatus for the manufacture of glassware, the combination with a swing carrier bearing a gathering instrument, a line shaft, and actuating mechanism therefor including a changeable speed gearing of a train of connections between the gathering instrument and the line shaft including a gear element slidably mounted upon the line shaft and constructed

to rotate therewith to transmit motion to the gathering instrument at all stages of its movement, substantially as set forth. 24th. In apparatus for the manufacture of glassware, the combination with a swing carrier, a gathering instrument, a line shaft, and a train of connections between the gathering instrument and the line shaft, including a gear element slidably mounted upon the line shaft and rotatable therewith, of a second shaft 33, in gear with the line shaft, and endwise movable shaft, gear elements of different size secured to the endwise movable shaft to engage with, respectively, corresponding gear elements of the line shaft or the aforesaid second shaft 36, according as the line shaft is to be driven at a comparatively slow or high speed, and means for shifting the endwise movable shaft to cause the gear elements carried thereby to engage with the corresponding co operating gear elements to a fast or slow rotary movement to the gathering instrument. 25th. In a machine for the manufacture of glassware, the combination with a swing carrier, a gathering instrument, a line shaft, and a train of connections between the line shaft and the gathering instrument embracing a gear element slidably upon the line shaft and rotatable therewith, of an endwise movable shaft, companion gear elements 31 32, between the line shaft and the endwise movable shaft a short shaft 36 parallel with the line shaft and in gear therewith and provided with a gear element 35, a gear element 34, of comparatively large diameter secured to the endwise movable shaft and adapted to be brought into contact with the gear element 35, of the short shaft to rotate the line shaft at a comparatively high rate of speed, means for shifting the endwise movable shaft, substantially as set forth. 26th. In a machine for the manufacture of glassware, the combination with a swing carrier provided with a gathering instrument, a line shaft, and a train of connections between the gathering instrument and the line shaft including a gear element slidably mounted upon the line shaft and rotatable therewith, of an endwise movable shaft, a changeable speed gearing between the endwise movable shaft and the line shaft, a fast and a slow driven pulley, a clutch device, a clutch shifter and means for simultaneously moving the latch bar and the aforesaid endwise movable shaft to accelerate the rotation of the gathering instrument and decrease the speed of its forward movement when picking up a quota of glass, substantially as set forth. 27th. In a machine for the manufacture of glassware, the combination with a swing carrier provided with a gathering instrument, a line shaft, and a train of connections between the line shaft and the gathering instrument, of an endwise movable shaft a changeable speed gearing between the endwise movable shaft and the aforesaid line shaft, a fast and a slow driven pulley, a clutch device, means for normally holding the clutch device in engagement with the fast driven pulley, a clutch shifter, a pivoted latch bar adapted to make engagement with said clutch shifter to throw the clutch and means simultaneously operating the latch bar and the aforesaid endwise movable shaft to accelerate the rotation of the gathering instrument and lessen the speed of its forward movement when picking up a quota of glass. 28th. In a machine for the manufacture of glassware, the combination with a swing carrier, a gathering instrument and a train of connections for transmitting rotary motion to the gathering instrument including a changeable speed gearing, of a fast and a slow driven pulley, a clutch device, a spring actuated clutch shifter, a latch bar adapted to make engagement with the clutch shifter, a lever 53 having pivotal connection with the latch bar, and means for simultaneously shifting the clutch device and the changeable speed gearing to advance the gathering instrument more slowly and accelerate its rotation when picking up a quota of glass. 29th. In apparatus for the manufacture of glassware, the combination with a swing carrier provided with a gathering instrument, a shaft 26, and a crank connection between said shaft and the swing carrier, of a fast and a slow driven pulley loosely mounted upon the clutch, gear engaging the said shafts, a train of connections between the clutch shaft and the gathering instrument including a changeable speed gearing, a clutch device, a clutch shifter, and a cam carried by the crank shaft to effect a simultaneous shifting of the clutch device and the speed gearing to accelerate the rotation of the gathering instrument and decrease the speed of its forward movement when picking up a quota of glass. 30th. In a machine for the manufacture of glassware, the combination with the swing carrier, a gathering instrument, a shaft 26, a crank connection between said shaft and the swing carrier, a clutch shaft and a train of connections between the said shaft and the gathering instrument including a changeable speed gearing, of a fast and a slow driven pulley loosely mounted upon the clutch shaft, a clutch device mounted to slide upon and rotate with the said clutch shaft and adapted to throw either of the said pulleys into operation, a clutch shifter, and cams applied to the arms of the crank shaft and disposed about at diametrically opposite points, one of the cams being adapted to shift the clutch and the speed gearing to accelerate the rotation of the gathering instrument and diminish its forward movement when picking up a quota of glass, and the other cam for throwing the machine out of gear, substantially as set forth. 31st. In a machine for the manufacture of glassware, the combination with a swing carrier provided with an instrument for gathering a quota of glass by a combined rotary and skimming action, a shaft having a crank connection with the swing carrier, a clutch shaft provided with a fast and slow driven clutch pulley and geared to the crank shaft, and a train of connections between the gathering instrument and the fast driven pulley including a change-

able speed gearing, of a clutch device, a latch bar, a spring actuated clutch shifter adapted to be engaged by the latch bar, a horizontally pivoted arm 41, vertically arranged levers having pivotal connection with the latch bar and said pivoted arm, respectively, and cams applied to the said crank and arm and located at diametrically opposite points for operating the latch bar and pivoted arm, substantially as and for the purpose set forth. 32nd. In a machine for the manufacture of glassware, the combination with a swing carrier, a gathering instrument supported by said carrier and movable therewith, and a shaft disposed at right angles vertically to the gathering instrument, of a flexible shafting for transmitting motion from the said shaft to the gathering instrument, and actuating mechanism for the said shaft, substantially as set forth. 33rd. In a machine for the manufacture of glassware, the combination with a swing carrier, a gathering instrument supported by and movable with said carrier, and a shaft 18 disposed at right angles to the gathering instrument, of a flexible shaft for transmitting motion from the said shaft to the gathering instrument, actuating mechanism including the line shaft and gearing between the said line shaft and the said shaft 18 for imparting motion thereto, substantially as described. 34th. In a machine for the manufacture of glassware, the combination with a swing carrier, a turntable for said carrier and movable therewith, and a gathering instrument mounted on said carrier, and mechanism for operating the turntable during the reciprocating movements of said carrier to swing the gathering instrument laterally to bring the quota of glass into position for forming and again returning said instrument to a normal position, of actuating mechanism including a line shaft and a train of connections between the said line shaft and the gathering instrument, including a vertical shaft 18 concentric with the axis of said turntable and independent thereof, substantially as described. 35th. In a machine for the manufacture of glassware, the combination with a swing carrier, a turntable, a gathering instrument mounted on said carrier, and means for effecting a lateral movement of the turntable during the travel of the carrier to swing the gathering instrument laterally, of a shaft concentric with the turntable and having connection with the gathering instrument to impart a rotary movement thereto at all stages of its movement, actuating mechanism including a line shaft and gearing between the line shaft and the said concentric shaft, including an element slidable upon and rotatable with the line shaft, substantially as described. 36th. In a machine for the manufacture of glassware, the combination of a reciprocating carriage, a turntable, means for effecting a turning of the table, a swing carrier having pivotal connection with the turntable, and a gathering instrument, means substantially as set forth for swinging the turntable and depressing the pivoted carrier to dip the receiving end of the gathering instrument into the molten glass, a shaft concentric with the turntable and operatively connected with the driving mechanism, and a flexible shafting connecting the said concentric shaft with the gathering instrument, substantially as described. 37th. In a machine for the manufacture of glassware, the combination with the reciprocating carriage, a turntable on the carriage, and a swing carrier having pivotal connection with the turntable about in line with its axis, and a gathering instrument, of a shaft concentric with the turntable, a flexible shafting for transmitting motion from the said shaft to the gathering instrument, and a train of connections for imparting motion to the said concentric shaft, including a line shaft and gearing having an element slidable upon and rotatable with the line shaft, substantially as set forth. 38th. In a machine for the manufacture of glassware, the combination with a reciprocating carriage, a swing carrier carrying a gathering iron mounted thereon, and means for swinging said carrier laterally, of a track for supporting the swing end of the arm, having an upward incline at the rear end of the track terminating in a shoulder to cause the swing end of the carrier to rise and drop suddenly to effect a positive dislodgement of the glass from the gathering iron when its receiving end is directly above the press mould substantially as set forth. 39th. In a machine, for the manufacture of glassware, the combination with a reciprocating carriage, a turntable applied to one side of the carriage, means for swinging the turntable during the reciprocating movement of the carriage, a gathering instrument supported by means of the turntable, and a shaft concentric with the turntable and adapted to transmit a rotary movement to the gathering instrument, of a corresponding turntable applied to the opposite side of the carriage, and a gathering instrument, intermeshing gearing connecting the two turntables for effecting a simultaneous swing thereof in opposite directions, a shaft concentric with the second turntable and adapted to transmit motion to the gathering instrument supported thereby, gear elements applied to the aforesaid concentric shafts, and an intermediate gear element intermeshing with the gear elements of the concentric shafts whereby to actuate the gathering instruments with simultaneous and identical movements. 40th. For gathering and delivering glass in the manufacture of glassware, a plurality of gathering instruments, means for rotating, dipping and swinging laterally one of the gathering instruments, and including gearing between the gathering instruments whereby they receive simultaneous and identical swinging and rotating movements. 41st. For gathering and delivering glass in the manufacture of glassware, and in combination with a reciprocating carriage, the swing arm 10 pivotally mounted on said carriage, and having near its pivoted end a chuck, and at its swing end a pair of rolls, of a gathering iron secured within said chuck, resting upon

said rolls and having a collar abutting said rolls, and means for rotating said chuck whereby the gathering iron is held in its chuck. 42nd. In a machine for gathering glass in the manufacture of glassware, and in combination with a gathering iron holder, means to cause the holder to be moved toward and from the glass, an independent vertically movable support for said holder, means arranged and constructed to allow the free descent of the holder, and means for adjusting its descent whereby the limit of the dipping movement of the gathering iron is increased, for the purpose stated.

No. 65,291. Machine for Gathering and Delivering Glass. (*Machine à recueillir et transférer le verre.*)



George Beatty, Dunkirk, Indiana, assignee of William Francis Altenbaugh, Tiffin, Ohio, both in the U.S.A., 11th December, 1899; 6 years. (Filed 15th April, 1899.)

Claim.—1st. In apparatus for gathering and delivering glass in the manufacture of blown ware, and in combination with a reciprocating carriage, a turn-table mounted thereon and a swing carrier pivotally mounted on said turn-table and projecting over the latter, of a chuck applied to said pivoted carrier provided with an air passage, a blow pipe connecting said chuck at the pivoted end of the carrier above the turn-table and a flexible puffing or blow tube connecting the blow pipe passage with the blow orifice in one side of said carrier whereby the said blow pipe is operated by blowing through the turn-table orifice. 2nd. For gathering and delivering glass in the manufacture of glassware, a gathering blow pipe and a carriage therefor, and mechanism automatically operating said blow pipe to gather the glass in a chamber by a rapid rotation, to reduce the speed of said rotation while being swung out to deliver the gather to the block, and to again increase the speed while puffing or blocking the glass in the block. 3rd. In apparatus for the manufacture of blown glass, the combination with a reciprocating carriage, a turn-table applied to the carriage and having a cheek formed with a mouth puffing opening, and a swing carrier pivotally connected with the cheek and adapted to move vertically at its free end, of a chuck shaft applied to the pivoted carrier and having a passage in communication with the puffing opening in said cheek and a blow pipe having communication with the cheek puffing opening. 4th. In apparatus for the manufacture of blown glassware, the combination with a reciprocating carriage, a swing carrier applied to the carriage, and a blow pipe, and a train of connections for the driving mechanism and the blow pipe for rotating the latter, of a changeable speed gearing forming a part of the aforesaid train connections, and means for changing the relation of the speed gearing for accelerating the rotation of the blow-pipe over the forming block, substantially as and for the purpose specified. 5th. In a machine for the manufacture of blown glassware, the combination with a reciprocating carriage, mechanism for imparting a reciprocating movement thereto, a support provided with a blow pipe, and means for imparting a vertical movement and lateral swing to the said support, of a train of connections between the blow pipe and the afore described actuating mechanism including a speed gearing, a clutch device for throwing the carriage into and out of gear, and means for accelerating the rotation of the blow pipe and throwing the carriage out of action when the receiving end of the blow pipe brings the quota of glass in position to be operated upon by the forming block, substantially as described. 6th. In apparatus for the manufacture of blown glassware, the combination with the reciprocating carriage, a swing carrier applied to the carriage and provided with a blow pipe, a power driven shaft, a crank applied to the power driven shaft and having connection with the carriage for reciprocating it, and a fast and slow driven pulley, of a train of connections between one of said pulleys and the blow pipe including a changeable speed gearing, of a clutch, a shifting lever, and cams applied to the said crank shaft to simultaneously throw the carriage out of action and the high speed gearing into engagement, whereby the rotation of the blow pipe is accelerated in working the glass over the forming block. 7th. In a machine for the manufacture of glassware, the combination with a reciprocating carriage provided with a chuck, of means for supplying a blow pipe to the chuck, consisting of pivoted hangers between and to which the blow pipe to be placed in position is suspended, one of said hangers being

adapted to be tripped to release one end of the blow pipe which falls into position to be taken in by the chuck, and the other hanger tilting and forming resistance to force the blow pipe home into the chuck, substantially as set forth. 8th. In a machine for the manufacture of glassware, the combination with a reciprocating carriage provided with a chuck, of means for supporting a blow pipe, consisting of a pivoted hanger weighted at one end to automatically assume a normal position when released after being tilted and a second pivoted hanger, the said weighted hanger adapted to be tripped and to form an inclined way for chucking the pipe as it falls from said hangers. 9th. In apparatus for the manufacture of glassware, the combination with the reciprocating carriage provided with a chuck, of means for holding the blowpipe in position to be quickly supplied to said chuck consisting of a pivoted hanger adapted to be tripped to release one end of the blow pipe, and a second pivoted hanger weighted and adapted to form a guide way for the gathering end of the pipe in the operation of chucking it. 10th. In a machine for the manufacture of glassware, the combination with a reciprocating carriage provided with a chuck, of means for holding a blow pipe in proper position to be chucked consisting of a pivoted hanger adapted to be tripped and constructed to engage one end of the pipe, and a second pivoted hanger weighted at one end and having its opposite end formed to receive the other end of the blowpipe, and a stop applied to the last mentioned pivoted hanger to limit the tilting thereof, whereby to form a resisting way for automatically chucking the pipe. 11th. In a machine for gathering and delivering glass in the manufacture of blown ware, the combination of a frame and a reciprocating carriage having a chuck, means for supporting a blow pipe on said frame and means automatically to deliver said pipe into the chuck by a sliding pushing action on one end to chuck the pipe as it is delivered from its supports. 12th. In a machine for gathering and delivering glass in the manufacture of glassware, the combination of a frame having a chuck, means for suspending a blow pipe on said frame above the chuck and means automatically to deliver the pipe into the chuck by the gravity of the pipe and resistance applied to its gathering end when released from suspension and falling. 13th. In a machine for gathering and delivering glass in the manufacture of blown ware, the combination with a frame and a reciprocating carriage provided with a chuck, of means for holding a blowpipe in suspension on said frame consisting of a tripping hanger for the blow end of the pipe and pivoted hanger for the other end of the pipe adapted to form an incline resisting way acting on the end of the pipe, and a guide rest fixed in front of the chuck whereby the blow end of the pipe is supported and guided into the chuck under the action of resisting incline. 14th. In a machine for gathering and delivering glass in the manufacture of blown ware, the combination of a frame and a reciprocating carriage having a rotating chuck, means for suspending a blow pipe above the chuck, constructed and arranged to operate to release the blow end of the pipe and to maintain the other end of the pipe on its suspending means, while automatically chucking the pipe. 15th. In a machine for gathering and delivering glass in the manufacture of blown ware, the combination of a frame and a reciprocating carriage having a chuck, a depending trip hanger mounted on the frame, and a resisting incline pivotally mounted on said frame and arranged to tilt downward toward the trip hanger, means automatically to cause said pivoted incline to maintain a normal horizontal position, and means automatically to hold said trip hammer in its normal vertical position whereby the said trip hanger and the said pivoted incline constitute means for suspending a blow pipe in position to be automatically delivered into the chuck. 16th. In a machine for gathering and delivering glass in the manufacture of blown ware the combination of a reciprocating carriage and a swing carrier pivotally mounted upon said carriage and having a tubular chuck shaft for holding a blow pipe in one end and means for rotating said shaft, a puff tube within one end of said chuck shaft having a non-rotating relation thereto and a blow mouth piece in the side of said swing carrier connecting the puff tube whereby the said chuck shaft is caused to rotate over the fixed interior puff tube. 17th. In a machine for gathering and delivering glass in the manufacture of blown ware, the combination of a reciprocating carriage and swing carrier pivotally mounted upon said carriage and having a tubular chuck shaft for holding a blow pipe in one end, and means for rotating said shaft, a puff tube within one end of said chuck shaft, having a non-rotative relation thereto, a mouth piece in the side of said swing carrier connecting said puff tube, and a spring whereby said blow tube is maintained in air tight relation to said chuck shaft and its blow pipe. 18. In a machine for gathering glass in the manufacture of blown ware, and in combination with a blow pipe holder, means to cause said holder to be moved toward and from the glass, means for rotating said holder, and means automatically operating to vary the speed of such rotation at the positions of the blow pipe while gathering and while being blown.

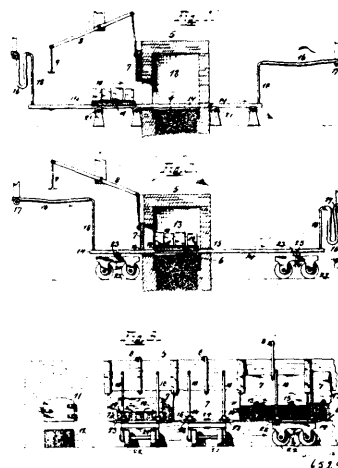
No. 65,292. Charging Device for Heating Furnaces.

(Appareil pour manipuler les lingots du four au laminair.)

James Hundley and William E. Peeples, both of Pomeroy, Ohio, U.S.A., 11th December, 1899; 6 years. (Filed 25th September, 1899.)

Claim.—1st. The combination with a furnace as described, of a carrier for moving the charge into and out of the heating chamber

thereof, and consisting substantially of hollow runners adapted to support the charge, arranged parallel side by side and disposed to



extend across the floor of the heating chamber, supporting means for these runners located outside of the heating chamber and which permit them to be moved horizontally across the floor of the heating chamber to bring that portion thereof upon which the charge rests either within or outside of the heating chamber and means to produce an uninterrupted water circulation through these runners in all their positions. 2nd. The combination of a heating furnace having a heating chamber adapted to receive piles, charging openings through which the latter are admitted, doors for these openings and runners supported within these charging openings and disposed across the furnace floor and projecting beyond the confines of the furnace on opposite sides of the latter, there being openings in such confines to clear the runners which latter are adapted to support piles and are capable of being moved in and out of the charging doors. 3rd. The combination with the heating chamber of a heating furnace, of runners adapted to support piles and disposed across the floor of the heating chamber of the furnace, beyond the confines of which latter these runners project on opposite sides of the furnace and rollers under these projecting parts of the runners whereby these latter are supported in a manner to permit them to be moved across the furnace floor for the purpose of moving the piles into and out of the furnace. 4th. The combination with the heating chamber of a heating furnace intended for heating piles, of hollow bars adapted to carry water and serving as a carrier upon which these piles rest and whereby they are charged into the heating chamber and also removed from the latter, said bars disposed across the floor of the heating chamber of the furnace beyond the confines of which latter they project on opposite sides thereof, means to support these runners in a manner to permit them to be moved across the furnace floor and water conduits of flexible material connected to the ends of the runners whereby the water is supplied to these latter and carried off therefrom. 5th. The combination with the heating chamber of a heating furnace intended for heating piles, of hollow runners adapted to carry water and serving as a carrier upon which these piles rest and whereby they are charged into the heating chamber and also removed from the latter, and runners disposed across the floor of the latter and projecting beyond the confines of the furnace on opposite sides thereof, pillows interposed between these runners and the piles to be supported by them and means to support the runners in a manner to permit them to be moved across the furnace floor.

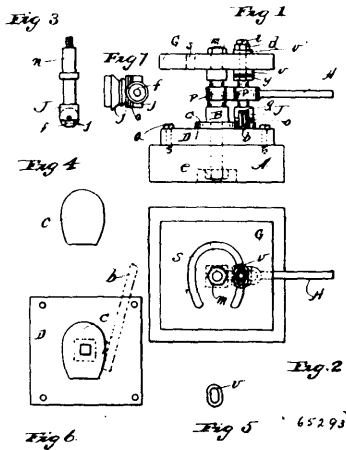
No. 65,293. Horseshoe Making Machine.

(Machine à confectionner les fers à cheval.)

Thomas Allwood, Auburn, and Vernon Anthony Bailey, Phenix, both in Rhode Island, U.S.A., 11th December, 1899; 6 years. (Filed 4th November, 1899.)

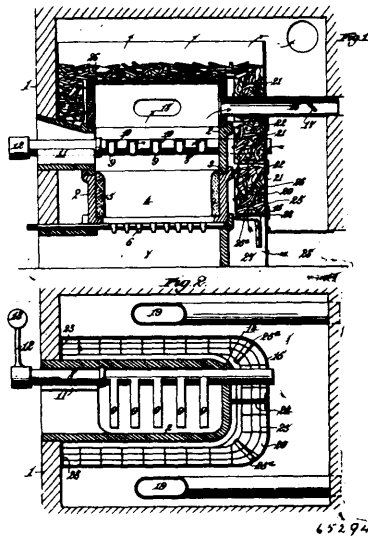
Claim. 1st. In a machine for making horseshoes the combination of a bed plate, a removable forming plate to shape the shoes on, a post passing down through said forming plate and bed plate and rigidly secured below, a lever having a bearing on said post and a traveller having a bearing in said lever, and an upper plate fast to the upper end of said post for guiding the traveller around said forming plate, substantially as described. 2nd. In a machine for making horseshoes, the combination of a bed plate, a removable forming plate to shape the shoes on, a post passing down through said forming plate and bed plate and rigidly secured below, an upper plate made fast to the upper end of said post, and provided with a slot made through it agreeing with the shape of said forming plate, a traveller having its upper end fitted to slide in said slot, and having a slot made in its lower end, a horizontal roller held in

the end slot to shape the face of the shoe, a vertical roller held on the lower end of the traveller to shape the outer side of the shoe.



and means for moving said traveller in the slot in the upper plate, substantially as described. 3rd. In a machine for making horse shoes the combination of a forming plate to shape the shoe on, a traveller to pass around said plate provided with a vertical roller to bend the bar into shape, a horizontal roller held in a slot in the lower end of said traveller, changeable washers on the side of said horizontal roller to vary its distance from the centre of said forming plate, a post rigidly held on top of the plate, a lever having bearings on said post and traveller, substantially as described.

No. 65,294. Furnace. (Fournaise.)



Peter Sweeney and Shirley Justin Green, New York City, New York, and George Balken, Hoboken, New Jersey, U.S.A., 11th December, 1899; 6 years. (Filed 15th November, 1899.)

Claim.—1st. In a furnace, the combination with the fuel chamber, of an air pipe extending therethrough having a series of perforated air tubes extending horizontally above the fuel therein, substantially as described. 2nd. In a furnace, the combination with the fuel chamber, of an air pipe extending therethrough and rotatably mounted therein and provided with a series of perforated tubes extending normally in a horizontal direction above the fuel therein, substantially as described. 3rd. In a furnace, the combination with the fuel chamber, of a counter-weighted air pipe extending through and rotatably mounted therein and provided with a series of perforated tubes extending at right angles to said pipe and occupying normally a horizontal position above the body of fuel in the chamber and adapted to be turned, by rotating said pipe, to an upright position, substantially as described. 4th. In a furnace, the combination with the fuel chamber, of an outer casing surrounding the same, to afford an air heating chamber, a series of open-work metal supports secured at different heights in said air heating chamber, and a filling of scrap iron or the like in said air heating chamber and

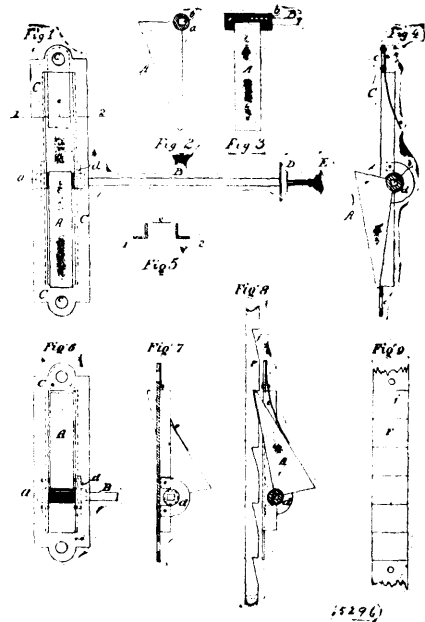
supported on said open-work metal supports, substantially as described. 5th. In a furnace, the combination with the fuel chamber, of an outer casing surrounding the same to afford an air heating chamber, and formed in separable sections, arranged one upon the other, an open-work metal support carried by each of said sections and extending in a horizontal plane throughout said air heating chamber, and a filling of scrap iron or the like in said air heating chamber and supported on said open-work metal supports, substantially as described. 6th. In a furnace, the combination with the fuel chamber, of an outer casing surrounding the same to afford an air heating chamber, a series of open-work metal supports secured at different heights in said air heating chamber, a filling of scrap iron or the like in said air heating chamber, and supported on said open-work metal supports, and means for forcing air through said air heating chamber, substantially as described.

No. 65,295. Osmium Filament for Incandescent Electric Lamps. (Filament d'osmium de lampe électrique incandescente.)

Dr. Carl Ritter Auer von Welsbach, Vienna, Austria, 11th December, 1899; 6 years. (Filed 17th October, 1898.)

Claim.—1st. The herein described process of making osmium-thoria-coated filaments for incandescent electric lamps from a paste of osmium-thorium-alumina and a binding material consisting in moulding the paste into suitable wire or thread like form, subjecting the same to dry distillation in a suitable gas and eliminating the carbon by the heat of an electric current passing through the filament in the presence of the protective gas and by the action of the electric current in high incandescence volatilize the alumina, while the thoria appears as a firmly united enamel-like coating on the surface of the coherent wire of osmium, substantially as described. 2nd. The herein described process of making filaments for electric incandescent lamps from a paste of osmium, titanic acid or an acid of a more basic character which will volatilize, when brought to incandescence, and a binding material consisting in moulding the paste into threads or the desired filamentary form, subjecting the same to dry distillation, then applying the electric current, first slowly and until the carbon of the binding material has been eliminated at a comparatively low heat, then increasing the current until the filament is heated to dazzling incandescence, when the titanic acid or oxyd used is volatilized and the impurities, when any, eliminated and the osmium cemented into a state of purity as a stable, dense, homogenous, coherent and elastic filament, substantially as set forth. 3rd. In the processes heretofore claimed, the substitution of alloys of osmium with other metals of the platinum group, and preferably ruthenium, in lieu of osmium alone, so as to produce metallic filaments suitable for use as the illuminating conductors of incandescent electric lamps, either alone or after being coated with refractory oxyd or oxyds, substantially as described.

No. 65,296. Sash Fastener. (Arrête-croisée.)

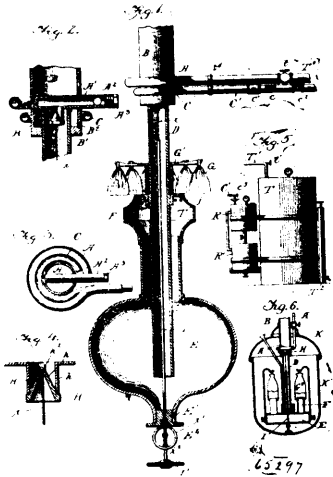


Alexander Forin, Nelson, British Columbia, Canada, 11th December, 1899; 6 years. (Filed 18th March, 1899.)

Claim.—A sash holder and fastener, comprising a bearing in the window jamb at a point above the lower sash when it is closed, a pawl rotatably mounted in the bearing and normally engaging said lower sash when the latter is raised, the said pawl being of such

length that when turned down or reversed into vertical position its free point will abut against the mid rail of the lower sash whereby to fasten such sash in closed position, as set forth.

No. 65,297. Hydrocarbon Vapor Lamp.
(*Lampe à hydro-carburé.*)



Winfield Scott Proskoy, Oskala, Florida, U.S.A., 11th December, 1899; 6 years. (Filed 5th June, 1899.)

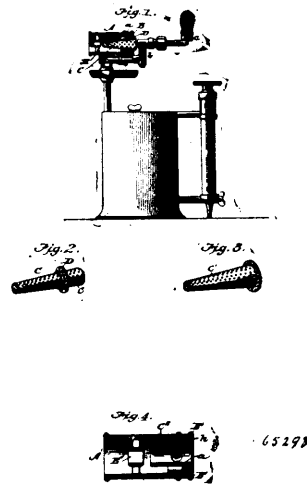
Claim.—1st. In a vapor lamp for incandescent lighting, the combination with a vapor burner, of a vaporizer connected to a source of fuel supply, a mixed acetylene gas and air burner for preliminary heating the vaporizer arranged adjacent the latter, and a source of acetylene gas supply therefor, substantially as described. 2nd. In a vapor lamp for incandescent lighting, the combination with the mixing chamber, of an air intake tube directly open to the atmosphere and connected in a right line to said chamber, and a vaporization coil surrounding and closely conforming to the external contour of the air intake tube and having an extension projecting into said tube, substantially as described. 3rd. In a vapor lamp for incandescent lighting, the combination with a vapor burner, of a mixing chamber connected thereto, incandescent tufts arranged adjacent the burner, and a vaporizer located in the heating zone of the tufts, substantially as described. 4th. In a vapor lamp for incandescent lighting, the combination with a cylindrical vapor burner, of a mixing chamber connected thereto, a series of incandescent tufts arranged in juxtaposition to the cylindrical vapor burner, a vaporizer, a mixed acetylene gas and air burner for initially heating the vaporizer arranged in juxtaposition thereto, and a mixing chamber tube centrally arranged with relation to the burner, the tufts and the vaporizer, substantially as described. 5th. In a vapor lamp for incandescent lighting, the combination with a vapor burner, of a mixing chamber connected thereto, incandescent tufts arranged in juxtaposition to the burner, a mixing chamber tube, an air intake tube connected therewith, a vaporization coil surrounding the air intake tube and having a portion entering the same and provided with a nozzle projecting into the mixing chamber tube, a valve for said nozzle extending through the mixing chamber tube, a plug in the mixing chamber, an adjusting ring connected to the plug, and means for operating the valve, substantially as described. 6th. In a vapor lamp for incandescent lighting, the combination with the mixing chamber, of an air intake tube having a head, a mixing chamber tube connecting the mixing chamber and air intake tube and extending into the latter forming a chamber between the two, and a nozzle extending into the mixing chamber tube and surrounded by said chamber, substantially as described. 7th. In a vapor lamp for incandescent lighting the combination with a vaporizer, of a nozzle, said nozzle comprising a cylinder, a conical plug for said cylinder, and a needle valve for said plug, substantially as described. 8th. In a vapor lamp for incandescent lighting, the combination with the mixing chamber, of an air intake tube, a mixing chamber tube connecting the chamber, with the air intake tube, a vaporization coil having an extension projecting into the air intake tube, a nozzle extending into the mixing chamber tube, a valve extending through the mixing chamber and mixing chamber tube and co-operating with the nozzle, and lock nuts arranged to limit the movements of the valve, substantially as described.

No. 65,298. Torch Burner. (*Torche.*)

William A. Nicholas and Gustave Burkhardt, both of Chicago, Illinois, U.S.A., 11th December, 1899; 6 years. (Filed 27th March, 1899.)

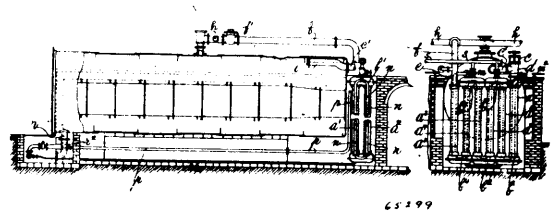
Claim.—1st. The combination with the casing, made open at each end, and having a cylindrical bore, of a nozzle which is also open at

each end, and provided with lateral perforations, and the flange, or flat ring, in which said nozzle is fixed centrally with its longitudinal



axis coincident with that of the casing at a right angle to the flange, and the device for securing the said flange detachably to the end of the casing, as shown and described. 2nd. The combination with the casing A, open at both ends, of an open ended perforated nozzle situated centrally within the casing, and a perforated flange rigidly supporting and threaded or screwed in for centering the nozzle, and a tubular interrupter or spreader arranged in front of and in line with said nozzle, as shown and described. 3rd. The improved burner comprising the tubular body open at each end, a vapour nozzle having lateral perforations and arranged in the rear opening of said body, the interrupter or spreader arranged in the cylinder in line with said nozzle and adapted for adjustment longitudinally thereof, as stated and described. 4th. The combination with the casing A, open at both ends, of an open ended perforated nozzle situated centrally within the casing, and a perforated or solid flange centering the nozzle, within the casing, said flange being situated within the inlet of the casing, substantially as shown and described.

No. 65,299. Steam Boiler Apparatus.
(*Appareil de chaudière à vapeur.*)



Henry Cruse, Manchester, Lancaster, England, 11th December, 1899; 6 years. (Filed 19th December, 1898.)

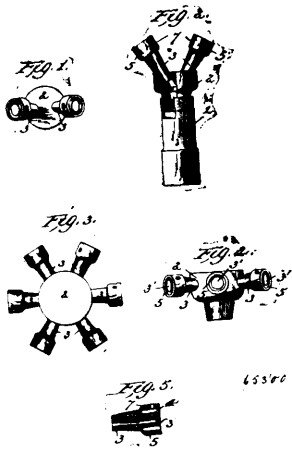
Claim.—1st. The combination with a steam generator, and external thereto, of tubes for superheating steam, which tubes contain inner tubes for carrying water in circulation from one part of the steam generator to the other, all substantially as herein set forth. 2nd. The combination of a steam generator with superheating steam tubes, external thereto, and which contain inner tubes for carrying feed water to the steam generator, all substantially as set forth. 3rd. The combination, with superheating tubes, when joined in series, of the special caps b adapted to fulfill the double function of forming connections between such superheating tubes a, and of supporting the inner water tubes n, substantially as set forth and shown.

No. 65,300. Gas Burner. (*Brûleur de gaz.*)

Demetrius M. Steward, Chattanooga, Tennessee, U.S.A., 11th December, 1899; 6 years. (Filed 27th September, 1899.)

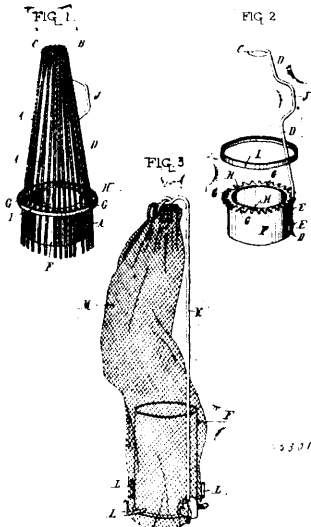
Claim.—1st. In combination with a metal pillar a head fitted therein, burner stems extending from said head diverging from each other and arranged in pairs and jet openings in each stem; adapted to direct the jet toward that of the adjacent stem, substantially as described. 2nd. In combination, the pillar, the head, the stem fitted at one end in said head and having its opposite end reduced

and having a discharge opening leading therefrom and an integral annular flange surrounding said reduced end, said flange having an



opening in line with the discharge opening whereby an enlarged cup shaped end is provided at the outer extremity of the stem, substantially as described.

No. 65,301. Incandescent Mantles, Filaments, etc.
(*Manteau incandescent, Filaments, etc.*)

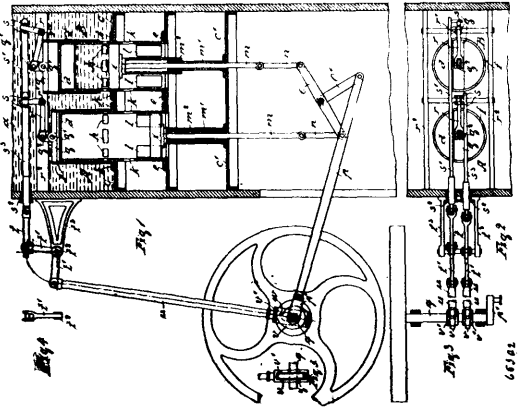


Achille Marie Plaissetty, Paris, France, 11th December, 1899; 6 years. (Filed 1st February, 1899.)

Claim.—1st. The process of producing an incandescent mantle which consists (1) in impregnating a combustible fabric with a syrupy solution of "incandescence" salts mixed with collodion, (2) in effecting the demitrification of the said salts by treating the impregnated fabric with hydrated sulphate of ammonia or calcium, substantially as specified. 2nd. The process of producing an incandescent mantle, which consists (1) in impregnating a combustible fabric with a syrupy solution of "incandescence" salts mixed with collodion consisting of nitrocellulose or pyroxyl dissolved in crystallizable acetic acid or acetone, (2) in effecting the demitrification of the said salts by treating the impregnated fabric with hydrated sulphate of ammonia or calcium, substantially as specified. 3rd. The process of producing an incandescent mantle which consists (1) in impregnating a combustible fabric with a syrupy solution of "incandescence" salts mixed with collodion, consisting of nitrocellulose or pyroxyl dissolved in a suitable solvent, (2) in soaking the fabric in a water bath for several hours, (3) in thoroughly drying the fabric for four or five hours at a temperature of 150 degrees to 160 degrees, (4) in effecting demitrification of the aforesaid salts by treating the fabric with hydrated sulphate of ammonia or calcium, substantially as specified. 4th. For carrying out the process described, a ring for holding a series of depending threads, a side rod connected to said ring, having an outward bend, a socket for mounting the mantle on the burner, and provided with notches in its horizontal flange for receiving the depending threads, and means

or preventing the displacement of said threads, substantially as described. 5th. For carrying out the process described for the treatment of mantles of the ordinary shape, a socket for surrounding the burner with radial projections at the bottom for supporting the mantle before it is burned, so as to ensure the guiding of the base of said mantle during the burning off on the socket, and thus prevent the breaking of the bottom of the mantle, substantially as described.

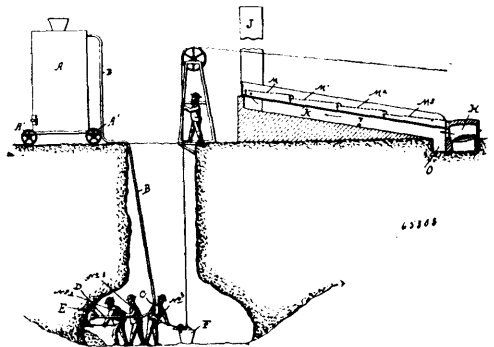
No. 65,302. Motor. (*Moteur.*)



Adolf Heim, Breslau, Silesia, German Empire, 11th December, 1899; 6 years. (Filed 17th April, 1899.)

Claim.—1st. In a motor actuated by compressed air, a water tank *a*, having a double bottom, and filled with water, in combination with cylinders *d, d*, provided with water inlet and outlet openings *h, k, l*, a mantle *f*, a steering mechanism *l', l', s', r, g²*, connecting said mantle to an excenter *r*, substantially as and for the purpose hereinbefore set forth. 2nd. In a motor actuated by compressed air, the combination of a tank *a*, with cylinder *d, d*, surrounded by a mantle *f*, opening and closing subsequently, the water inlet apertures *h*, thereby effecting the entrance of the water into the cylinder, water outlets *k, l*, a piston *i*, being moved by the air compressed after the entrance of the water into the cylinder, a piston rod *m*, attached to the piston *i*, sliding in sockets *m¹, m²*, a beam *o*, connected to the piston rods *m*, by intermediate pieces *n*, and transmitting the motion of the same by crank *o¹*, to the connecting rod *p, p¹*, and to the driving shaft *g*, substantially as and for the purpose hereinbefore set forth. 3rd. In a motor actuated by compressed air, a mantle *f*, surrounding the cylinders and having a transverse *g*, an angle lever *r*, engaging with an eye *g¹* of said transverse *g*, a fork *s*, fixed to rod *s¹*, passing through the walls of the tank *a*, and connecting the angle lever *r* to the excenter rod *u*, by means of intermediate pieces *l, l¹*, rotatably connected together, substantially as and for the purpose hereinbefore set forth. 4th. In a motor actuated by compressed air, an excenter *r* for regulating the steering, a nose *w*, moving the casing *v¹*, an excenter rod *u*, transmitting the motion by means of intermediate pieces *l, l¹*, to the angle lever *s*, substantially as and for the purpose hereinbefore set forth.

No. 65,303. Earth Thawing Apparatus.
(*Appareil à dégeler la terre.*)

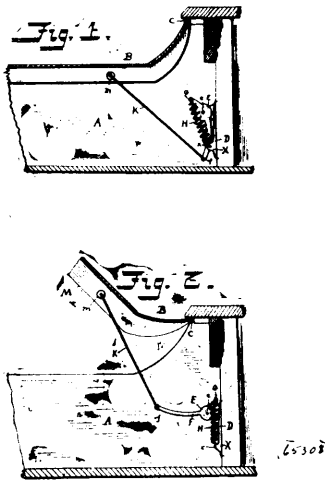


James John Shedlock, Hacheston, Suffolk, England, 11th December, 1899; 6 years. (Filed 1st March, 1898.)

Claim.—The herein described apparatus for instantly treating frozen ground which has been thawed and brought to the surface, which consists in the combination with a sieve or sieves of an inclined

and heated shelf disposed immediately below said sieve or sieves, and adapted to receive and dry thereon the finer particles falling through said sieve, substantially as and for the purposes set forth.

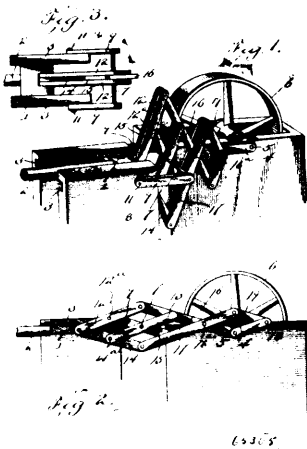
No. 65,304. Carriage Boot. (*Botte de voiture.*)



George T. Wilson, Moline, Illinois, U.S.A., 12th December, 1899; 6 years. (Filed 14th June, 1899.)

Claim.—1st. In a device for holding the boot of a carriage box, either open or closed, the combination with the casting D having the angle lugs E and X, and the apertures *x* and *e*, the lever F pivoted to said casting, and apertured lug G, the spring H connecting the projections G and X, of the rod K having one end secured to the outer end of the said lever, its other end secured to the boot which is pivoted to the carriage box, all substantially as shown and described. 2nd. In a device of the class described, the combination of the casting D, a lever F pivoted to said casting, the longer arm F of said lever connected with the boot B by means of a rod K, the short arm of said lever connected with the lower part of the casting D by means of the spring H, all as and for the purposes set forth.

No. 65,305. Pittman. (*Bielle.*)

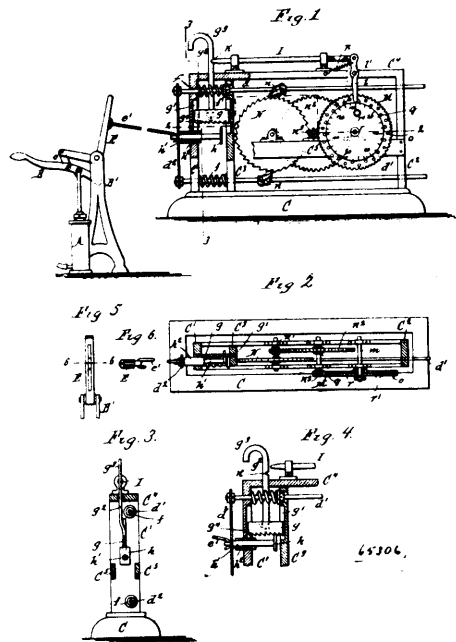


Robert G. Linn, Sawdust Valley, Tennessee, U.S.A., 12th December, 1899; 6 years. (Filed 5th September, 1899.)

Claim.—1st. In a device of the class described, the combination of a lazy tong system of levers designed to be connected with a cross head and comprising the short levers 12 and 14 pivoted together at their outer ends, the long levers 16 and 17 pivoted together near their inner ends and having their inner terminals connected to the inner ends of the levers 12 and 14, the crossed bars 13 and 15 pivoted to the levers 12 and 14 at the centers thereof, and the toggle links connected with the outer ends of the levers 16 and 17, and an oscillating or swinging fulcrum connected with bars 13 and 15, substantially as described. 2nd. In a device of the class described, the combination of the short levers 12 and 14 pivoted together at their outer ends and designed to be connected with a cross head, the long levers 16 and 17 pivoted together near their outer ends and having

their inner terminals connected with the inner ends of the short levers, the toggle links arranged at an angle to the outer portions of the long levers, pivoted to the same and having their outer ends pivotally connected together and designed to be attached to a crank, and an oscillating fulcrum, connected with the levers, substantially as described. 3rd. In a device of the class described, combination of the short levers 12 and 14 pivoted together at their inner ends and designed to be connected with a cross head, the long levers fulcrumed between their ends and having their inner ends connected with the short lever and designed to be connected at their outer ends with a crank, bars pivoted to the short levers at points between the ends thereof, and an oscillating fulcrum or support passing through the said bars, substantially as described. 4th. In a device of the class described, the combination with a reciprocating cross head, of a lazy tong system of levers comprising the short levers 12 and 14 pivoted at their outer ends to the cross head, the long levers 16 and 17 pivoted together near their outer ends and having their inner terminals pivoted to the inner ends of the levers 12 and 14, the cross bars 13 and 15 pivoted to the levers 12 and 14, at the centers thereof, and the toggle links connected with the outer ends of the levers 16 and 17, and an oscillating or swinging fulcrum passing through the bars 13 and 15 and connecting the same at the centers thereof, substantially as described.

No. 65,306. Register. (*Registr.*)



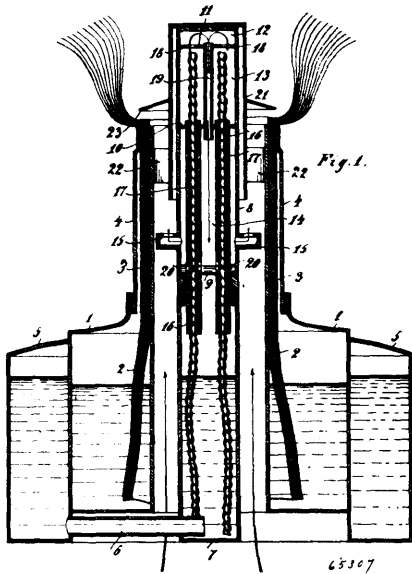
Willard Almond Dodge, Wellsville, New York, U.S.A., 12th December, 1899; 6 years. (Filed 25th May, 1899.)

Claim.—1st. In an automatic locking register, the combination with a stationary frame, of a vibrating frame or actuator guided in said frame, a locking device arranged to engage with said vibrating frame or actuator for holding the same against movement in either direction, a releasing or trip wheel controlling the movement of said lock, and a feed device which transmits the movement of the vibrating frame or actuator to said releasing wheel, substantially as set forth. 2nd. In an automatic locking register, the combination with a stationary frame and a vibrating frame or actuator guided therein, of a locking device for holding said actuators guided therein, of a locking device for holding said actuator, a catch for holding said lock in its inoperative position, a retracting device operating on said catch, a trip wheel having a pin or projection adapted to engage against said retracting device and a feed device which transmits the movement of said actuator to said trip wheel, substantially as set forth. 3rd. In an automatic locking register, the combination with a stationary frame, and a reciprocating frame guided therein, of a lock arranged to engage with said reciprocating frame, a trip wheel controlling the movement of said lock, a ratchet wheel geared with said trip wheel, and a pair of reversely arranged feed pawls carried by said reciprocating frame and engaging with said opposite portions of said ratchet wheel, substantially as set forth. 4th. The combination with the stationary frame of the indicator and reciprocating actuating frame guided therein, of a locking device for said frame, a bolt or catch for holding said lock in its inoperative position, a retracting device for said catch, a trip wheel having an annular row of openings adapted to

receive a removable trip pin which is arranged to engage with said retracting device, an adjustable indicating dial carried by said trip wheel, and capable of being turned independently thereof, and feed mechanism whereby the movement of said reciprocating frame is transmitted to said trip wheel, substantially as set forth. 5th. The combination with the stationary frame of the indicator and a reciprocating frame guided therein and having a feed pawl, of a ratchet wheel which is actuated by said pawl, a trip wheel geared with said ratchet wheel and having a pin or projection, a lock for said frame, a catch for holding said lock in its inoperative position, and a releasing lever controlling said catch and arranged to be engaged by said trip wheel, substantially as set forth. 6th. The combination with the stationary frame of the indicator and a reciprocating frame guided therein, of a locking bar having a longitudinal series of teeth adapted to interlock with said frame, a catch for holding said locking bar in its inoperative position, and a releasing device for said catch, substantially as set forth. 7th. The combination with a pump and a lever connected with the plunger rod of the pump, of an indicator comprising a stationary frame, a reciprocating frame guided therein, a lock for said frame, a releasing or trip wheel controlling said lock and actuated by said frame, and a rod connecting said frame with said lever and capable of adjustment toward and from the fulcrum of the lever, substantially as set forth.

No. 65,307. Hydrocarbon Bunsen Burner.

(Four à hydro-carbur.)



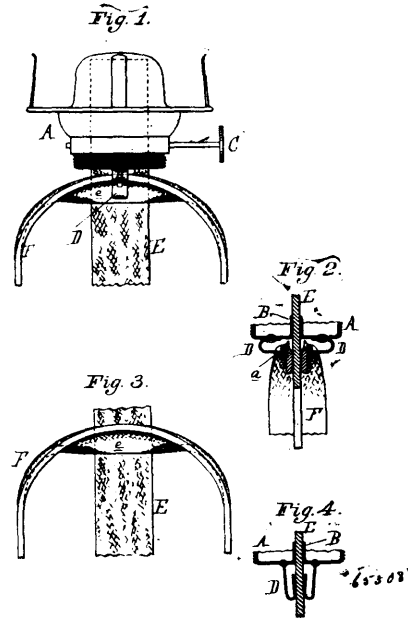
Richard Adam, Friedenau, near Berlin, Prussia, German Empire. 12th December, 1899; 6 years. (Filed 18th May, 1899.)

Claim.—1st. In a bunsen burner for liquid fuel, the combination with a receptacle for the fuel, a wick, an inner and an outer wick tube, the latter passing right through the center of the receptacle, of a water tube, arranged in the middle of the inner wick tube, an evaporator tube being fixed to the same, consisting of three compartments, the middle one of which serves for generating, the upper one for superheating and the lower one for collecting the steam, nozzles serving for directing the steam into the inner wick tube, thereby producing a strong upwardly directed current of air, a flame spreader serving for conducting the heat of the flame to the evaporator tube, substantially as and for the purpose described. 2nd. In a bunsen burner of the kind hereinbefore described, the combination with a central water reservoir, of an evaporator tube, screwed to the water reservoir, said evaporator tube being closed at the top and the bottom and divided by two discs into three compartments the middle one of which serving for raising, the upper one for superheating and the lower one for collecting the steam, the water being brought to the middle part by means of wicks, resting in tubes and ending in the water reservoir, the raised steam passing through a series of perforations into the upper part, and from there through a tube to the lowest part where it loses the water carried with it, nozzles arranged in the walls leading the steam into the inner wick tube and the flame, the tube through which the water wicks are passed, being provided at the lowest part with perforations, substantially as and for the purpose described. 3rd. In a bunsen burner of the kind hereinbefore described, the combination with an evaporating tube, of a flame spreader fixed to a tube, fitting exactly over the evaporation tube, closed at its upper end and reaching with the lower end down to the nozzles, ears fixed to the outside of the said tube serving for centering the same in the

inner wick tube, substantially as shown and described. 4th. In a bunsen burner of the kind hereinbefore described, the combination with an evaporating tube, of a flame spreader fixed to a short tube, being open at both ends, and fitting exactly over the evaporating tube, to said flame spreader being fixed concentrically, a second short tube fitting exactly into the wick tube and being provided near its upper end with a series of perforations, substantially as shown and described.

No. 65,308. Lamp Burner and Wick.

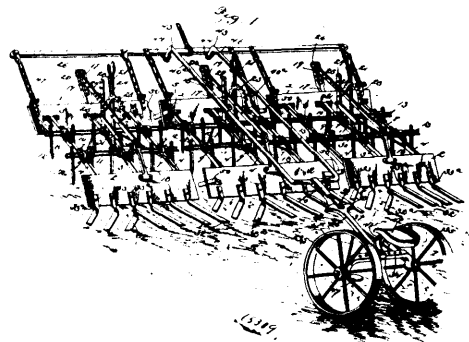
(Brûleur à mèche de lampe.)



Robert Scribo West, Cleveland, Ohio, U.S.A., 12th December, 1899; 6 years. (Filed 16th February, 1899.)

Claim.—In a lamp burner, the combination with a main wick, of an auxiliary wick provided with a centrally located slot through which the main wick passes, and clamps or clips for supporting the said auxiliary wick and forming an oil pocket at the point of intersection of the two wicks, in the manner and for the purpose, substantially as set forth.

No. 65,309. Land Scraper. (Grattoir.)



George M. Light, Pomeroy, Washington, U.S.A., 12th December, 1899; 6 years. (Filed 21st November, 1899.)

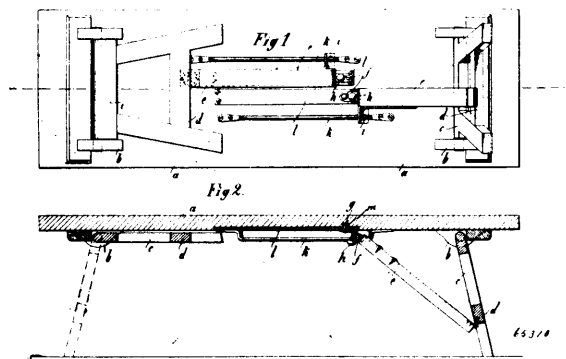
Claim.—1st. A machine of the class described, comprising the front and rear scraper blades adapted to be arranged at an inclination, and a rod or shaft located between the blades and carrying harrow teeth also adapted to be arranged at an inclination, substantially as described. 2nd. A machine of the class described, comprising front and rear blades adapted to be set at an inclination, a frame connecting the blades, a rod or shaft journaled on the frame and carrying harrow teeth adapted to be arranged at an inclination, and operating mechanism connected with the blades and with the rod or shaft, whereby the teeth and the blades are simultaneously adjusted, substantially as described. 3rd. A machine

of the class described, comprising front and rear scraper blades, a frame connecting the blades and having the same hinged to it, rods or shafts journaled on the frame, arms fixed to the blades and to the rods or shafts, a rod or bar connected with the said arms, and a lever for adjusting the rod or bar, substantially as described. 4th. A machine of the class described, comprising a frame, front and rear scraper blades hinged to the frame and adapted to be arranged at an inclination, shafts journaled on the frame and carrying harrow teeth, the front and rear arms extending upward from the scraper blade and from the shafts, a rod or bar 18^a connected with the arms of the scraper blades and with the front arm of the shafts, a short bar connecting the arms of the shafts, and means for adjusting the rod or bar 18^a, substantially as described. 5th. A machine of the class described, comprising the front and rear scraper blades adapted to be arranged at an inclination, and the rearwardly disposed cutting blades secured to the rear scraper blades, and arranged substantially at right angles to the same, and adapted to be adjusted simultaneously with the scraper blades, substantially as described. 6th. A machine of the class described, comprising a frame, front and rear scraper blades hinged to the frame, the rearwardly disposed wood cutting blades having shanks secured to the rear scraper blades and means for adjusting the scraper blades, whereby the weed cutting blades may be set at the desired inclination, substantially as described. 7th. A machine of the class described, comprising a series of sections composed of front and rear scraper blades connected together, a reach extending rearward from the sections and connected with the same at the front thereof, and provided between its ends with a joint, a truck connected with the reach, and a seat supported above the truck, substantially as described. 8th. A machine of the class described comprising a series of sections composed of front and rear scraper blades, a reach connected with the sections, and composed of two sections pivoted together, one of the reach sections being provided with a segmental head, and a seat supporting truck arranged at the rear end of the reach, substantially as described. 9th. In a machine of the class described, the combination of a tubular shaft having continuous portions and cut away portions, the cut away portions being provided at their edges with notches, harrow teeth secured in the notches of the cut away portions of the shaft, and a frame or support having bearings receiving the continuous portions of the shaft, substantially as described. 10th. A machine of the class described, comprising a series of sections composed of front and rear scraper blades, operating mechanism for adjusting the blades, a transverse bar connected with the front blades, a truck provided with a seat and having a reach composed of pivotally connected front and rear sections, the front section being forked to clear the operating mechanism and connected with the transverse bar, substantially as described. 11th. A scraper composed of sections having front and rear blades, and provided with arms or fenders adapted to prevent the blades from binding when turning the scraper, substantially as described. 12th. A scraper composed of sections having front and rear blades, and provided with arms or fenders composed of substantially L-shaped pieces secured to the front and rear faces of the blades of one section, and arranged to be engaged by the blades of the adjacent section, substantially as described. 13th. A scraper having front and rear scraper blades, and provided at the rear scraper blade with weed cutting blades constructed of flat metal, and provided at their front ends with shanks, and having substantially quarter bends, whereby their body portions are set at an angle, substantially as described. 14th. A machine of the class described, comprising front and rear scraper blades, and weed cutting blades extending from the rear scraper blade and constructed of flat metal, said weed cutting blades being provided between their ends with substantially quarter bends forming short shanks, and arranging the body portion of the weed cutting blades at an inclination, substantially as described. 15th. A machine of the class described, comprising a series of sections composed of front and rear scraper blades, a truck provided with a drop or cranked axle, and having a reach provided in rear of the said sections with a joint, and a seat adjustably mounted on the top portion of the axle, substantially as described. 16th. A scraper provided with front and rear blades, and having means whereby the blades may be set at different inclinations to cause the front blade to level the soil and break lumps, and the rear blade to pack the earth, substantially as described. 17th. A scraper comprising front and rear blades, connections between the blades having the latter hinged to them, and operating mechanism mounted on the said connections, and adapted to adjust the blades and hold the same at the desired inclination, substantially as described. 18th. A scraper composed of sections having front and rear blades of different lengths, whereby the spaces or intervals between the adjacent ends of the front blades will be out of alignment with those of the rear blades, substantially as described. 19th. A scraper comprising a series of sections having front and rear blades hinged mounted and adapted to be arranged at an inclination, operating mechanism mounted on the sections and connected with the front and rear blades, a transverse bar arranged at the front of the scraper and forming a main whiffletree, and connections between the upper portions of the front blades and the transverse bar, substantially as described. 20th. A scraper comprising the front and rear blades hinged mounted, a longitudinal bar adjustably connecting the blades, and adapted to set them at different inclinations, and operating mechanism connected with the longitudinal bar, and adapted to shift the blades

simultaneously, substantially as described. 21st. A scraper comprising front and rear blades hinged mounted and provided with upwardly extending arms, connections between the blades, a longitudinal bar pivoted to the arm of the rear blade, and adjustably connected to the arm of the front blade, an operating lever fulcrumed on the said connections and connected with the longitudinal bar, and means for locking the operating lever, substantially as described. 22nd. A scraper comprising front and rear blades, the central and side connecting bars hinged to the blades, braces connecting the said bars, and operating mechanism mounted on the central bar and connected with the blades, substantially as described. 23rd. A scraper comprising a series of sections composed of front and rear blades, and connecting bars having the blades hinged to them, operating levers fulcrumed on the connecting bars, longitudinal bars connecting the levers with the blades, and a transverse bar arranged at the front of the scraper and connected with the front blades, substantially as described.

No. 65,310. Table and Seat with Folding Legs.

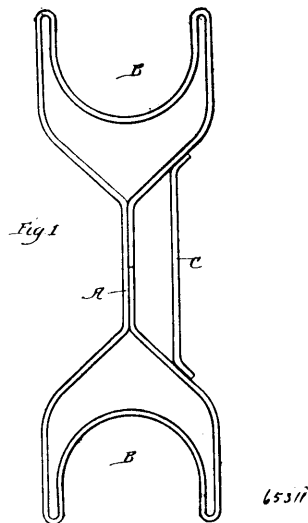
(Table et siège avec pattes pliantes.)



Casper Detlef Hinrich Thielmann, Kiel, Prussia, German Empire, 12th December, 1899; 6 years. (Filed 20th November, 1899.)

Claim. A table, seat or the like having folding legs in which the hinged struts or levers *l* are provided at their ends with spring locking pins *f, g* and guide lugs *i*, the table top being provided with guide bars *k*, and guides *l* having recesses *m* for the reception of the pins *g*, substantially as hereinafter described with reference to the drawings annexed and for the purpose set forth.

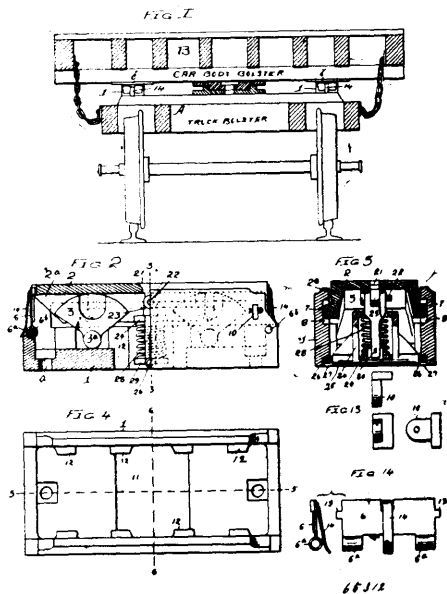
No. 65,311. Clothes Line Holder. (Porte-corde à linge.)



Harry Huebner, Philadelphia, Pennsylvania, U.S.A., 12th December, 1899; 6 years. (Filed 18th November, 1899.)

Claim. A clothes-line holder, consisting of a bobbin or reel upon which the line may be wound, and means such as a handle, for holding the device, as specified.

No. 65,312. Side Bearings for Rolling Stock. (Croussinet de coté pour matériel roulant.)

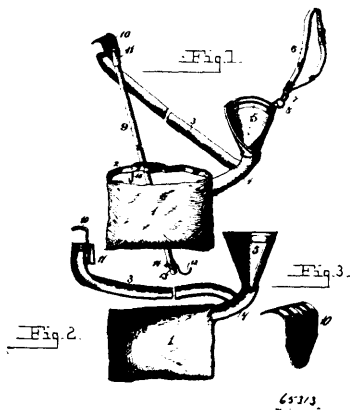


Channing M. Thompson, Newark, Ohio, U.S.A., 12th December, 1899; 6 years. (Filed 20th November, 1899.)

Claim.—1st. A side bearing, comprising a bottom or shell casing, a reciprocating top, and a pair of non-contacting rockers mounted in the shell or casing at opposite sides of its middle and supporting the said top on their upper faces, substantially as specified. 2nd. A side bearing, comprising a bottom shell or casing, a reciprocating top, lug and recess connections between the two to allow the proper movement of the top in the casing or shell, and a pair of non-contacting rockers mounted in the shell or casing at opposite sides of its middle and supporting said top on their convex upper faces, substantially as specified. 3rd. A side bearing, comprising a bottom shell or casing, a reciprocating top guided therein, rockers mounted on the shell or casing and supporting the top plate on their convex upper faces, and positive connections between the top and the said rockers to insure the operation of the latter by said top, substantially as specified. 4th. A side bearing, comprising a bottom shell or casing having two pairs of lugs on each inner face, two rockers having extended lower ends between opposite pairs of lugs, and a reciprocating top guided in the shell or casing and supported on the upper convex faces of said rockers, substantially as specified. 5th. A side bearing, comprising a shell or casing having internal opposed pairs of lugs and longitudinal grooves or recesses, two rockers having end recesses and extended lower ends between opposed pairs of lugs, and a reciprocating top supported on the rockers, having side ribs projecting into said longitudinal recesses and also provided with lugs engaging said recesses in the rockers, substantially as specified. 6th. A side bearing comprising a shell or casing having longitudinal recesses on its inner sides, closed at one end and open at the other, a reciprocating top having longitudinal side ribs slid into recesses from the open end thereof, a key for preventing the withdrawal of said top, and rockers mounted in the shell and supporting the said top on their convex edges, substantially as specified. 7th. A side bearing, comprising an open ended bottom shell or casing, a reciprocating top supported and guided therein, yielding shields closing the ends of the casing or shell, substantially as specified. 8th. A side bearing, comprising an open ended bottom shell or casing, a reciprocating top supported and guided therein, hinged shields closing the ends of the shell and springs tending to hold the shields closed, substantially as specified. 9th. A side bearing, comprising an open ended bottom shell or casing, a reciprocating top supported and guided therein, and shields having knuckles at their lower edges, pintles passed through said knuckles and through apertures in the shell, and plate springs secured to the shields and bearing at their free lower ends against the ends of the shell or casing to hold the shields closed, said shields also having top lugs, substantially as specified. 10th. A side bearing, comprising an open ended bottom shell or casing, a reciprocating top, non-contacting rockers within the bottom shell at opposite sides of its middle and supporting the top and means for returning the top to its normal central position after the removal of the load, substantially as specified. 11th. A side bearing, comprising a bottom shell or casing, a reciprocating top, rockers supporting the top and a spring located between the rockers and connected to said top to return it to its normal central position, substantially as specified. 12th. A side bearing, comprising a bottom shell or casing, a reciprocating top, rockers supporting said top, a pivoted link or arm

depending from the centre of the top and provided at its lower end with a follower, a frame or pocket pivotally connected at its lower end to the shell or casing, and a compression spring between the follower and the upper end of the frame or pocket, substantially as specified.

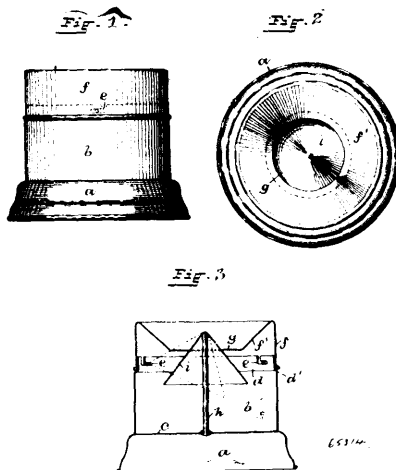
No. 65,313. Fruit Gatherer. (Appareil à recueillir des fruits.)



Phoenix M. Gutleber, Liberty Corner, New Jersey, U.S.A., 12th December, 1899; 6 years. (Filed 20th November, 1899.)

Claim.—1st. A fruit gatherer comprising a receptacle having a strap or belt for securing it to the wearer, the short chute having an enlarged flaring mouth, and provided with a shoulder strap adapted to support the mouth of the short chute at the breast of the wearer to receive the fruit picked by hand, a long chute having a fruit picking device, both of said chutes delivering into the receptacle and a pole supporting the long chute, substantially as described. 2nd. A fruit gatherer, comprising a receptacle provided with a belt having a supporting device, the long and short chutes both delivering into the receptacle, the short chute being provided with means for attaching it to the wearer adjacent to the shoulders, so that the fruit may be readily introduced into it by hand, a head mounted on the long chute at the outer end thereof, and adapted to engage the fruit, and provided with an inverted socket, and a detachable and reversible pole having one end removably fitted in the socket to support the long chute and provided at its other end with means for engaging the limb of a tree, the said supporting device being adapted to receive the long chute when the pole is detached from the socket, substantially as described.

No. 65,314. Cuspidor. (Crachoir.)

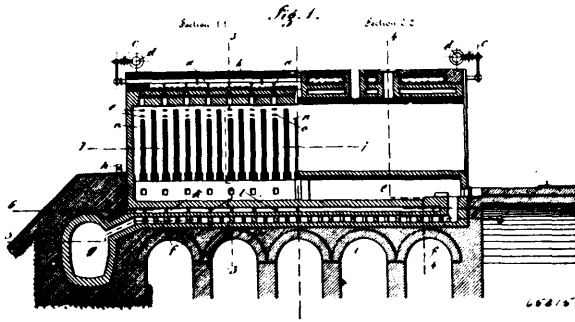


John Sheminger, Providence, Rhode Island, U.S.A., 12th December, 1899; 6 years. (Filed 20th November, 1899.)

Claim.—1st. In a cuspidor, in combination, a base, a chamber extending upward from the base, a bottom dividing the base from the chamber, a removable top, an annular funnel-shaped rim on the top surrounding a central opening, a post secured to the bottom and extending centrally above the lower edges of the annular rim on the

top, and a conical shield normally supported at its apex on the post, whereby the contents of the cuspidor are covered and out of sight, and the opening in the top is automatically closed by the cone shield when the cuspidor is upset, as described. 2nd. In a cuspidor, the combination with the base *a*, the chamber *b*, the removable top *f*, and the annular inclined rim *f*¹ on the top, of the post *h* secured to the bottom and extending centrally above the lower edges of the annular rim on the top, and a conical shield normally supported at its apex on the post, whereby the contents of the cuspidor are covered and out of sight, and the opening in the top is automatically closed by the cone shield when the cuspidor is upset, as described.

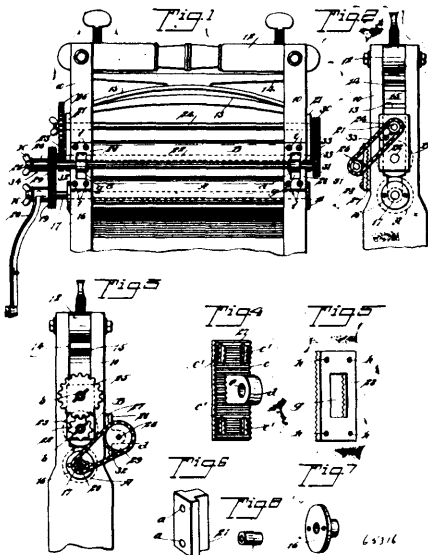
No. 65,315. Coke Oven. (Four à coke.)



Heinrich Poetter, Dortmund, Westphalia, Prussia, German Empire, 12th December, 1899; 6 years. (Filed 17th November, 1899.)

Claim.—1st. A coke oven having single or double walls and fixed from above, comprising a fuel-gas distributing pipe provided with a series of burners, the gas supply to which is regulated by only two cocks for each oven, substantially as set forth. 2nd. In a coke oven having single or double walls and fixed from above, the combination of the sole flue *e*, parallel passages *i k* running to and fro, located below said sole flue, for the introduction of the air for combustion, and lower flues *f* running below said air passages *i k*, through which flues the waste gases from the sole flues pass from one end of the oven to the snore hole *g* at the other end, substantially as set forth. 3rd. In a coke oven having single or double walls and fixed from above, the combination of the sole flue *e*, lower flues *f*, for conducting the waste gases from one end of said sole flue to the snore hole *g* at the opposite end of the oven parallel air passages *i k* running to and fro, located between said sole flue *e*, and lower flues *f* for the introduction and heating of the air for combustion, and up-takes *m* in partition walls of the oven conducting the heated air from the said air passages *i k* to the heating flues *n*, substantially as set forth.

No. 65,316. Clothes Wringer. (Essoreuse à linge.)

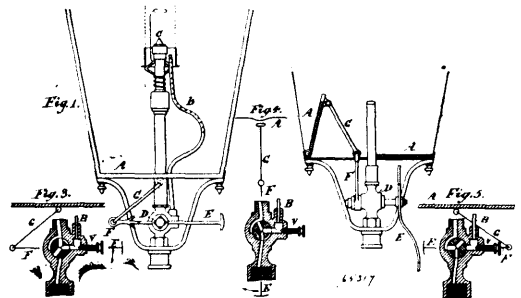


Albert G. Carling, Hackensack, New Jersey, U.S.A., 12th December, 1899; 6 years. (Filed 18th November, 1899.)

Claim.—1st. In a clothes wringer, the combination with a frame, and two fixed and two slidable boxes in slots in the frame, of a lower roll, the shaft of which is journaled in the fixed boxes, an upper

roll, the shaft of which is journaled in the slidable boxes, an upper countershaft also journaled in the slidable boxes, an exchangeable spur gear and a meshing pinion on like ends of the upper roll shaft and upper counter shaft, a secondary counter shaft adjustably journaled in boxes on the sides of the frame, exchangeable sprocket gears, and a chain thereon at one end of the lower roll shaft and secondary counter shaft, sprocket gears on the other end of the secondary counter shaft, and a like end of the upper counter shaft, and a chain connecting said sprocket gears, substantially as described. 2nd. In a device of the character described, the combination with a frame, and a rotatable lower roll thereon, of an upper roll shaft, a countershaft journaled in the same boxes with the upper roll shaft and above said roll shaft, a spur gear and a meshing pinion exchangeable on the ends of the upper roll shaft and upper counter shaft, a crank handle adapted to engage the lower roll shaft with the upper counter shaft, substantially as described. 3rd. In a device of the character described, the combination with the frame, and two shafts carrying rolls and rotatable in the frame, of two interchangeable meshed cog gears, two counter shafts, the cog gears being located one on a roll shaft and one on a counter shaft, sprocket gears on the lower roll shaft and both counter shafts sprocket chains connecting pairs of sprocket gears, and a crank handle adapted to engage with an end of the lower roll shaft, or with an end of one of the counter shafts, substantially as described. 4th. In a device of the character described, the combination with the wringer frame, two supported rolls thereon, and an interchangeable crank handle, of two countershafts, and gearing exchangeable on the roll shafts and countershafts, and adapted by differing adjustments to drive the rolls toward each other slower and faster than the revolutions of the crank handle, substantially as described.

No. 65,317. Lighting of Gas Lamps or Lanterns. (Allumeur de lampe à gaz ou lanternes.)



Pierre Bardot, Lyons, Republic of France, 12th December, 1899; 6 years. (Filed 26th April, 1899.)

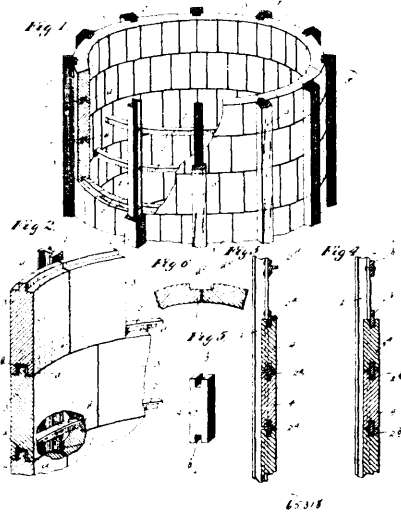
Claim.—1st. In a gas lamp or lantern having one or more burners provided with tubular pilot lighters conducting the flame to each burner, the combination of a three-way cock opening successively the passage for the gas to the lighters and to the burners, and of a movable pane in the lower part of the lamp or lantern in connection with the plug of the cock, in such manner that the pane is opened to allow the lighting lamp to pass where the gas passes into the tubular pilot lighters, and is closed in the other positions, substantially as herein set forth. 2nd. In a gas lamp or lantern having one or more burners provided with tubular pilot lighters conducting the flame to each burner, the combination of a three-way cock opening successively the passage for the gas to the lighters and to the burners, a movable pane in the lower part of the lamp or lantern, a lever on the plug of the cock to operate said movable pane, a link connecting said lever with said pane, and a lever on the cock to be operated by the lamp lighter, substantially as herein set forth. 3rd. In a gas lamp or lantern having several burners arranged as herein described, a separate cock to feed one of the burners, which latter serves as night or watch light and as re-lighter for the other burners, substantially as herein set forth. 4th. In a gas lamp or lantern having several burners provided with tubular pilot lighters conducting the flame to each burner, the combination of a three-way cock opening successively the passage for the gas to the lighters and to the burners, a movable pane in the lower part of the lamp or lantern, operative connections between the plug of the cock and the movable pane, a lever on the plug of the three-way cock to be operated by the lamp lighter, and a separate cock to feed one of the burners, which latter serves as night or watch light and as re-lighter for the other burners, substantially as herein set forth.

No. 65,318. Grain Storage Bin. (Coffre à avoine.)

Olaf Hoff, Minneapolis, Minnesota, U.S.A., 12th December, 1899; 6 years. (Filed 20th November, 1899.)

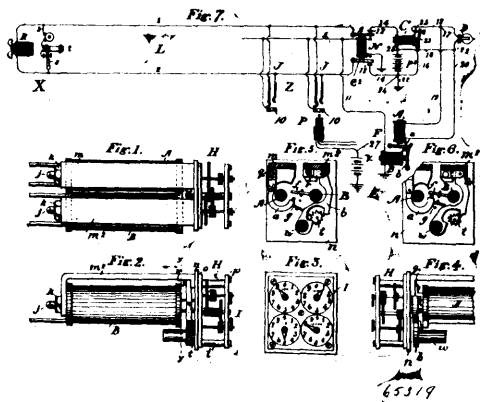
Claim.—1st. In a storage bin, the combination with metallic standards or uprights, and horizontal tie frames rigidly secured to said standards at their ends and intermediate portions, to form a rigid self-sustaining skeleton framework, of filling or lining sections

having interlocking engagement with and held by the adjacent tie frames, substantially as described. 2nd. In a storage bin, the com-



bination with metallic standards or upwards and horizontal tie-frames rigidly secured to said standards at their ends and intermediate portions, to form a rigid self-sustaining skeleton framework, of filling or lining sections having interlocking engagement with each other and with the adjacent tie frames at their upper and lower edges, substantially as described. 3rd. A fire proof skeleton framework forming the outer line of a series of rigidly connected bins, in combination with fire-proof filling pieces covering and insulating said skeleton framework and completing the bins, substantially as described.

No. 65,319. Register for Telephone Circuits.
(*Régistre pour circuits de téléphone.*)

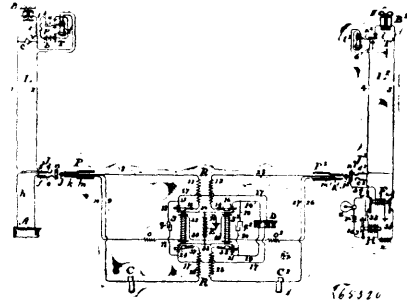


The Bell Telephone Company of Canada, Montreal, Canada, assignee of George Knox Thompson, Malden, Massachusetts, U.S.A., 13th December, 1899; 6 years. (Filed 29th August, 1899.)

Claim.—1st. In a telephone call signal registering apparatus, the combination of two electromagnets one of which is provided with an armature carrying or adapted to operate a pawl or escapement, the second being relatively sluggish in operation and having an armature adapted to lock the first armature while both armatures are in their unattracted position, with a counting mechanism provided with a ratchet wheel arranged to be rotated by said pawl or escapement, and one or more dials with pointers impelled by the said ratchet wheel, as set forth. 2nd. In a registering apparatus the combination of two straight electromagnets one being relatively sluggish in operation both having armatures pivoted to swing at a right angle to the poles thereon and to hang away the refronably gravity, the one having a projection adapted to lie in the path of the second and lock the same when so retracted and the latter terminating in a pawl or escapement, with a counter mechanism provided with a ratchet wheel, as set forth. 3rd. The combination of a telephone substation relay circuit, with a call registering apparatus, consisting of two

electromagnets, the first of which is in the circuit of the test conductor or a branch thereof of said circuit and the second being in a normally open local circuit of the said relay circuit, the armature of the first electromagnet adapted to operate a pawl or escapement, and the armature of the second electromagnet operating to lock the said first armature when both are unattracted and a counter provided with a ratchet wheel adapted to be operated by said pawl or escapement, and with one or more pointers and dials, whereby when the substation telephone is removed from its hook switch the registering armature is unlocked and when an answering plug is inserted in a jack of the relay circuit the counter is operated, as set forth.

No. 65,320. Telephone Switchboard.
(*Commutateur de téléphones.*)

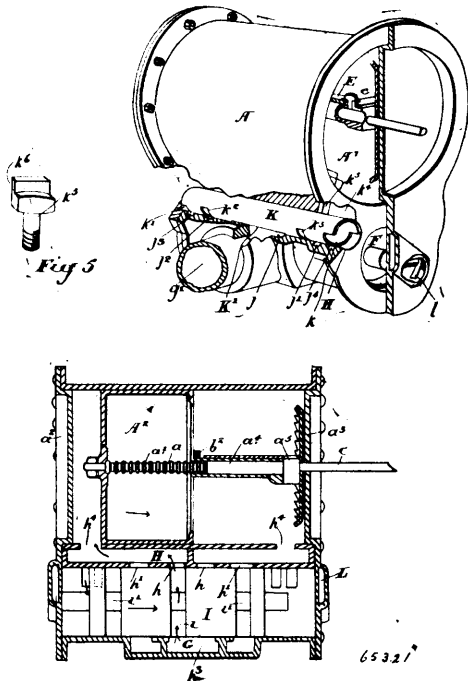


The Bell Telephone Company of Canada, Montreal, Canada, assignee of George Knox Thompson, Malden, Massachusetts, U.S.A., 13th December, 1899; 6 years. (Filed 29th August, 1899.)

Claim.—1st. A cord circuit for linking together substation circuits of different types, divided into two inductive plug circuits, each plug having tip, sleeve, and test contact surfaces which constitute the terminals of two separate circuits, including separate disconnecting signals for each type of substation circuit, and means whereby when either plug is inserted into the switch socket of either a magneto or relay substation circuit, the said circuit is adapted to repeat into the opposite plug circuit and the substation circuit connected thereto, and whereby the distinctive disconnecting signal appropriate to each type of circuit is adapted to be operated as set forth. 2nd. A cord circuit, divided by a repeating coil into two independent plug circuits, normally organized to connect with magneto substation circuits, each plug having three contact surfaces, the tip and sleeve contacts being in circuit with each other, and normally including in series two helices of the said repeating coil, a condenser and a disconnecting signal and having in shunt therewith one coil of a second disconnecting signal, and the test contact being in circuit with a relay and battery, each plug circuit being adapted when connected with a relay substation circuit to automatically switch out from the said tip and sleeve circuit the said condenser and second disconnecting signal and to switch in thereto the said battery, as set forth. 3rd. A cord circuit divided by a repeating coil into two independent plug circuits normally organized to connect with substation circuits of one type, each plug having three contact surfaces, the tip and sleeve contacts being in circuit with each other and normally including in series two helices of the said repeating coil, a condenser and a disconnecting signal, and having in shunt therewith a second disconnecting signal, and the test contact being in circuit with a relay and battery, each plug circuit being adapted when connected with substation circuits of a different type to automatically switch out from the said tip and sleeve circuit the said condenser and second disconnecting signal and to switch therein the said battery, as set forth. 4th. A cord circuit for linking together substation circuits of two different types, divided into two similar inductive plug circuits, each plug having tip, sleeve and test contact surfaces, the latter surface forming the terminal or a grounded test circuit including a relay and battery, the former surfaces constituting the terminals of an inductive circuit, including switches, normally organized to repeat into the opposite plug circuit current undulations from a battery at a connected magneto substation, and when a plug is inserted into a relay substation circuit the relay in that plug circuit operates said switches to re-organize said inductive circuit and include therein and in the test circuit of said relay circuit, the said first mentioned battery, as set forth. 5th. A cord circuit for linking together substation circuits of diverse character divided by a repeating coil into two independent plug circuits, each plug having three contact surfaces, the tip and sleeve being in circuit with each other and normally including in series two helices of said coil, a condenser, and a disconnecting signal, and a test contact surface being in circuit with a relay and battery, whereby when the plugs are inserted into substation circuits of the same or of dissimilar type, each plug circuit is adapted to repeat into the other, as set forth. 6th. A cord circuit for linking together substation circuits of diverse character divided

by a repeating coil into two independent plug-circuits, each plug having three contact surfaces, the tip and sleeve being in circuit with each other and normally including in series two helices of said coil, a condenser and a disconnecting signal, and having in shunt therewith one coil of a second disconnecting signal, and the test contact surface being in circuit with a relay and battery, whereby when the plugs are inserted into magneto or into relay substation circuits, each circuit is adapted to repeat into the other, and the disconnecting signals be operated, as set forth.

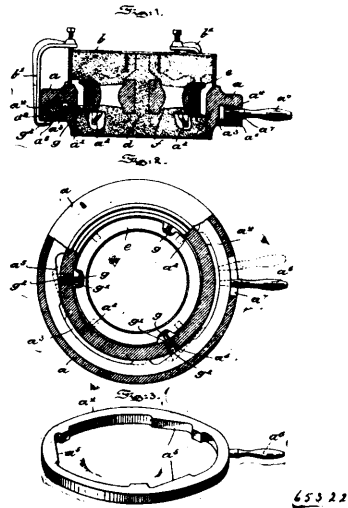
No. 65,321. Water Meter. (*Compteur à eau.*)



William Duncan, Ottawa, Ontario, Canada, 13th December, 1899
6 years. (Filed 22nd April, 1899.)

Claim.—1st. In a machine of the class described, the combination with the main cylinder a piston operating therein having its piston rod connected to a metre clock mechanism of the cylinder located beneath said main cylinder, ports connecting the main cylinder and lower cylinder, and outlet and inlet pipes connected by ports to said lower cylinder and the piston valve I designed to open and close and connect said ports as and for the purpose specified. 2nd. In combination with the main cylinder, a piston operating therein having its rod connected to a metre clock mechanism a cylinder located beneath said main cylinder, the ports connecting main cylinder and lower cylinder, outlet and inlet pipes connected by ports to said lower cylinder, the valve piston I, a cylindrical bore and slide valve operating therein connecting passage between the inlet pipe and end of said bores, ports connecting the valve bore and lower cylinder and means for operating the valve between the ports by the reciprocating motion of the piston, as and for the purpose specified. 3rd. In combination, the main cylinder and piston located therein the piston valve cylinder and piston valve ports connecting the inlet pipe and main cylinder through said piston valve cylinder a tubular slide valve working in the suitable bore outlet and inlet ports therein designed to register alternately with outlet and inlee ports connecting said bore with main cylinder slots cut between main cylinder and cylinder bore, pins secured in said slide valve and projecting through said slots to form contact with the piston in its reciprocating motion, as and for the purpose specified. 4th. In combination, the main cylinder and piston located therein the piston valve cylinder and piston valve I inlet ports *ff* and outlet ports *hh* and annular connecting ports *i¹i¹* a cylindrical valve bore a tubular valve located therein, inlet and outlet ports *j², j², j³, j³*, and ports *k¹, k², k³, k⁴*, designed to alternately register in pairs, pins secured in the slide valve projecting through slots into the cylinder and having heads with broad flat inner faces designed to form contact with the cylinder, as and for the purpose specified. 5th. The combination with the main cylinder and piston, of a piston rod secured to said piston, an annular toothed rack formed thereon, a journal box secured to one of the end plates of the cylinder, a rod journaled centrally of the plate, a rack wheel secured thereon, a rocking detent pivoted to said journal box and designed to operate said rack wheel and a toothed quadrant at its inner end suitably connected by gears to said annular rack, as and for the purpose specified.

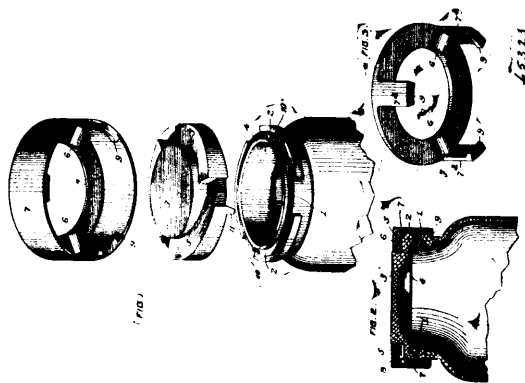
No. 65,322. Flasks for the Formation of Car Wheels.
(*Moule pour roues de chars.*)



William Tilghman Snyder, Catasauqua, Pennsylvania, U.S.A.,
13th December, 1899; 6 years. (Filed 17th November, 1899.)

Claim.—1st. In a combined flask and mould for car wheels, a flask having on its interior periphery supports adapted to receive a tire, and means in connection with said flask for centering the tire on said supports with respect to the mould, substantially as and for the purposes described. 2nd. In a device of the character described, a flask having on its interior periphery a series of steps to support a tire and means in connection with the flask for centering the tire on said steps, substantially as and for the purposes described. 3rd. In a device of the character described, a flask, means within its interior periphery adapted to support the tire of a car wheel, a series of pins normally retracted within the flask, and means for extending said pins beyond the interior periphery of said flask so as to abut against and center the tire within the flask, substantially as and for the purposes described. 4th. In a device of the character described, a flask having a recess in its wall, a ring adapted to be turned in said recess, a series of pins located in the wall of said flask, and means connected with said ring adapted to project said pins into the interior of said flask, when said ring is turned, substantially as and for the purposes described. 5th. In a device of the character described, a flask having an annular recess in its walls, a cam ring adapted to be turned in said recess, a series of pins located in the wall of said flask and adapted to be projected into the interior of the flask, when said ring is turned in one direction and means for retracting said pins, when the ring is turned in the opposite direction, substantially as and for the purposes described.

No. 65,323. Jar. (*Jarre.*)

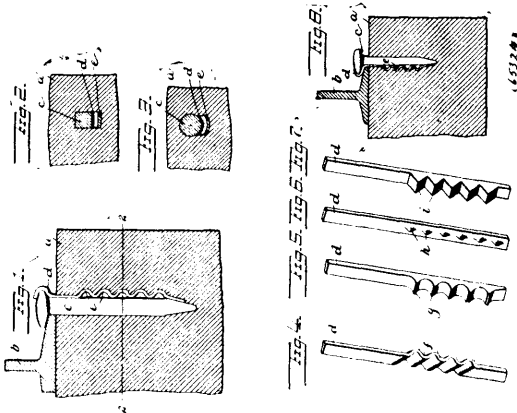


Stephen Hipkins, jr., Martin's Ferry, Ohio, U.S.A., 13th December,
1899; 6 years. (Filed 23rd November, 1899.)

Claim.—1st. The combination of a jar provided with a continuous shoulder and with beads arranged around the neck of the jar below the shoulder, a cap or cover provided on its top with inclines and a clamp consisting of an annular portion provided with bearing por-

tions adapted to bear on the inclines and having lugs adapted to engage the beads, on the neck, substantially as set forth. 2nd. The combination of a jar provided with a continuous shoulder and with spaced beads arranged around the neck of the jar below the shoulder, a cap or cover provided on its top with inclines or cam surfaces and having fingers adapted to project down into the spaces between the ribs and a clamp provided with bearing portions adapted to bear on the inclines and having lugs adapted to engage the beads on the neck, substantially as set forth.

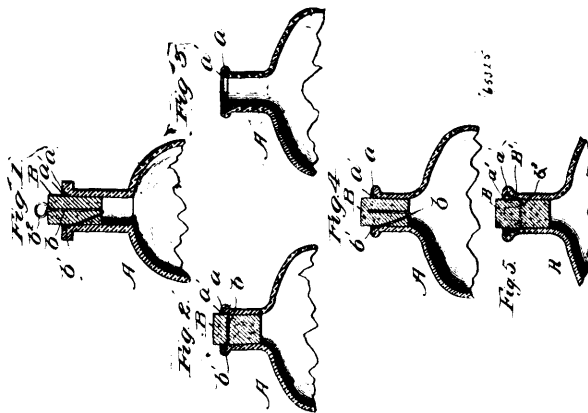
No. 65,324. Key for Railroad Spikes.
(Clé pour cheville de chemin de fer.)



John Harrison, Philadelphia, Pennsylvania, U.S.A., 13th December, 1899; 6 years. (Filed 23rd November, 1899.)

Claim.—1st. As a means for utilizing old spikes in old spike holes, the combination with a railroad tie having a spike hole therein, of an ordinary spike, having plane surfaced sides and of substantially uniform thickness throughout the greater portion of the length and tapering to a point at its driving end, and being of a thickness less than the average diameter of the spike hole, of a key having laterally projecting surfaces, the key of a width substantially that of the spike, and of a length approximately that of the spike, and adapted to be inserted loosely into the spike hole after the withdrawal and before the reinsertion of the spike, the width of the spike plus the thickness of the key being substantially greater than the diameter of the spike hole, the laterally projecting surfaces of the key being forced into engagement with the tie by the lateral pressure exerted by the spike during its insertion. 2nd. As a means for utilizing old spikes in old spike holes, the combination with the spike, of a key of substantially uniform thickness but of a thickness substantially that of the spike, the key being bent laterally to form corrugations, substantially as described, the key being adapted to be inserted loosely into the spike hole after the withdrawal of the spike and to be forced into engagement with the tie by the lateral pressure exerted by the spike during its insertion.

No. 65,325. Bottle. (Bouteille.)



John Joseph Campbell, Black Cape, Quebec, Canada, 13th December, 1899; 6 years. (Filed 20th November, 1899.)

Claim.—1st. A bottle, constructed with an annular groove formed in the neck portion thereof adjacent to the mouth, whereby a thin film is formed about the mouth of the bottle, in combination with a cork, and a wire secured therein, an end of which projects from the

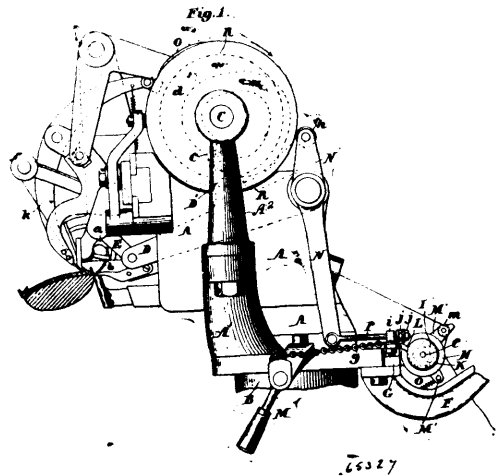
side of the cork in position to engage the said groove, substantially as described. 2nd. A bottle, constructed with an annular groove formed in the neck portion thereof, adjacent to the mouth, whereby a thin film is formed about the mouth of the bottle, in combination with a cork, and a wire extending vertically through said cork and then passed through the side thereof and adapted to engage the said groove, the outer portion of the wire being adapted to be used to remove the cork, substantially as described.

No. 65,326. Matter to be Used as a Stone for Grinding and Sharpening Machine Knives, Plough Points and Edged Tools. (Composition pour aiguïser les outils etc.)

Luke Harrison Page, Southwold, and Colin St. Clair Leitch, Dutton, both in Ontario, Canada, 13th December, 1899; 6 years. (Filed 16th October, 1899.)

Claim.—1st. The herein described composition of matter consisting of water, borax, gum shellac, virgin rubber, sharp white sand, blue clay, emery No. 2, maple syrup, steel filings, coal clinkers or slag, substantially as described and for the purpose specified. 2nd. The herein described composition of matter for grinding and sharpening machine knives, plough points and other edged tools, consisting of water, two gallons, borax four pounds, gum shellac two pounds, virgin rubber one pound, sharp white sand thirty-two pounds, blue clay eight pounds, emery No. 2, eight pounds, maple syrup one pound, steel filings two pounds, coal clinkers or slag eight pounds, substantially as described.

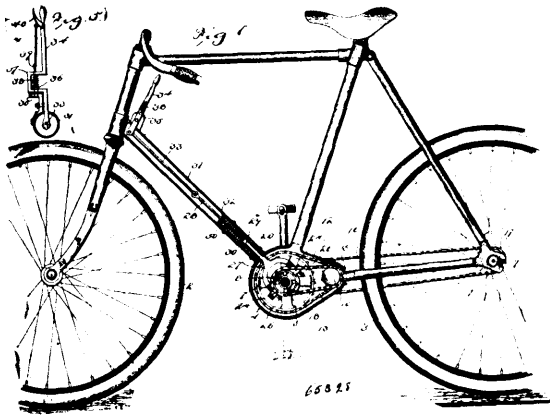
No. 65,327. Thread Tension for Sewing Machines.
(Tirant à fil pour machines à coudre.)



The Bay State International Shoe Machinery Company, assignee of Joseph Eli Bertrand, all of Boston, Massachusetts, U.S.A., 13th December, 1899; 6 years. (Filed 14th November, 1898.)

Claim.—1st. A wax thread chain stitch sewing machine, having in combination, a stitch setting hooked needle, a looper, a normally operative tension, and means for automatically relieving the tension while the needle is drawing the loop through the work and for again applying the tension before the needle completes its retracting stroke so that the needle sets the stitch with the thread under the tension strain, substantially as set forth. 2nd. A wax thread chain stitch sewing machine, having in combination, a curved stitch setting hooked needle, a looper, a tension, and connected mechanisms for operating the needle and looper, and for controlling the tension, the mechanism for controlling the tension operating to automatically relieve the same after the looper has acted to loop the thread around the needle, and to again apply the tension before the needle has completed its loop drawing stroke, whereby the tension is relieved while the needle is drawing the loop through the work and is operative when the needle sets the stitch, substantially as set forth. 3rd. A wax thread chain stitch sewing machine, having in combination, the curved stitch setting needle *b*, the looper *k*, the drive shaft *C*, having cam discs provided with cams for operating said needle and looper through connecting instrumentalities, said connecting instrumentalities, a grooved tension wheel *H*, a friction disc *I*, a spring *J*, pressing said friction disc against said tension wheel, a cam *O*, carried by the said shaft *C*, and intermediate devices between said cam *O*, and said friction disc *I*, where said friction disc is automatically removed from said tension wheel *H*, while the needle is drawing a loop through the work and is in operative contact with said tension wheel when the needle sets the stitch, substantially as set forth.

No. 65,328. Variable Gear for Bicycles.
(*Engrenage variable pour bicycles.*)

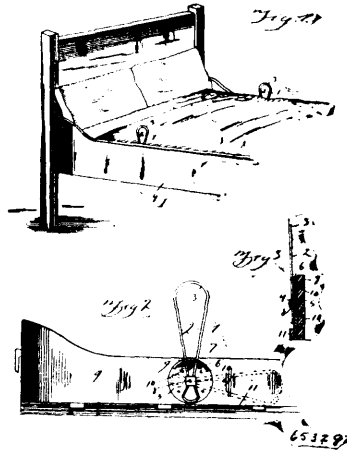


William Lane, Alfred Downey, Robert Kellow, and Samuel Keat, all of Pen Argyl, Pennsylvania, U.S.A., 13th December, 1899; 6 years. (Filed 7th April, 1899.)

Claim.—1st. In a driving mechanism of the class specified, the combination of an axle, of differential driving members carried thereby, a clutch slidable between said driving members, and a clutch operating device having a diagonal pin, substantially as described. 2nd. In a driving mechanism of the class specified, the combination with an axle, of differential driving members carried by said driving axle, a second axle provided with members operatively connected with and actuated by said driving members, a clutch slidable between the said differential driving members, a ring carried by the clutch, and a clutch operating device having a diagonal pin located to engage said ring, substantially as described. 3rd. In a driving mechanism of the class specified, the combination with an axle, of the two sprocket wheels carried thereby, a second shaft provided with sprocket wheels connected by sprocket chains with said first mentioned sprocket wheels, a clutch slidable on said first mentioned axle between the sprocket wheels thereon, a ring carried by said clutch and provided with oppositely disposed ears having diagonal openings, and a clutch operating device provided with diagonal pins projecting through said openings, substantially as described. 4th. In a driving mechanism of the class specified, the combination with an axle, of differential driving members carried thereby, a wheel operatively connected with said axle, a clutch slidable between said differential driving members, a ring on the clutch provided with gears having diagonal openings, a clutch shifting device furnished with diagonally disposed pins projecting into said openings, driving means for said clutch shifting device, a hand lever, and a link pivoted respectively to the hand lever, and to said clutch shifting device, substantially as described. 5th. In a driving mechanism of the class specified, the combination with an axle, of differential driving members carried thereby, a wheel operatively connected with said axle, a clutch slidable between said differential driving members, a ring on the clutch provided with gears having diagonal openings, a clutch shifting device furnished with diagonally disposed pins projecting into said openings, driving means for said clutch shifting device, a hand lever, a link pivoted respectively to the hand lever and to said clutch shifting device, a toothed sector, and a pawl on said hand lever adapted to co-operate with said toothed sector, substantially as described. 6th. In a driving mechanism of the class specified, the combination with an axle, of differential driving members carried thereby, a wheel operatively connected with said axle, a clutch slidable between said differential driving members, a ring on the clutch provided with gears having diagonal openings, a clutch shifting device furnished with diagonally disposed pins projecting into said openings, driving means for said clutch shifting device, a hand lever, a link pivoted respectively to the hand lever and to said clutch shifting device, a sector bar having teeth and also having longitudinal slots, a pawl, guides on the hand lever for said pawl, a spring acting respectively against one of the guides and against said pawl, a second lever mounted upon the hand lever and operatively connected to said pawl, the screws extending through said longitudinal slots, substantially as described. 7th. In a driving mechanism of the class specified, the combination with an axle, of differential driving members carried thereby, a clutch slidable between said driving members, a ring carried by the clutch, and a clutch shifting device provided with diagonal pins adapted to engage said ring and supported for reciprocation transversely of said axle, substantially as described. 8th. In a driving mechanism of the class specified, the combination with an axle having a polygonal portion, of differential driving members carried by said axle, a clutch slidable on

said polygonal portion and between said driving members, a ring carried by the clutch and provided with oppositely disposed ears having diagonal openings, and a clutch shifting device supported for reciprocation transversely of said axle and having a segmental portion provided with pins fitted in said openings and disposed at the same angle, substantially as described.

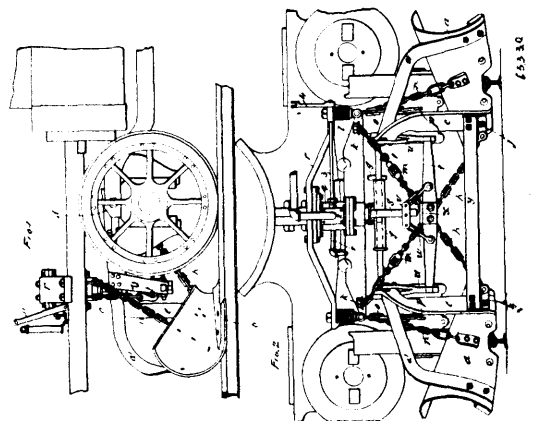
No. 65,329. Bedclothing Holder. (*Porte-couverture de lit.*)



Stephen J. Davis, Williamantic, Connecticut, U.S.A., 13th December, 1899; 6 years. (Filed 21st November, 1899.)

Claim.—A device of the class described, comprising an attaching bracket, having a rib and a spring arm pivoted intermediate its ends to the bracket, and adapted to engage the rib when in use at one side of the pivot, whereby the outer end of the arm is forced against the bracket, substantially as shown and described. 2nd. A device of the class described, comprising an attaching bracket, an arm, pivoted intermediate its ends to the bracket and comprising an upper triangular frame and a lower triangular frame, the latter being adapted to engage the bracket, whereby the tension is had upon the upper frame to hold it in engagement with the bracket and prevent accidental displacement of the arm in use, substantially as shown and described. 3rd. A device of the class described, comprising an attaching bracket having an arcuate transverse rib provided with notches, and an arm made of spring wire, in the form of two transversely arranged triangular frames having a plate connecting the frames together at the apex thereof, the arm being pivoted to the bracket through the plate, the sides of the upper triangular frame being adapted to be seated in the respective notches of the rib, whereby the lower frame is engaged with the bracket, substantially as and for the purpose set forth.

No. 65,330. Locomotive Flanger.
(*Grattoir pour locomotives.*)

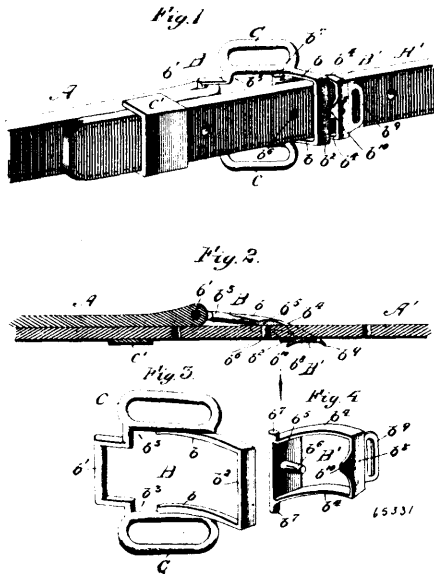


Thomas Crocket, Montreal, Quebec, Canada, 13th December, 1899; 6 years. (Filed 21st November, 1899.)

Claim.—1st. In combination with the frame of a locomotive, of a flanger device comprising a pair of flanger plates, a pair of arms rigidly connected at their rear ends of said flanger plates and pivotally connected at their forward end to the frame of the locomotive, means for bracing said flanger plates together, a lifting device

means for connecting said flanger device to said lifting device substantially as and for the purpose set forth. 2nd. In combination with the frame of a locomotive, of a flanger device comprising a pair of flanger plates, a pair of arms rigidly connected at their rear ends to the forward ends of said flanger plates and pivotally connected at their forward ends to the frame of the locomotive, a pair of reinforcing arms connected rigidly at their rear ends to the rear ends of said flanger plates and at their forward ends rigidly to the first mentioned arms, means for bracing said flanger plates together, a lifting device, a chain connection between said flanger device and the piston rod of said lifting device, substantially as described and for the purpose set forth. 3rd. The combination of flangers *a, a*, carrying arms *c, c*, pivoted to the equalizing levers of the locomotive truck, lifting bar *l*, hanger bars *u*, carried above the lifter bar and the operating cylinder *q*, piston rod *s*, bearing directly upon and having a free connection with said bar, substantially as and for the purpose set forth. 4th. The combination with piston rod, *s*, and lifter bar *l*, of cross head *r* and links *w* with pivotal connections to cross head and bar, substantially as and for the purpose set forth.

No. 65,331. Harness Buckle. (*Boucle de harnais.*)



Henry James Bickle, Gladstone, Manitoba, Canada, 13th December, 1899; 6 years. (Filed 21st November 1899.)

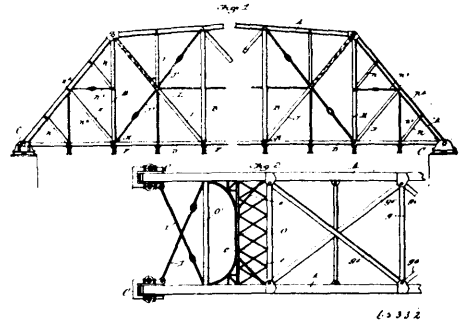
Claim.—1st. A harness buckle, comprising two members, one of which is adapted to be secured to the trace, and constructed of side bars provided with recesses, a bar uniting said side bars, a detachable buckle member constructed of side bars, a plate uniting said side bars and provided with a vertical lug for engagement with the adjustable portion of the trace, lugs formed on said side bars and adapted to pass through said recesses and engage the side bars of the fixed buckle member, a bar uniting the outer ends of the side bars of the detachable buckle member, a rearwardly extending lip integral with said bar and adapted to engage the bar of said fixed buckle member, substantially as described. 2nd. The combination with a fixed trace section and an adjustable trace section, of a harness buckle, comprising a member secured to said fixed trace section, and provided with upwardly curved side bars, and having suitable recesses formed in said side bars, a bar uniting the outer ends of said side bars, a detachable buckle member provided with upwardly curved side bars, a plate uniting said side bars and provided with a vertical lug for engagement with said adjustable trace section, lugs formed on said side bars and adapted to pass through the recesses of said recesses and engage the side bars of the fixed buckle member, a bar uniting the outer ends of the side bars of the detachable buckle member, a rearwardly extending lip integral with said bars and adapted to engage the bar of said fixed buckle member, substantially as described.

No. 65,332. Bridge. (*Pont.*)

Charles M. Horton, West Superior, Wisconsin, U.S.A., 13th December, 1899; 6 years. (Filed 20th March, 1899.)

Claim.—1st. In a bridge, the combination with suitable panel posts and floor beams, of a top chord beam comprising longitudinal beams bound together by a longitudinal plate or bar having ribs thereon, said ribs being rolled upon the flanges of the said beams for binding the parts together to form a box beam, and means for bracing the parts together, substantially as described. 2nd. In a bridge structure, the combination with a top chord beam, and panel

posts suspended therefrom, of downwardly bent shore ends forming a part of the top chord beam, bottom chord beams, foot boxes adapted

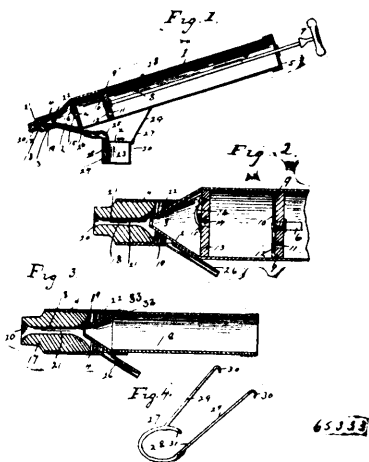


to receive and have the shore ends of the top chord beams rest upon them, the said foot boxes comprising an integral base plate and side limiting lugs, a shoulder formed on the base plate between the limiting lugs forming an abutment for the end of the top chord beam, and means for securing the chord beams in the said boxes, substantially as described. 3rd. In a bridge structure, the combination with panel posts and floor girders, of a top chord beam for supporting the same, the shore ends of the said beam being bent downwardly, bottom chord beams, foot boxes for receiving the said shore ends comprising parallel limiting walls, an abutment formed between the said limiting lugs upon the bottom of the box for receiving the end thrust of the top chord beam, and a bolt for holding the said chord beam in place, substantially as described. 4th. In a bridge structure, the combination with a top chord beam and bottom chord beams, of foot boxes for supporting the shore ends thereof, an abutment formed upon the bottom of the foot boxes for receiving and supporting the end thrust of the top chord beam, integral side walls or limiting lugs for limiting the lateral movement of the beam, a strengthening abutment formed on the outer sides of the said side walls or limiting lugs, and means for holding the said foot boxes in place, substantially as described. 5th. In a bridge structure, the combination with a top chord beam, and bottom chord beams, of foot boxes for receiving and supporting the shore end thereof, a base plate formed upon its upper side with a socket or recess, rollers mounted in the said socket and adapted to support the foot boxes proper, and means connecting the rollers for spacing them properly, the construction being such that the expansion and contraction of the metal of the structure will be compensated, substantially as described. 6th. In a bridge structure, the combination with a top chord beam and bottom chord beams, of a foot box for supporting the same, parallel lugs formed upon the said foot box for receiving the shore ends of brace rods for bracing the structure laterally, and means for securing the said foot box to the shore, substantially as described. 7th. In a bridge structure, the combination with panel posts and floor beams, of a top chord beam, comprising longitudinal beams and a longitudinal binding plate having ribs rolled upon the said longitudinal beams for holding them together, splicing plates secured to the binding plate of the said chord beam, the said splicing plates extending inwardly beyond the edge of the plate and engaging bracing structures for holding the chord beam in proper place, substantially as described. 8th. In a bridge structure, the combination with panel posts and floor girders, of a top chord beam, each comprising longitudinal beams and a longitudinal binding plate having ribs rolled upon the said longitudinal beams for holding them together, splicing clips or plates secured to the said binding plate for holding its adjoining ends together, the said plate extending beyond the inner edge of the said plate, an angle plate also secured to said chord beam, the construction being such that lateral bracing structures may be secured to the said top chord beam between the said angle plate and the said splicing plate, substantially as described. 9th. In a bridge structure, the combination with a top chord beam having a channel in its under side, of panel posts extending into the said channel, a stiffening box fitting the inner contour of the said channel and receiving the upper end of said panel post for strengthening the joints, substantially as described. 10th. In a bridge structure, the combination with a top chord beam having a channel in its under side, of panel posts entering said channel, a bolt for securing the panel posts to the said chords beams, a suspending clip having bifurcated flanges secured to the web of each panel post and provided with an upwardly extending eye at right angles to said flanges for engaging the said bolt and rendering an additional support to the said panel posts, substantially as described. 11th. In a bridge structure, the combination with a top chord beam, of panel posts suspended therefrom, bolts passing through the lower end of the said panel posts, suspending clips having bifurcated flanges secured to the web of the said panel posts and provided with downwardly extending eyes at right angles to the said flanges for engaging the said bolt, and means for suspending floor girders from the said bolt, substantially as described. 12th. In a bridge structure, the combination with top chord beams, of main panel posts, floor girders supported

thereby, intermediate panel posts comprising bars or angle irons, suspended from said top chord beams, eye bars suspended from the said angle bars and connecting them with floor beams and brace rods for holding the said angle and eye bars in place, substantially as described. 13th. In a bridge structure, the combination with top chord beams, of panel posts suspended therefrom, floor girders supported by the said panel posts, stringers connecting and resting upon said floor girders, securing plates interposed between the said stringers and the said girders, having downwardly extending lugs for engaging notches in the said girders and upwardly extending lugs for engaging notches in the said stringers, the construction being such that the stringers and the girders are securely fastened together, substantially as described. 14th. In a bridge structure, the combination with top chord beams, of end sections bent downwardly therefrom to shore engaging portions, panel posts supported by the said top chord beams, struts or diagonal beams connecting the middle of the said downwardly bent chord beams with the bottom of the first main panel post, and parallel T-irons also parallel with the said struts for further supporting the said end structure, substantially as described. 15th. In a bridge structure, the combination with top chord beams, of end portions bent downwardly for engaging the shore, struts or diagonal beams for bracing the said end portions, the said struts being provided with bolt receiving apertures in their ends and having their web portions cut way to allow a passage of the said bolts, and bolts passing through the said apertures and cutaway portions for securing the parts together, substantially as described. 16th. In a bridge structure, the combination with top chord beams, of panel posts suspended therefrom, diagonal braces for bracing the said panel posts with respect to each other, tension bars extending from panel post to panel post, and attaching plates upon the said tension bars for engaging the webs of the said panel posts, substantially as described. 17th. In a bridge structure, the combination with top chord beams, of panel posts suspended therefrom, tension bars having screw threads upon one end and provided with bifurcated portions upon their other ends, the said screw threaded ends engaging plates applied to the sides of the panel posts, and the bifurcated ends passing through the web of the panel posts and the said plates, and nuts for securing them therein, substantially as described. 18th. In a bridge structure, the combination with top chord beams, of panel posts suspended therefrom, intermediate panel posts also suspended from said top chord beams, and lateral braces interposed between the chords adjacent to the intermediate panel posts upon opposite sides of the structure, and angle plates bolted to the sides of the said top chord beams, and securing the ends of the said lateral braces in place, substantially as described. 19th. In a bridge construction, the combination with top chord beams, of end sections bent downwardly and engaging the shore for supporting the said bridge structure, lateral braces connecting the said end sections and lattice work interposed between the said lateral braces and the said end sections of the top chord beams, and diagonal struts or braces for further bracing the lattice work and lateral braces with respect to the end panel posts, substantially as described.

No. 65,333. Pneumatic Sprayer.

(Pulvérisateur pneumatique.)



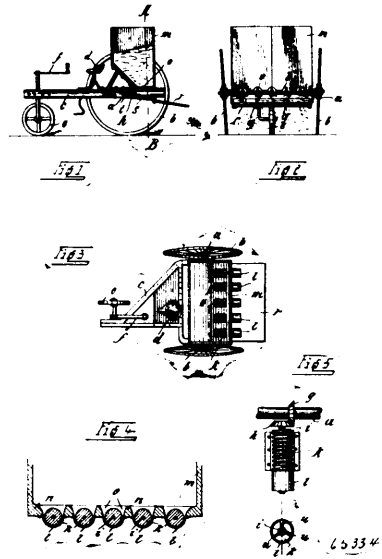
Joseph M. Oldham, Afton, Minnesota, U.S.A., 13th December, 1899; 6 years. (Filed 14th October, 1899.)

Claim.—1st. In a sprayer, a cylinder, a piston therein, and an adjustable nozzle upon the end of such cylinder, as and for the purpose set forth. 2nd. In a sprayer, a cylinder having a tapering end with a contracted aperture therein, a piston on the inside of said cylinder, a tube concentric with said cylinder, secured to the tapering end thereof, an adjustable nozzle therein, and a supply pipe for

spraying material communicating with said tube. 3rd. In a sprayer, a cylinder having a nozzle at the forward end thereof, a reciprocating piston therein, a receptacle for spraying material communicating with said nozzle, and a bracket whereby said receptacle is adjustably mounted on said cylinder, the same comprising a wire bent at a point intermediate of its ends forming a loop adapted to embrace said cylinder, and diverging spring arms leading from said loop and formed with hooks upon their outer ends adapted to fit within openings in said receptacle, as and for the purpose set forth. 4th. In a sprayer, a cylinder having a tapering end with a contracted aperture at the apex thereof, a reciprocating piston in said cylinder a tube concentric with said cylinder secured to said tapering end, a nozzle adjustably mounted in said tube having an opening extending therethrough which is cylindrical at a point intermediate of its ends, is flaring at its outer end and is formed with outwardly curved walls at its rear end, the said outwardly curved walls and the apex of the tapering end of said cylinder forming an annular chamber whose sides converge, a receptacle for spraying material, and a pipe connecting said receptacle with said chamber, as and for the purpose set forth.

No. 65,334. Manure and Seed Distributing Machine.

(Distributeur d'engrais et de graine.)



Rudolf Schulte Biome, Sieveringsen, Post Ostonen, near Soest, Germany, 13th December, 1899; 6 years. (Filed 21st November, 1899.)

Claim. 1st. A seed and manure distributing machine, the whole constructed, arranged and adapted to operate, substantially as described with reference to the accompanying drawings. 2nd. In a seed and manure distributing machine, a receptacle with openings in the bottom, casings enclosing conveyor worms arranged beneath each of said openings to receive the material therefrom, driving gear in connection with the axle of the machine for rotating the conveyor worms, a rocking plate for receiving the material for final distribution on the ground and means for rocking said plates, substantially as set forth. 3rd. In a seed and manure distributing machine the bottom of the receptacle fitted so as to receive the conveyor, worms in openings therein, said conveyor worms tightly fitting in casings in connection with the bottom of the receptacle and means for rotating the conveyor worms from the vehicle axle, substantially as set forth.

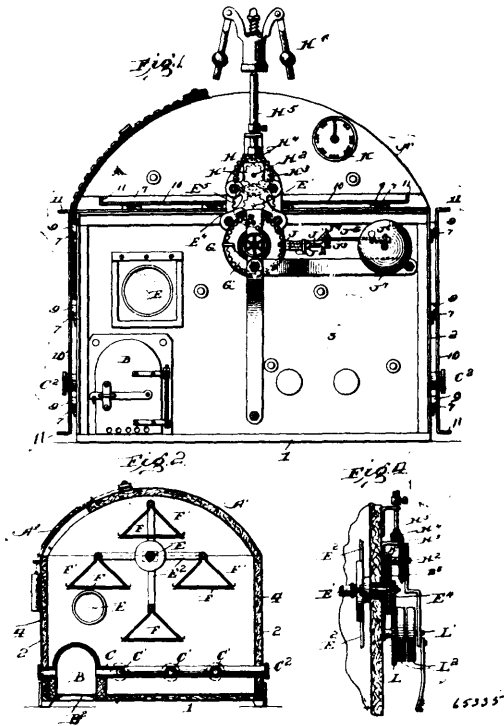
No. 65,335. Bake Oven. (Four à cuire.)

Herman August Schoregge, Wakefield, Nebraska, U.S.A., 13th December, 1899; 6 years. (Filed 24th November, 1899.)

Claim.—1st. In a bake oven, the combination with a rotary shaft, of the shelf frame carried thereby consisting of the arms having the bake pans suspended at their ends, the counter balance device mounted on the shaft, whereby the shelf frame may be counter balanced, and mechanism for driving the shaft, substantially as described. 2nd. In a bake oven, the combination with the reel shaft, the radial arms on the shaft, the bake pans suspended on the arms, the radial arms mounted on the end of the shaft outside of the oven, and weights adjustably carried on said arms, and mechanism for driving the reel shaft, substantially as described. 3rd. A bake oven having its side and end walls and top and bottom formed in separable sections, said end and side walls having cooperating staples and apertures and means to simultaneously engage the projecting ends of said staples, and thereby hold the parts in a locked position, as and for the purpose set forth. 4th.

As an improvement in bake ovens, the end and side walls formed of separate parts, each part consisting of an inner and outer plate hav-

prising a body portion having a locking flange formed upon each edge thereof, and a detachable portion provided upon each edge



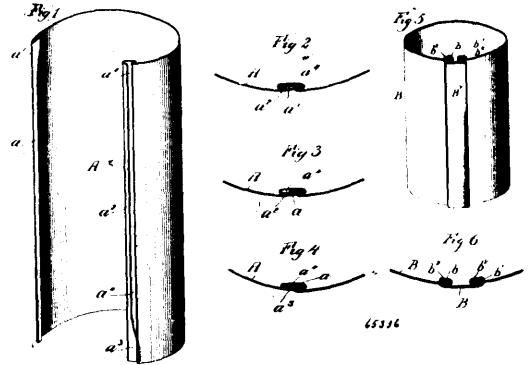
ing the outer edges thereof permanently secured together, and adapted to receive between them a packing of asbestos or the like, and a series of staples carried by the side or end plates and receiving apertures formed in the end of the adjacent plate, whereby said parts may be locked in union with each other, in combination with a locking bar having a series of fingers, each finger being so disposed as to take into the projecting end of one of said staples, as specified and for the purpose set forth. 5th. In bake ovens, the combination with side, end, top and bottom sections, of co-operating staples, and apertures provided for the edges of said parts, and a bar having a plurality of fingers adapted to engage the projecting end of said staples after the same have passed through apertures provided in the edge of the interposed walls, whereby said walls will be locked in engagement with each other until said fingers are withdrawn from said staples in the manner specified and for the purpose set forth. 6th. The herein described bake oven formed of separable parts, the end and side walls consisting of two parallel plates of sheet metal permanently secured together at their edges and having a filling of asbestos or the like disposed between them, the ends of said plates being shaped to receive or fit into close contact with each other and a series of staples carried by one of the plates and a series of apertures formed in the contiguous plate and a locking bar having a plurality of fingers, each of which is adapted to take through the projecting end of its respective staple and thereby hold the side and end walls into permanent engagement with each other, as and for the purpose set forth. 7th. In a knock down bake oven, the combination with a double walled side, bottom and top sections lined with non-heat conducting material, of flanges or extensions secured to said sections and extending beyond the non-heat conducting material within said walls, co-operating staples and apertures provided for said flanges and a bar having a plurality of fingers adapted to secure said flanges into locked engagement with each other, whereby they may be again readily separated and the parts separately removed and afterwards assembled, as and for the purpose set forth.

No. 65,336. Joint for Stove Pipes, Metal Shingles.

(Joint pour tuyaux de poêles, feuilles métallique, etc.)

Arthur St. Arnaud, St. Genevieve de Batiscan, Quebec, Canada, 13th December, 1899; 6 years. (Filed 24th November, 1899.)

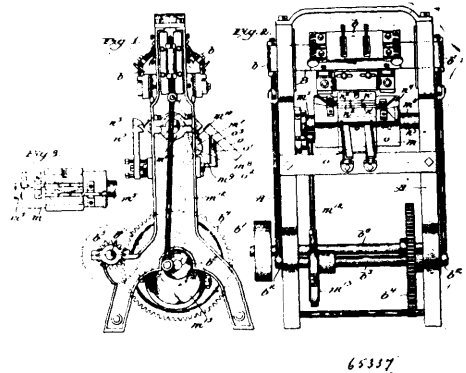
Claim.—1st. A detachable joint for stove pipes and other sheet metal articles, comprising a flange formed upon one edge of the metal sheet and terminating in a locking lug, a similar flange formed upon the other edge of the sheet and terminating in a locking lug, and a groove formed between the last named flange and the body portion of the sheet in which the first named flange is adapted to be slidably engaged, substantially as described. 2nd. A detachable joint for stove pipes and other sheet metal articles, com-



with a locking flange, the flange of the detachable portion being adapted to interlock with the flanges of the body portion, and the width of said locking flanges being sufficient to completely fill the spaces formed by said flanges, substantially as described.

No. 65,337. Machine for Cutting Shank Stiffeners.

(Machine pour dérouter les renforts de semelles.)



William Francis O'Brien and Darius Scott Keith, both of Whitman, Massachusetts, U.S.A., 13th December, 1899; 6 years. (Filed 24th November, 1899.)

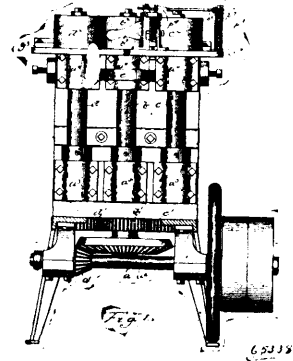
Claim.—1st. In a machine for cutting shank stiffeners, a pair of knives for cutting the opposite sides of a stiffener, means for moving them, a bed having a work receiving face, and means for moving said bed to present said face obliquely to first one and then to the other knife of the pair, substantially as described. 2nd. In a machine for cutting shank stiffeners, two pairs of knives, one pair constructed and arranged to cut one side of a stiffener and the opposite side of another stiffener, and the other pair constructed and arranged to cut the opposite sides of said stiffeners, a bed having a work receiving face, and means for moving said bed to present said face successively to said pairs of knives, substantially as described. 3rd. In a machine for cutting shank stiffeners, two pairs of knives, one pair constructed and arranged to cut one side of a stiffener and the opposite side of another stiffener, and the other pair constructed and arranged to cut the opposite sides of said stiffeners, a bed having a work receiving face obliquely to first one and then to the other pair of knives, substantially as described. 4th. In a machine for cutting shank stiffeners, a pair of knives for cutting the opposite sides of a stiffener, a bed having a work receiving face, and means for moving it to present said face obliquely to one of said knives and then obliquely to the other knife, substantially as described. 5th. In a machine for cutting shank stiffeners, a pair of knives for cutting the opposite sides of a stiffener, a bed having two work receiving faces, and means for operating said bed to successively present said faces to said knives, substantially as described. 6th. In a machine for cutting shank stiffeners, a pair of knives for cutting the opposite sides of a stiffener, a bed having two work receiving faces, and means for operating said bed to successively present said faces obliquely to said knives, substantially as described. 7th. In a machine for cutting shank stiffeners, a pair of knives a^2, a^3 for successively cutting the opposite sides of a stiffener, and means for operating them, and a bed having two work receiving faces arranged obliquely to said knives, substantially as described. 8th. In a machine for cutting shank stiffeners, two pairs of knives, one pair constructed and arranged to cut one

side of a stiffener and the opposite side of another stiffener, and the other pair constructed and arranged to cut the opposite sides of said stiffeners, a bed having two work receiving faces, and means for operating said bed to present both of said faces to said pairs of knives, substantially as described. 9th. In a machine for cutting shank stiffeners, two pairs of knives, one pair constructed and arranged to cut one side of a stiffener and the opposite side of another stiffener, and the other pair constructed and arranged to cut the opposite sides of said stiffeners, a bed having two work receiving faces, and means for operating said bed to present said faces successively to said pairs as described. 10. In a machine for cutting shank stiffeners, a pair of knives cutting the opposite sides of a stiffener, a bed having a number of work receiving faces, means for turning said bed to successively present said faces to said knives, substantially as described. 11th. In a machine for cutting shank stiffeners, a pair of knives for cutting the opposite sides of the stiffener, a bed having a number of work receiving faces, means for intermittently rotating said bed to successively present said faces obliquely to said knives, substantially as described. 12th. In a machine for cutting shank stiffeners, two pairs of knives, one pair for cutting one side of the stiffener and the opposite side of another stiffener and the other pair for cutting the opposite sides of said stiffeners, means for moving the knives of each pair simultaneously, and a bed having two work receiving faces arranged obliquely to said pairs of knives, substantially as described. 13th. In a machine for cutting shank stiffeners, two pairs of knives, one pair for cutting one side of a stiffener and the opposite side of another stiffener, and the other pair for cutting the opposite sides of said stiffeners, a bed having a number of work receiving faces, and means for rotating it to successively present said faces to said pairs of knives, substantially as described. 14th. In a machine for cutting shank stiffeners, a pair of knives, one for cutting one side and the heel end of a stiffener and the other for cutting the opposite side of said stiffener, and a bed having a work receiving face, and means for moving said bed to present said face successively to said knives, substantially as described. 15th. In a machine for cutting shank stiffeners, a pair of knives, one for cutting one side of the shank stiffener, and the other for cutting the opposite side and heel end of said stiffener, one of said knives having thereon an extension for severing the stiffener from a strip, and a bed having a work receiving face, substantially as described. 16th. In a machine for cutting shank stiffeners, two pairs of knives, one pair for cutting one side and the heel end of a stiffener, and the opposite side of another stiffener, and the other pair for cutting the opposite side of the first named stiffener, and the opposite side and heel end of the last named stiffener, one knife of each pair being provided with an extension for severing the stiffener from the strip, and a bed having a number of work receiving faces, and means for moving it to successively present said faces to said pairs of knives, substantially as described. 17th. In a machine for cutting shank stiffeners, a pair of knives for cutting the opposite sides of a stiffener, a bed having a number of work receiving faces, means for operating it to successively present said faces to said knives, and means for moving said knives simultaneously toward and from two of said work receiving faces, substantially as described. 18th. In a machine for cutting shank stiffeners, a pair of knives for cutting the opposite sides of a stiffener, a bed having two or more work receiving faces, means for intermittently rotating said bed to successively present said faces obliquely to said knives, and means for moving said knives simultaneously toward and from two of said oblique work receiving faces, substantially as described. 19th. In a machine for cutting shank stiffeners, two pairs of knives, one pair constructed and arranged to cut one side of a stiffener and the opposite side of another stiffener, and the other pair constructed and arranged to cut the opposite sides of said stiffeners, a bed having two or more work receiving faces, means for intermittently rotating said bed to successively present said faces obliquely to said knives, and means for moving said knives simultaneously toward and from two of said oblique working receiving faces, substantially as described. 20th. In a machine for cutting shank stiffeners, two pairs of knives, one pair constructed and arranged to cut one side of a stiffener and the opposite side of another stiffener, and the other pair constructed and arranged to cut the opposite sides of said stiffeners, and means for operating said knives, substantially as described. 21st. In a machine for cutting shank stiffeners, two pairs of knives, one pair arranged and constructed to simultaneously cut one side of a stiffener and the opposite side of another stiffener, and the other pair constructed and arranged to thereafter simultaneously cut the opposite sides of said stiffeners, and means for operating said knives, substantially as described. 22nd. In a machine for cutting shank stiffeners from a strip, a bed upon which the strip is placed, two pairs of knives moving obliquely to said bed, one pair constructed and arranged to cut one side of the stiffener and the opposite side of another stiffener on a bevel, and the other pair constructed and arranged to cut the opposite sides of said stiffeners on an opposite bevel, and means for operating said knives, substantially as described. 23rd. In a machine for cutting shank stiffeners from a strip, two pairs of knives, one pair constructed and arranged to cut one side of a stiffener and the opposite side of another stiffener and to sever the part forming the two stiffeners from the strip, and the other part constructed and arranged to cut the opposite sides of said stiffeners and to sever the two stiffeners, substantially as described. 24th. In a machine for cutting shank stiffeners, two pairs of knives, one pair for cutting one side and the heel end

of a stiffener, and the opposite side of another stiffener, and the other pair for cutting the opposite side of the first named stiffener, and the opposite side and heel end of the last named stiffener, one knife of each pair being provided with an extension for severing the stiffener from the strip, and means for operating said knives, substantially as described.

No. 65,338. Moulding Machine for Shank Stiffeners.

(Machine pour découper les renforts de semelles.)

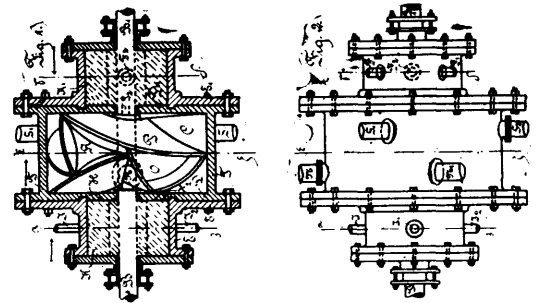


William Francis O'Brien and Darius Scott Keith, both of Whitman, Massachusetts, U.S.A., 13th December, 1899; 6 years. (Filed 24th November, 1899.)

Claim.—1st. In a machine for moulding shank stiffeners, a revolving roll recessed to receive the shanks and two presser rolls co-operating therewith located one at each side of the shank receiving roll, and means for carrying the shank from one presser roll to the other, substantially as described. 2nd. In a machine for moulding shank stiffeners, a revolving roll recessed to receive the shanks and two presser rolls co-operating therewith, located one at each side of the shank receiving roll, and a guide opposite said shank receiving roll for directing the shanks from the first to the second presser roll, substantially as described. 3rd. In a machine for moulding shank stiffeners, a revolving roll recessed to receive the shanks and two presser rolls co-operating therewith, located one at each side of the shank receiving roll and a guide opposite said shank receiving roll for directing the shanks from the first to the second presser roll and one or more rolls bearing upon said shank receiving roll between the first and second presser rolls, substantially as described. 4th. In a machine for moulding shank stiffeners, a revolving roll recessed to receive the shanks and two presser rolls co-operating therewith located one at each side of the shank receiving roll, a guide opposite said shank receiving roll for directing the shanks from the first to the second presser roll and a feeding device constructed and arranged to feed the shanks into the bight of the shank receiving roll and first presser roll at predetermined times, substantially as described.

No. 65,339. Rotary Steam Engine.

(Machine à vapeur rotatoire.)

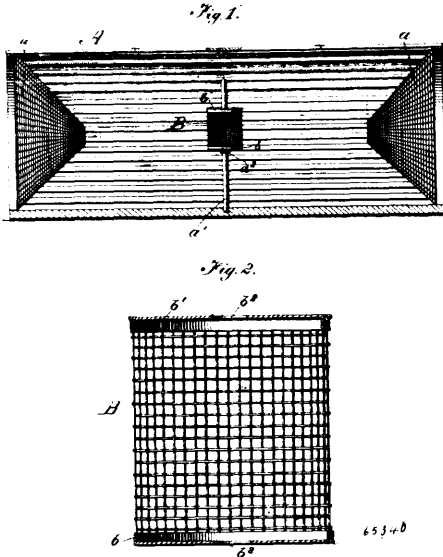


Johann Webber, Bonn, Rhineland, Prussia, Germany, 13th December, 1899; 6 years. (Filed 23rd November, 1899.)

Claim.—A rotary steam engine, characterized by the arrangement of a rotating piston A, having screw formed surfaces, in a cylinder C, and of two rotating slides or pistons K, K', provided

with cuts and contained in two cylinders E, E', which are attached to the covers of the cylinder C and connected with the inner room of the cylinder C, by steam ports for the purpose specified.

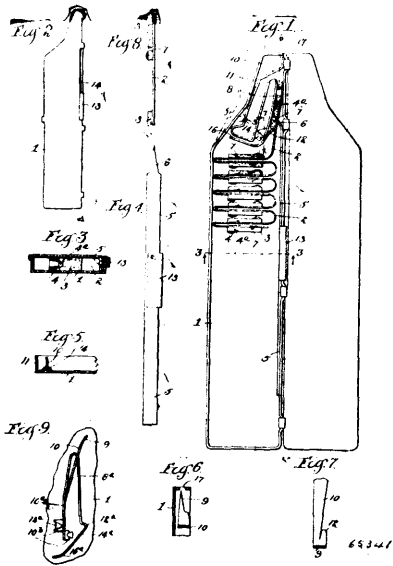
No. 65,340. Bait Can for Lobster Traps.
(Appât pour pièges à homard.)



Theodore A. Kenny, Glenwood, Nova Scotia, Canada, 13th December, 1899; 6 years. (Filed 21st November, 1899.)

Claim.—1st. A lobster trap, having an interior supporting standard, and a wire bait receptacle mounted upon said standard, substantially as described. 2nd. A lobster trap, having an interior supporting standard, and a wire bait receptacle removably mounted upon said standard, substantially as described.

No. 65,341. Fire Lighter. (Allumoir.)

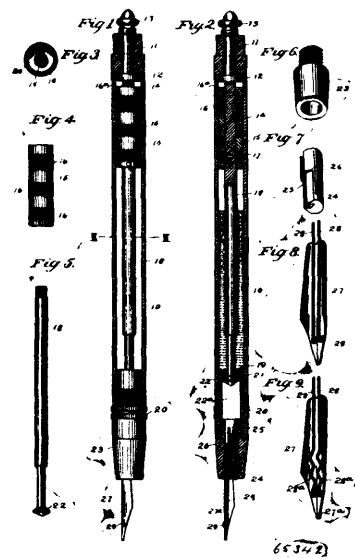


Delia K. Hawley and Frank A. Rathburn, both of Chicago, Illinois U.S.A., 14th December, 1899; 6 years. (Filed 6th April, 1899.)

Claim.—1st. An automatic lighter having in combination a box or receptacle for containing a strip of connected matches, an ejector for forcing said matches from said box, said box being provided with an opening and a spring tongue closing said opening, and an igniter having a portion adapted to bear against and deflect said tongue before the latter is reached by the match, substantially as set forth. 2nd. An automatic lighter having in combination a box or receptacle for containing a strip of connected matches, an ejector, a flexible guide arranged adjacent to the line of movement of said ejector,

a dog arranged at the lower or inner end of said guide for preventing retrograde movement of the match, and an igniter arranged at the other end of said guide, substantially as set forth. 3rd. An automatic lighter having in combination a box or receptacle for containing a strip of connected matches, and being provided at one end with an opening and a spring tongue closing said opening, an ejector for forcing said matches through said opening, and means for deflecting said tongue and igniting the match before the latter reaches the tongue, substantially as set forth. 4th. An automatic lighter having in combination a box or receptacle for containing a number of connected matches, an ejector having a point for ejecting said matches, said box being provided with an opening for the passage of the matches and a spring tongue for closing said opening and having a notch adapted to fit around said point after the match is ejected, and an igniter arranged in the line of movement of the match, substantially as set forth. 5th. An automatic lighter having in combination a box or receptacle, an ejector arranged against one side thereof, and having a slide 13, turned over and embracing said side, and a cover to said box fitting against said ejector and holding the same in place, substantially as set forth. 6th. An automatic lighter having in combination a box or receptacle, an ejector consisting of a flat strip arranged against one side thereof and having a slide 13, turned over and embracing said side, and a cover for said box having the cut away portion 14, forming a slot for the movement of said slide, said ejector having a portion projecting beyond or below said slot and fitting under said cover, substantially as set forth. 7th. An automatic lighter having in combination a box or receptacle, an ejector, an igniting point, a guide spring and a spring dog formed in one piece and secured in said box, substantially as described. 8th. An automatic lighter having in combination a box or receptacle, an ejector, a spring strip having a pointed end arranged adjacent to the line of movement of said ejector and constituting an igniter, the intermediate portion of said strip being doubled backwardly upon itself to form a spring guide adjacent to the line of movement of said ejector, and a spring dog for preventing the inward movement of the match, composed by bonding said strip outwardly towards said ejector, substantially as set forth. 9th. An automatic lighter having in combination a box or receptacle, an ejector, a spring strip bent to form an igniter and guide spring, a lip or lug turned outwardly from said spring, a tongue struck up from the bottom of said box and pressing downwardly in said lip or lug, and a second tongue struck up from the bottom of the box, and bearing against the opposite side of said spring for holding the spring in place, substantially as set forth. 10th. An automatic lighter having in combination a box or receptacle, an ejector, a strip having one end pointed to form an igniter, bent to form the shoulder 10, doubled back upon itself to form a guide spring adjacent to the line of movement of the ejector, the match holding dog formed on said guide spring and a guide spring projecting downwardly to one side from said dog, and a spring tongue for closing the aperture of the box arranged adjacent to a part of said strip and adapted to be deflected thereby, substantially as set forth.

No. 65,342. Pen. (Plume.)



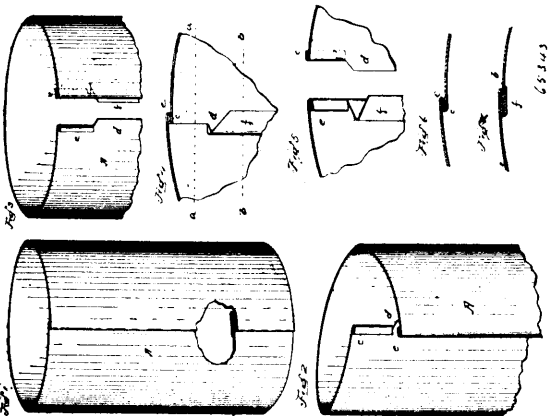
John Weeks and John H. Morch, both of New York, City, New York, U.S.A., 14th December, 1899; 6 years. (Filed 23rd May, 1899.)

Claim.—1st. The combination with a pen of an agitator fixed at one end only to the flexible or vibrating part of the pen, the free body portions of the agitator lying essentially parallel with the pen so as

to lie in the channel of a fountain pen, whereby the vibrations of the pen point will be imparted to the agitator and ink, substantially as described. 2nd. The combination with a fountain pen having a discharge channel, of a pen, and an agitator fixed at one end only to the flexible part of the pen, the free body portions of the agitator extending into the ink channel essentially parallel with the pen so that the vibration of the pen and agitator prevent clogging in the channel, substantially as described. 3rd. The combination with a fountain pen having a discharge channel, of a pen, and an agitator, the latter comprising two members fixed to the flexible part of the pen on opposite sides of the pen slit, the body portions of the agitator being free, essentially parallel with the pen and extending into the channel, substantially as described. 4th. In a device of the character described, a barrel having a valve seat, a plunger held to travel in the barrel, a valve controlled by the plunger and adapted to engage with said seat, and means for operating the plunger, substantially as described. 5th. In a device of the character described, a plunger, and a valve connected therewith and located within the barrel or fountain portion, the plunger being arranged to draw the ink from the pen or force the ink in the direction thereof and the valve controlling the supply of ink to the pen, substantially as described. 6th. In a fountain pen, the combination with a barrel, of a plunger movable longitudinally within the barrel, a valve connected with the plunger and located within the said barrel, means for operating the plunger or piston so as to draw the ink from the pen when moved in one direction and force the ink toward the pen when moved in the opposite direction, the said valve controlling the supply of ink to the pen, substantially as described. 7th. In a fountain pen, the combination with a barrel having its lower end provided with a chamber communicating by a contracted opening with the interior of the barrel, and a valve controlling the passage of material from the body of the barrel to the said chamber, the said valve having a valve extending upward into the barrel, of a plunger connected with the upper end of said valve rod, and means for imparting movement to said plunger longitudinally of the barrel, substantially as described. 8th. In a fountain pen, the combination with a barrel having its lower end provided with a chamber communicating with the interior of the barrel, and a valve controlling the passage of material from the body of the barrel to the said chamber, of a stem arranged to turn in the upper portion of the barrel and held against end movement, the said stem being capable of being operated from the outside of the barrel and having its inner or lower end threaded, and a plunger arranged to travel on the threaded portion of said stem when the stem is turned, said plunger being connected with the said valve, substantially as described. 9th. In a fountain pen, the combination with a barrel, and a stem extending through an opening in the top of the barrel and fitted to turn therein, the outer end of the stem being provided with a knob by which the stem may be turned, the said stem being provided inside the barrel to prevent end movement and the lower portion of the stem within the barrel being provided with an exterior thread, of a plunger held to travel upon the lower threaded portion of the stem, a sleeve fitted into the lower end of the barrel, a nozzle holding a pen detachably connected to the sleeve, the said sleeve being formed with a chamber and having a contracted opening in its top connecting said chamber with the interior of the barrel, and a valve arranged to control the passage of material from the body of the barrel to the said chamber, the said valve being provided with rod extending upward in the barrel and connected at its upper end to the plunger, substantially as described.

No. 65,343. Sheet Metal Pipe Seam.

(Joint de tuyau en feuille de métal.)



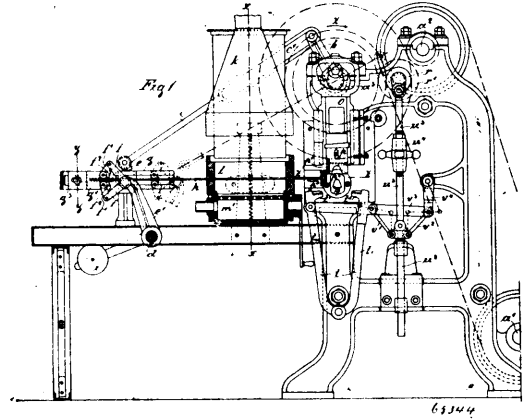
The Reeves Iron Company, assignees of Louis Brucks, all of Canal Dover, Ohio, U.S.A., 14th December, 1899; 6 years. (Filed 20th November, 1899.)

Claim.—1st. A section of sheet metal pipe having at its upper end oppositely disposed flanges, a tongue formed upon one of its edges,

adapted to engage the hem formed on the opposite edge, by folding a portion of the metal thereof inward and backward upon itself, and thence outward, substantially as described and for the purpose set forth. 2nd. The combination in a sheet metal pipe section, of a locking device consisting of oppositely disposed flanges formed upon the upper portion of the section, with a tongue formed upon one of the edges of the section adapted to engage the hem formed upon the opposite section, by folding the metal thereof inward and backward upon itself, and thence outward, substantially as described and for the purpose set forth.

No. 65,344. Machine for Bending Chain Links.

(Machine à plier les anneaux de chaînes.)



Maschinenfabrik St. Georgen bei St. Gallen, Gottfr. V. Susskind, St. Georgen, near St. Gallen, assignee of Heinrich Spühl, of St. Gallen, all in Switzerland, 14th December, 1899; 6 years. (Filed 23rd November, 1899.)

Claim.—1st. In a machine for automatically bending chain links, a mechanism for advancing the wire, a swage provided with a cutting blade, cutting the wire and bending it around a mandril, a pair of tongues bending the lower extremities of the wire, all mechanisms being actuated from the main driving shaft, whereby during the first quarter of revolution the wire is advanced, during the second quarter is cut and laid over a mandril, during the third quarter the pair of tongues bend the lower extremity of the links, and during the fourth quarter the return of all mechanisms into original position is effected, substantially as and for the purpose set forth. 2nd. In a machine for automatically bending chain links, the combination of a main shaft *a*², imparting motion to all parts with a slide carriage taking up the wire to be employed, a lever *e*¹ having opposite arms *f*², cams *f*², fixed to the arms *f* by means of levers *f*¹, said cams *f*² clamping the wire, a weight *i* acting upon the lever *e*¹, and causing its return, a stop *g*² determining the running backwards of the slide carriage, a connecting rod *c* causing the slide carriage *g*¹ to slide within the guides *g*, a triangle *l* effecting the heating of the wire extremity, a mandril of angular or egg form arranged in front of the forge, an annular boring *p*² serving to guide the wire, a swage *p* raised and lowered by rotation of the main shaft *a*², a crank *n* forcibly connected to the main shaft and circulating within a slide carriage *o*, to which the swage *p* is fixed, said circulations causing the up and downwards movement of the swage, a cutting blade *p*¹ fixed to the swage *p*, and cutting the advanced piece of wire, said swage bending the cut piece of wire around the upper part of the mandril, a pair of tongues *t*, having legs *t*², *t*³, means for forcibly governing the legs of this pair of tongues, such as to open and to close simultaneously, a rod *u*² linked to a rod *u*¹, and actuated from the main driving shaft by suitably intermittent gearings, whereby during the first quarter of turn of the main shaft the wire clamped by the cams *f*² is advanced a predetermined distance, during the second quarter of turn is cut by the blade *p*¹, and bent around the upper part of the mandril *q*, by means of the swage *p* during the third quarter, a pair of tongues forcibly are closed, thereby bending the lower extremities of the wire around the lower surface of the mandril, and during the fourth quarter of turn the return of all mechanisms into original position is effected, and the readily bent chain link is removed, substantially as and for the purpose as set forth.

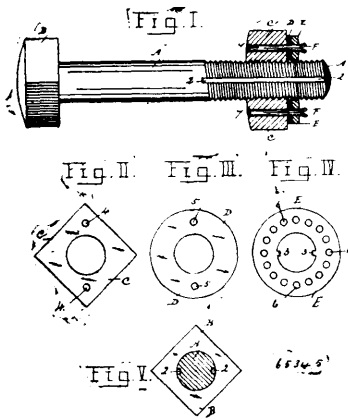
No. 65,345. Nut Lock. (Arrête-écrou.)

William H. Barlow, Hamilton, and George W. Carrick, Hagersville, both in Ontario, Canada, 14th December, 1899; 6 years. (Filed 18th November, 1899.)

Claim.—A nut locking device, comprising a bolt with longitudinal rectangular grooves in direct radial line and extending from the end of said bolt to a distance on the thread thereof, a threaded nut on said bolt, apertures through said nut from face to face and in radial line therewith, a rubber washer on said bolt against the outer face of the nut, apertures in the washer to conform with the

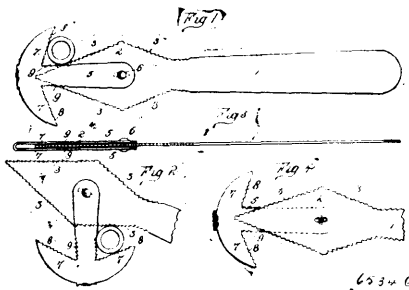
apertures of the nut, a metallic washer on the bolt against the outer face of the rubber washer, rectangular tongues on the metallic

ingly spaced upon both discs, whereby sums in addition and subtraction may be worked out by carrying a certain figure on one



washer to conform to and fit into the said grooves of the bolt to slide therein and split pins through the apertures of the nut and the washers to fasten the same to the nut and prevent the same from turning, substantially as set forth.

No. 65,346. Wrench. (*Cle à écrou.*)



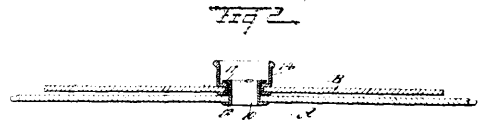
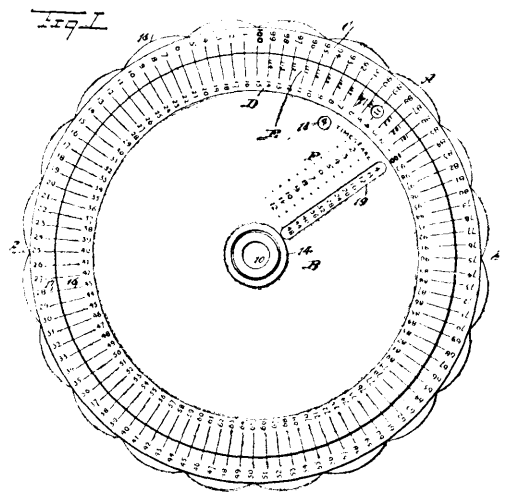
Henry Lanjus, Galion, Ohio, U.S.A., 14th December, 1899; 6 years. (Filed 24th July, 1899.)

Claim.—1st. In a wrench of the character described, the combination with the handle and its arrow or diamond shaped head formed with teeth on all four of its edges, of the shank pivotally connected with said head and having oppositely extending jaws integral therewith and formed with their inner sides at an angle thereto, the adjacent sides of the shank and jaw being provided with teeth, substantially as specified. 2nd. In a wrench of the character described, the combination with the handle, and the arrow shaped head provided with teeth and formed with a slot, of the shank consisting of two parallel arms, formed with teeth and pivotally connected with said head, and the oppositely extending jaws formed integral with said arms with their inner sides at an angle thereto and provided with teeth, substantially as specified.

No. 65,347. Computing Machine. (*Machine à compter.*)

Charles Tregoning, New York City, New York, U.S.A., 14th December, 1899; 6 years. (Filed 1st May, 1899.)

Claim.—1st. A reckoner, consisting of two discs, one mounted to revolve upon the other, each disc being provided with numerals near its periphery, said numerals being consecutively arranged and reading from 1 to 100, or to a higher numeral, as set forth. 2nd. A reckoner, consisting of two discs, one mounted to revolve upon the other, each disc being provided with numerals near its periphery, said numerals being consecutively arranged and reading from 1 to 100 or to a higher numeral, the numerals upon both discs reading in one direction, whereby sums in addition and subtraction may be worked out by bringing the figures on one disc in certain relation to figures upon the opposing disc, in the manner specified. 3rd. A reckoner, consisting of two discs, one mounted to revolve upon the other, each disc being provided with numerals near its periphery, consecutively arranged and reading from 1 to 100, or a higher numeral, each disc being also provided with lead lines from said numerals, the lead lines upon both discs being in direction of the opposing disc, and the numerals and lead lines being correspond-



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disc to a starting point on the other disc, and reading the result upon one or the other of the discs at a point opposite the second element in the sum or example, as described. 4th. In a reckoner, the combination with a disc having a series of numerals consecutively produced thereon near its periphery, reading from 1 to 100, or a higher numeral, the peripheral surface of the disc being provided with scallops indicating groups of five numerals, of a second disc of less diameter and mounted to revolve upon the larger disc, the revolving disc being provided with a series of numerals near its periphery, corresponding in spacing and numerical order to the spacing and numerical order of the numerals on the larger disc, for the purpose set forth. 5th. A reckoner, consisting of a main disc provided with numerals consecutively arranged adjacent to its periphery, said main disc being also provided with numerals representing the products of multiplication tables and with multipliers adjacent to said columns, and a second disc of less diameter and mounted to revolve upon the larger disc, the smaller disc being provided with a series of numerals arranged in the same order and corresponding to the numerals on the larger disc, the numerals upon one disc being capable of varying relation to the numerals upon the other disc, the smaller disc being also provided with an opening adapted to expose the multiplier of a table, and a slot adapted to expose to view the column representing the products of multiplication, the multiplicands being produced upon the smaller disc between the said opening and said slot, the said multiplicands being common to all of the tables, as and for the purpose specified. 6th. In a reckoner, the combination with a disc having a series of numerals consecutively produced thereon near its periphery, reading from 1 to 100, or higher numeral, and a second and inner series of numerals arranged in the same order as the outer series but reading in a reverse direction, of a second disc of less diameter than the main disc and mounted to revolve thereon, the revolving disc being provided with a series of numerals near its periphery, corresponding in spacing and numerical order to the spacing and numerical order of the outer series of numerals upon the main disc and reading in the same direction, the revolving disc being adapted to cover all of the numerals of the inner series on the main disc except one that is exposed at an opening made in the said revolving disc, as specified.

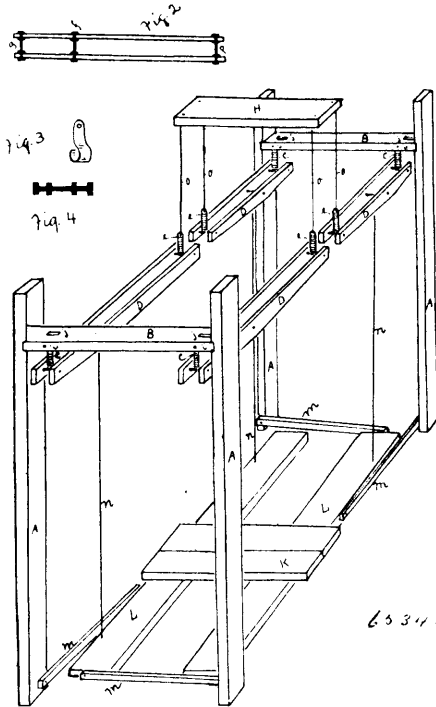
No. 65,348. Platform Scales. (*Bascule.*)

John Cowie, East Williams, Middlesex, Ontario, Canada, 14th December, 1899; 6 years. (Filed 16th May, 1899.)

Claim.—1st. The combination of ordinary platform scales in the story above with levers, one arm of which is a multiple of the other, placed under the floor on which said platform scales rest and above the weighing platform K, all substantially as set forth. 2nd. The construction of the levers D, D, D, D, each having three bolt bearings, the central part ground to a bearing edge, and each end fur-

nished with thread and nuts to tighten on the parallel pieces, substantially as described. 3rd. The combination of a suspended plat-

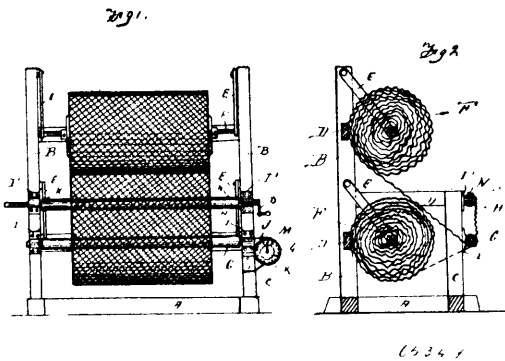
operating upon the dies or matrices to carry them directly from one position of adjustment to another without returning to a zero or



form K, held from horizontal movement by the stay pieces *n, m, m, m*, all substantially as set forth.

No. 65,349. Display Rack for Measuring Goods.

(*Râtelier de montre et appareil à mesurer les marchandises.*)



Matthew Burton, Batavia, Illinois, U.S.A., 14th December, 1899; 6 years. (Filed 24th July, 1899.)

Claim.—In a combined display rack and measuring device, the combination with a frame comprising front and rear standards secured together by cross bars, of a swinging frame comprising arms *E* and a spindle *F*, said arms being pivotally secured to the rear standards above the rear cross bar so that the roll of material on the spindle *F* will normally rest against the cross bar, a measuring roll supported in brackets on the front standards, a receiving roll mounted in brackets above the measuring roll so that the material passes under the measuring roll and thence upward around the receiving roll, and means operated by the measuring roll for indicating the quantity of material rolled upon the receiving roll.

No. 65,350. Type Casting and Composing Machine.

(*Machine pour couler les caractères et composer.*)

The Lanston Monotype Machine Company, Washington, D.C., U.S.A., assignee of John Sellers Bancroft, Philadelphia, Pennsylvania, U.S.A., 14th December, 1899; 6 years. (Filed 12th May, 1899.)

Claim.—1st. In an organized type casting machine such as described, and in combination with an adjustable mould and a movable series of dies or matrices, of a controllable centreing mechanism

normal point of departure, substantially as described. 2nd. In an organized type casting machine such as described, provided with an adjustable mould, a movable series of dies or matrices and mould adjusting devices, of a controllable centreing mechanism engaging the series of dies or matrices and the mould adjusting devices to transport them from one position of adjustment to another directly without returning to a normal or zero point of departure, substantially as described. 3rd. In a die or matrix centreing mechanism, the combination with a movable series of dies or matrices, of a positioning or adjusting mechanism for shifting the series of dies or matrices from any one position of adjustment to another directly without returning to a normal or initial point of departure, substantially as described. 4th. In a type casting machine such as described employing an adjustable mould and a series of dies or matrices adjustable with respect thereto to form different type, the combination with the mould blade of an adjusting mechanism containing a variable factor, such as the normal wedge, automatically shifted from one position of adjustment to any other without returning to a normal or zero position, substantially as described. 5th. In a type casting machine such as described, the combination of the following elements, to wit: a die or matrix case, a mould provided with a movable mould blade, a normal wedge for positioning the mould blade, and an adjusting or centreing mechanism for shifting the die case and the normal wedge directly from one position of adjustment to another without first returning to a zero or normal starting point, substantially as described. 6th. In a type casting machine provided with an automatically adjustable mould the combination with the adjustable member or mould blade, of abnormal adjusting devices containing a variable factor, such as the justifying wedge, and controllable adjusting devices shifting said variable factor directly from one position of adjustment to another without returning to a normal or zero position, substantially as described. 7th. In a type casting machine, and in combination with the mould blade through which the size of the mould cavity is varied, of a normal and an abnormal adjusting mechanism, operating separately or together, and each containing a variable factor, with controlling or adjusting devices for moving said variable factors directly from one position of adjustment to another without returning to a normal or zero position, substantially as described. 8th. In a type casting machine, provided with an automatically adjustable mould, the combination with the adjustable member, such as the mould blade, of an abnormal adjusting or justifying mechanism containing a plurality of variable factors, such as the justifying wedges, and controllable adjusting devices for shifting or adjusting each of said variable factors, substantially as described. 9th. In a type casting machine, such as described, the combination with the movable die case, the mould provided with an adjustable section or mould blade, the normal wedge for determining by its position of adjustment the size of the mould cavity, and the centering plunger, of the following elements to

wit:—an adjusting or centering mechanism connected with the die case to move the latter directly from one position of adjustment to another, said mechanism also operating upon the normal wedge to shift it directly from one position of adjustment to another, and a lock for the normal wedge operated by the actual lever for the centering plunger, substantially as described. 10th. In a type casting machine, the combination of the following elements, to wit:—a movable die case, a mould provided with an adjustable mould blade, a normal wedge for adjusting the position of the mould blade, and a die case centering or adjusting mechanism including a pair of oppositely movable jaws with intercepting devices for arresting them in closed position at any point within the limits of their motion towards each other, said jaws engaging both the normal wedge and translating devices connected to the die case, substantially as described. 11th. In a type casting machine, provided with a movable die case, a centering plunger and an adjustable mould, the combination therewith of the following elements, to wit, a die case centering mechanism whose positioning devices are a pair of oppositely movable jaws with a controllable gauge determining the closed position of said jaws, a normal wedge normally controlled as to position by said jaws, a lock for said normal wedge, a justifying wedge normally disconnected from said jaws, a lock or detent for holding said normal wedge, a justifying wedge normally disconnected from said jaws, a lock or detent for holding the justifying wedge in adjusted position, controllable shifting devices for temporarily connecting the justifying wedge in adjusted position, controllable shifting devices for temporarily connecting the justifying wedge with the jaws of the positioning mechanism, and a mould blade abutment controlled, as to position, by the normal and justifying wedges, substantially as described. 12th. In a type casting machine, provided with a movable die case, a centering plunger and an adjustable mould, the combination therewith of the following elements, to wit, a die case centering mechanism whose positioning devices are a pair of oppositely movable jaws with a controllable gauge determining the closed position of said jaws, a normal wedge controlled as to position by said jaws, a lock for said normal wedge, a justifying wedge normally disconnected from said jaws, a lock or detent for holding the justifying wedge in adjusted position, controllable shifting devices for temporarily connecting the justifying wedge with the jaws of the positioning mechanism, transfer blocks, actuating devices for said transfer blocks, controllable locking mechanism for suspending the action of either transfer block, thereby selecting either the normal wedge or the normal and justifying wedges for determining the size of the mould cavity, and a mould blade abutment controlled, as to position, by the normal and justifying wedges, substantially as described. 13th. In a type casting machine, provided with a movable die case, a centering plunger, and an adjustable mould, the combination therewith of the following elements, to wit, a die case centering mechanism provided with a positioning mechanism containing oppositely movable jaws and a controllable gauge for determining the closed position of said jaws, a normal wedge extending between and in the path of movement of said jaws, a justifying wedge normally disconnected from the jaws of the positioning mechanism, controllable devices such as a shifting lever, trip lever, and actuating lever, for connecting and disconnecting the justifying wedge and the positioning mechanism, transfer blocks, controllable mechanism for locking either transfer block out of action, and a mould blade abutment whose position is determined by the normal or normal and justifying wedges and a transfer block, substantially as described. 14th. In a type casting machine such as described the combination with the abutment slide for the mould blade, of the following elements, to wit:—a positioning mechanism provided with oppositely movable jaws and a controllable gauge for determining their closed position points in the line of their motion when approaching, a normal wedge extending parallel with the direction of motion of said jaws and provided with a shoulder projecting between and in the path of the two jaws, a plurality of dissimilarly tapered justifying wedges extending parallel with the normal wedge, each provided with a projection or shoulder adapted to be engaged by the positioning jaws but held normally outside of the paths of said jaws, controllable devices for bringing the justifying wedges successively and temporarily into the path of the jaws and between the latter, to adjust said wedges longitudinally to any of the series of positions indicated by the controllable gauge, a pair of transfer blocks or wedges, extending longitudinally of the normal wedge, the one lying between the normal wedge, and the other between the normal and justifying wedges, actuating devices for reciprocating the transfer blocks, and controllable locking devices for arresting either transfer block in inoperative position while the other is moved to operative position, substantially as described. 15th. In a type casting machine the combination with a mould provided with an adjustable section or mould blade and means for automatically adjusting the latter to accord with the normal dimensions of type, of a justification or abnormal adjusting mechanism comprising a plurality of separately adjustable members, such as justifying wedges, and means for automatically positioning said members so as to vary the normal adjustments of the mould, substantially as described. 16th. In a type casting machine such as described the combination with the mould and the series of movable matrices or dies, of a mould adjusting mechanism including a stepped or irregular wedge with controllable mechanism for adjusting or positioning said wedge, substantially as described. 17th. In a type casting

machine, the combination of the following elements, to wit:—a movable die case, a mould provided with a movable wall or mould blade, a die case centering mechanism provided with a controllable positioning mechanism, a stepped or irregular normal wedge connected to said positioning mechanism for adjustment through uniformly spaced intervals, and an abutment slide through which the normal wedge is caused to act upon the mould blade in positioning the latter, substantially as described. 18th. The combination in a type casting machine such as described of the following elements, to wit:—a fixed mould provided with mould blade and cross blade, a die case movable horizontally for bringing different matrices or dies in alignment with the mould, and vertically to seat the centered matrix on the mould, and a type carrier guided to reciprocate vertically and horizontally, to receive the type from the mould and carry it laterally and downwardly out of the path of the die case, substantially as described. 19th. The combination in a type casting machine such as described of the following elements, to wit:—a fixed mould provided with a type ejecting mould blade and a movable front wall or cross blade, a die case movable in a plane transverse to the axis of the mould, for centering the matrices or dies, and parallel with the axis of the mould, to seat the centered die or matrix on the mould, and a type carrier reciprocating in a plane inclined to the axis of the mould, whereby as it recedes from the latter it will be carried downward or away from the path of the die case, substantially as described. 20th. In a type casting machine, the combination of the following elements, to wit:—a fixed mould with horizontally reciprocating cross blade and mould blade ejector, a horizontally and vertically movable die case, and a type carrier connected to the cross blade, but guided to reciprocate in a path inclined to that of the cross blade, whereby the type carrier is alternately elevated and depressed as it travels toward and from the mould, substantially as described. 21st. In a type casting machine, the combination of the following elements, to wit:—a fixed mould with cross blade and ejecting mould blade, a horizontally and vertically movable die case, and a type carrier mounted to reciprocate in a plane inclined to the horizon, said type carrier being furnished with a clamping member and a yielding gate or type supporting blade, substantially as described. 22nd. In an organized type casting and composing machine, such as described the combination of the following elements, to wit:—a mould with movable mould blade, a die case with controllable centering mechanism, therefore, a controllable normal adjusting mechanism for mould blade, a plurality of abnormal or justification adjusting devices for the mould blade, with controllable mechanism for adjusting each of said devices, a galley mechanism provided with a controllable starting mechanism connected with the controllable abnormal or justification adjusting mechanism, a controlling strip, and a transmitting system governed by the controlling strip and operating upon the controllable members of the die case centering mechanism, the normal mould adjusting mechanism, and each of the abnormal mould blade adjusting devices, whereby the abnormal adjusting devices may be independently adjusted to predetermined positions, and the adjustment of either will operate to start the galley mechanism, substantially as described. 23rd. In an organized type casting and composing machine such as described, the combination of the following elements, to wit:—a mould with movable mould blade, a die case with controllable centering mechanism, a controllable normal adjusting mechanism for the mould blade, a controllable abnormal or justification adjusting mechanism for the mould blade, a galley mechanism provided with a controllable starting and stopping mechanism connected with a controllable abnormal or justification mechanism, and a controlling system governed by a controller or record strip and operating upon the controllable members of the die case centering mechanism and the normal and abnormal mould blade adjusting mechanisms, to centre the dies or matrices and adjust the mould to correspond therewith, and to set the abnormal adjusting mechanism and start the galley mechanism, substantially as described. 24th. The combination in a type casting machine such as described, of the following elements, to wit:—a mould provided with an adjustable mould blade, a movable die case, a controllable centering mechanism for the die case, a controllable normal adjusting mechanism for the mould blade, a controllable abnormal mould blade adjusting mechanism comprising a plurality of independent elements such as justifying wedges, a controlling member, such as a perforated strip, and a controlling system, such as a pneumatic system, intermediate said controlling member and the controllable mechanisms mentioned, for governing the centering of the die case, the position of the normal adjusting mechanism, and the positions of each abnormal adjusting mechanism, substantially as described. 25th. In a type casting and composing machine such as described, the combination with the abnormal or justifying mechanism for the mould, and the controllable devices for setting or adjusting said mechanism, of a galley mechanism provided with a controllable driving mechanism, and connections intermediate the abnormal or justifying mechanism and the controllable member of the galley driving mechanism for starting the latter when the abnormal or justifying mechanism is set or adjusted, substantially as described. 26th. In a type casting machine such as described, provided with a movable die case containing a plurality of dies or matrices, a fixed mould with an adjustable member, such as a mould blade, for varying the dimensions of the mould cavity, normal and abnormal or justifying mould adjusting mechanisms, and a galley mechanism provided with a

controllable driving mechanism, the combination with the controllable mechanism for setting the abnormal or justifying mould adjusting members and the controllable member of the galley driving mechanism, of connecting mechanism for actuating the controllable member of the galley driving mechanism to set the latter in motion when the adjustment of the abnormal or justifying mechanism is effected, whereby the setting of the justifying mechanism for a line starts the galley mechanism in action, to dispose of the previously completed line, substantially as described.

27th. In a type casting and composing machine such as described, the combination with the controllable member of the galley driving mechanism, of actuating devices engaging said controllable member connected with and operated by the controllable adjusting mechanism of the mould justifying devices, substantially as described, whereby the setting of the justifying mechanism connects the galley mechanism with its driving mechanism.

28th. In a type casting and composing machine such as described, the combination with the adjusting or setting mechanism of the abnormal or justifying devices, a controllable pump actuating mechanism, and a controllable galley actuating mechanism, of actuating devices controlled by the setting mechanism of the justifying devices and engaging the controllable members of the pump and galley actuating mechanisms, whereby the setting of the justifying mechanism will effect a suspension of the pump action and start the galley mechanism, substantially as described.

29th. In a type casting and composing machine, the combination with the starting lever of the galley mechanism and the shifting lever of the justifying wedge, of a shaft interposed between said shifting lever and starting lever for transmitting motion from the former to the latter, substantially as described.

30th. In a type casting machine such as described, the combination with a reciprocating injecting mechanism consisting of melting pot, pump and nozzle, of a pump actuating mechanism including opposing power transmitting devices engaging the piston and cylinder respectively, substantially as described.

31st. In a type casting machine, the combination with the mould, of a vertically reciprocating injecting mechanism including melting pot, pump and nozzle, and a supporting frame pivotally attached to the main frame on a vertical axis, substantially as described.

32nd. In a type casting machine, such as described, and in combination with the vertically movable injecting devices, including melting pot, pump and nozzle, of a vertically adjustable and laterally movable supporting frame therefor, and a lock for holding said frame from lateral motion when in elevated position, whereby the injecting mechanism can be lowered and swung from beneath the mould, substantially as described.

33rd. In a type casting machine, the combination with the pump and the actuating mechanism thereof, of a controllable disengaging or arresting device including a reciprocating driving member, a driven member carrying a latch for engagement with the driving member, and reciprocating member, moving in a direction to release the latch from engagement with the driving member and shiftable into and out of the path of said latch, substantially as described.

34th. In adjusting or centering mechanism for shifting a member from one to another of a series of indicated positions the combination of the following elements, to wit: - a positioning or gauging mechanism provided with oppositely movable jaws, a fixed gauge composed of a plurality of stops or pins serially arranged and each adapted to be projected into the path of one of said jaws to arrest the latter as it approaches the opposite jaw, a shiftable member or gauge located between the two jaws in position to be engaged by the latter as they approach, and actuating devices engaging and connecting the two jaws, to cause them to advance successively in closing upon the shiftable member, said devices including a pair of levers, the one pivotally connected to the frame and the other to the actuating lever at points intermediate their ends, each of said levers being pivotally connected at one end to one of the jaws while their opposite ends are connected together, and a spring operating through the connected levers to hold one jaw against a stop at the outer extreme of its motion while the opposite jaw is advancing and until it contacts with the stop, when, by the continued motion of the actuating lever, the second jaw will be advanced, thus positioning the shiftable member projecting between the jaws, substantially as described.

35th. In a type casting machine, the combination with the adjustable mould blade for varying the size of the mould cavity, its actuating devices and limiting abutment, of a normal wedge, a justifying wedge, and a reciprocating transfer block, substantially as described.

36th. In a type casting machine, as a means for effecting the adjustments of the mould for both normal and justifying type, the combination with the adjustable member or mould blade, of a normal adjusting device, an abnormal adjusting device and two interponents or transfer blocks operating successively, the one to throw the normal adjusting devices into operative relation with the mould blade and the other to throw both the abnormal and normal adjusting devices into operative relation with the mould blade, substantially as described.

37th. In a type casting machine, the combination with a stationary mould and a movable metal injecting mechanism, including a pump and nozzle, of two opposing connected levers, one connected to the cylinder and the other to the piston of the pump, an actuating device for each lever, and mechanism operating upon said actuating devices to move them in unison with the injecting mechanism as the latter advances towards and recedes from the mould, and to separate them and thus project the metal into the mould after the nozzle has been seated, substantially as described.

38th. In a die or matrix adjusting mechanism the combination with the movable die or matrix case, and a gauge controller presenting a graduated series of stops or contacts corresponding to the various positions of adjustment of the die case, of actuating and controlling mechanism intermediate the die case and gauge and controlled, as to position, by the latter, said actuating and controlling mechanism being moved alternately into and out of engagement with the die case, so that in moving or setting the latter it will be carried directly from one position of adjustment to another, substantially as described.

39th. The combination, to form an adjusting mechanism of a shiftable member, such as a die case, of the following elements, to wit: - a primary controller or fixed gauge comprising a plurality of controllable contacts or spots serially arranged and constituting an index for the various positions of adjustment, a primary positioning mechanism controlled as to position by the primary gauge, a secondary or shiftable gauge controlled, as to position, by the primary positioning mechanism, a secondary positioning mechanism, controlled, as to position, by the shiftable gauge, a shiftable member such as a die case, and translating devices intermediate the secondary positioning mechanism and the shiftable member for moving the latter from one position of adjustment directly to another position of adjustment, substantially as described.

40th. In a die or matrix adjusting or centering mechanism, the combination with the die case and the controlling gauge by which the position of the die case is determined, of a centering or adjusting mechanism independent of the die case, and co-operating alternately with the controlling gauge and the die case, to first set or determine the adjusting motion and then transmit or communicate the adjusting motion to the die case, substantially as described.

41st. In a die or matrix centering or adjusting mechanism the combination with a die case movable in two directions to bring any one of the series of matrices to position at a fixed point, of two sets of positioning or adjusting devices operating independently and each acting to shift the die case in one direction only the number of spaces or degrees necessary to bring the column or line containing the selected matrix in alignment with the centering point, whereby the transition from one position of adjustment to another, or the shifting from one matrix to another at the central point, is affected directly, without a return to an initial or normal point of departure, substantially as described.

42nd. In a die or matrix centering or adjusting mechanism, the combination with a die case movable in two directions on intersecting lines, to bring any one of a series of matrices to a fixed centre, and two fixed gauges or controllers each serving to indicate the position of the die case within the limits of its movements in one direction, of two adjusting or centering mechanisms each operating in conjunction with one of the fixed gauges or controllers and mediating or immediately upon the die case to carry the latter in either direction from any one position of adjustment to another, whereby the centering of the matrices is performed by a direct movement from one position of adjustment to another without an intermediate return to a normal or zero starting point, substantially as described.

43rd. In an adjusting mechanism for a shiftable member, such as the secondary gauge of the die case centering mechanism, the combination of the following elements, to wit: - a fixed gauge comprising a series of controllable stops or contacts indicating relative positions of adjustment, a positioning mechanism including a pair of oppositely movable jaws, one of which is adapted to engage and be arrested by the fixed gauge and form a stop or abutment for limiting the movement of the opposite jaw, and a shiftable member occupying a position between the jaws of the positioning mechanism, whereby the position of said shiftable member is varied to accord with that one of the stops or contacts of the fixed gauge at the time operating upon the positioning mechanism, substantially as described.

44th. In a die case centering mechanism, the combination of the following elements, to wit: - a shiftable gauge, a positioning mechanism provided with oppositely moving jaws adapted to close upon the shiftable gauge in any position of adjustment, a shiftable die case, and translating devices connected to the die case and projecting between the jaws of the positioning mechanism so that in closing upon the gauge the jaws will bring the die case into a position corresponding with that of the gauge, substantially as described.

45th. In an adjusting or centering mechanism the combination of the following elements, to wit: - a shiftable gauge with means for locking it in adjusted position, a primary positioning mechanism provided with oppositely moving jaws between which the shiftable gauge is located and by which the latter is carried to position, a secondary positioning mechanism provided with oppositely movable jaws for engagement with the shiftable gauge, a transmitting device located intermediate the jaws of the secondary positioning mechanism, and a primary gauge acting upon the primary positioning mechanism to determine the position of its jaws when closed, substantially as described.

46th. The combination in a die or matrix centering or adjusting mechanism of the following elements, to wit: - a die case movable in guides to bring successive sections in line with a fixed point or centre, a translating device connected to said die case, a positioning mechanism comprising oppositely movable jaws between which said translating device extends and by which the die case is carried in either direction to adjusted position, and a shiftable gauge, interposed between and movable in the plane of motion of the said jaws, to determine by its position the point at which the two jaws shall be brought together, whereby, during the separation of the two jaws, preliminary to the resetting of the gauge, the die case is released from its actuating

devices, and as the jaws are again brought together to the position indicated by the gauge the die case will be shifted, substantially as described. 47th. In a matrix centering mechanism and in combination with a mould, a die case, actuating devices for the die case, a centering plunger and a friction device or brake for alternately retarding and releasing the die case, substantially as described. 48th. In a matrix centering mechanism the combination with a die case, its carrier and the mould, of centering devices for the die case and its carrier operating on intersecting lines, to center individual dies or matrices above the mould, a centering plunger, and brakes or friction devices for the die case and its carrier, engaging the latter during their motions of translation and being withdrawn or relieved during the action of the centering plunger, substantially as described. 49th. In a die case centering mechanism, the combination of the following elements, to wit:—a die case, a die case carrier, a die case centering or shifting mechanism, a mould, a centering plunger in line with the mould, a brake or friction device for the die case applied to the connection between the die case and its centering mechanism, and a brake or friction device applied to the die case carrier, said brake or friction devices operating during the motions of translation of the die case and its carrier, and being suspended during the action of the centering plunger substantially as described. 50th. In a die or matrix centering mechanism, the combination of the following elements, to wit, a die case, a die case carrier, a supporting frame for the die case and its carrier, independent actuating devices for the die case and for its carrier, a centering plunger, frictional braking devices intermediate the die case and its carrier, and actuating devices for reciprocating the centering plunger and simultaneously therewith withdrawing the braking devices, substantially as described. 51st. In a die or matrix centering mechanism, the combination with the vertically movable supporting frame, the die case carrier, the die case and the centering plunger, of the following elements, to wit, a friction block mounted upon the supporting frame in position to engage the die case carrier, an actuating device, such as a lever, for operating the friction block, and a spring with limiting stops interposed between the frame and the friction block actuating device, whereby, as the die case supporting frame is lowered, after the preliminary centering of the die case, the friction block actuating device will be withdrawn from its actuating spring, leaving the die case free to respond to the action of the centering plunger, substantially as described. 52nd. In a die or matrix centering mechanism, the combination with the horizontally reciprocating die case carrier and its vertically movable supporting frame, of the centering plunger, the friction blocks mounted upon the supporting frame in line with the guides for the carrier and engaging the latter, the curved levers pivoted in the supporting frame engaging the friction blocks and partially encircling the centering plunger, and the vertically movable pins each contacting with one of the levers and provided with an actuating spring and a limiting stop or gauge, substantially as described. 53rd. In a die or matrix centering mechanism, the combination with the supporting frame of the die case and its carrier, and the centering plunger of the actuating lever engaging the centering plunger, and the link and lever for transmitting motion from the actuating lever to the supporting frame, substantially as and for the purpose set forth. 54th. In a die or matrix centering mechanism, the combination with the centering plunger, and the spring sustained supporting frame upon which the die case is adjusted to bring any matrix block into alignment with the centering plunger, of the actuating lever engaging the centering plunger, the lever connected to the supporting frame, and a connection between said last-named lever and the actuating lever, whereby motion in the same direction but at relatively different speeds will be communicated to the centering plunger and supporting frame, substantially as described. 55th. In an adjusting or centering mechanism such as described containing a primary controller or fixed gauge, a primary positioning or gauging mechanism provided with oppositely movable jaws, and a secondary controller or shiftable gauge, the combination, to form an actuating mechanism for the jaws of the said positioning or gauging mechanism, of the following elements, to wit:—a lever mounted on a fixed fulcrum and having one end attached to one of the jaws, a second lever having one end attached to the other jaw and its opposite end connected through a link to the first-named lever, a spring operating to hold one of said levers retracted, and an actuating lever connected to said second lever intermediate its ends, whereby, as the actuating lever is moved in one direction, it and the spring will separate the jaws, and when moved in the opposite direction, will advance one jaw until arrested by a stop pin of the fixed gauge and then advance the opposite jaw against the resistance of the spring, thus carrying the shiftable member to a position of adjustment corresponding with the position in the series of the stop pin in engagement with the jaw. 56th. The combination with the two pairs of connected levers 73, 74, one lever of each pair being attached to a fixed pivot and the other to a reciprocating actuating device, of a spring retractor connected to one lever of each pair, whereby the corresponding levers of each pair are advanced and continued in motion until arrested before the opposite levers are affected by the actuating device, substantially as described. 57th. The combination with two positioning mechanism each provided with a pair of oppositely movable jaws and a fixed gauge for determining the closing position of each pair of jaws, of the two sets of connected levers pivotally attached to the jaws, one lever of each set attached to a fixed pivot and the other to a reciprocating driver, and a spring retractor

for engaging one lever of each set or pair, so that in the act of closing the jaws of each positioning mechanism, the jaw contacting with the fixed gauge will be first advanced and when arrested motion will be communicated to the opposite jaw, substantially as described. 58th. In a centering or adjusting mechanism and as a means for operating the pairs of oppositely movable jaws of the positioning or gauging mechanisms, the combination with said jaws of a lever system for each pair of jaws comprising two levers or members pivotally connected together at one end and each attached to one of the jaws, a fixed bearing or pivot to which one of said levers or members is connected by a link attached intermediate the points of attachment to the jaw and the opposite lever or member, and an actuating device or mechanism connected to the other lever or member intermediate the points of attachment to the jaw and first named lever or member, substantially as described. 59th. In a centering or posing mechanism, as a means for actuating the jaws of the primary and secondary positioning or gauging mechanisms, the combination of the following elements, to wit:—a pair of levers pivotally connected at one end and having their opposite ends connected respectively to the opposing jaws, one of said levers being furnished with a fixed fulcrum and the other connected intermediate its ends to the actuating lever, and a second pair of connected levers engaging the other pair of jaws, the fixed fulcrum and the connecting with the actuating lever of this second pair being reversed in position as compared with those of the first named pair, whereby the two pairs of jaws will be caused to move in relatively opposite directions, one pair closing as the other separates or opens, substantially as described. 60th. In a centering or adjusting mechanism such as described for locating the position of a movable member, such as a die case, at any of a series of indicated positions by a two-way movement on intersecting lines, the combination with such movable member or die case of the following elements, to wit:—two fixed gauges or controllers, two mechanism each provided with oppositely movable jaws whose closed position is determined by a member of the fixed gauge, a secondary or shiftable gauge intermediate the jaws of each positioning mechanism, two secondary positioning mechanism each provided with oppositely movable jaws whose closed position is determined by the shiftable gauge, and translating devices intermediate the jaws of one secondary positioning mechanism and the movable member or die case, and between the jaws of the other secondary positioning mechanism and the carrier or support for said movable member or die case, substantially as described. 61st. In a centering or adjusting mechanism such as described, for locating the position of a movable member, such as a die case, by movements in transverse lines, the combination of the following elements, to wit:—two primary controllers or fixed gauges, a primary positioning mechanism with oppositely movable jaws co-acting with each primary controller, the latter determining the closed position of said jaws, a secondary controller or shiftable gauge intermediate the jaws of each primary positioning mechanism and set thereby, a lock for each secondary controller, a secondary positioning mechanism for each secondary controller provided with oppositely movable jaws whose closed position is determined by the secondary controller, translating devices intermediate the secondary positioning mechanisms and the movable member or die case, and actuating devices operating upon the jaws of the primary and secondary positioning mechanisms to open one set of jaws while closing the other set, substantially as described. 62nd. In a centering or adjusting mechanism, such as described, for locating the position of a two-way movable member, such as a die case, the combination of the following elements, to wit:—two primary controllers or fixed gauges, two primary positioning or gauging mechanisms, each provided with oppositely movable jaws, whose closed positions are determined by the members of the fixed gauges, a secondary controllable or shiftable gauge interposed between and located by the jaws of each primary positioning mechanism, a secondary positioning or gauging mechanism with oppositely movable jaws for each secondary controller, the latter determining the closed position of said jaws, translating devices intermediate the jaws of the two secondary positioning mechanisms and the movable member or die case, and a single actuating lever mediate connected to the jaws of the primary and secondary positioning mechanism for opening and closing them in alternation, substantially as described. 63rd. The combination with a fixed controller or gauge and a positioning mechanism containing two oppositely movable members or jaws whose closed position is determined by engagement with the fixed controller, of a shiftable member lying between and in the path traversed by said jaws when approaching or closing, and a centering or locking device engaging said shiftable member when brought to position by the jaws, for effecting the final adjustment and locking the shiftable member while the jaws are receding therefrom, substantially as described. 64th. The combination in a die or matrix centering mechanism such as described of the die case, and its carrier and supporting frame each provided with central guides intermediate its edge guides, as and for the purpose set forth. 65th. A type mould for use in casting machine comprising side blocks, a movable cross blade, an adjustable mould blade, the latter serving as an ejector, and an adjustable limiting stop for the mould blade, the whole mounted upon a detachable mould frame. 66th. In a type mould for use in a casting machine such as described, the combination with the side blocks supported on a mould frame, and an adjustable mould blade interposed between said side blocks and guided and

supported wholly by the latter and the mould frame, whereby distortion and binding of the mould blade is prevented and the expansion and contraction of the parts of the mould is equalized.

67th. In a type casting mould for use in connection with a reciprocating nozzle, the combination therewith of a nozzle plate provided with a thin walled and bell shaped seat for the nozzle, to prevent chilling the metal in the nozzle when the latter is seated in position to inject the molten metal into the mould, substantially as described.

68th. In combination with the mould and nozzle, the nozzle plate mounted upon the mould and provided with concave face and projecting bell nozzle seat, substantially as described.

69th. In a type casting machine, the combination with the detachable mould and its movable mould blade for varying the dimensions of the mould cavity and ejecting the type therefrom of the adjustable limiting stop carried by the mould frame and engaging the mould blade, substantially as described.

70th. In a mould adjusting mechanism such as described, the combination with the mould blade, its abutment slide, the normal wedge and the justifying wedge, of oppositely reciprocating jaws engaging said wedges to set or adjust the latter, substantially as described.

71st. The combination with the mould blade abutment and an adjustable normal wedge for positioning the former, of a movable transfer block interposed in the line of connection between the fixed bearing or abutment and the movable mould blade abutment, substantially as described.

72nd. In a mould adjusting mechanism, the combination with the mould blade abutment slide, a main adjusting element, such as the normal wedge, an adjustment setting member, such as a transfer block, and a plurality of supplemental adjusting elements, such as justifying wedges, of controllable positioning mechanism for separately positioning each supplemental adjusting element and the main adjusting element, substantially as described.

73rd. The combination with a movable abutment slide furnished with an adjustable contact for engagement with the mould blade, of a normal wedge for determining the position of adjustment of the mould blade, and a reciprocating wedge shaped transfer block co-operating with the normal wedge in setting the abutment slide to the position indicated by the normal wedge, substantially as described.

74th. In a mould adjusting mechanism for type casting machines, the combination with the mould blade, actuating devices therefor and an adjustable intercepting abutment, of a transfer block, a normal wedge and actuating devices for reciprocating the transfer block and adjusting the normal wedge, substantially as described.

75th. In a mould adjusting mechanism for type machines, the combination with adjusting devices operating upon the mould blade to determine its position in the mould when a cast is to be made, of a setting or adjusting mechanism including a transfer block having a uniform range of motion, and a normal wedge having a variable motion of adjustment, substantially as described.

76th. In a mould blade adjusting mechanism, the combination with devices directly controlling the position of the mould blade, such as an abutment slide, of an adjusting or normal wedge, variable adjusting devices for moving said wedge to different positions of adjustment, a second wedge or transfer block, and actuating devices for communicating uniform reciprocating movements to said second wedge, substantially as described.

77th. In a mould blade adjusting mechanism, the combination with the mould blade abutment and the variably adjustable normal wedge, of the transfer block having a uniform reciprocating movement, and an adjustable abutment fixed to the frame for defining one extreme of said reciprocating movement, substantially as described.

78th. The combination with the abutment slide for the mould blade, a variably adjustable normal wedge and a reciprocating transfer block having a uniform degree of motion, of actuating devices for said transfer block including yielding or elastic connections, and an adjusting wedge against which the transfer block contacts at the limit of its operative stroke in setting the abutment slide to the position of adjustment determined by the normal wedge, substantially as described.

79th. In a type casting machine the combination with the movable mould blade and its adjustable stop or abutment, of mould blade actuating mechanism, substantially as described, the latter comprising the head or slide carrying a cross pin for engagement with the mould blade, a rod connected to said head and provided with two springs, a headed sleeve engaging one of said springs and a loose collar the other, a sleeve interposed between the said loose collar and the headed sleeve, and an actuating lever narrower than the interval between said collar and sleeve, substantially as described.

80th. The combination with the transfer blocks and a lock for holding either of said blocks at one extreme of its motion, or in inoperative position, of an actuating lever and intermediate connections for transmitting the motion of said lever to either block, substantially as described.

81st. The combination with the reciprocity transfer blocks of the actuating rods, the locking rod and the yielding actuating devices intermediate said actuating rods and the actuating lever, substantially as described.

82nd. In combination with the transfer blocks, their limiting abutment and a lock for holding either block out of action, of actuating mechanism comprising a spring seated lever connected to one transfer block, a second lever pivoted upon the first named lever and connected to the other transfer block and the driving mechanism or main actuating lever connected to said second lever, substantially as described.

83rd. In a type casting machine such as described, the combination with the mould and its movable mould blade, of the abutment slide located immediately in rear of the mould blade,

and the normal and justifying wedges located directly beneath said abutment slide, substantially as described.

84th. In a mould adjusting mechanism such as described the combination with the normal and justifying wedges of the transfer blocks loosely connected to their actuating rods, to permit lateral displacement, substantially as described.

85th. In a type casting machine the combination with the mould, the horizontally and vertically movable die case, and the actuating lever controlling the vertical movements of the die case, of the mould blade adjusting devices including the adjustable normal wedge, the reciprocity transfer block and the locking bolt for said transfer block connected to the die case actuating lever, substantially as described.

86th. In a mould adjusting mechanism, the combination with the mould blade, its abutment and actuating devices therefor, and the normal wedge, of the normal wedge setting or adjusting mechanism including a primary controller or fixed gauge, a primary positioning mechanism, a secondary controller or shiftable gauge and a secondary positioning mechanism, the latter operating upon the normal wedge to shift it to the position indicated by the primary controller, substantially as described.

87th. In a mould adjusting mechanism, the combination with the mould blade abutment and its movable support, of a longitudinally adjustable normal wedge resting loosely in the interval between the mould blade abutment support and a fixed abutment or bearing, a reciprocating transfer block intermediate said normal wedge and the fixed bearing, and actuating devices for retracting the transfer block, during the adjustment of the normal wedge and bringing it into operating position after the normal wedge is adjusted, to set or position the mould blade abutment, substantially as described.

88th. In a mould adjusting mechanism, the combination with the mould and its movable section or mould blade, of a stepped or irregular normal wedge, for varying the position of said movable mould section, and a controllable positioning mechanism for setting said stepped wedge in any one of a longitudinal series of uniformly spaced positions, substantially as described.

89th. In a mould blade adjusting mechanism, the combination of the following elements, to wit, a mould blade abutment, an adjustable normal wedge for positioning said abutment, and an automatic shifting or adjusting mechanism for carrying the normal wedge directly from one position of adjustment to another, substantially as described.

90th. In a mould blade adjusting mechanism, the combination of the following elements, to wit, a pair of oppositely movable jaws adapted to be intercepted and closed at different points, a mould blade adjusting or normal wedge extending between the jaws and moved thereby, and a mould blade abutment whose position is determined by the normal wedge and which serves in turn to fix the position of the mould blade in the mould, substantially as described.

91st. In a mould adjusting mechanism the combination of the following elements, to wit: a mould blade, a movable abutment, a normal wedge for positioning said abutment, and an automatic shifting or adjusting mechanism controlling the position of the normal wedge, comprising a pair of oppositely movable jaws engaging a portion of the normal wedge, and a gauge intermediate the jaws upon which the latter are closed thus carrying the normal wedge to the position indicated by said gauge, substantially as described.

92nd. In a mould blade adjusting mechanism the combination of the following elements, to wit: a pair of oppositely movable jaws adapted to be intercepted and closed at any point in the line of their movement towards each other, a mould blade adjusting normal wedge extending between and in the path of motion of the jaws and moved thereby to adjusted position, a locking and final adjusting device for the normal wedge, and a mould blade abutment whose position is determined by that of the normal wedge, substantially as described.

93rd. In a type casting machine the combination with oppositely movable jaws for positioning the die case by engagement with translating devices connected therewith, of the normal wedge controlling the position of the mould blade in the mould, said normal wedge or a part connected thereto projecting between said jaws, so that the position of adjustment of the normal wedge will correspond with that of the die case, substantially as described.

94th. In a mould adjusting mechanism such as described, the combination with the mould blade and its abutment slide, of a normal wedge provided with a discontinuous or stepped engaging surface, substantially as described.

95th. In a mould adjusting mechanism and in combination with the devices for positioning the mould blade to produce mould cavities of different dimensions, a sectional or stepped wedge for controlling, by its position, the various positions of the mould blade in the mould, substantially as described.

96th. In a mould adjusting mechanism the combination with the mould blade and its abutment slide, of a longitudinally adjustable normal wedge, an abutment and a device engaging the normal wedge to withdraw it from the abutment during the adjustment of said wedge substantially as described.

97th. In a mould adjusting mechanism such as described, the combination with the mould blade and its positioning mechanism, of a stepped or irregular normal wedge, an abutment against which said wedge acts, a spring seated holding plate, for disengaging the wedge and holding it separated from its abutment during adjustment, and a reciprocating transfer block or wedge, substantially as described.

98th. The combination to form a mould blade adjusting mechanism, of a normal wedge, a justifying wedge and two transfer blocks, one acting in conjunction with the normal wedge and the other with both the normal and justifying wedge, substantially as described.

99th. The combination with a normal wedge movable

to vary the position of the mould blade in the mould, and a justifying wedge whose adjustments, added to those of the normal wedge, determine the position of the mould blade when type of abnormal width are to be produced, of two transfer blocks, one for the normal wedge alone, and the other for normal and justifying wedges together, actuating mechanism for reciprocating both transfer blocks, and locking devices for locking or throwing out of action either of the transfer blocks, substantially as described. 100th. In a mould blade and adjusting mechanism for varying the size of the mould cavity, the combination of the following elements, to wit, a normal wedge for effecting the normal adjustments of the mould blade, a justifying wedge for effecting the abnormal adjustments of the mould blade, a transfer block or wedge co-operating with the normal wedge, a second transfer block or wedge co-operating with the normal and justifying wedges, actuating devices connected to both transfer blocks, and a lock adapted to arrest one or other of the transfer blocks in retracted position leaving the other free to advance to operative position, substantially as described. 101st. The combination with a laterally and longitudinally movable wedge, such as the justifying wedge, of a positioning mechanism for effecting the longitudinal adjustments of the wedge, a lever or support engaging the wedge to shift it laterally into and out of engagement with the positioning mechanism, and controllable actuating devices for said shifting lever or support. 102nd. In a wedge adjusting mechanism such as described, the combination with a wedge supported to move laterally as well as longitudinally, and positioning mechanism for engaging and setting the wedge longitudinally, of shifting devices to move the wedge laterally into and out of engagement with the positioning mechanism, substantially as described. 103rd. In a mould adjusting mechanism the combination with a controllable positioning mechanism provided with oppositely movable jaws, of an adjusting device or mechanism comprising a wedge movable longitudinally for adjustment and laterally for engagement with the jaws of the positioning mechanism, substantially as described. 104th. The combination with the oppositely movable jaws of a controllable positioning mechanism, of an adjusting member, such as a justifying wedge, normally disconnected from the positioning mechanism and provided with means for temporarily placing it under the control of the jaws of said positioning mechanism, substantially as described. 105th. In an adjusting mechanism such as described the combination with a controllable positioning mechanism provided with oppositely movable jaws, of a justifying wedge lying normally to one side of the plane of motion of said jaws but capable of being brought into engagement therewith, a shifting lever engaging the wedge to carry it laterally into or out of the path of the jaws, a trip pivoted upon the shifting lever and a stepped actuating lever adapted to engage said trip to shift the wedge, substantially as described. 106th. In an adjusting mechanism the combination with a controllable positioning mechanism provided with oppositely movable jaws, of an adjusting member, such as the justifying wedge, controllable mechanism for temporarily establishing an operative relation between said adjusting member and the jaws of the positioning mechanism, and a lock for holding said adjusting member in position when disengaged from its positioning mechanism, substantially as described. 107th. In a mould adjusting mechanism, the combination with the oppositely movable jaws of the positioning mechanism, of a justifying wedge, a locking bar engaging detents on said wedge, a shiftable support or lever engaging the wedge, to temporarily disengage it from the locking bar and carry it into the path of the positioning mechanism for effecting adjustment, substantially as described. 108th. The combination to form a wedge setting or adjusting mechanism of the following elements, to wit, a reciprocating positioning mechanism provided with oppositely movable jaws, a laterally and longitudinally movable wedge provided with a shoulder adapted to enter between and be engaged by the jaws of the positioning mechanism, a locking projection or bar engaging detents on the wedge when the latter is withdrawn from between the jaws, and a controllable mechanism for shifting the wedge laterally from the plane of the locking bar into that of the jaws and vice versa, substantially as described. 109th. The combination with a laterally and longitudinally movable adjusting wedge, such as the justifying wedge, and a controllable positioning mechanism for determining the position of adjustment of the wedge, of a detent engaging the wedge to hold it in adjusted position, a lever provided with jaws embracing the wedge and adapted to shift the latter from the detent into engagement with the positioning mechanism, an actuating lever, and a trip intermediate said actuating lever and shifting lever, substantially as described. 110th. The combination with a laterally and longitudinally movable wedge, such as the justifying wedge, and a controllable positioning mechanism for effecting the longitudinal adjustments of the same, of a shifting lever movable laterally of the wedge and engaging the latter to carry it into or out of connection with the positioning mechanism, an actuating lever, a trip intermediate said actuating lever and the shifting lever, and a controllable trip lever engaging the trip, substantially as described. 111th. In a mould adjusting mechanism such as described, the combination with the justifying wedge and the positioning mechanism therefor, of the wedge shifting lever provided with jaws between which said wedge is received and guided, a trip pivoted to said shifting lever, a reciprocating actuating lever for engaging the trip, a trip lever operating upon said trip to shift it into engagement with the actuating lever at predetermined intervals, and a piston operating said trip lever, substantially as

described. 112th. The combination with oppositely movable jaws and a gauge or stop for determining their closed position of a normal wedge provided with an engaging portion lying between and in the plane of movement of said jaws, a justifying wedge provided with an engaging portion normally to one side of the plane of movement of the jaws but capable of being brought into said plane between the jaws, and two transfer blocks brought into action dissimultaneously for rendering the adjustments of the normal wedge or of the normal and justifying wedges operative to effect the position of the mould blade, substantially as described. 113th. In a machine for automatically effecting the adjustments of a mould, to produce normal and justifying type, the combination of the following elements, to wit:—a normal wedge and transfer block for effecting normal adjustments or those corresponding with different widths of normal type, a justifying wedge and transfer block for effecting, in conjunction with the normal wedge, abnormal adjustments such as are required for justification, adjusting mechanism intermittently engaging the wedges to set and then release them, controllable devices for bringing the justifying wedge temporarily under the influence of its adjusting mechanism, actuating devices for the transfer blocks, and a lock for suspending the action of one or the other transfer block, substantially as described. 114th. In a mould adjusting mechanism the combination with the mould and its mould blade, and a movable abutment controlling the mould blade when in casting position, of a wedge for adjusting the position of the mould blade abutment, adjusting mechanism intermittently engaging said wedge to carry it to any position of adjustment and there leave it, a lock for holding the wedge in adjusted position, and a second wedge or transfer block operating in conjunction with the first named wedge to set the mould blade abutment, substantially as described. 115th. In a mould adjusting mechanism the combination with the normal wedge and transfer block of a plurality of justifying wedges, adjusting devices for said justifying wedges, and controllable devices for bringing the justifying wedges temporarily and successively within the control of the adjusting devices, substantially as described. 116th. In a mould adjusting mechanism, the combination with the mould and its mould blade, of a normal wedge, a justifying wedge, an adjusting mechanism normally in operative relation with the normal wedge and in operative relation with the justifying wedge, controllable devices for placing the justifying wedge temporarily within the control of said adjusting mechanism, and transfer blocks for determining which of the adjusting factors—normal wedge alone or normal and justifying wedges together—shall operate upon the mould blade, substantially as described. 117th. In a mould adjusting mechanism for type casting machines the combination of the following elements, to wit:—a plurality of adjusting elements, such as wedges, a plurality of setting devices, such as transfer blocks, for rendering one or more of the adjusting elements operative upon the mould, and controllable positioning mechanism for setting and adjusting elements successively to predetermined positions of adjustment, substantially as described. 118th. In a mould adjusting mechanism for type casting machines, the combination of the following elements, to wit:—a main adjusting element, such as the normal wedge, a supplemental adjusting element, such as a justification wedge, controllable positioning mechanism for the main and supplemental adjusting elements, independent controllable devices for connecting the supplemental adjusting element with the controllable positioning mechanism, and two setting devices, such as the transfer blocks, with controllable devices for bringing them alternately into action, to cause either the main or the main and supplemental adjusting elements to operate in conjunction with the movable member of the mould in fixing the width of the mould cavity, substantially as described. 119th. In a mould adjusting mechanism for type casting machines, the combination of the following elements, to wit:—a main adjusting member, such as the normal wedge, with controllable positioning mechanism for shifting the same to effect different degrees of adjustment, a supplemental adjusting member, such as a justifying wedge, with controllable positioning mechanism for shifting it to different positions of adjustment, and a transfer mechanism, such as the transfer blocks, for shifting the mould adjustment from the main to the main and supplemental adjusting members, substantially as described. 120th. In a mould adjusting mechanism for type casting machines, the combination with a controllable adjusting or positioning mechanism, including a pair of oppositely movable jaws, and a main adjusting member, such as the normal wedge, of a supplemental adjusting member, such as a justifying wedge, controllable devices for temporarily connecting said supplemental adjusting member with the adjusting or positioning mechanism, and controllable devices, such as the transfer blocks, for establishing connection between the mould blade and either the main or main and supplemental adjusting members, substantially as described. 121st. In an adjusting mechanism, the combination with the abutment slide, the transfer block, the normal wedge, and controllable positioning mechanism for setting the normal wedge, of the justifying wedge and controllable devices for shifting the latter into and out of engagement with the positioning mechanism, substantially as described. 122nd. In a mould adjusting mechanism for type casting machines, the combination with the normal wedge and the controllable positioning mechanism therefor, of a plurality of differently tapered justifying wedges, and controllable mechanism governing the connections between said positioning mechanism

and the justifying wedges to set the latter, whereby the adjustment effected is compounded of the separate adjustments of the several wedges as determined by their relative positions and tapers, substantially as described. 123rd. The combination with the reciprocating transfer blocks, each provided with a notched actuating rod, of the locking rod engaging said actuating rods to lock one and release the other, substantially as described. 124th. In a mould adjusting mechanism for type casting machines, the combination with the normal and justifying wedges, the transfer blocks, the mould blade abutment slide, and the controllable positioning mechanism with its oppositely movable jaws for setting the wedges, of the locking bolt for the normal wedge, the detent for the justifying wedge, the shifting lever for the justifying wedge provided with a trip, and the actuating lever operating both the normal wedge lock and the shifting lever for the justifying wedge, substantially as described. 125th. In a mould adjusting mechanism such as described, the combination with a slide or movable member connected to the mould blade to determine the position of the latter in the mould, of the following elements, to wit:—a bearing or shoulder upon said slide or movable member, two fixed abutments, a longitudinally adjustable normal wedge engaging the bearing on the slide, an adjustable member, such as a justifying wedge, engaging one of the fixed abutments, two reciprocating transfer blocks or setting wedges, the one interposed between the normal wedge and a fixed abutment and the other between the normal wedge and the adjustable member or justifying wedge, and controllable mechanisms for setting the normal and justifying wedges and reciprocating the transfer blocks, substantially as described. 126th. In a type casting and composing machine, the combination of the following elements, to wit: a fixed mould, a horizontally and vertically movable die case, a line channel located to one side of and below the level of the mould, an ejector opposite the line channel, and an angularly reciprocating type carrier provided with a type receiving channel, a clamping member, and a type sustaining gate or blade, whereby the type received from the mould are transported opposite the line channel in position to be entered therein by the ejector, substantially as described. 127th. In a type casting machine provided with a horizontally movable die case and stationary mould, and in combination therewith, a horizontally and vertically reciprocating type carrier for receiving the type as it is ejected from the mould, substantially as described. 128th. In a type casting machine such as described, the combination with a mould provided with a cross blade, of a type carrier connected to and reciprocating in unison with said cross blade, substantially as described. 129th. In a type casting machine, the combination with the mould and its cross blade, the latter guided to reciprocate in a plane, of a type carrier guided to reciprocate in a plane inclined to that of the cross blade, and connected to the latter by a flexible joint or coupling, substantially as described. 130th. The combination to form a type carrier adapted to transport and deliver individual type, of a slide provided with a type channel or passage, a clamping jaw transversely of said channel or passage, and a reciprocating and laterally yielding type sustaining blade projecting into said channel, substantially as described. 131st. In a type carrier such as described, the combination with the reciprocating slide provided with a transverse type passage or channel, of a spring actuated clamping jaw movable across said channel, a stop engaging said jaw to restrain the latter as the slide approaches the receiving station, a laterally yielding type supporting blade movable across the type channel, and a lever mounted upon the slide and contacting with fixed abutments near opposite ends of its path to alternately project said type supporting blade across the type channel and withdraw it therefrom, substantially as described. 132nd. In a type casting machine, the combination with the mould, its movable wall or cross blade and the ejector or mould blade, of a type carrier provided with a type receiving channel or passage, a clamping jaw movable transversely of said passage, a flexible type sustaining blade extending across said passage, and actuating devices for retracting the clamping jaw and advancing the type sustaining blade as the carrier approaches the mould, for advancing the clamping jaw to grasp the type as the carrier is retracted, and for retracting the type sustaining blade as the carrier arrives in front of the ejector, substantially as described. 133rd. In a type casting machine the combination with the mould, its cross blade and mould blade, the latter serving as an ejector, of the type carrier, the latter comprising a reciprocating slide with transverse type channel, a spring actuated clamping dog with limiting stop, a flexible type sustaining blade extending through the clamping dog and attached to a slide and a lever mounted upon the carrier slide in position to engage fixed abutments and acting through a block and spring to advance and retract the type supporting blade, substantially as described. 134th. The combination with the type carrier provided with a movable clamping jaw, of an ejector flanged along its upper and lower edges and provided with bevelled shoulders in advance of its type engaging face, to insure the passage of the latter between the clamping walls or members, substantially as described. 135th. In a type carrier for casting machines the combination with the slide provided with a transverse type channel and a spring actuated clamping member, of a type sustaining blade or gate, including a spring blade 255 guided at its front or operating portion in the clamping member end carried by a slide 251⁶, the latter operated through block 256, lever 258 and spring 257 to alternately advance said blade or gate into the type channel and to withdraw it therefrom

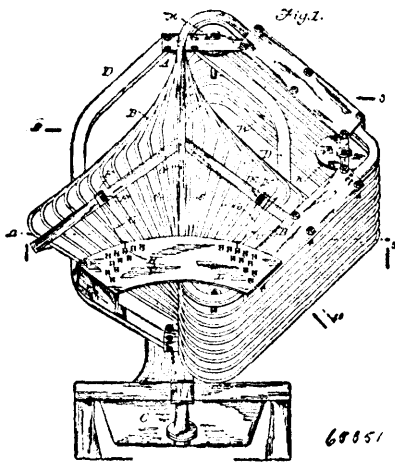
as the type carrier slide is reciprocated between the receiving and delivering stations, substantially as described. 136th. The combination to form a type carrier such as described, of the following elements, to wit:—a slide provided with a transverse type channel, a clamping member or type holder 251 guided to reciprocate laterally of the type channel and projected therein by a spring, a gate or type support 255 mounted upon a supporting slide 251⁶, the latter furnished with shoulders or stops between which is received a block 256, and a lever 258 mounted upon the type carrier in position to engage fixed stops on the frame, said lever operating through elastic connections to reciprocate the type supporting gate, substantially as described. 137th. The combination with the reciprocating type carrier provided with clamping jaw and a reciprocating and laterally yielding type sustaining blade, of the ejector for discharging the type from the carrier, said ejector being held under spring tension against one of its guiding surfaces and provided with inclines at its entering end engaging the carrier to facilitate the entrance of the ejector, substantially as described. 138th. In a type casting and composing machine such as described, the combination with the starting lever of the galley mechanism, and the controllable member of the pump actuating mechanism, of the shifting lever for the justifying wedge, and a shaft or connection engaged by said shifting lever to actuate the galley starting lever and the controllable member of the pump actuating mechanism, substantially as described. 139th. In a galley mechanism such as described, the combination of the following elements, to wit: an oscillatory reciprocating line carrier pivotally attached to a reciprocating slide and provided with an arm movable between the stops or shoulders on said slide, a slide mounted in ways parallel with the first named slide and engaging the arm of the line carrier, and a reciprocating driving member movable between stops or bearings on said second slide and engaging the latter, substantially as described. 140th. In a galley mechanism such as described, and as means for actuating the line carrier, the combination with the latter, of a slide or support mounted to reciprocate parallel with the line channel, a line carrier pivotally attached to said slide and provided with a laterally projecting arm extending between limiting stops on the slide, a second slide, such as 283, engaging the arm on the line carrier, a third slide, such as 287, provided with a pin riding in a longitudinal slot or opening in the slide 283, and actuating devices including a double compression link or connection for reciprocating slide 287, substantially as described. 141st. In a galley mechanism such as described, the combination of the following elements, to wit:—a line carrier pivotally supported on a slide and provided with an arm extending between the limiting stops on said slide, a reciprocating slide, such as 283, engaging the line carrier arm to oscillate the line carrier and reciprocate it and its supporting slide, a third slide or reciprocating member such as 287, engaging slide 283, a laterally movable bar, a line transformer, a line supporting blade and resetting slide carried by said movable bar, and a latch carried by slide 287 for engagement with the resetting slide of the line supporting blade, substantially as described. 142nd. In a galley mechanism such as described, and as a means for reciprocating the line transformer, the combination with the latter and its pivoted support or lever, of the cam, the actuating lever and the compression link, said actuating lever and the line transformer, substantially as described. 143rd. In a galley mechanism such as described, the combination with the driving shaft, of a controllable connection between said shaft and the actuating devices of the galley mechanism, the same including a ratchet wheel, a spring actuated pawl provided with an engaging shoulder and a pin, and an arresting and releasing lever provided with a shoulder extending normally in the path of the pawl and engaging the latter to withdraw it from the ratchet wheel and arrest the motion of the actuating devices, and a latch carried by said lever and engaging the pawl in rear of the fixed shoulder on the lever, said latch being elevated by the pin to permit the passage of the pawl, substantially as described. 144th. In a galley mechanism such as described, and in combination with the actuating mechanism for the line carrier, the line transformer and the vertically movable blade, of the vertical driving shaft, the cam loosely mounted thereon, the ratchet wheel fast on the shaft, the pawl pivoted upon the cam, and the locking and releasing lever provided with a fixed and a movable jaw or abutment, said lever operating both as a starting and stopping device, substantially as described. 145th. In a type composing mechanism such as described, the combination with a reciprocating type carrier provided with a transverse type receiving channel having fixed and movable clamping walls or members recessed or slotted horizontally at the delivery end in the plane of motion of said type carrier, of a line channel provided at its entering end with type sustaining devices, such as springs, the latter projecting partially within the line of motion of the type carrier and entering the recessed or slotted portions of the clamping members, and an ejector reciprocating through the type carrier to force the type held between the clamping members thereof into the line channel, substantially as described. 146th. In combination with reciprocating type carrier and the ejector blade, the line channel furnished at its entering end with the type holding and sustaining springs 265 and 267, substantially as described. 147th. In a controllable pump actuating mechanism for type casting machines, such as described, the combination with the reciprocating driving member, the driven member and the interposed latch or detachable connection, of a power actuated arm for operating said latch or detachable connection, a longi-

tudinally movable shaft upon which said arm is supported and moved into or out of engagement with the latch or detachable connection, said shaft being interposed between the controllable mechanism for setting the justifying devices and the controllable starting devices of the galley mechanism, and actuated by the former to suspend the pump action and start the galley mechanism when the justifying adjustments are effected, substantially as described. 148th. In a type casting machine, the combination to form a controllable pump actuating mechanism, of a reciprocating driving member, such as arm 223, a driven member, such as arm 227, connected to the pump actuating devices, and provided with a latch, such as 226, for engagement with the driving member, a member, such as tripping arm 230, reciprocating in a plane parallel with the latch, and actuating devices for shifting said last named member into and out of the path of the latch or a part connected therewith, substantially as described. 149th. In a controllable pump actuating mechanism for type casting machines, such as described, the combination with the driving and driven members and interposed connecting and disconnecting device, of a power driven reciprocating disconnecting member, such as arm 230, a longitudinally movable shaft to which said arm is connected, a connection with the justifying adjusting mechanism for shifting said shaft, and a detent, such as the spring actuated plunger, connected to and moving in unison with the arm and engaging a seat on the frame, for maintaining the arm in adjusted position, substantially as described. 150th. In a pump controlling mechanism, such as described, the combination with a driving member or arm 223 connected to the pump actuating lever or prime mover, and provided with an angular head, of a driven member or arm 227 connected to the pump actuated devices, a latch carried by said driven member in position to engage the angular head of the driving member, a reciprocating member, such as tripping arm 230, moveable longitudinally of its pivot to carry it into or out of the path of the latch, and a spring seated pin or shoulder on the latch with which said tripping arm engages when moved laterally, substantially as described. 151st. In a controllable pump actuating mechanism for a type casting machine such as described, the combination with driving arm 223, driven arm 227, with its latch 226, and tripping arm 230, of the shifting lever for the justifying wedge operating to shift the tripping arm into engagement with the latch, and a detent for holding said tripping arm in engagement with the latch after the withdrawal of the justifying wedge shifting lever, substantially as described. 152nd. In a controllable actuating mechanism such as described, the combination with a driving member, a driven member and a latch or interlocking member, of a reciprocating arm 230, moveable into and out of connection with said latch or interlocking member, a longitudinally moveable shaft upon which said arm is pivoted, and actuating devices for reciprocating the shaft to carry the latch engaging arm into and out of operative connection with said latch, substantially as described. 153rd. In a pump actuating mechanism such as described, the combination of the following elements, to wit: a pivotally supported power actuated driving arm 223, a driven arm 227 sleeved upon the pivot of arm 223 and provided with an arm connected to the pump operating devices, a latch 226 pivoted to one of said arms and detachably engaging the other arm, a shaft parallel with the axis of the driving and driven arms, a latch operating arm 230 attached to a sleeve turning loosely upon said shaft and held in position thereon between a shoulder and spring so that the sleeve can be moved longitudinally of the shaft, together with or independently of the latter, to bring its arm into the path of the latch, and controllable devices for moving either the shaft and sleeve or sleeve alone longitudinally of the shaft for causing the vibrating arm to engage the latch and thereby arrest the pump action, substantially as described. 154th. In a pump actuating mechanism such as described, as a means for transmitting motion from the actuating lever to the connected piston and cylinder levers, the combination of sleeve 211 and its spring, shaft 212 passing through said sleeve and connected to the actuating lever through a compression link and controllable power transmitting devices, a cross bar 208 secured to said shaft, and a pin passing through said cross bar and a projection on sleeve 211 and provided with a stop or shoulder engaging said sleeve to limit its movement, substantially as described. 155th. In a type casting machine such as described, the combination with the metal injecting devices and the mechanism controlling their motions towards and from the mould, of a vertical threaded shaft mounted in bearings on the main frame, and a supporting frame or base for the injecting devices pivoted upon said shaft and movable both longitudinally and laterally thereon, substantially as described. 156th. In a metal injecting apparatus, such as described, the combination of the following elements, to wit:— a supporting base or frame attached to the main frame by a vertical pivot about which it can swing horizontally, the melting pot, pump, nozzle and their elevating devices mounted upon said pivoted base or frame, and a pump lever pivotally connected to the actuating devices in line with the axis of the supporting frame, substantially as described. 157th. The combination with a reciprocating pump and nozzle, the spring actuated mechanism for advancing and seating the nozzle and the connected opposing pump actuating levers, of a reciprocating power driven shaft carrying a bar or cross head engaging both the piston lever and the spring actuated mechanism, a sleeve surrounding the shaft and connected to the cylinder lever, a spring for advancing said sleeve, and a stop for arresting the

sleeve, substantially as described. 158th. In a type casting machine, the combination with the mould, of a metal injecting mechanism movable towards and from the mould and including a melting pot, nozzle and pump, a parallel link support or guide therefor, and actuating devices for elevating and depressing the connected receptacle nozzle and pump, whereby regurgitation of the molten metal is prevented, substantially as described. 159th. In a type casting machine, the combination with the mould and its nozzle plate, of the nozzle, pump and melting pot connected to move in unison, a parallel link support or guide, and a lifting lever applied in line with the nozzle for elevating the metal injecting devices and seating the nozzle thereof, substantially as described. 160th. In a metal ejecting apparatus for type casting machines, the combination with the melting pot, pump and nozzle, connected together and movable towards and from the mould, of a spring actuated elevating and seating mechanism, and a pump operating mechanism engaging the said elevating mechanism to limit and control the action of its spring, substantially as described. 161st. In a metal ejecting apparatus for type casting machines, the combination with the pump, melting pot and nozzle connected to move in unison and provided with a parallel link guiding mechanism, of spring actuated elevating devices and pump actuating devices engaging said elevating devices to control the action of the spring in seating the nozzle, substantially as described. 162nd. In a pump operating device for metal injecting mechanisms, the combination with the pump of opposing power transmitting devices engaging the cylinder and piston respectively, substantially as described. 163rd. In a pump operating mechanism such as described, and in combination with the cylinder and piston thereof, two opposing levers connected together and to the piston and cylinder respectively, and actuating devices engaging said levers to move them in relatively opposite directions, whereby the power for actuating the pump will operate equally upon the cylinder and piston, but in opposite directions, substantially as described. 164th. In a pump operating mechanism, the combination with the cylinder and the piston thereof, of two levers connected respectively to the piston and to the cylinder, a link connecting the two levers, and actuating devices engaging the levers to cause their separation or approach, substantially as described. 165th. In a type casting machine such as described, the combination with a reciprocity injecting mechanism, of pump actuating mechanism consisting of two connected and oppositely moving levers engaging the piston and the cylinder respectively, substantially as described. 166th. In a type casting machine, the combination of a reciprocating, spring actuated injecting mechanism, of two parallel connected levers, the one engaging the piston and the other the cylinder, and actuating devices engaging said levers to cause them to move in relatively opposite directions, whereby the unseating of the nozzle during the pump action is prevented, substantially as described. 167th. The combination with a reciprocating injecting mechanism including a pump, and as a means for operating the latter, two opposing connected levers, the one operating upon the piston and the other upon the cylinder of the pump, an actuating device connected with each lever, and mechanism for reciprocating said actuating devices in unison with the injecting mechanism and for causing their separation when the cast is to be made, substantially as described. 168th. In a type casting machine the combination with the vertically reciprocating injecting devices mounted upon a vertically and horizontally movable support or frame, of the pump actuating levers connected together and to the piston and cylinder respectively, and vertically reciprocating actuating devices attached to the pump actuating levers by swivel connections in alignment with the axis of the pivot by which the support of the injecting devices is attached to the main frame, substantially as described. 169th. The combination with a reciprocating pump and its connected actuating levers, the one operating upon the piston and the other upon the cylinder, of an actuating mechanism comprising a bar or cross head 208, secured to a longitudinally reciprocating power shaft and connected to the piston lever, a sleeve 211 surrounding said shaft and connected to the cylinder, and a spring engaging the sleeve and a stop for limiting the movement of the sleeve, substantially as described. 170th. The combination with the movable melting pot, nozzle and pump and the lever for actuating the same, of the spring actuated rod engaging said lever, a lever 206 operating upon the rod in opposition to the spring, and the reciprocating shaft provided with a pump actuating bar or cross head, the latter engaging lever 206, substantially as described. 171st. In an injecting mechanism such as described, the combination of a vertically movable melting pot, a pump seated in said pot and communicating with a nozzle, and a pump actuating mechanism operating upon the cylinder and piston with a pressure equal in amount but opposite in direction, substantially as described. 172nd. The combination with the injecting devices, including melting pot, pump and nozzle, and the support thereof, of the two parallel shafts mounted upon the support and provided with arms to which the injecting devices are pivoted, connections between said shafts to cause them to turn in unison, and a lifting lever engaging the injecting devices, to reciprocate the latter, substantially as described. 173rd. In a metal injecting mechanism such as described the melting pot, nozzle and connecting conduit, provided with a combustion chamber below the melting pot and a flue or passage for the products of combustion extending from the combustion chamber beneath the conduit, thence vertically to a point near the nozzle, downwardly and rearwardly above the con-

duit and laterally to the escape pipe. 174th. In a paper feeding mechanism the combination with the ratchet wheel, of a locking pawl guided to move radially of the ratchet wheel, and provided with a slot or recess substantially concentric with said wheel, and a feeding pawl mounted upon a support movable concentrically with the wheel and provided with two operating arms extending on opposite sides of its pivotal connection with its support, one of said arms engaging the ratchet wheel and the other riding in the slot or recess of the locking pawl, substantially as described. 175th. In a feeding mechanism the combination with the ratchet wheel, of the slotted locking pawl, a pivoted actuating pawl extending on opposite sides of its pivot for engagement with the ratchet wheel and the locking pawl respectively, a movable support for said actuating pawl provided with limiting stops, and driving mechanism connected to the actuating pawl to oscillate and reciprocate the latter, substantially as described. 176th. The combination of the ratchet wheel, pivoted locking pawl, annular supporting plate, and a feeding pawl pivoted upon the supporting plate and provided with three arms, one engaging the ratchet wheel, another the locking pawl and the third the actuating device, the latter including a compression link or equivalent yielding connection, substantially as described. 177th. The combination with the ratchet wheel, and locking pawl, of an oscillatory reciprocating actuating pawl engaging the locking pawl and the ratchet wheel, actuating mechanism engaging the actuating pawl and including a compression link, and a controllable stop or lever for holding the locking pawl in fixed relation to the ratchet wheel, thereby suspending the feed motion, substantially as described. 178th. In a paper feeding mechanism such as described, the combination with mechanism for intermittently advancing the strip, of a stationary cross bar containing air ports, an air bar supported upon pivoted arms, a lever connected to the driving mechanism, a rod connected to the air bar and passing through the lever and a spring interposed between said air bar and lever, substantially as described. 179th. The combination in a paper feed operating mechanism and with the actuating lever thereof, the link provided with a slotted head engaging a pin on the actuating lever, and a swinging block interposed between said pin and slotted head and provided with a detent, substantially as described.

No. 65,351. Machine for Assembling and Distributing Type Dies. (*Machine à assembler et distribuer les caractères.*)

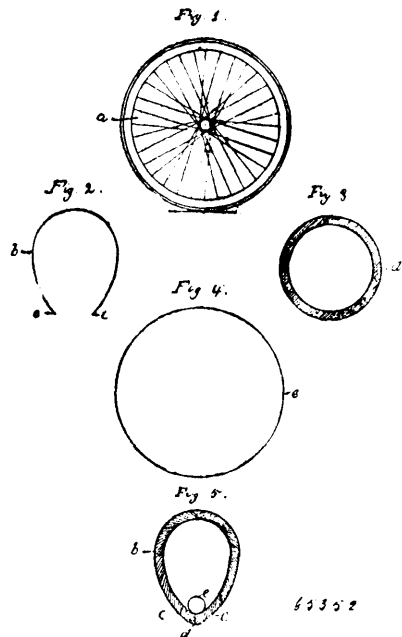


John Raphael Rogers, Brooklyn, New York, U.S.A., 14th December, 1899; 6 years. (Filed 17th August, 1899.)

Claim.—1st. In a mechanism for assembling and distributing type dies, an endless guide and dies sustained thereby and arranged to travel thereon. 2nd. In a mechanism for assembling and distributing type dies, endless guides or ways on which the dies are stored and around which they travel for assemblage and distribution, substantially as described and shown. 3rd. In a mechanism for assembling and distributing dies, a series of endless die sustaining guides diverging through a portion of their length to effect the distribution of the dies and converging through another portion of their length to assemble the dies in line. 4th. A series of endless inclined die sustaining guides converging in opposite directions from the storage point in combination with escapement devices to release the dies one at a time for assemblage in a common line, and means for advancing the assembled line upward along the guides, preparatory to their distribution thereby. 5th. A series of endless inclined guides separated in oblique lines through a portion of their length and brought together in parallel lines for the remainder of their length in combination with dies suspended therefrom and arranged to slide downward to an assembling point by gravity, escapements to hold the dies at rest and release them one at a time for assemblage, and means for continuing the movement from the assembling point along the guides to their upper ends. 6th. A series of inclined die

sustaining guides diverging laterally from their upper ends to distribute the dies, converging again toward their lower ends to align the released dies and continued upward at one side to the point of beginning whereby the guides are adapted to assemble the different dies in a common line, carry the assembled line to the rear, and then distribute the dies on their respective guides to the storage points from which they started. 7th. A series of endless guides and type dies arranged to travel thereon always in the same direction, said guides converging at another point to distribute or separate the aligned dies. 8th. The inclined endless guides converging and diverging for a portion of their length and parallel for the remainder of their length in combination with type dies suspended therefrom, and a carrier to advance the dies along the guides from the place of convergence to the place of divergence. 9th. In a mechanism for assembling and distributing type dies, the endless guides inclined downward and forward in diverging and converging lines, and then rearward and upward in two vertical tiers in combination with type dies suspended therefrom, escapements to control the descent of the dies, and a carrier finger arranged to advance behind the assembled line and carry the same upward between the tiers of guides. 10th. In combination with the inclined endless guides and dies thereon escapements to control the advance of the dies, an endless chain provided with a carrier finger, substantially as described and shown. 11th. The endless guides, the dies thereon, the escapements, the endless chain, its finger and the guide rail for the finger, constructed and combined, substantially as shown. 12th. In a mechanism for assembling and distributing type dies, a guide consisting of a longitudinally slotted tube in combination with a die having a shank or head to enter the slot and engage within the tube. 13th. In a mechanism for assembling and distributing type dies, a series of fixed guides arranged in a vertical tier, each guide consisting of a rectangular tube longitudinally slotted in one side to receive the shank of the die.

No. 65,352. Bicycle Tire. (*Bandage de bicyclet.*)



Samuel D. Densmore, Boston, Massachusetts, U.S.A., 14th December, 1899; 6 years. (Filed 7th January, 1898.)

Claim.—In a wheel for bicycles and other vehicles the combination of a resilient sheet metal rim, the section whereof is curved so that the outer edges approach one another, a continuous rubber tube located within the said rim with its tread portion protruding therefrom, and a resilient spring hoop or band adapted to retain the said tube, to allow of vertical yielding of said tube, substantially as described.

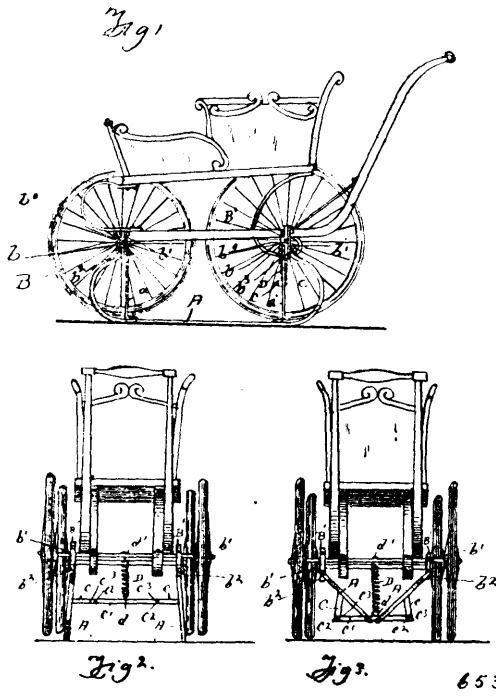
No. 65,353. Runners for Wheeled Vehicles.

(*Patin pour roues de voitures.*)

Andrew J. Boyd, Syracuse, New York, U.S.A., 14th December, 1899; 6 years. (Filed 19th August, 1899.)

Claim.—1st. In a runner attachment for wheeled vehicles, the combination with clips for rigid attachment upon the axles of the vehicles, and runners having standards pivotally connected to said clips, of a plurality of arms hinged together and the opposite ends of the outer arms being pivotally connected to standards upon the respective runners, the said arms being adapted to fold with respect to each other in but one general direction, and a tension device

acting upon said arms constantly in the same direction, substantially as described. 2nd. In a runner attachment for wheeled vehicles,

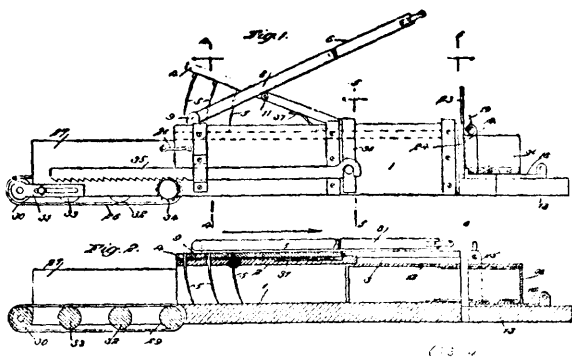


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the combination with clips for rigid attachment upon the axles of the vehicles, runners having standards pivotally connected to said clips, of a pair of relatively short arms pivoted upon standards of the respective runners, an intermediate longer arm to the ends of which said shorter arms are hinged, and with respect to which said shorter arms having a swing in but one direction, form a parallel line, and a spring acting upon said intermediate arm constantly in one direction, substantially as described. 3rd. In a runner attachment for wheeled vehicles, the combination with a pair of runners, and means for detachably connecting the same to the axles of the vehicles, of the relatively shorter arms C C pivotally connected at their outer ends to the runners, an intermediate longer arm C¹, to which the inner ends of said arms C C are hinged, the said shorter arms C C being capable of turning upwardly from the ends of said intermediate arm C¹, stops preventing the downward turning of said shorter arms relative to said intermediate arm, and a coiled spring attached to said intermediate arm and to a portion of the vehicle, tending constantly to pull said intermediate arm upwardly, substantially as described.

No. 65,354. Canning Machine.

(Machine à mettre en boîte.)



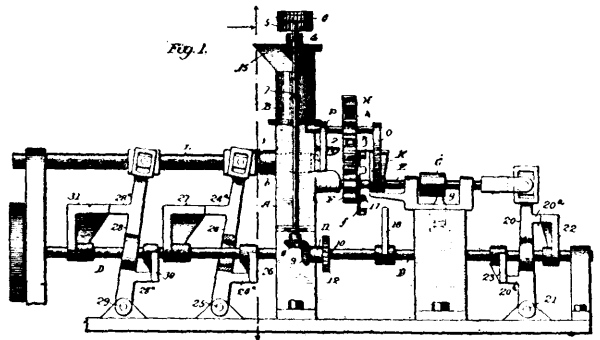
Oren Rubarts, Newport, Oregon, U.S.A., 14th December, 1899; 6 years. (Filed 4th October, 1899.)

Claim. -1st. A canning machine, comprising a trough, a can holder at the outlet end of the trough, and a plunger movable in the trough, substantially as specified. 2nd. A canning machine, comprising a trough, a forming tube at the outlet end of said trough, a can holder at the end of the tube, and a plunger movable in the trough, the said plunger being also movable into and out of the

trough, substantially as specified. 3rd. A canning machine, comprising a trough, a forming tube in said trough, a can clamping device at the outlet end of the tube, a cutter for operating between the outlet end of the tube and the clamping device, and a plunger movable longitudinally of the trough and also movable into and out of said trough, substantially as specified. 4th. A canning machine, comprising a trough, a forming tube in said trough, a can clamping device at the outlet end of said tube, the said clamping device being mounted to swing relatively to a base, a cutting blade movable between the clamping device and the outlet end of the tube, and a plunger consisting of teeth movable longitudinally of the trough, substantially as specified. 5th. A canning machine, comprising a trough, a cover mounted to slide longitudinally of the trough, a plunger carrier mounted to swing on the cover, a plunger consisting of teeth secured to said carrier and movable through openings in the cover, a handle for moving the plunger longitudinally and serving to force the teeth into the trough, a can holding device at the outlet end of the machine, and a knife movable between said can holding device at the outlet end of the machine, substantially as specified. 6th. A canning machine, comprising a trough, a forming tube arranged in said trough, a plunger movable in the trough and longitudinally thereof, an endless feeding apron, and means operated by a feeding motion of the plunger to operate the apron, substantially as specified. 7th. A canning machine, comprising a trough, a cover mounted to slide longitudinally on the trough, a forming tube in the trough, a can holding device at the outlet end of the tube, a knife for operating between the can holding device and the end of the tube, a plunger movable with the sliding cover, an endless apron at the inlet end of the trough, a ratchet wheel on the shaft of one of the endless apron rollers, a rack bar engaging with said wheel, and a connection between the rack bar and the sliding cover, substantially as specified.

No. 65,355. Machine for Filling Cans.

(Machine à remplir les boîtes.)



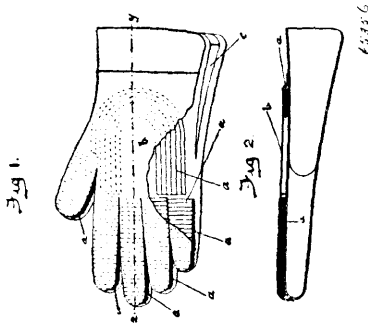
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John T. Hefferman, Port Townsend, Washington, U.S.A., 14th December, 1899; 6 years. (Filed 9th September, 1899.)

Claim. -1st. In a can filling machine, a filling chamber having a delivery passage at its lower end, a can receiver, means to reciprocate the receiver to bring the open end of the can into communication with the delivery passage, a tubular knife mounted to reciprocate in the passage, a plunger mounted to reciprocate within the knife, and means to reciprocate the knife and plunger, substantially as set forth. 2nd. In a can filling machine, a filling chamber, a can receiver supported to slide toward and away from the filling chamber, a tubular knife and a plunger each supported to have reciprocating movement to and from a can on the receiver, pivoted levers respectively connected to the carrier, the knife and the plunger, a rotating shaft and a pair of cams for each lever mounted on the shaft to respectively engage the levers on opposite sides, substantially as set forth. 3rd. In a can filling machine, a filling chamber, a screw conveyor supported to revolve within the chamber, vertical ribs oppositely disposed within the cylinder in the space between its inner wall and the conveyor, substantially as set forth. 4th. In a can filling machine, a filling chamber provided with oppositely disposed chutes leading into it, substantially as set forth. 5th. In a can filling machine, a filling chamber provided with oppositely disposed chutes leading into it, combined with a screw conveyor supported to revolve within the chamber, substantially as set forth. 6th. In a can filling machine, a filling chamber provided with oppositely disposed vertical ribs projecting from its inner wall, a pair of oppositely disposed chutes leading into the chamber between the ribs, and a screw conveyor supported to rotate within the chamber in close proximity to the ribs, substantially as set forth. 7th. In a can filling machine, a can receiver supported to turn about its axis, a series of uniformly spaced lugs projecting therefrom, a rotatable shaft, and an arm carried by the shaft to strike said lugs successively, substantially as set forth. 8th. In a can filling machine, a can receiver supported to turn about its axis, a series of uniformly spaced lugs projecting therefrom, a rotatable shaft, an arm carried by the shaft to strike said lugs successively and means to prevent the carrier from over running, substantially

as set forth. 9th. In a can filling machine, a can receiver, an endless chain can carrier, pulleys around which the carrier moves and means to turn the receiver about its axis to force a can between it and the carrier, substantially as set forth. 10th. In a can filling machine, a can receiver supported to turn about its axis, a can carrier supported to move immediately above the receiver, a can gripped by the carrier and receiver, and means to move the latter and, through the medium of the can, the former whereby one can is discharged and another gripped by the carrier and receiver, as set forth. 11th. In a can filling machine, a can receiver supported to turn about its axis, a can carrier supported to move immediately above the receiver and to co-act with it to grip a can, and a spring to press the carrier toward the receiver, substantially as set forth. 12th. In a can filling machine, the combination with the filling chamber, of a can receiver having pockets into which the cans fit, said pockets being recessed to receive the flange on the bottom of the can, means to hold the can in its pocket, and means to reciprocate the carrier toward and away from the filling chamber, substantially as set forth. 13th. In a can filling machine, a can receiver supported to turn about its axis, a series of uniformly spaced lugs projecting therefrom, a rotatable shaft, an arm carried by the shaft to strike one of said lugs at each revolution, a hexagonal block connected to the receiver to turn with it, said block having sides equal in number to said lugs, and a spring pressed top to engage a side of the block, substantially as set forth. 14th. In a can filling machine, a filling chamber, a tubular knife supported to reciprocate within the chamber, a plunger supported to reciprocate within the tubular knife, and means to actuate the knife and plunger independently, substantially as set forth.

No. 65,356. Cricket Glove. (*Gant pour cricket.*)



Joseph John Harris and Edwin Toft, both of Brighton, Sussex, England, 14th December, 1899; 6 years. (Filed 10th November, 1899.)

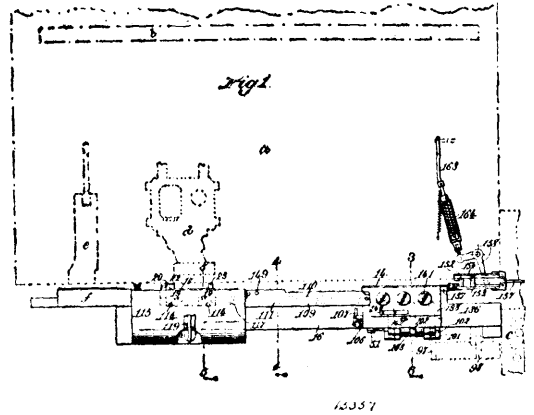
Claim.—1st. In gloves and the like for the use when playing cricket and other purposes, air channels, chambers or passages carried at a suitable part of said gloves, an outer covering upon said air channels, chambers or passages for the purpose of preventing concussion, an elastic piece of suitable shape for the purpose of adapting the glove to fit the hand, substantially as described and illustrated herein and for the purpose set forth. 2nd. In means for preventing concussion, the interposition of air channels, chambers, or passages between a covering or surface receiving the concussion, and the surface of a glove, or other analogous article, substantially as described and illustrated and for the purpose set forth.

No. 65,357. Monoline Type Composing and Casting Machine. (*Machine pour composer et couler les caractères.*)

The Monoline Composing Company, Washington, D.C., assignee of William Ernest Bertram, New York City, New York, all of the U.S.A., 15th December, 1899; 6 years. (Filed 7th January, 1899.)

Claim.—1st. In a line casting or monoline composing machine, a series of matrix bars each having a group of matrices on one edge, and each provided on its other edge with a series of aligning notches exceeding the number of said matrices, whereby any matrix bar that may have to be brought to its lowest operative level, to present a required character at the proper point in an assembled line of matrices, is adapted to be engaged both with a stationary assembly aligning bar and with a travelling aligning bar operated in a horizontal plane above the said stationary aligning bar, substantially as described. 2nd. A matrix bar provided with a vertical series of perforations, and having a series of aligning notches on one edge, in combination with an aligning bar, a plunger or pusher to move the matrix bar on to the aligning bar, and a longitudinally movable pin to engage in one of the said perforations of the matrix bars and prevent it from turning or slipping while being moved on to the aligning bar, substantially as described. 3rd. A matrix bar provided with a vertical series of perforations, and having on one edge a corresponding group of matrices, and on its other edge a series of aligning notches exceeding the number of said matrices, substanti-

ally as described. 4th. An expansible spacer bar composed of upper and lower sections, and having on the upper section a supporting

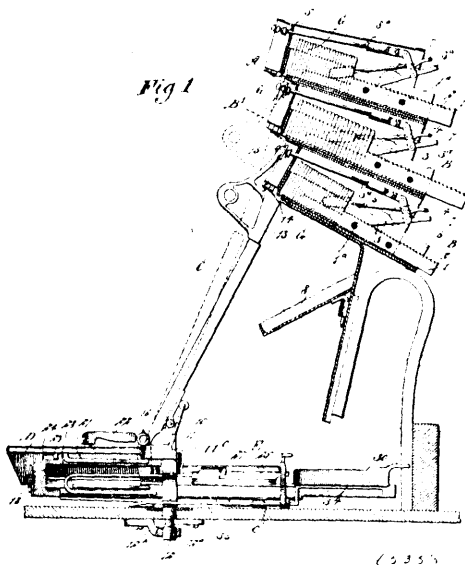


ly as described. 4th. An expansible spacer bar composed of upper and lower sections, and having on the upper section a supporting

Fig. 9, with a jog or recess 10 in the lower corner of said lug, whereby the said spacer bar may be first engaged at said lug recess with a stationary support, and subsequently with a travelling aligning bar movable below said support and lug, substantially as described. 5th. An expansible spacer bar comprising upper and lower sections having, in one section, a perforation and in the other a corresponding slot, in combination with a longitudinally movable pin to engage said perforation and slot so as to prevent turning or slipping of the said spacer bar while being moved into position in assembling a line of matrices, substantially as described. 6th. The combination with a line carriage, and a stationary aligning bar on which to assemble a line of matrix bars, of a travelling aligning bar movable to and from said line and adapted to engage therewith, and to move with the line carriage, substantially as described. 7th. The combination with a line carriage, and a stationary aligning bar on which to assemble a line of matrix bars, of a travelling aligning bar movable to and from said line in a horizontal plane above the said stationary aligning bar, to engage and move with the line and support the same as it moves with the line carriage, substantially as described. 8th. The combination with a line carriage, and a stationary aligning bar on which to assemble a line of matrices, comprising a series of matrix bars that each have on one edge a group of matrices, and on the other edge a series of aligning notches exceeding the number of said matrices in each group, of a travelling aligning bar movable to and from said line in a horizontal plane above the said stationary aligning bar to engage and move with the line, and whereby the said travelling aligning bar will engage with any matrix bar that may have to be brought to its lowest operative level to present a required character at the proper point in an assembled line, substantially as described. 9th. The combination with a line carriage, a series of matrix bars and interposed spacers, and a stationary aligning bar, of a travelling aligning bar carried by the line carriage and movable to and from the line of assembled matrix bars and spacers, to engage with and support the line as it moves with said carriage, substantially as described. 10th. The combination with a carriage for moving an assembled line in a monoline composing machine, of a travelling aligning bar adapted and arranged to move with said carriage and independently movable to and from the assembled line to engage with and be released from the same, substantially as described. 11th. The combination with a carriage for moving an assembled line in a monoline composing machine, of a travelling aligning bar adapted to have a yielding connection with said carriage to move the same, and independently movable to and from the assembled line, substantially as described. 12th. The combination with a carriage for moving an assembled line in a monoline composing machine, of a travelling aligning bar carried by said line carriage and independently movable to and from the assembled line, and mechanism for controlling said travelling aligning bar, substantially as described. 13th. The combination with a travelling line carriage, and a travelling aligning bar adapted and arranged to move with said carriage and be independently movable to and from an assembled line in a monoline composing machine, of a yielding device for connecting said bar and carriage, substantially as described. 14th. The combination with the carriage jaws, of a connecting rod on which said jaws are adjustable to the length of an assembled line of matrix bars and spacers, substantially as described. 15th. The combination with the carriage jaws, of a connecting rod having a locking engagement with one of said jaws and on which said jaws are adjustable to and from each other, substantially as described. 16th. The combination with the carriage jaws, of a connecting rod having a locking and unlocking engagement with one of said jaws, and a screw shaft for spreading the jaws and drawing them together onto an assembled line of matrix bars and spacers, substantially as described. 17th. The combination with the movable carriage jaw and its guide pins, of guide plates having guideways to receive the pins, a horizontally movable slide, links connecting said slide and pins, a

spring to act on said slide for causing the said jaw to move downward and outward from one end of a line of matrices held in a line carriage, a catch for locking said slide when the movable jaw is carried inward and upward, and means for tripping said catch, substantially as described. 18th. The combination with the carriage jaws, and a screw shaft for moving said jaws toward and from each other, of a rod connecting said jaws, a spring pressed bolt mounted in one of said jaws to engage a head on one end of said rod, a pivoted tripping dog connected with said bolt, a vertically movable slide to trip said dog, a crank arm on the screw shaft and connected with said slide, and means for actuating said slide to release and spread the carriage jaws, substantially as described. 19th. The combination with the carriage jaws, means for moving said jaws toward and from each other, and a travelling aligning bar movable with the carriage and provided with slots that are bevelled at one end, of vertically movable bevelled pins to engage in said slots and move the said aligning bar away from the line of matrices, and mechanism through which said pins are actuated, substantially as described. 20th. The combination with the carriage jaws, and a screw for moving said jaws toward and from each other, of a vertically movable slide connected with a crank on said screw shaft, a lifting lever to engage and lift said slide, a roller on said lever, and a lifting dog for said roller to ride on, substantially as described. 21st. The combination with a line carriage and its jaws, of a travelling aligning bar carried by said carriage and independently movable to and from a line of matrices arranged to travel with said carriage and bar, guides for the travelling aligning bar and carriage, mechanism for moving the travelling aligning bar into engagement with an assembled line and for closing a movable jaw of the carriage at one end of said line, and mechanism for spreading the carriage jaws and moving the travelling aligning bar from engagement with the line of matrices after the casting of a type bar, substantially as described. 22nd. The combination with the line carriage, a travelling aligning bar to move said carriage and independently movable to and from an assembled line of matrices, and guides for said carriage and travelling bar, of fingers for moving the said aligning bar into engagement with the line of matrices, a trip catch for locking said fingers, and a spring for retracting the fingers, substantially as described. 23rd. The combination with the line carriage, a stationary aligning bar, an assembled series or line of matrix bars and spacers, and a travelling aligning bar movable to and from the line, of a block provided with a rib to furnish a support for the lugs of the spacers, a cap piece movable on said block and provided with a depending flange to furnish a bearing for the said lugs on the spacers, and a shoe to act on the spacer bars, against said cap flange, and expand or justify the line, substantially as described. 24. The combination with the assembly box and its gates, and a plunger to push matrix bars out of the assembly box, of a longitudinally movable pin carried by said plunger and adapted to engage one of a series of perforations in a matrix bar, substantially as described. 25th. The combination with the assembly box and its gates, a plunger to push matrix bars out of the assembly box, and a lever to actuate said plunger, of a yielding connection between said lever and its driving mechanism, substantially as described.

No. 65,358. Type-Setting Machine. (Machine à composer.)



Charles J. Botz, Sedalia, Missouri, U.S.A., 15th December, 1899; 6 years. (Filed 24th June, 1899.)

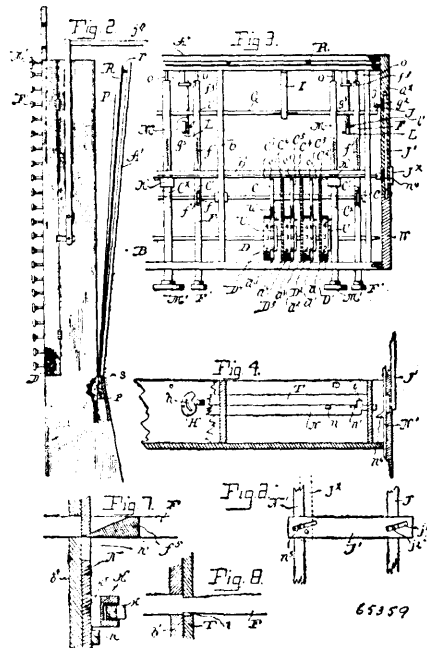
Claim. 1st. The combination of the type receptacle having a plurality of type holders or channels, and means for discharging the types, with the type chute arranged to receive the discharged types

and movable into registry with any one of the type holders, and the composing slide arranged to receive successively the types fed to the type chute, said slide being mounted to move in unison with the type chute, so as to remain in a receiving position relatively thereto whenever the chute is moved from registry with one type holder into registry with another type holder. 2nd. The combination of the type receptacle having a plurality of type holders or channels, and means for discharging the types, with the movable type chute arranged to receive the types from the channels, and the composing slide arranged to receive the types from the chute and to be moved by the chute at the reception of each type. 3rd. The combination of the type receptacle having a plurality of type holders or channels, and means for discharging the types, with the movable type chute arranged to receive the types from the channels, and the composing slide arranged to receive the types from the type chute and to be fed forward by the movement of the type chute. 4th. The combination of the type receptacle having a plurality of type holders or channels, and means for discharging the types, with the movable type chute arranged to receive the types from the channels, and to operate the means for discharging the types from their channels, and to receive such types, and the composing slide arranged to receive the types after their passage through the type chute, said slide being mounted to move in unison with the type chute, so as to remain in a receiving position relatively thereto whenever the chute is moved from registry with one type holder into registry with another type holder. 5th. The combination of the type receptacle having a plurality of type holders or channels, and means for discharging the types, with the movable type chute arranged to receive the types from the channels, and the composing slide arranged to receive the types from the type chute and to be fed forward by the movement of the type chute. 6th. The combination of the receptacle having type channels, and means for discharging the types from the channels with a column forming mechanism stationary in relation to the type receptacle, a type chute arranged to receive the types from said channels, a composing slide arranged to receive the types from the type chute, and a movable frame on which said composing slide is carried, to bring the slide from the receiving position into registry with the column forming mechanism. 7th. The combination of the receptacle having type channels, and means for discharging the types from the channels with a column forming mechanism stationary in relation to the type receptacle, a type chute arranged to receive the types from said channels, a composing slide arranged to receive the types from the type chute, and a pivoted frame on which the said composing slide is carried, to swing the slide from the receiving position into registry with the column forming mechanism. 8th. The combination of the receptacle having type channels, and means for discharging the types from the channels with a column forming mechanism stationary in relation to the type receptacle, a movable frame, a type chute carried by said frame and arranged to receive the types from said channel, and a composing slide likewise carried by said movable frame and adapted to receive the types from the type chute, said slide being adapted to be brought, by the movement of the frame, into registry with the column forming mechanism. 9th. The combination of the receptacle having type channels, and means for discharging the types from the channels with a column forming mechanism stationary in relation to the type receptacle, a pivoted frame, a type chute carried by said frame and arranged to receive the types from said channels, and a composing slide likewise carried by said pivoted frame, and adapted to receive the types from the type chute, said slide being adapted to be swung, by the pivotal movement of the frame, into registry with the column forming mechanism. 10th. The combination of the type receptacle, the pivoted type chute arranged to receive the type from said receptacle, and the composing slide arranged to be actuated by the movement of the type chute on its pivot. 11th. The combination of the type receptacle, the pivoted type chute arranged to receive the types from said receptacle, the stop pivoted to the lower end of the type chute, and the composing slide arranged to move in the same plane in which the type chute swings and provided with a stop opposing the pivoted stop of the type chute. 12th. The combination of the type receptacle, the column forming mechanism stationary in relation to said type receptacle, the frame pivoted about a vertical axis, the composing slide movable horizontally on said frame, and the type chute pivoted on said frame about a horizontal axis and arranged to convey the types from the type receptacle to the composing slide, the latter being adapted to be brought into registry with the column forming mechanism by the pivoted movement of the frame. 13th. The combination of the type receptacle, the frame having a vertical pivot, the movable catch for preventing a withdrawal of said pivot, the type chute carried by said frame and adapted to receive the types from said receptacle, the composing slide arranged to move on the frame and to receive the types from the type chute, and the column forming mechanism with which the composing slide is adapted to be brought into registry by the movement of the frame. 14th. The combination of the type receptacle, the column forming mechanism stationary relatively to said type receptacle, the composing slide, the type chute arranged to convey the types from the type receptacle to the composing slide, the movable frame carrying said composing slide, and a hook or stop for holding said frame stationary when the composing slide is in registry with the column forming mechanism. 15th. The combination of the type receptacle having inclined channels provided with discharge openings at their

upper ends, and means for feeding the types toward said upper ends. 16th. The combination of the type receptacle having inclined channels provided with discharge openings at their upper ends, a follower located at the lower end of each channel, and means for operating the follower. 17th. The combination of the type receptacle having inclined channels provided with discharge openings at their upper ends, a follower located at the lower end of each channel, and provided at its sides with a friction device engaging the channel, and means for operating the follower. 18th. The combination of the type receptacle having type channels provided with discharge openings, a follower located in each channel and provided with a rack surface, a pawl engaging said rack surface, and a key for operating the pawl. 19th. The combination of the type receptacle having type channels provided with discharge openings, a follower located in each channel and provided with a rack surface, a pawl engaging said rack surface, and a key for operating the pawl, said key being extensible so that its free end will project more or less to vary the stroke of the key and the throw of the pawl. 20th. The combination of the type receptacle having type channels with discharge apertures, and key operated mechanism for feeding the types toward the discharge apertures, with a movable type chute provided with a mouth and a finger arranged to register respectively with the discharge aperture of a channel and with the key of the type feed mechanism belonging to the same channel. 21st. The combination of the type receptacle having type channels arranged in superposed rows, an extensible type chute arranged to register with any one of said type channels, and mechanism for transferring the types from the type channels to the type chute. 22nd. The combination of the type receptacle, the swinging type chute arranged to receive the types therefrom, the composing slide arranged to receive the type from the type chute and constructed to be fed forward by the movement of said chute, the column forming box with which the composing slide is adapted to register, and the ejector arranged to force the types from the composing slide into the column forming box. 23rd. The combination of the type receptacle, the frame having a guideway, the composing slide mounted to move in said guideway, the type chute for conveying the types from the receptacle to the composing slide, means for moving the slide, and the spring secured to the frame to engage the side of the type adjacent to the lower end of the type chute. 24th. The combination of the frame having a guideway, the composing slide movable in said guideway, a movable chute for feeding types to said slide and for moving the slides, and a catch secured to the frame and arranged to engage the last of the types held in the composing slide. 25th. The combination of the frame having a guideway, the composing slide movable in said guideway, means for feeding the types to said slide and for advancing the slide, a catch secured to the frame and arranged to engage the last of the types held in the composing slide, and a handle operatively connected with the said catch and arranged to collide with the frame during the return movement of the slide, to move said catch out of the path of the types. 26th. The combination of the frame, the composing slide movable thereon, mechanism for feeding types to said composing slide and for advancing the slide, a plate pivoted to the frame and forming a wall to normally hold the types in the composing slide, yet allowing said types to be swung forward so as to permit of justifying the line, and means for normally holding the said plate in an upright position. 27th. The combination of the frame, the composing slide movable thereon, mechanism for feeding types to said composing slide and for advancing the slide, a plate pivoted to the frame and forming a wall to normally hold the types in the composing slide, yet allowing said types to be swung forward so as to permit of justifying the line, a stop for locking the composing slide relatively to the frame when the line of types registers with said pivoted plate, and means for normally holding said plate in an upright position. 28th. The combination of the frame, the composing slide movable thereon, mechanism for feeding types to said composing slide and for advancing the slide, a plate pivoted to the frame and forming a wall to normally hold the types in the composing slide, yet allowing said types to be swung forward so as to permit of justifying the line, an ejector movably secured to the frame and constructed to act against the rear side of the types to force them forward with said pivoted plate, and means for normally holding said plate in an upright position. 29th. The combination with the composing slide and means for filling the same, of the column forming box, the movable follower arranged to engage the front face of the type in the column forming box, and a vertically movable plate arranged to engage the front face of the type in the column forming box, and a vertically movable plate arranged to engage the rear face of the type after the removal of the composing slide from registry with the column forming box, said plate being arranged to be lifted by the composing slide as the latter comes into registry with the column forming box. 30th. The combination with the composing slide and means for filling the same, of the column forming box, the movable follower arranged to engage the front face of the type in said box, the pivoted arm carrying a vertically movable plate arranged to engage the rear face of the type after the removal of the composing slide from registry with the column forming box, said plate being arranged to be lifted by the composing slide as the latter comes in registry with the column forming box. 31st. The combination of the composing slide having two stops between which the line of type is to be received, justifying plates located normally outside the said slide, but slidable to be inserted between two types, mechanism for causing said plates to

assume an oblique position, and an indicator, operatively connected with said mechanism and indicating the amount of space corresponding to the oblique position of the justifying plates. 32nd. The combination of the composing slide having two stops between which the line of type is to be received, the justifying plates slidable toward and from said slide and adapted to project between two types, the sliding rod connected to said plates to give them an oblique position whereby the types will be forced against said stops, and an indicator operatively connected with said rod, and indicating the amount of spaces corresponding to the oblique position of the justifying plates. 33rd. The combination of the frame having a guideway with a front wall extending along part of said guideway, the composing slide arranged to move in said guideway, the justifying slide movable adjacent to the composing slide, means for normally connecting the two slides, mechanism located at the end of said front wall for disconnecting the composing slide from the justifying slide, justifying plates slidable from the justifying slide into the composing slide, mechanism for causing said plates to assume an oblique position, and an indicator connected with said mechanism and indicating the amount of spaces corresponding to the oblique position of the justifying plates. 34th. The combination of the composing slide, the frame in which said slide is movable, the justifying plates slidable toward and from said slide, the spacing key movably mounted on the frame to force the justifying plates into the composing slide, mechanism for causing said plates to assume an oblique position, and an indicator connected with said mechanism and indicating the amount of spaces corresponding to the oblique position of the justifying plates. 35th. The combination of the composing slide, the justifying plates slidable into said slide and out therefrom, a spacing key adapted to engage said plates singly to move them into the composing slide, a withdrawing device arranged to remove jointly from the composing slide, all the plates inserted therein, mechanism for causing said plates to assume an oblique position, and an indicator operatively connected with said mechanism and indicating the amount of spaces corresponding to the oblique position of the plates. 36th. The combination of the composing slide, the justifying plates slidable toward and from said slide and provided with slots extending in the direction of the sliding movement, a spacing key arranged to move said plates singly into the composing slide, a withdrawing lever passing through the slots of all the plates, mechanism for causing said plates to assume an oblique position, and an indicator operatively connected with said mechanism and indicating the amount of spaces corresponding to the oblique position of the justifying plates. 37th. The combination of the composing slide, the frame in which said slide is movable, and the space driver secured upon the frame to move transversely of the slide and force the spaces down between the types, said space driver having an elongated edge for engaging the spaces, and being also mounted to turn so that said edge will engage a greater or smaller width of spaces.

No. 65,359. Voting Machine. (Machine à voter.)



John B. Weigand, Ferdinand A. Strupp, both of Athens, and Joseph Weigand, Kenosha, all in Wisconsin, U.S.A., 15th December, 1899; 6 years. (Filed 1st August, 1899.)

Claim. 1st. In a voting machine, the combination with the registering mechanisms and rods operating the same, of locking

devices for the rods comprising pivoted plates adapted to engage said rods, a tumbling shaft actuated by the rods, and means operating the pivoted plates from the tumbling shaft, substantially as shown and for the purpose set forth. 2nd. In a voting machine, the combination with the registering mechanisms and rods operating the same, of locking devices for the rods comprising pivoted plates adapted to engage said rods provided with angle slots, a tumbling shaft actuated by the rods, and spring fingers projecting from the tumbling shaft into the angle slots of the pivoted plates, substantially as shown and for the purpose set forth. 3rd. In a voting machine, the combination with the registering mechanisms and rods operating the same, of locking devices for the rods comprising pivoted plates adapted to engage said rods, a tumbling shaft actuated by the rods, means operating the pivoted plates from the tumbling shaft, and a plate spring bearing upon said tumbling shaft, the latter being flattened where the plate spring engages, substantially as shown and for the purpose set forth. 4th. In a voting machine, the combination with the registering mechanisms and rods operating the same, the latter having outwardly projecting pins and notches near their rear ends, of locking devices for the rods comprising pivoted plates adapted to engage the notches in said rods, a tumbling shaft having pins engaged by the pins of the operating rods, and spring fingers projecting from the tumbling shaft, said spring fingers projecting from the tumbling shaft into angle slots in the pivoted plates, together with a plate spring bearing upon the tumbling shaft, the latter being flattened where the plate spring engages, substantially as shown and for the purpose set forth. 5th. In a voting machine, the combination with the registering mechanisms and rods operating the same, of locking devices for the rods comprising pivoted plates adapted to engage said rods, a tumbling shaft connected to the plates and operated by the rods, said tumbling shaft being bent at one end, a slide having pins engaging the bent ends of the tumbling shafts, and means for operating said slide, substantially as shown and for the purpose set forth. 6th. In a voting machine, the combination with the registering mechanisms and rods operating the same, said registering mechanisms being arranged in horizontal series, of locking devices for the operating rods comprising pivoted plates adapted to engage said rods and provided with angle slots, tumbling shafts actuated by the operating rods, spring fingers projecting from the tumbling shafts into the angle slots of the pivoted plates, one end of each tumbling shaft being bent at an angle, together with a slide having projecting pins adapted to engage the bent ends of the tumbling shafts, and means for operating said slide, substantially as shown and for the purpose set forth. 7th. In a voting machine, the combination with the registering mechanisms comprising in part an operating shaft having a ratchet wheel keyed thereon, independent operating rods for said mechanisms, vertical rods having gravity pawls engaging a ratchet wheel of the registering mechanism in vertical series, and push rods for operating said vertical rods, together with pivoted plates adapted to engage the operating rods and devices preventing the operation of said plates upon the operation of any one of the vertical rods, substantially as shown and for the purpose set forth. 8th. In a voting machine, the combination with the registering mechanisms arranged in vertical and horizontal series, of independent operating rods for the registering mechanisms, rods operating the registering mechanisms of each vertical series, pivoted plates adapted to engage the operating rods, tumbling shafts extending across the machine adjacent each series of operating rods, means connecting the tumbling shafts to the pivoted plates, said tumbling shafts being operated either independently by the individual operating rods or collectively by the vertical rods, substantially as shown and for the purpose set forth. 9th. In a voting machine, the combination with the registering mechanisms arranged in vertical and horizontal series, of independent operating rods for the registering mechanisms, rods operating the registering mechanisms of each vertical series, pivoted plates adapted to engage the operating rods and provided with angle slots, tumbling shafts extending across the machine adjacent each series of operating rods, spring fingers projecting from the tumbling shafts into the angle slots of the pivoted plates, and vertical rods operating the tumbling shafts, said tumbling shafts being operated either independently by the operating rods or collectively by the vertical rods, together with a slide engaging the tumbling shafts to bring them to their normal position, substantially as shown and for the purpose set forth. 10th. In a voting machine, the combination with the registering mechanisms arranged in vertical and horizontal series, of independent operating rods for the registering mechanisms, rods operating the registering mechanisms of each vertical series, operating rods for said vertical rods, pivoted plates adapted to engage the operating rods and provided with angle slots, tumbling shafts extending across the machine adjacent each horizontal series of operating rods, spring fingers projecting from the tumbling shafts into the angle slots of the pivoted plates, said tumbling shafts being operated either independently by the independent operating rods or collectively by the vertical rods, together with means for bringing the tumbling shafts to their normal position, substantially as shown and for the purpose set forth. 11th. In a voting machine the combination with the registering mechanisms arranged in vertical and horizontal series, of independent operating rods for the registering mechanisms of each vertical series, operating rods for said vertical rods having cams engaging the same, pivoted plates adapted to engage the operating rods and provided with angle slots, tumbling shaft extending across the

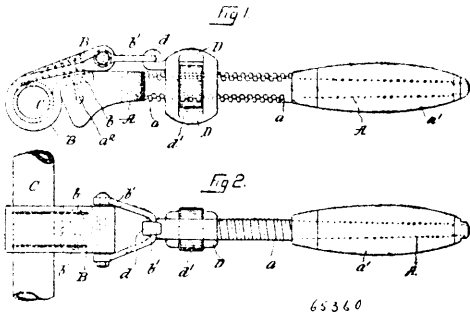
machine adjacent each horizontal series of operating rods, spring fingers projecting from the tumbling shafts into the angle slots of the pivoted plates, arms projecting from the tumbling shafts, and vertical rods having pins engaging the aforesaid arms, said tumbling shafts being operated either independently by the independent operating rods or collectively by the vertical rods, together with means for bringing the tumbling shafts to their normal position, substantially as shown and for the purpose set forth. 12th. In a voting machine, the combination of a cabinet comprising a series of drawers divided into compartments, independent registering mechanisms located in said compartments, the front of the drawers being provided with sight openings, movable slides extending across the front of the drawers to cover said sight openings, a vertical rod having pins engaging the slides, said slides being provided with openings adapted to register with the sight openings, together with independent operating rods for the registering mechanisms, pivoted plates adapted to engage said rods, tumbling shafts extending across the rear ends of the drawers, and spring fingers connecting the tumbling shafts to the pivoted plates, the tumbling shafts being turned by the operating rods, substantially as shown and described. 13th. In a voting machine, the combination with the registering mechanisms and operating rods therefor, of horizontal pins projecting from the rear ends of the operating rods through the back of the machine, a vertical hinged board having recesses on a line with said pins, a skeleton frame pivoted to the lower end of the board, and springs projecting the upper or free end of said skeleton frame, together with a tally sheet placed upon the skeleton frame, and a closed receptacle at the lower end of the cabinet, said receptacle having a slot in its upper end through which the tally sheet may pass, substantially as shown and for the purpose set forth. 14th. In a voting machine, the combination of a cabinet comprising a series of drawers, independent registering mechanisms located in said drawers, operating rods for said mechanisms, pins projecting from the operating rods through the rear ends of the drawers, a hinged board adapted to close against the rear ends of the drawers and provided with recesses on a line with the pins, a spring projected frame connected to the inner side of said board, and a tally sheet placed between the frame and rear ends of the drawers of the cabinet, together with a closed receptacle at the lower end of the cabinet, said receptacle having a slot in its upper end through which the tally sheet may pass, substantially as shown and for the purpose set forth. 15th. In a voting machine, the combination with the registering mechanisms and rods operating the same, of vertical rods operating the registering mechanisms in vertical series, said rods having notches, slides having projections adapted to engage said notches, and means moving said slides by the operation of the individual operating rods, substantially as shown and described. 16th. In a voting machine, the combination with the registering mechanisms and individual rods operating the same, of rods operating the registering mechanisms in vertical series, said rods having notches, slides having projections adapted to engage said notches, blocks on the underside of the individual operating rods and adapted to move said slides, a vertical slide having inclined lugs for returning the first mentioned slides to their normal position, and means for operating said vertical slide, substantially as shown and for the purpose set forth. 17th. In a voting machine, the combination with the registering mechanisms and individual rods operating the same, of rods operating the registering mechanisms in vertical series, said rods having notches, slides having projections adapted to engage said notches, blocks on the underside of the individual operating rods and adapted to move said slides, a vertical slide having inclined lugs for returning the aforesaid slides to their normal position, a sliding plate having an inclined slot with which a pin on the vertical slide engages, together with locking devices for the operating rods comprising pivoted plates adapted to engage said rods, tumbling shafts connected to said pivoted plates, the tumbling shaft being turned by the operating rods and each tumbling shaft provided at its end with a projection, a vertical slide having pins engaging the projections of the tumbling shafts, said vertical slide engaging an inclined slot in the sliding plate, and means for operating said sliding plate, substantially as shown and for the purpose set forth. 18th. In a voting machine, the combination with the registering mechanisms and rods operating the same, of a horizontal slide for each horizontal series of operating rods, said slides having notches or openings through which the rods pass, and the latter provided with beveled edges with which the slides engage, substantially as shown and for the purpose set forth. 19th. In a voting machine, the combination with the registering mechanisms, comprising in part a series of digit wheels loosely mounted upon a shaft and turned by operating rods through the intervention of ratchet wheels and gear wheel, substantially as shown, of collar fixed to the shaft of the digit wheels, gravity pawls carried by the collars and adapted to engage pins projecting from the digit wheels when the shaft and collars are turned in one direction, for the purpose set forth.

No. 65,360. Pipe Wrench. (Clé à écrou.)

William Quinby, assignee of Jereh Cory Gifford, both of Cambridge, Massachusetts, U.S.A., 15th December, 1899; 6 years. (Filed 25th October, 1899.)

Claim.—In combination with the frame A, with a flat end surface extending crosswise of the frame and screw threaded at α , saddle D

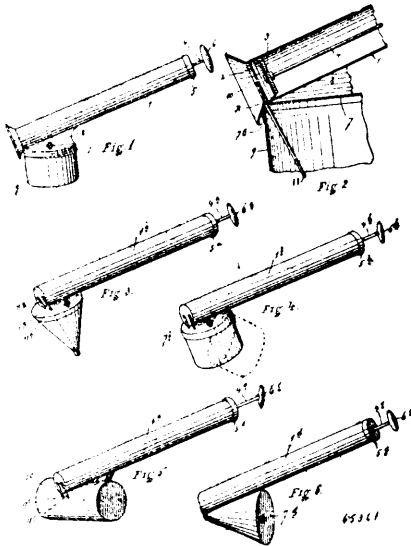
provided with a hood *d*, nut *d'* carrying saddle *D*, strap *B*, one end of which is connected to the head of frame *A*, above the upper end



65360

of its flat end surface, the loop *b'*, fast to the other end of strap *B*, and adapted to engage hook *d*, all arranged to operate substantially as shown and described.

No. 65,361. Sprayer. (Pulvérisateur.)



65361

DeWane B. Smith, Deerfield, New York, U.S.A., 15th December 1899; 6 years. (Filed 4th March, 1899.)

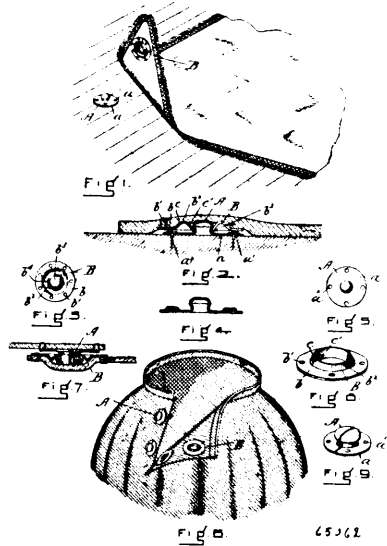
Claim. - 1st. The combination in a sprayer of a barrel or cylinder having a head with an opening therein, a plunger in the cylinder, a receptacle head secured to and suspended under the barrel, the removable receptacle adapted to be secured to said head and a suction pipe extending from the position substantially at the bottom of the receptacle to a point approximating said opening in the head at the outside, substantially as set forth. 2nd. The combination in a sprayer of the barrel having the head with an opening therein, a plunger in the barrel, the receptacle head secured to and suspended under the barrel at an acute single angle with the barrel as shown, the removable receptacle body and suction pipe substantially as set forth. 3rd. The combination in a sprayer of the plunger, the barrel having a head with an opening therein, the receptacle cover secured to the barrel and having one side projecting in advance of the head, the removable receptacle and the suction tube passing through the projecting edge of the cover, substantially as set forth. 4th. The combination in a sprayer of the barrel having an apertured head, a plunger, a receptacle cover secured to the under side of the barrel at an acute angle therewith and having one edge projecting beyond the end of the barrel, a removable receptacle and means for securing it to the cover, and the suction tube passing through the projecting edge of the cover and having its discharge end in close proximity to the aperture in the barrel head, substantially as set forth.

No. 65,362. Fastener. (Attache.)

William Streeter Richardson, Boston, Massachusetts, U.S.A., 15th December, 1899; 6 years. (Filed 8th May, 1899.)

Claim. - 1st. The combination of a socket member having a fastening flange, a wall surrounded by the flange and integral therewith

which wall forms a cavity open at both ends and provides a yielding socket entrance, and a flexible fabric to one surface of which the



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fastening flange is secured, and which fabric covers the said cavity opposite the socket entrance and is held from said socket entrance by the wall, and which fabric and wall forms a bearing, raised from the socket entrance, for the thumb or finger used in holding or pressing said socket member while it is being engaged by or with its co-operating member. 2nd. The combination of a socket member of a fastener having a fastening flange, a wall at an angle to said flange surrounded by and integral with the flange, forming a cavity or chamber open at both ends and a socket entrance, flexible fabric to which the said member is secured by said flange, and which fabric is held from the socket entrance by said wall and closes one end of said cavity, with a ball member having a flange by which it is secured to its support or material, and said support or material, the said socket and ball members being secured to the opposing faces of the fabrics or parts which they unite without perforating said fabrics or parts and without interposing any substance between the ball and the fabrics with which it is united by the socket member. 3rd. A socket member of a fastener consisting of a single piece of metal having a fastening flange adapted to lie against the surface of the fabric or material to which the member is to be attached, a wall integral with said flange and forming a stud containing cavity open at both ends, and which wall provides, first, a socket entrance, second a means for holding the fabric from the socket entrance, and, third, a pressure receiving bearing, as and for the purpose set forth. 4th. A complete socket member of a fastener consisting of a single piece of metal, having an attaching flange, a socket entrance substantially in line with said flange and a wall or raised section surrounding said socket entrance. 5th. A complete socket member of a fastener consisting of only one piece of metal having an attaching flange, a socket entrance substantially in line therewith, a raised section about said socket entrance, and a slit *b'* extending from the socket entrance through the raised section or wall and flange. 6th. A complete socket member of a fastener consisting of only one piece of metal and having the flange *b* provided with holes *b'*, the continuance socket entrance *b''* and the interposed raised section or wall *b''*, as and for the purpose described. 7th. A complete socket member of a fastener consisting of a single piece having an attaching flange adapted to be united to a surface of the fabric or material with which it is used, and integral continuous wall extending first upward and then downward, to provide a socket entrance substantially in line with the flange, said wall serving as a means for holding the fabric or material above or away from the socket entrance and thereby establishing a ball receiving cavity above the said entrance. 8th. A complete socket member or fastener consisting of a single piece of metal having and attaching flange and a continuous raised wall or bead within said flange and the inner depending part of which wall or bead extends downward so as to form a socket entrance substantially in line with the said flange, said wall or bead serving to hold the fabric or material above or away from the socket entrance, to provide a ball receiving cavity, combined with a ball member consisting also of a single piece of metal and also having an attaching flange, one of said members being formed resilient so that they will be elastically and detachably connected when engaged, and the ball of said ball member being of a height approximately equal to the height of said wall so that the top of said ball will not project materially above the top of said wall or bead when the two members of the fastening are engaged.

No. 65,363. Fluid Measure Indicator and Recorder.
(Mesure indicatrice et registre de fluides.)

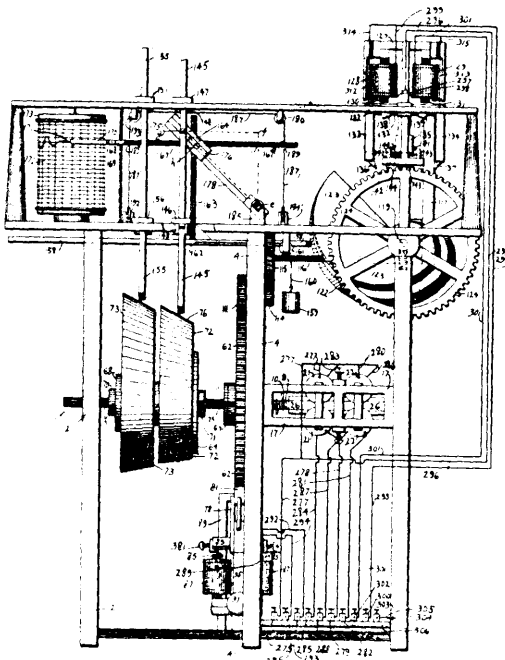


Fig. 1.

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John Edward Thebaud, Buffalo, New York, U.S.A., 15th December, 1899; 6 years. (Filed 4th March, 1899.)

Claim.—1st. An indicating and recording mechanism for measurement of fluids in conduits or motors, consisting of a cam, the operative surface of which is generated by a curve or curves, the ordinates of which represent to scale the results of tests or computations made upon the conduit or motor for quantities of discharge or power, a rider provided with an indicating point used to denote upon a fixed scale or chronographic sheet the quantities of discharge or power and having a bearing contact with the operative surface of the cam, and intervening mechanism between the cam and the conduit or motor for giving such cam movement for changes in the factor or factors which govern the magnitude of the ordinates of the operative surface of the cam. 2nd. An indicating and recording mechanism for measurement of fluids in conduits or motors, consisting of a cam, the operative surface of which is generated by a curve or curves, the ordinates of which represent to scale the results of tests or computations made upon the conduit or motor for quantities of discharge or power, a rider provided with an indicating point used to denote upon a fixed scale or chronographic sheet the quantity of discharge or power and having a bearing contact with the operative surface of the cam, an electric transmitter and connections with the conduit or motor, and intervening mechanism between the electric transmitter and cam, for giving to such cam movement for changes in the factor or factors which govern the magnitude of the ordinates of the operative surface of the cam. 3rd. An indicating and recording mechanism for measurement of fluids in conduits or motors, consisting of a cam, the operative surface of which is generated by a curve or curves, the ordinates of which represent to scale the results of tests or computations made upon the conduit or motor for quantities of discharge or power, a rider provided with an indicating point used to denote upon a fixed scale or chronographic sheet the quantity of discharge or power and having a bearing contact with the operative surface of the cam, intervening mechanism between the cam and the conduit or motor for giving such cam movement for changes in the factors which govern the magnitude of the ordinates of the operative surface of the cam, an auxiliary cam, the operative surface of which is generated by a curve or curves, the ordinates of which represent the fractions or percentages that the ordinates, as indicated upon a fixed scale or chronographic sheet, are of the respective ordinates of the main cam, mechanism for operating such auxiliary cam in conjunction with the main cam, and intervening mechanism between the conduit or motor and the auxiliary cam, each cam having a separate rider and both riders being connected by a system of levers which operate a common indicator, for indicating on a scale or for tracing upon a chronographic sheet a resultant reading. 4th. An indicating and recording mechanism for measurement of fluids in conduits or motors, consisting of a cam, the operative surface of which is generated by a curve or curves, the ordinates of which represent to scale the results of tests or computations made

upon the conduit or motor for quantities of discharge or power, a rider provided with an indicating point, used to denote upon a fixed scale or chronographic sheet the quantity of discharge or power and having a bearing contact with the operative surface of the cam, an electric transmitter and connections with the conduit or motor, intervening mechanism between the electric transmitter and cam for giving to such cam movement for changes in the factor or factors which govern the magnitude of the ordinates of the operative surface of the cam, an auxiliary cam, the operative surface of which is generated by a curve or curves, the ordinates of which represent the fractions or percentages that the ordinates, as indicated upon the fixed scale or chronographic sheet, are of the respective ordinates of the main cam, mechanism for operating such cam in conjunction with the main cam, and intervening mechanism between the conduit or motor and the auxiliary cam, each cam having a separate rider and both riders being connected by a system of levers, which operate a common indicator for indicating upon a scale or for tracing upon a chronographic sheet a resultant reading. 5th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with a shaft adapted for motion of translation, a gear wheel pivoted to such shaft, a cam upon such shaft and partaking of its motion of translation and having its operative surface generated by a curve or curves, the ordinates of which represent to scale the results of tests or computations made upon the conduit or motor for quantities of discharge or power, and an indicating rider in operative contact with such cam surface, of rack bars in engagement with the gear wheel upon the shaft and mechanism interposed between such rack bars and the conduit or motor for reciprocating the rack bars and giving to the shaft a motion of translation. 6th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with a shaft adapted for motion of translation, a gear wheel pivoted to such shaft, a cam upon such shaft and partaking of its motion of translation and having its operative surface generated by a curve or curves, the ordinates of which represent to scale the results of tests or computations made upon the conduit or motor for quantities of discharge or power, and an indicating rider in operative contact with such cam surface, of rack bars in engagement with the gear wheel upon the shaft, an electric transmitter in connection with the conduit or motor and mechanism interposed between such rack bars and the electric transmitter for reciprocating the rack bars and giving to the shaft a motion of translation. 7th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with a shaft, a cam revoluble upon such shaft and having its operative surface generated by a curve or curves, the ordinates of which represent to scale, the results of tests or computations made upon the conduit or motor for quantities of discharge or power, and an indicating rider in operative contact with such cam surface, of a gear wheel revolving about the shaft, means upon such gear wheel and in engagement with the cam for rotating same, and mechanism interposed between the gear wheel and the conduit or motor for revolving the cam. 8th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with a shaft, a cam revoluble upon such shaft and having its operative surface generated by a curve or curves, the ordinates of which represent to scale the results of tests or computations made upon the conduit or motor for quantities of discharge or power and an indicating rider in operative contact with such cam surface, of a gear wheel revolving about the shaft, means upon such gear wheel and in engagement with the cam, for rotating the same, an electric transmitter connected with the conduit or motor, and mechanism interposed between the gear wheel and the electric transmitter for revolving such cam. 9th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with the rack bar or gear wheel and their respective cams of a pivoted lever provided with separate pawls for giving to the rack bar or gear wheel movements in opposite directions, and intermediate arm on the pivoted lever, tripping levers pivoted to the intermediate arm, locking levers pivoted to the frame independent of the intermediate arm and adapted for engagement with the rack bar or gear wheel and the tripping levers, armatures upon the pivoted lever, magnets for operation with the armatures, and an electric transmitter connected to the magnets and to the conduit or motor, all combined and operating, substantially as and for the purpose stated. 10th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with the rack bar or gear wheel and their respective cams of a pivoted lever provided with separate pawls for giving to the rack bar or gear wheel movements in opposite directions, an intermediate arm on the pivoted lever, tripping levers pivoted to the intermediate arm, locking levers pivoted to the frame independent of the intermediate arm and adapted for engagement with the rack bar or gear wheel and the tripping levers, armatures upon the pivoted lever, magnets for operation with the armatures, an electric transmitter connected to the magnets and conduit or motor and means connected with the pivoted lever, and the magnets for introducing a local or stronger circuit through the magnets, all combined and operating substantially as and for the purpose stated. 11th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with the gear wheel 62, the main cam 72, the shaft 119, the auxiliary cam 122 on the shaft 119, of the gear wheel 111 intermeshing with the gear wheel 62 employed to rotate

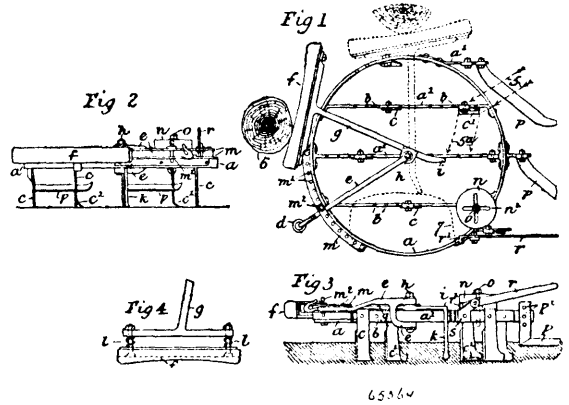
the main cam 72, the shaft 112 upon which the gear wheel 111 is mounted, pinion 114 mounted on the shaft 112, the gear wheel 115 intermeshing with the pinion 114, the shaft 116 upon which is mounted the gear wheel 115, the pinion 118 mounted on shaft 116, and the shaft 119 provided with the annular ribs 121 adapted to intermesh with the teeth of the pinion 118, all combined and operating substantially as and for the purpose stated. 12th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with the vertical rider, the main cam, the horizontal rider and the auxiliary cam, of a horizontal rod carrying a marker, means for preserving the horizontality of the marker rod in its varying positions, a projecting arm on the vertical rider, a vertical rod on the horizontal rider, a vertical socket in which the vertical arm of the horizontal rider reciprocates a horizontal socket in which the horizontal marker rod reciprocates, a rod rigidly connecting the vertical and horizontal sockets, an inclined lever pivoted to the main frame, and a groove in an arm of the inclined lever adapted for the sliding reception of the outer end of the projecting arm on the vertical rider, the connecting rod between the two sockets having a sliding contact with the upper side of the inclined pivoted lever, all combined and operating to give to the marker a resultant movement for indicating or recording the quantities of discharge or power of the conduit or motor. 13th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with the magnets, its armature and the pivoted lever which carries the armature, of a spring insulated from the magnet, its rigid end being connected to the magnet wire, a pin on the pivoted lever for operative contact with the free end of the spring, an auxiliary armature on the spring for operative engagement with the core of the magnet, the local circuit which is first completed through the contact of the free end of the spring with the pin on the pivoted lever and then broken by the sliding escape of the free end of the spring from engagement with the pin on the pivoted lever, extends from the pin on the pivoted lever through the lever and connecting frame work to the generator wire, through the generator, through a connecting wire to and through the magnet, then by wire to the spring, the magnet having previously been energized by a different circuit. 14th. In an indicating and recording mechanism for secured to the frame and adapted for contact with the contacting arms of the T piece to close the circuit, means for limiting the movements of the T piece on the movable rod, and means for separating the contacting arms from the contact strips for breaking the circuit, the movable arm and the contact strips being connected with an electric circuit. 15th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, an electric transmitter for successively closing and breaking the circuit, consisting of a series of projecting pins mounted upon a movable surface, a movable arm in engagement with the frame, a T piece pivoted to the movable arm, consisting of a lever for successive engagement with the pins, and of contacting arms on opposite sides of the lever, means for returning the T piece to its normal position, insulated contact pieces secured to the frame and adapted for contact with the contacting arms of the T piece to close the circuit, means for limiting the movement of the T piece on the movable arm, means for separating the contact arms from the contact strips for breaking the circuit, and locking levers pivoted to the frame and operated by the movable arm to throw them in and out of engagement with the pins on the movable surface, the movable arm and the contact strips being connected with the electric circuit. 17th. In an indicating and recording mechanism for measurement of fluids in conduits or motors, the combination with the movable surface of the transmitter carrying the operating pins, of a fly geared to such movable surface for retarding a too rapid movement of such surface, and a device for harmonizing the irregular movements of a shaft geared to the transmitter, with the motion of the movable surface, consisting of two contiguous gear wheels, one of which is connected with the movable surface, a rigid pin on each gear wheel at different distances from their respective centers, two arms pivoted to the gear wheel connected with the movable surface, and a spring connecting the two arms and serving to press them against the two rigid pins to normally preserve their position in the same radial line, and to return them to such normal position when displaced in operating the transmitter.

No. 65,364. Cultivator. (Cultivateur.)

Frederick Marshall Higgs, Kyabram, Victoria, Australia, 15th December, 1899; 6 years. (Filed 4th August, 1899.)

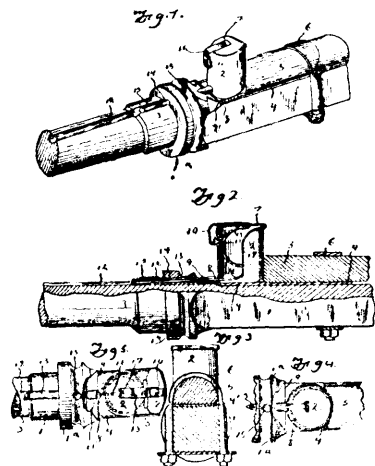
Claim.—1st. In a cultivator of the class indicated, a swivel or swinging lever having a fender projecting from the frame of said cultivator, substantially as and for the purposes set forth. 2nd. In a cultivator of the class indicated a swivel or swinging lever having at one end which projects beyond the frame of said cultivator a fender (with or without spring supports), and also having a tooth or rudder or equivalent means to keep the fender normally in its forward position substantially as and for the purposes set forth. 3rd. In a cultivator of the class indicated, tines set to enter the ground at an angle to the line or direction of draught so as to cause the implement to travel in a special track to one side of and nearer to the trees than the track of the animal drawing the implement, as and for the purposes set forth. 4th. In a cultivator of the class indicated, having a frame with beams or supports, cultivating tines set

to enter the ground at an angle to the line of draft attached thereto, and a draft lever pivotally connected centrally thereto with means



for the adjustment of its range of movement and its bearing point, such as a peg or the like inserted in the said framing, all in combination substantially as set forth. 5th. In a cultivator of the class indicated, a movable fender projecting outside the frame towards the front, and an adjustable weight connected to such frame or to an attachment thereto towards the rear, all in combination as and for the purposes set forth. 6th. In a cultivator of the class indicated the combination with the frame having a fender at the end of a swivel lever and a weight with means to adjust it in position relatively to said frame of a draught lever pivoted centrally to the frame and having means to regulate its range of movement and its bearing point, all substantially as set forth. 7th. In a cultivator of the class indicated, the combination with the frame of beams as a^1 , a centre pivot as b , to which are connected a draught lever, and a lever carrying a fender, substantially as and for the purposes set forth. 8th. In a cultivator of the class indicated, the combination with the frame, having beams as a^1 , of tines c and c^1 , substantially as and for the purposes set forth. 9th. In a cultivator of the class indicated, the combination with a centrally pivoted draught lever e , of a bridle m , with adjustable peg or the like m^2 , substantially as and for the purposes set forth. 10th. In a cultivator of the class indicated, the combination with a lever pivoted within the frame, of a descending tooth or rudder adapted when the implement is in work to bring the said lever back into its normal position and a beam or other stop upon the said frame to limit the movement of the said rudder substantially as and for the purposes set forth. 11th. In a cultivator of the class indicated, the combination with the frame or with an attachment thereto of a knife or knives as p , substantially as and for the purposes set forth. 12th. In a cultivator of the class indicated, the combination of the parts a to s , substantially as and for the purposes set forth.

No. 65,365. Axle Lubricator. (Graisseur.)

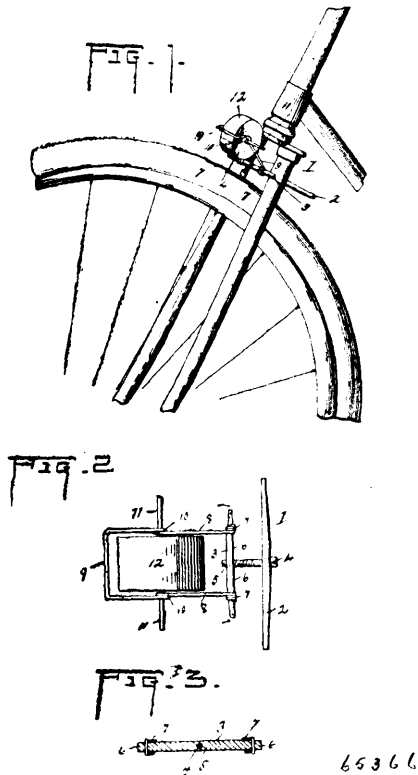


Henry J. Faust, Denmark, South Carolina, U.S.A., 15th December, 1899; 6 years. (Filed 16th August, 1899.)

Claim.—1st. The combination of an axle provided in its spindle with a groove and having an opening extending through the shoulder or enlargement at the inner end of the spindle and registering with the groove to form a vent, said axle being provided at the inner edge of the shoulder or enlargement with a straight edge or face, an

axle bed, a clip embracing the axle and the axle bed, and oil receptacle mounted up in the axle and arranged between the straight face or edge of the enlargement or shoulder and the adjacent end of the axle bed and provided with an arm or plate interposed between the latter and the axle, and a tube extending from the receptacle through the opening of the groove, substantially as described. 2nd. The combination with an axle, of an oil receptacle mounted thereon and having a tube extending to the spindles, a longitudinally movable rod arranged within the tube, and a hinged cover provided with means for actuating the rod, whereby the latter will be automatically operated as the cover is opened and closed, substantially as described. 3rd. The combination with an axle, of a receptacle mounted thereon and provided with a tube extending to the spindle, a rod arranged within the tube and adapted to project therefrom, a spring arranged within the receptacle and connected with the rod, and an arm mounted on the cover of the receptacle and arranged to depress the spring and draw the rod inward when the cover is closed, whereby the rod will be caused to spring outward when the cover is opened, substantially as described. 4th. The combination with an axle, of an oil receptacle mounted thereon and having a tube extending to the spindle, a longitudinally movable rod arranged within the tube, and a hinged cover provided with means for actuating the rod whereby the latter will be operated automatically when the cover is opened and closed, said means being located wholly within the receptacle when the cover is closed, substantially as described.

No. 65,366. Bicycle Brake. (*Frien de Bicycle.*)



Anthony Wayne Diehl, Zion's Grove, Pennsylvania, U.S.A., 15th December, 1899; 6 years. (Filed 26th August, 1899.)

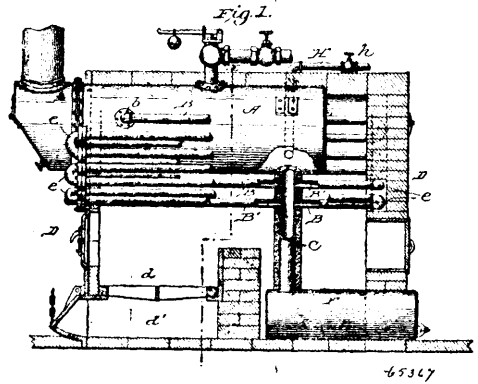
Claim.—A bicycle brake, comprising a clamp formed of two bars connected by a bolt and adapted to be secured to the front fork of a bicycle, the rear bar of said clamp being extended to form foot rests, oppositely disposed spring arms formed with coils at their rear ends surrounding the front clamp bar and connected thereto, a shaft mounted in said arms and extended laterally on each side thereof, and a friction roller mounted on said shaft, the spring arms being connected to the clamp in such manner that the roller will be normally out of contact with the tire, substantially as described.

No. 65,367. Steam Boiler. (*Chaudière à vapeur.*)

Percy W. Burke, Chicago, Illinois, U.S.A. 15th December, 1899; 6 years. (Filed 5th September, 1899.)

Claim.—1st. The combination with a fire tube or flue steam boiler, of a mud drum below the same, a mud drum leg connecting the boiler with said drum, and water circulating pipes having return bends connecting near the top, at one end of the boiler, and directly with said leg below the boiler, whereby the heavy impurities will

be deposited in the mud drum and left undisturbed by the water circulated above the same, substantially as described. 2nd. The



combination with a fire tube or flue steam boiler, of a mud drum below the same, a mud drum leg connecting the boiler with said drum, water circulating pipes having return bends connecting near the top, at one end of the boiler, and directly with said leg, on opposite sides, below the boiler, and a feed water pipe connecting with said flue boiler and discharging near the opening of the mud drum leg, whereby the heavy impurities will be deposited in the mud drum and left undisturbed by the water circulated above the same, substantially as described. 3rd. The combination with the fire tube or flue steam boiler, of a mud drum below the boiler, the mud drum leg C, connecting the bottom of the boiler at the rear with said drum, one or more water circulating coils as B, B', composed of tubes having return bends, connecting at the upper end with the front end of the boiler, and at the lower end directly with said leg C, on opposite sides, and a feed water pipe connecting directly with said flue boiler, whereby the impurities will be carried by the circulating currents and deposited in the mud drum and left undisturbed by the currents of water circulated above, substantially as described.

No. 65,368. Combined Letter Box and Bell.

(*Boîte à lettre et cloche.*)

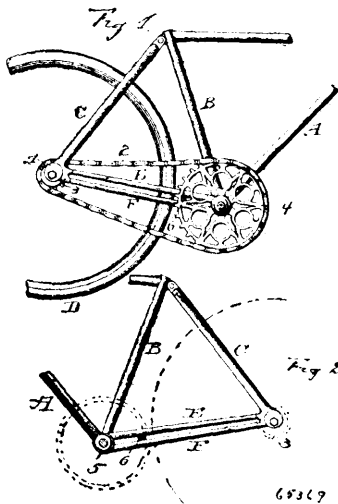


Harvey Elrod, Lodoga, Indiana, U.S.A., 15th December, 1899; 6 years. (Filed 5th September, 1899.)

Claim.—1st. In a device of the class described, the combination with a door having a slot, a movable cover for the same, and a box mounted on the inner face of the door, of an electric bell, a circuit closer located within the box and connected with the bell and provided with a push button, a lever fulcrumed within the box, arranged to engage the push button and connected with the cover, whereby when the same is opened, the bell will be rung, substantially as described. 2nd. In a device of the class described, the combination with a door having a slot, of a box mounted on the inner face of the door, an electric bell, a circuit closer arranged within the box and connected with the bell and having a push button, a movable plate or cover arranged over the slot, and a spring actuated lever fulcrumed between its ends and having one end arranged to engage the push button, its other end being connected with the plate or cover, substantially as described. 3rd. In a device of the class described, the combination with a door having a slot, of a box mounted

on the inner face of the door and provided with a horizontal partition forming an upper compartment and having a slot, an electric bell, a battery arranged within the compartment and connected with the bell, inner and outer circuit closers mounted on the door and in the said compartment and connected with the bell, a lever arranged to engage the inner circuit closer and extending through the slot of the partition, and a plate or cover arranged over the slot of the door and connected with the said lever, substantially as described. 4th. In a device of the class described, the combination with a box having a horizontal partition provided with a slot, of supports located above the partition and arranged adjacent to the slot, a lever fulcrumed on the supports and extending through the slot, an electric bell, a circuit closer connected with the same and arranged to be engaged by the lever, a spring connected with the lever and holding the same normally out of contact with the circuit closer, and a lid or cover connected with the lever and adapted to operate the same, substantially as described.

No. 65,369. Bicycle. (Bicycle.)



Charles Sanford Dikeman, Torrington, Connecticut, U.S.A., 15th December, 1899; 6 years. (Filed 25th September, 1899.)

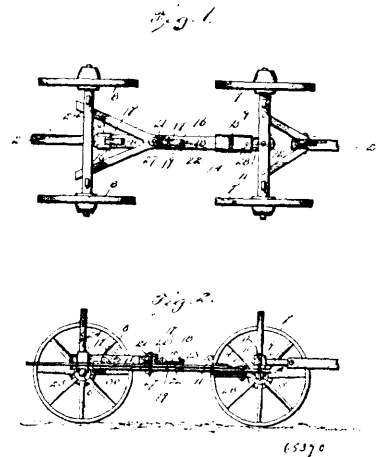
Claim.—1st. In a bicycle, the combination with the rear fork and crank hanger, of two tubes or bars disposed on each side of the rear wheel, the tubes of each pair being tapered and arranged to gradually diverge from their smaller to their larger ends, substantially as set forth. 2nd. In a bicycle, the combination with the rear fork and crank hanger, of two tubes or bars disposed on each side of the rear wheel, the tubes of each pair being tapered from end to end and arranged to gradually diverge from their rear to their forward ends, the rear small ends being rigidly and permanently secured to the lower end of the rear fork in front of the rear axle, and the forward ends to the upper and lower portions of the crank hanger, substantially as set forth. 3rd. In a bicycle, the combination with the rear fork and crank hanger, of two tapering tubes or bars arranged to gradually diverge from their rear to their forward ends and connected at their rear and smaller ends with the rear fork at a point in front of the rear axle, and at their forward and large ends to the upper and lower portions of the crank hanger, and a stud interposed between the tubes near the crank hanger, substantially as set forth.

No. 65,370. Waggon Reach. (Extension de wagon.)

Albert T. Barry, Opal, Wyoming, U.S.A., 15th December, 1899; 6 years. (Filed 19th September, 1899.)

Claim.—1st. A waggon reach, comprising two elements slidably connected, perforations in said elements adapted for alignment, and a strap extending upwardly and rearwardly of the reach and adapted to receive the hounds between it and the reach. 2nd. A waggon reach, comprising two elements slidably connected, a plate carried by one of said elements and a second plate removably connected with the first named plate and having an upwardly and rearwardly extending portion adapted to receive the hound between it and the reach. 3rd. A waggon reach, comprising two elements slidably connected and having perforations therein adapted to align, plates secured to one of said elements, a plate adapted to be connected alternately and removably with the first named plates and having an upwardly and rearwardly extending portion adapted to receive the hounds. 4th. A waggon reach, comprising two elements slidably connected and having perforations adapted to align, a plate removably connected with one of said elements and extending upwardly and rearwardly thereof, said rearward exten-

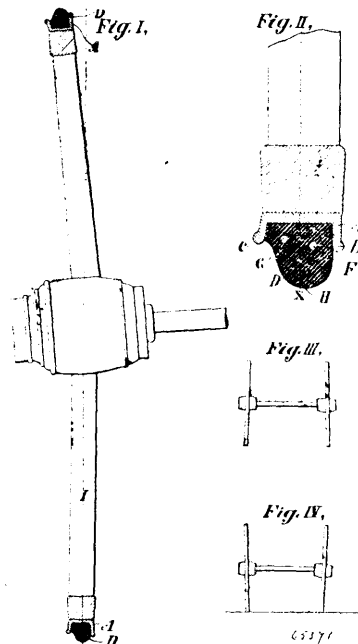
sion having a perforation in alignment with one of said elements and adapted to align with the perforations in the other element,



said rearwardly extending portion being adapted to receive the hounds between it and the adjacent reach element, and a pin adapted to be passed through the reach, said plate, and the hounds. 5th. A waggon reach, comprising two elements, slidably connected, said elements having perforations adapted to align, plates carried by one of said elements, a plate adapted to engage the first named plate alternately and having an upwardly and laterally extending portion, a perforation in the laterally extending portion in alignment with the adjacent element of the reach, said perforations being adapted to align with a perforation in the lower element of the reach, and a bolt passed through said perforation and adapted to engage the hounds.

No. 65,371. Elastic and Metal Vehicle Tires. (Bande elastique et metallique de vehicules.)

(Bande elastique et metallique de vehicules.)

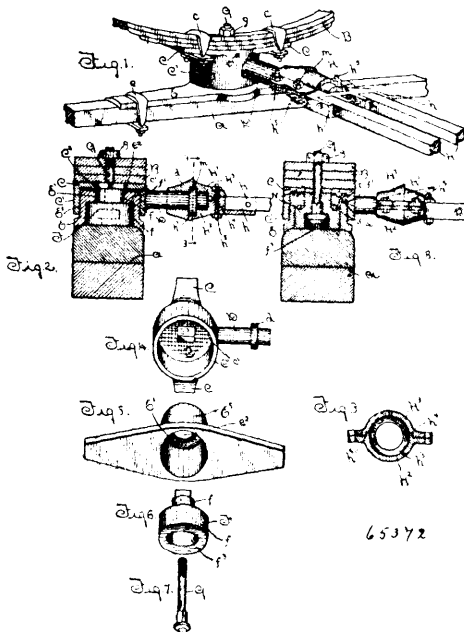


Howard M. DuBois, Ashbourne, Pennsylvania, U.S.A., 15th December, 1899; 6 years. (Filed 16th September, 1899.)

Claim.—1st. An elastic tire for a vehicle fitted into a grooved or flanged metal tire in which the inner flange is longer than the outer flange, so shaped that the part resting upon the road bed shall have its centre inward from the centre of the metal tire and kept in place by means of wires which are tightened about the wheel through holes in the elastic material, each hole being in a different horizontal plane from the base of the metal tire, substantially as hereinbefore described. 2nd. An elastic tire so shaped that the grater bulk of the elastic material is inward from a line erected perpendicular to the centre of the plane of the metal channel upon which the tire rests, substantially as hereinbefore described. 3rd. A vehicle wheel

with a flanged metal tire the flange inward towards the vehicle being longer than the outer flange, so that an elastic tire, shaped with the greater bulk of the elastic material inward from a plane perpendicular to the central point of the metal tire, when fastened in the metal channel, will bear against the longer flange, substantially as shown and for the purposes specified. 4th. A vehicle wheel with a flanged metal tire in which the flange inward toward the vehicle is heavier than the outer flange, so that an elastic tire, shaped with the greater bulk of the elastic material inward from a plane perpendicular to the centre of the metal tire, will bear against the heavier flange, substantially as shown, for the purposes specified. 5th. An elastic tire having holes throughout its length through which retaining wires extend, each in a different horizontal plane, substantially as shown for the purposes specified. 6th. A vehicle wheel with a flanged metal tire, in which the flange inward towards the vehicle is longer and heavier than the outer flange, into which metal tire is fitted an elastic tire shaped with the greater bulk of the elastic material inward from a plane perpendicular to the centre of the metal tire, so that the elastic material will bear against the long, heavy flange, the elastic material being held in place by two or more wires extending through the elastic material about the wheel, substantially as described, and for the purposes specified. 7th. A vehicle wheel with a flanged metal tire, in which the flange inward towards the vehicle is longer and heavier than the outer flange, each flange being perpendicular to, or inclined at any angle from, the metal tire, thus making a groove into which is fitted an elastic tire, shaped with the greater bulk of the elastic material inward from a plane perpendicular to the centre of the metal tire, so that the elastic material will bear against the long, heavy flange, the elastic material being held in place by two or more wires extending through the elastic material about the wheel, substantially as described and for the purposes specified.

No. 65,372. Fifth Wheel. (Rou d'avant train.)

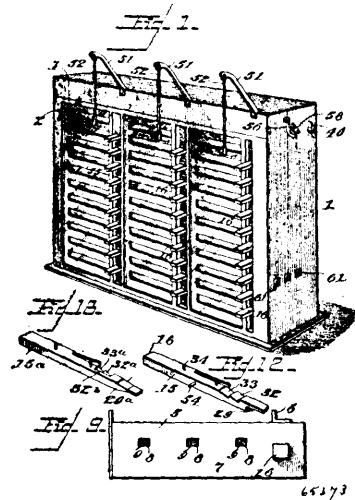


Thomas H. C. Beall, Cicero, Indiana, U.S.A., 15th December, 1899; 6 years. (Filed 11th September, 1899.)

Claim.—1st. A head block having an under side annular flange and an opening with straight sides, concentric with the flange, and also having an outside lateral extension to which the reach is coupling, an axle plate having an upwardly projecting turret or sleeve with an internal flange, a plug to fit the bore of the turret and having a reduced portion to extend through the top opening of the turret and the upper end of said plug being shaped to fit the square sided opening through the head block, through which it is projected, said plug having a longitudinal central opening, and a king bolt to hold the parts together, substantially as described and specified. 2nd. A head block with an under side annular flange and an opening concentric with the flange said flange having a lateral extension to which the reach is fastened, an axle plate having upwardly projected cylindrical walls with an internal flange at the top, a plug to fill the bore of the axle plate cylinder and reduced to pass through the opening at the top, said plug having its end reduced and shaped to fit the opening through the head block said plug and opening through the head block being shaped to compel the head block and plug to move together, said plug having a longitudinal opening, means substantially as described, to keep the flange at the top of the axle plate cylinder from being impinged between the head block and the plug,

and a king bolt to hold the several parts together, substantially as described. 3rd. An axle plate having a top cylindrical flange or turret open at the bottom, but partially closed at the top by an internal flange, a plug fitting into the cylindrical opening in the turret and having a reduced portion which is projected through the opening between the flange, the end of said reduced portion of the plug being squared at a suitable distance above the flange for the purposes specified, and said plug being provided with a central longitudinal opening, a head block having an underside flange or sleeve to surround the flange or turret of the axle plate and having a squared opening through which the reduced and squared end of the plug is inserted, said flange or turret having a laterally extended arm with an annular flange near its end, a king bolt, a split housing to fit over the end of the arm having a groove to form a seat for the flange of the arm, the meeting faces of the two parts of the housing being tongue and grooved to make dust proof joint as shown and the housing having indented seats to receive the end or ends of the reach or reaches, substantially as described and specified.

No. 65,373. Voting Machine. (Machine à voter.)



Lenna R. Winslow, Kansas City, Missouri, U.S.A., 15th December, 1899; 6 years. (Filed 25th September, 1899.)

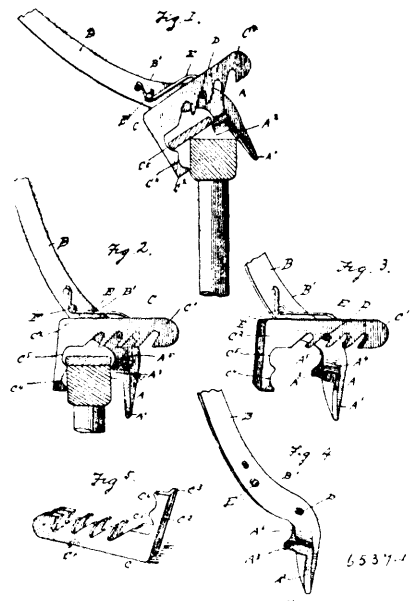
Claim.—1st. In a voting machine, the combination with a series of voting slides, and tally mechanisms operatively connected therewith of replacing mechanism for simultaneously returning the slides to their normal positions, and including a movable member capable of continued movement after the slides have reached their normal position, and an alarm mechanism having a member arranged in the path of said movable member of the replacing mechanism during the said movement thereof, whereby the alarm is sounded subsequent to the complete replacement of the slides, substantially as specified. 2nd. In a voting machine, the combination with a series of voting slides, and tally mechanisms operatively connected therewith, of replacing mechanism for simultaneously returning the slides to their normal positions, the same including a movable member mounted for contact with the slides, and capable of continued movement after the slides have reached their normal positions, and an alarm mechanism having an actuating arm arranged in the path of said continued movement of the movable member, whereby the arm is engaged to sound the alarm subsequent to the complete replacement of the slides, substantially as specified. 3rd. In a voting machine, the combination with a series of parallel voting slides, tally mechanisms operatively connected therewith, of replacing mechanism for simultaneously returning the slides to their normal positions, the same having a frame disposed in a plane perpendicular to the slides, and provided with parallel swinging supports, for carrying the frame in an arc-shaped path, the terminal portion of said path being perpendicular to the direction of movement of the slides, exterior means for actuating the swinging supports, and an alarm mechanism having an actuating arm in the path of said frame at the limit of its said perpendicular movement, whereby the alarm is sounded subsequent to the complete replacement of the slides, substantially as specified. 4th. In a voting machine, the combination with a series of movable parts, and tally mechanisms operatively connected with said movable parts for actuation thereby, of replacing mechanism for simultaneously returning the parts to their normal positions, retaining devices normally disposed to secure the movable parts in their adjusted positions, trip mechanism arranged in operative relation with said retaining devices for disengaging from the slides, and means for actuating the trip and replacing mechanisms, to release and return the slides, substantially as specified. 5th. In a voting machine, the combination with a series of movable parts, and tally mechanisms operatively connected with said movable parts, of replacing mechanism

ism including a movable frame for simultaneously returning the adjusted movable parts to their normal positions, retaining devices normally positioned to engage and secure the movable parts in their adjusted positions, a trip frame having members in operative relation with said retaining device and means for simultaneously operating the trip frame and replacing mechanism, substantially as specified. 6th. In a voting machine, the combination with a series of movable parts, and tally mechanisms operatively connected with said movable parts, of replacing mechanisms for simultaneously returning the movable parts to their normal positions, retaining devices normally positioned to engage and secure the movable parts in their adjusted positions, a trip frame having its members arranged in operative relation with said retaining devices, and operating connections between trip frame and replacing mechanism, substantially as specified. 7th. In a voting machine, the combination with a series of movable parts, and tally mechanisms operatively connected with said movable parts, of replacing mechanism including a rock shaft, retaining devices normally positioned to engage and secure the movable parts in their adjusted positions, a trip frame having its members arranged in operative relation with said retaining devices, rocking levers supporting the trip frame, and cams on said rock shaft for actuating the rocking levers, substantially as specified. 8th. In a voting machine, the combination with a series of movable parts having ratchet teeth and tally mechanisms operatively connected with said movable parts, of retaining pawls for engagement with the ratchet teeth of the movable parts, a trip frame having a plurality of trip rods arranged respectively in operative relation with ears or projections on said pawls, a replacing device, and means for operating the same to engage and return the movable parts to their normal positions, and operating connections between the trip frame and said replacing device, substantially as specified. 9th. In a voting machine, the combination, with a series of tally mechanisms of slides fitted in fixed guides in operative relation with said tally mechanisms and provided with cam faces, a transverse guide arranged contiguous to each series of tally mechanisms, and provided with openings through which said slides extend, slide locking bolts mounted for movement in said guide and provided with terminal cam faces arranged in the planes of and adapted to co-act with the cam faces of the slides, whereby the operation of one of the slides arranges the extremities of the locking bolts in the paths of the cam faces on the remaining slides of the series, the slides being provided in rear of their cam faces with lateral extensions which overhang and rest upon the ends of the bolts to hold them against upward displacement, and replacing mechanism adapted to engage the projecting rear portions of the slides, substantially as specified. 10th. In a voting machine, the combination with a series of tally mechanisms, of a corresponding number of springless movable parts mounted for sliding movement, locking devices for engaging said movable parts successively at a plurality of spaced points, to prevent subsequent movement of said parts in the opposite direction, means for communicating motion from each movable part to the co-operating tally mechanism after the initial engagement of said movable part by its locking device, locking bolts for actuation by a movable part during its initial movement, prior to its first engagement by a locking device, to secure the remaining movable parts in the same series against simultaneously or subsequent movement, and means for releasing and returning the movable parts to their normal positions, substantially as specified. 11th. In a voting machine, the combination with a series of tally mechanisms, of a corresponding number of springless movable parts mounted for sliding movement, locking devices for engaging said movable parts successively at a plurality of spaced points to prevent subsequent movement of said parts in the opposite direction, means operatively connected with each tally mechanism for engagement by the co-operating movable part after the initial engagement of said movable part by its locking device, slide locking bolts arranged in operative relation with said movable parts, and adapted to be actuated by the movement of one movable part to prevent the movement of other movable parts in the same series, said actuation of the slide locking bolts being accomplished prior to the initial engagement of the locking devices with the movable part, and connected releasing and returning mechanism for the movable parts, substantially as specified. 12th. In a voting machine, the combination with a series of tally mechanisms and slides operatively connected therewith, of a straight ticket voting device including an operating lever, a rod connected at one end to said operating lever, a link supporting the other end of the rod, and arranged parallel with said lever and projections on the slides arranged in the path of said rod, substantially as specified. 13th. In a voting machine, the combination with a series of tally mechanisms, and movable parts, operatively connected therewith, of a straight ticket voting device including an operating lever, a rod connected at one end to said operating lever, a link supporting the other end and arranged parallel with the lever, and means in connection with said movable parts, arranged in the path of said rod for actuation thereby to advance the movable parts and actuate their respective tally mechanisms, substantially as specified. 14th. In a voting machine, the combination with slides arranged in a vertical series, tally mechanisms operatively connected with said slides for actuation thereby, the slides having upper and lower bevel or cam faces, slide locking bolts arranged between contiguous slides, and having shoulders for engagement by the contiguous bevel or cam faces of the slides, also having notches

extending partially across the upper surface thereof to leave guide ribs for preventing engagement of the slide locking bolts with the notches, pawls for engaging the notches to prevent return movement of the slides, trip mechanism for disengaging the pawls from the notches, and replacing mechanism for returning the slides to their normal positions, substantially as specified. 15th. In a voting machine, the combination with a casing having a transparent front wall, and a plurality of tally mechanisms, each having inspection openings adapted to be viewed through the transparent wall of the casing, and means for actuating said tally mechanism of an opaque shield common to plurality of tally mechanisms, interposed between said transparent wall and the tally mechanisms, and provided with openings adapted to register with the several inspection openings of the tally mechanism, said shield being mounted in guides for vertical upward movement to secure such registration of its openings with those of the tally mechanism, and means for moving the shield, including an exposed shifting lever, located exteriorly of the casing, an arm 57 arranged within the casing and permanently connected with the shield and locking devices for securing said lever when the shield is in its normal position with its openings out of registration with these of the tally mechanism, substantially as specified. 16th. In a voting machine, a tally mechanism having a plurality of ratchet wheel dials of different denominations operatively connected with said ratchet wheels, means for communicating motion from one dial to the next of higher denominations, actuating devices for the ratchet wheel connected with the dial of lowest denomination, a resetting device, consisting of a plurality of shifting pinions adapted to be arranged in operative relation with gears carried by the dials and normally arranged out of engagement therewith, substantially as specified. 17th. In a voting machine, a tally mechanism having a plurality of dials operatively connected whereby motion is communicated from one dial to the next of higher denomination, and means for actuating the dial of lowest denomination of a resetting device having a plurality of pinions, means for simultaneously actuating said pinions and mutilated gears carried by the dials for engagement by said pinions, substantially as specified. 18th. In a voting machine, a tally mechanism having a plurality of dials, means for communicating motion from one dial to the next of higher denomination, and operating devices for the dial of lowest denomination, a resetting device having an adjustable frame, a plurality of pinions carried by said frame and operatively connected for simultaneous rotation, and mutilated gears carried respectively by the dials and adapted to be engaged respectively by said pinions when the shifting frame is advanced, substantially as specified.

No. 65,374. Tire Setter and Placer.

(Appareil à assujettir les bandages.)

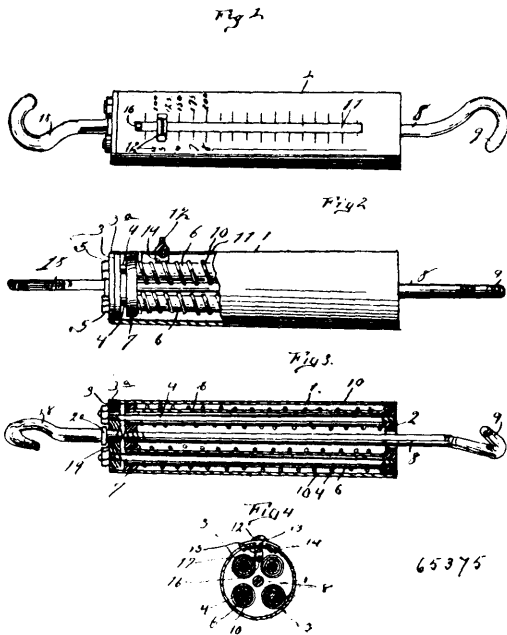


Samuel R. Duvall, Ellicott City, Maryland, U.S.A., 15th December, 1899; 6 years. (Filed 8th November, 1899.)

Claim. 1st. In a tire setter and placer, consisting of a fixed jaw, having a transverse shoulder or flange adjacent its end and also formed with a concavity beyond said transverse shoulder or flange, and a movable jaw pivotally connected to the fixed jaw and adjustable thereon, said movable jaw having a hook at its end, the inner face of said hook having one or more concavities or recesses adapted

to receive the tire, substantially as shown and described. 2nd. In a tire setter and placer, consisting of a fixed jaw, having a flanged end and a movable jaw having a hook end, said movable jaw being slitted longitudinally and provided with a series of notches, the pivot stud fixed upon the fixed jaw, and the spring for holding the fixed and movable jaws in position, substantially as shown and described. 3rd. In a tire setter and place, comprising a fixed jaw, covered and flanged as described, the movable jaw having a hook end, said end having one or more recesses or concavities, said movable jaw being slitted longitudinally, and having a series of notches produced in said slitted portion, the pivot stud carried by the fixed jaw, and the spring fixed upon the fixed jaw and adapted to bear upon the movable jaw, substantially as shown and described. 4th. In a tire setter and placer, the combination with the fixed jaw, having a shank or handle integral therewith, said fixed jaw being curved as described, flanged or flattened and pointed at its end, and having a transverse flange arranged upon said flattened and pointed portion, the movable jaw slitted longitudinally and having a hook at its end, said hook having one or more concavities or recesses produced therein, the slitted portion of the movable jaw having a series of notches produced therein, adapted for engagement with the pivot stud, carried by the fixed jaw, and a spring arranged upon said fixed jaw for the purpose of holding the movable jaw in position, substantially as shown and described.

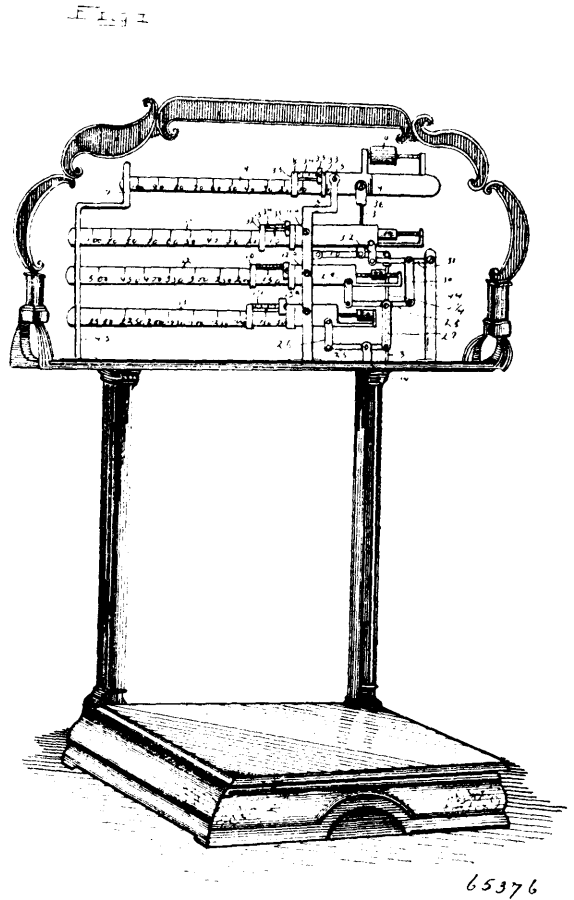
No. 65,375. Spring Scales. (Bascule à ressort.)



Samuel Goodbaudy, Miami, Indian Territory, U.S.A., 15th December, 1899; 6 years. (Filed 11th October, 1899.)

Claim.—1st. In spring scales, the combination with a cylindrical casing having heads fixed in its opposite ends, of a follower arranged to freely move in said cylinder and having a plurality of perforations, a hooked rod freely passing through one of said heads and fixed at its inner end to said follower, a plurality of tubular guides bearing at one end against said head and at their other ends loosely passing through the perforations in the follower, coiled springs disposed about said tubular guides between the said head and the follower, and a movable index actuated by the follower, substantially as described. 2nd. In spring scales, the combination with a cylindrical casing having heads fitted in the opposite ends thereof, of tie bolts connecting said heads together, tubular guides disposed about said tie bolts, a perforated follower arranged to freely slide in the cylinder over said tubular guides, coiled springs disposed about said tubular guides, a hooked rod freely passing through said head and attached at its inner end to the follower, substantially as described. 3rd. In spring scales, the combination with a cylindrical casing having a head screwed into one end and a flanged head fitted over the opposite end, of a plurality of tie rods screwed at one end into one of said heads and projecting at their opposite ends through the other head, nuts screwed over said projecting ends, tubular guides disposed about said tie rods, a perforated follower arranged to freely slide in the cylinder over said tubular guides, coiled springs disposed about said tubular guides between the follower and one of the heads, a hooked rod freely passing through the said head and attached at its inner end to the follower, a hooked rod swivelled in the other head, and a movable index actuated by the follower, substantially as described.

No. 65,376. Weighing Scales. (Bascule.)

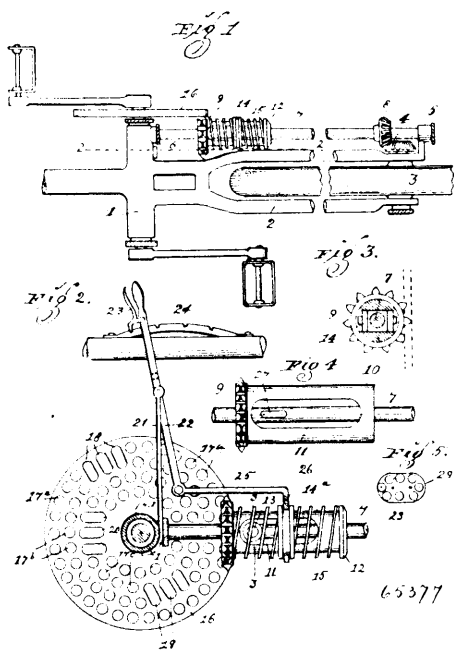


Chester L. Bell, El Paso, Texas, U.S.A., 15th December, 1899; 6 years. (Filed 26th September, 1899.)

Claim.—1st. In a weighing scale, the combination with a platform lever, of a tare beam having an adjustable poise, a weighing beam also having an adjustable poise, a motion communicating connection between the platform lever and the tare beam, and an independent motion communicating connection between the platform lever and the weighing beam, whereby the platform lever may impart differential throws to said beams, substantially as specified. 2nd. In a weighing scale, the combination with the platform lever, of a tare beam provided with an adjustable poise, a weighing beam also provided with an adjustable poise, and independent connections between the platform lever and said beams for communicating the motion of the lever successively to the tare beam and the weighing beam, the connections of the tare beam including a lever or levers of the second order, substantially as specified. 3rd. In a weighing scale, the combination of a series of weighing beams provided with independent weighing poises, means for limiting the weighing movements of said beams, and a series of connections between the weighing beams for communicating motion from one beam to the next, successively, said connections including levers of the third order, to one which is connected to the scale or platform rod, substantially as specified. 4th. In a weighing scale, a series of weighing beams provided with independent poises, stops for limiting the weighing movements, respectively, of said beams for communicating motion from one beam to the next, successively, said connections, and connections between the beams consisting of levers of the third order, one end of each of which is suspended from a weighing beam, and means for connecting the other end of the levers of higher denomination with intermediate points of the next levers of lower denomination, the weight or platform rod being connected with the lever of highest denomination, substantially as specified. 5th. In a weighing scale, the combination of weighing beams provided with independent weighing poises, connecting levers of the third order, each of which is connected at one end with the heel of one of the weighing beams, the other end of each lever of higher denomination being connected with an intermediate point of the lever of next lower denomination, the lever of lowest denomination having a fixed terminal fulcrum, and means for applying weight to an intermediate point of the lever of highest denomination, substantially as specified. 6th. In a weighing scale, the combination with weighing beams, connections between

the heels of the weighing beams, including levers of the third order, and connections between each lever of higher denomination and the next of lower denomination, the weight of the platform rod being connected with the lever of highest denomination, and adjustable poises mounted respectively upon the weighing beams, and each having an auxiliary poise adjustable parallel with the beam, substantially as specified. 7th. In a weighing scale, the combination of a series of weighing beams of different denominations provided with independent weighing poises, means for limiting the weighing movements of said beams, and a series of connections for communicating motion successively to beams of lower and higher denomination, the weight of platform rod being applied to the connection of highest denomination, and each connection becoming operative to communicate motion as the beam of lower denomination is checked at the limit of its weighing movement, substantially as specified. 8th. In a weighing scale, the combination with weighing beams of different denominations, connections between the heels of the weighing beams, including levers, and connections between each lever of higher denomination and the next of lower denomination, the weight or platform rod being connected with the lever of highest denomination, and poises mounted respectively upon the weighing beam, substantially as specified.

No. 65,377. Changeable Speed Gearing.
En gronage de vitesse variable.

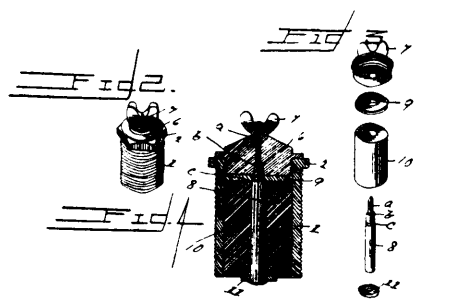
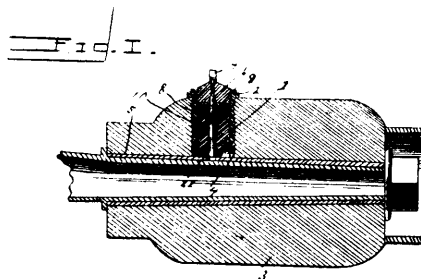


Lester D. Ferris, Hood River, Oregon, U.S.A., 15th December, 1899; 6 years. (Filed 27th September, 1899.)

Claim.—1st. In a device of the class described, a driven shaft, a disc rigidly fixed thereon, in which disc is formed a plurality of concentric rows of apertures, each row being connected to the next adjacent row by a plurality of parallel slots, a counter shaft rotatably arranged, a sleeve arranged to slide upon said counter shaft, and a toothed wheel integral with said sleeve, which toothed wheel meshes in the apertures of the disc, substantially as specified. 2nd. In a device of the class described, a driven shaft, a disc rigidly fixed thereon, in which disc is formed a plurality of concentric rows of apertures, each row being connected to the next adjacent row by a plurality of parallel slots, a rotatably arranged counter shaft, a sleeve arranged to slide upon said counter shaft, a toothed wheel integral with said sleeve, which toothed wheel meshes in the apertures of the disc, and means for moving the sleeve upon the counter shaft, substantially as specified. 3rd. In a device of the class described, a driven shaft, a disc rigidly fixed thereon, in which disc is formed a plurality of concentric rows of apertures, each row being connected to the next adjacent row by a plurality of parallel slots, a counter shaft rotatably arranged, a sleeve arranged to slide upon said counter shaft, a toothed wheel integral with said sleeve, which toothed wheel meshes in the apertures of the disc, a grooved collar arranged to slide upon the sleeve, expansive coil springs arranged upon said sleeve on each side of said collar, and means whereby said collar is moved upon said sleeve, substantially as specified. 4th. In a changeable speed gearing, a driven shaft, a disc rigidly located thereon, in which disc is formed a plurality of concentric rows of

apertures, which apertures are of uniform size and arranged at equal distances apart, each of said rows of apertures being connected to the next adjacent row by means of a plurality of parallel slots, a counter shaft rotatably arranged, a toothed wheel arranged to slide upon said counter shaft, which toothed wheel meshes in the apertures of the disc, and means for moving said toothed wheel longitudinally upon the counter shaft, substantially as specified.

No. 65,378. Axle Lubricator. (*Graisseur d'essieu.*)



65378

James Cleavenger, Waynesburg, Pennsylvania, U.S.A., 15th December, 1899; 6 years. (Filed 26th September, 1899.)

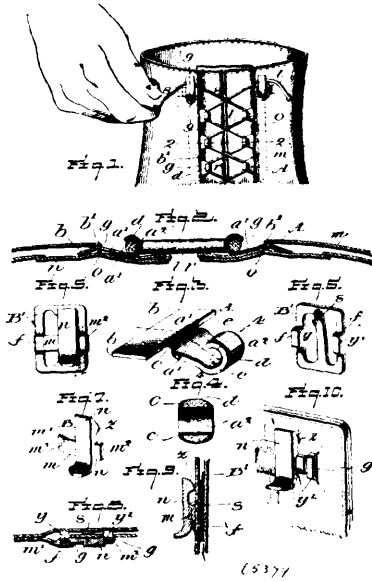
Claim.—An axle lubricator comprising a tube adapted to be fitted within an opening formed within a vehicle hub, and provided with an interiorly threaded portion at its outer end, a plunger stem provided near one end with a pair of concentric shoulders in different planes, a solid cylindrical rubber plunger secured upon the stem and having a sliding registering fit within the tube, said plunger being of a size nearly equaling the entire interior area of the tube, an exteriorly threaded closure plug revolvably mounted upon one end of the stem, and a collar or disc interposed between the contiguous ends of the plunger and plug and fitting upon the other of said shoulders of the stem, said collar or disc permitting a free and independent rotation of the plug, substantially as set forth.

No. 65,379. Fastening Device for Shoes.
(Attache pour chaussures.)

The Gates Lacing Hook Company, Wilmington, Delaware, assignee of William Henry Gates, Baltimore, Maryland, U.S.A., 18th December, 1899; 6 years. (Filed 30th October, 1899.)

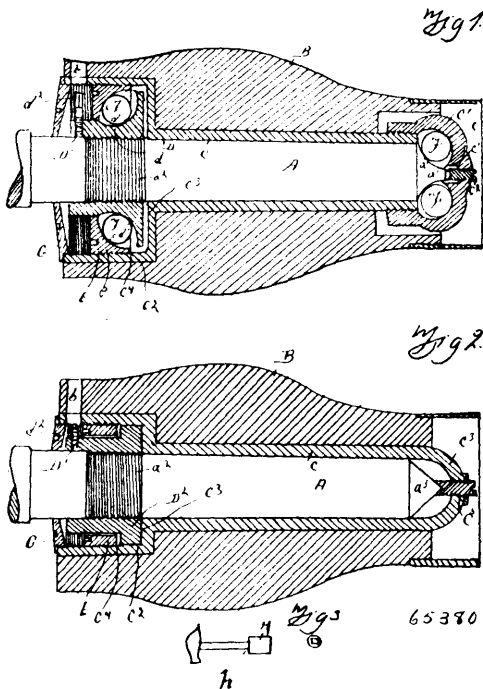
Claim.—1st. A lacing hook or fastener A formed essentially of two parts or members inclined relatively to each other whereby when the fastener rests upon the edges of such parts or members, its central portion is elevated, and a hook integral with and carried by one of said parts at its lower edge, substantially as set forth and illustrated in figures 1-4 of the accompanying drawing. 2nd. A lacing hook or fastener comprising the upward and forward inclined plate *b*, the downward and forward inclined limb *a*¹ and the hook proper *a*², substantially as herein shown and described. 3rd. A lacing hook or fastener, provided with a hook proper *a*² in the form of a slotted tube or cylinder having at its cylindrical ends outward curved flanges *c* and a covering for the cylinder, said flanges assisting in holding said covering in place and serving to strengthen the hook and to form rounded bearings at the ends thereof, substantially as set forth. 4th. A lacing hook comprising an upward and forward inclined plate *b*, a downward and forward inclined limb *a*¹, together constituting a tripod like support, the part *a*¹ being provided with the shoulders *c*, and a hook proper *a*², substantially as set forth. 5th. A laced shoe provided on either border of the lacing opening with a series of lacing hooks, the bases of which are confined within the said borders and are elevated relatively to the hooks proper, whereby when the shoe is laced the hooks proper are situated in a channel or recess bounded by the raised portion of the lacing borders,

substantially as described and illustrated in figures 1 and 2 of the drawings. 6th. A lacing cord fastener consisting of a body of cross



like shape, adapted to be applied to one face of the border or upper and composed of superposed limbs or members having an angular path for the lacing cord at the point where they cross one another, and a spring acting base adapted to be applied to the opposite face of said border or upper and to be interlocked with the said body and said border or upper, substantially as hereinbefore described and illustrated.

No. 65,380. Vehicle Bearing. (Coassinet de véhicules.)



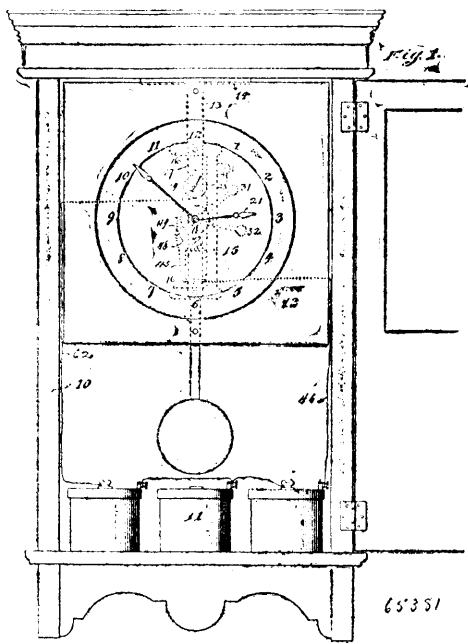
coned end of the axle, and means at the inner end of the box for securing the box to the axle. 3rd. In a vehicle bearing, the combination of the axle having a ball bearing cone at its outer end, a box on said axle, a ball bearing cup secured to said box and arranged oppositely to said cone, said cup being provided with the ball retaining lug *d*. 4th. In a vehicle bearing, the combination of the axle, a box on said axle, a nut secured to said box at its inner end, and a nut secured to the axle, and arranged to act in opposition to the nut on the box and to secure the box on the axle, said nut having an extension extending within and inwardly beyond the nut in the box, whereby the exposed inner end may be engaged to remove the nut from the axle. 5th. In a vehicle bearing, the combination of the axle, a box on said axle, a nut secured to said box at its inner end, a nut secured to the axle, and arranged to act in opposition to the nut on the box, and to secure the box on the axle, and means in the wheel for disengaging the axle nut from the axle. 6th. In a vehicle bearing, the combination of the axle having a screw thread *a*², a box on said axle, a nut secured to said box at its inner end, a nut screwed on to the axle threads *a*², and arranged to act in opposition to the nut on the box to secure the box on the axle, and means for locking the axle nut with the wheel. 7th. In a vehicle bearing, the combination of the axle, a box on the axle having the enlargement *C*², a nut secured to said box within said enlargement, and a nut secured to the axle, and arranged to act in opposition to the nut on the box to secure the box on the axle, and means in the wheel for disengaging the axle nut from the axle. 8th. In a vehicle bearing, the combination of the axle, a box on said axle having an enlargement at its inner end, forming a shoulder at the point of enlargement, a flange arranged oppositely to the shoulder, formed by the enlargement to make a retaining cavity between it and said shoulder, and a nut in said retaining cavity arranged to be secured to and detached from the axle while retained in said cavity. 9th. In a vehicle bearing, the combination of the axle, a box on said axle having an enlargement at its inner end, forming a shoulder at the point of enlargement, a flange arranged oppositely to the shoulder, formed by the enlargement to make a retaining cavity between it and said shoulder, a nut in said retaining cavity arranged to be secured to and detached from the axle while retained in said cavity, and means in the wheel for disengaging the nut from the axle. 10th. In a vehicle bearing, the combination of the axle having the screw thread *a*² thereon, the box on the axle having the opening *b* therein, a nut *D* screwed on the axle and arranged to secure the box on the axle, and a set screw *D*, arranged to lock the nut and to be brought into register with the opening *b*. 11th. In a vehicle bearing, the combination of the axle having a screw thread thereon, the box on the axle, a nut screwed on the screw thread and arranged to secure the box on the axle, and a set screw for locking the nut with the axle, which screw is arranged to form a means through which said nut may be locked with the box, for the purpose set forth. 12th. In a vehicle bearing, the combination of the axle, the box having the enlargement *C*², forming the shoulder *c*³, a nut having a ball bearing surface, and being detachably secured to the axle, and arranged within the enlargement of the box, a nut secured to the box of the enlargement, and having a ball bearing surface at the axle nut, and arranged to form with a shoulder *c*³, a nut retaining cavity in which are held the axle nut and balls when detached from the axle, and balls interposed between said nuts. 13th. In a vehicle bearing, the combination of the axle, the box having the enlargement *C*², forming the shoulder *c*³, a nut having a ball bearing surface, and being detachably secured to the axle, and arranged within the enlargement of the box, a nut secured to the box at the enlargement, and having a ball bearing surface in opposition to the ball bearing surface of the axle nut, and arranged to form with a shoulder *c*³, a nut retaining cavity in which are held the axle nut and balls when detached from the axle, the balls interposed between said nuts, and means in the wheel for disengaging the axle nut from the axle. 14th. In a vehicle bearing, the combination of the axle, the box having the enlargement *C*², forming the shoulder *c*³, a nut having a ball bearing surface, and being screwed on the axle, and arranged within the enlargement of the box, a nut secured to the box at the enlargement, and having a ball bearing surface in opposition to the ball bearing surface of the axle nut, and arranged to form with a shoulder *c*³, a nut retaining cavity in which are held the axle nut and balls when detached from the axle, balls interposed between said nuts, and means for locking said nut with the wheel, for the purpose described. 15th. In a vehicle bearing, the combination of the axle, a box on said axle having an enlargement *C*², forming a shoulder *c*³, an end thrust bearing in said box, a nut detachably secured to the axle and arranged within the enlargement and having a ball bearing surface, a nut secured to the box at the enlargement, and having a ball bearing surface in opposition to the ball bearing surface on the axle nut, and forming with the shoulder *c*³, a nut retaining cavity for the axle nut, balls interposed between the nuts, and means for adjusting the nuts to each other and relatively to the end thrust bearing. 17th. In a vehicle bearing,

John W. Chambers and George W. Dexheimer, both of Fort Atkinson, Wisconsin, U.S.A., 18th December, 1899; 6 years. (Filed 18th October, 1899.)

Claim.—1st. In a vehicle bearing, the combination of the axle, a box on said axle, ball bearing at the outer end of the box arranged to be adjusted by an axial movement of the box upon the axle, and means at the inner end of the box for securing the box to the axle, and for adjusting it longitudinally on the axle. 2nd. In a vehicle bearing, the combination of the axle having a coned end, a box on the axle, a cone screw secured in the end of the box counter to the

the combination of the axle, the box provided with the enlargement C², at the inner end of the box, an end thrust bearing in said box at the outer end of the axle, the nut D, having the cone end *d*, screwed on the axle, the nut E, having cup-end *e*, screwed in the enlargement, and the balls F.

No. 65,381. Electric Clock. (Horloge électrique.)



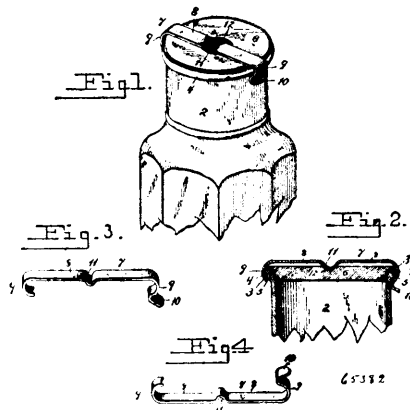
The Automatic Electric Clock Company, Kansas City, Missouri assignee of Fred Isaac Getty, Chicago, Illinois, all in the U.S.A., 18th December, 1899; 6 years. (Filed 19th September, 1899.)

Claim.—1st. In an independent electric clock, the combination with a driven shaft or arbor of the clock train, of two levers having pawl and ratchet connections with said arbor to actuate the same by gravity, an electromagnet having an armature operatively connected with said levers to alternately lift the same, an energizing circuit for said magnet, and means for making and breaking said circuit at the termination of the downward movement of each lever, substantially as described. 2nd. In an independent electric clock, the combination with a driven shaft or arbor of the clock train, of two weighted levers having pawl and ratchet connections with said arbor, said levers being so arranged that one has about half completed its descent when the other is at the beginning of its descent, an electromagnet having an armature operatively connected with said levers to alternately lift the same, an energizing circuit for said magnet, and means for making and breaking said circuit at the termination of the downward movement of each lever, substantially as described. 3rd. In an independent electric clock, the combination with a driven shaft or arbor of the clock train, of a ratchet wheel secured thereon, the said ratchet wheel having notches in its periphery equal in number to the times the magnet is energized during a single rotation of the said shaft, a weighted lever loosely mounted on said shaft and having a pawl to successively engage each of the notches of said ratchet wheel, an electromagnet provided with an armature having a lost motion connection with said lever to lift the same, an energizing circuit for said magnet, means for closing said circuit at the termination of the downward movement of said lever, and means for breaking said circuit before the said lever reaches the limit of its upward movement, substantially as described. 4th. In an independent electric clock, the combination with a driven shaft or arbor of the clock train, of a ratchet wheel mounted thereon and having its periphery alternately circular and notched, a weighted lever loosely mounted on said arbor and having a hub disc of a diameter equal to that of the ratchet wheel but partly cut away and terminating in a cam incline, an electromagnet having an armature operatively connected with said lever to lift the same, an energizing circuit for said magnet, means for making and breaking said circuit, and a detent lever bearing upon the peripheries of the ratchet wheel and hub disc and connected with and controlling the circuit making and breaking means, substantially as described. 5th. In an independent electric clock, the combination with a driven shaft or arbor of the clock train, of two ratchet wheels mounted thereon, two levers having slotted hub discs loosely mounted on said arbor between the ratchet wheels, an electromagnet having a vibrating armature, a link pivoted on said armature at one end and engaging the slots of the lever hub discs at its other end, an

energizing circuit for the magnet, and means for making and breaking said circuit at the termination of the downward movement of each lever, substantially as described. 6th. In an independent electric clock, the combination with a weighted actuating lever, and means for imparting to said lever an upward movement with excess momentum, of a pivoted stop located in the path of the lever and comprising two arms at an angle to each other, the jaw thus formed being cushioned, substantially as described. 7th. In an independent electric clock, the combination with a driven shaft or arbor of the clock train, of a ratchet wheel connected with said shaft or arbor, an electromagnet, an energizing circuit for the magnet, a weighted actuating lever having a pawl engaging the ratchet wheel to rotate the same on the downward movement of the latter, an armature arranged in proximity to the electromagnet, a link pivoted to the armature and having a pin and slot connection with the actuating lever, and a circuit maker and breaker actuated by the descending weight to close the circuit after energizing the electromagnet and thereby raising the weight, substantially as described.

No. 65,382. Jar Cap Fastener.

(Attache sur couvercles de jarres.)



The Kearns-Gorsuch Bottle Company, assignee of Charles H. Hess, both of Zanesville, Ohio, U.S.A., 18th December, 1899; 6 years. (Filed 27th November, 1899.)

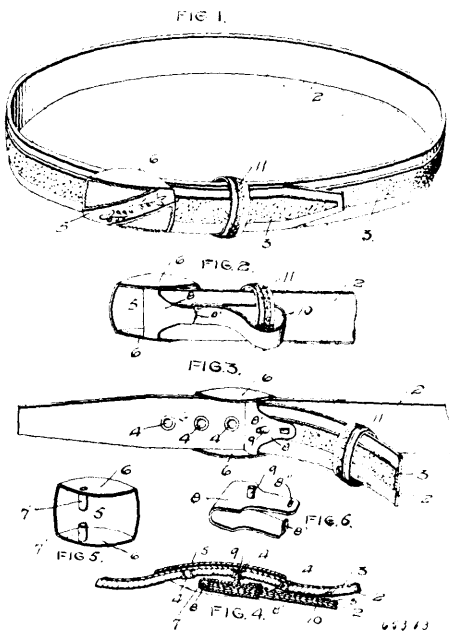
Claim.—1st. A jar cap fastener, consisting of a single spring metal strip provided at its opposite ends with engaging hooks, and at a point intermediate said hooks with a lateral binding projection for engagement with the jar cap, substantially as set forth. 2nd. A jar cap fastener, consisting of a single spring metal strip provided at opposite ends with engaging hooks projecting from the same side thereof, one of said hooks being formed with an outwardly deflected finger tongue, said spring metal strip being further provided centrally between the terminal hooks with a bend or crimp, forming at one side of the strip a binding projection adapted to engage with the central portion of the jar or cap, substantially as set forth. 3rd. The combination with a jar, bottle or similar receptacle having a removable cap, provided centrally in the upper side thereof with a retaining socket, of a fastener or clamp consisting of a single spring strip provided at opposite ends with terminal engaging hooks adapted to engage with the top edge of the neck of the receptacle, said strip being further provided centrally between its terminal hooks with a binding projection adapted to engage in the retaining socket of the cap, substantially as set forth.

No. 65,383. Buckle. (Boucle.)

Martin L. Burkhardt and John K. Mortland, both of Minneapolis, Minnesota, U.S.A., 18th December, 1899; 6 years. (Filed 25th November, 1899.)

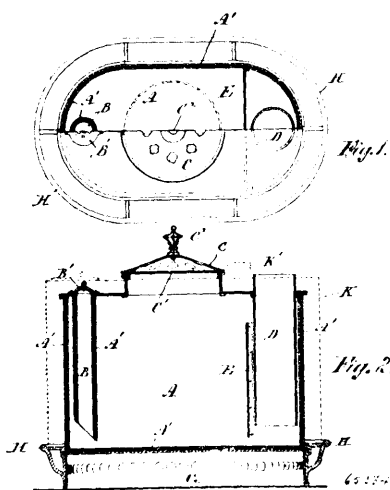
Claim.—1st. As a new article of manufacture, a buckle, comprising a frame, a U-shaped plate eccentrically pivoted thereon and having its ends secured to one end of a belt or strap, and a stud or pin provided on said plate and projecting toward said frame and adapted to enter an eyelet hole in said belt when the free end of the same is passed between said plate and said frame, substantially as described. 2nd. A buckle, comprising a frame 5 having a transverse bar upon its back at one side of the centre thereof, a plate looped around said bar and having a tongue at one end to pass through the end of the strap and enter a slot in the opposite end of said plate, and a stud provided on the inner end of said plate and adapted to enter an eyelet hole provided in the free end of the belt when it is passed between said plate and said frame, substantially as described. 3rd. A buckle, comprising a frame 5, a transverse bar provided at the rear of said frame at a point at one side of the centre thereof, a plate 8 looped around said bar and having its ends secured to one end of a belt whereby the belt is eccentrically supported upon said frame, a stud 9 provided on said plate 8 to enter an eyelet hole in the opposite or free end of the belt when the same

is passed between said bar and said frame, and said stud being a sufficient distance from said bar or pivotal support of the belt to



permit the free end of the belt to be readily disengaged from the stud by the movement of said frame, substantially as described. 4th. A buckle, comprising a frame 5 having inwardly turned flanges or lips 6 to extend over the edges of a belt, a bar 7 connecting the edges of said lips or flanges at a point to one side of the centre of said frame, a plate 8 looped around said bar and having its ends secured to one end of a belt whereby the belt is eccentrically supported upon said frame, a stud 9 provided on said plate 8 to enter an eyelet hole in the opposite end of the belt when the same is passed between said bar and said frame, and said stud being a sufficient distance from said bar or pivotal support of the belt to permit the free end of the belt to be readily disengaged from the stud by the movement of said frame, substantially as described.

No. 65,381. Stove. (Poêle.)

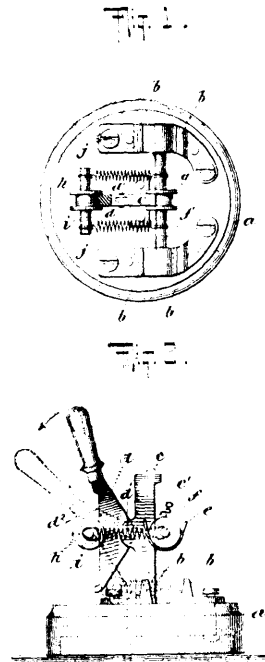


Richard Hewitt, and Frank Morgan Buckland, both of Pilot Mound, Manitoba, Canada, 18th December, 1899; 6 years. (Filed 25th November, 1899.)

Claim.—1st. A down-draft heating stove having the wall and bottom comprising two thicknesses of metal and an intervening lining A¹ of asbestos. 2nd. A down-draft heating stove having the lower end of the inlet air pipe cut to an angle of about 45 degrees,

as and for the purpose set forth. 3rd. A down-draft heating stove, having an interior partition, in combination with a smoke pipe extending downwardly to near the bottom of the stove to cause a down draft by suction, around the outside of said pipe. 4th. A down-draft heating stove having the feed apertures provided with a cone shaped cover C perforated near the apex, and having a base C² to keep the handle C² cool.

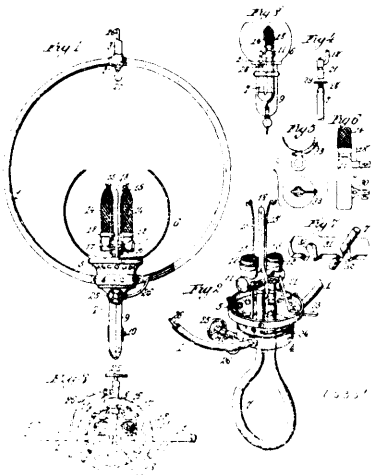
No. 65,385. Electric Switch. (Commutateur électrique.)



The Incandescent Arc Light Company, assignee of Charles J. Klein, both of New York City New York, U.S.A., 18th December, 1899; 6 years. (Filed 16th November, 1899.)

Claim.—1st. In an electric snap switch, the combination with circuit terminals, of means for closing the circuit between the terminals, comprising a plurality of bearing surfaces, one capable of being inclined with respect to the other, a plurality of moving pieces, each freely moving or sliding upon a bearing surface and a spring connection between the moving pieces whereby an electric circuit may be opened or closed by inclining one of the bearing surfaces with respect to the other, substantially as described and for the purpose set forth. 2nd. In a switch of the character described, the combination with circuit terminals, of means for closing the circuit between the terminals, comprising a fixed bearing surface, a movable bearing surface, a plurality of spring connected pieces, one bearing upon each of the bearing surfaces, whereby when the movable bearing surface is inclined with respect to the other bearing surface, a movement of opening or closing the switch is effected. 3rd. In an electric switch, the combination with circuit terminals, of means for closing the circuit between the terminals, comprising the supporting frame or bar c, the rocking lever d, and a plurality of moving pieces, one moving freely upon the supporting frame or bar, and the other moving freely upon the rocking lever, and a spring connection between the two moving pieces whereby upon movement of the rocking lever the spring connection will be effective to open or close the switch. 4th. In an electric switch, the combination with circuit terminals, of means for closing the circuit between the terminals, comprising a supporting frame and rocking lever provided with bearing surfaces capable of being made substantially parallel with, or being inclined with respect to each other, and a plurality of freely moving pieces, one co-operating with one bearing surface, and the other with the other bearing surface, and a spring connection connecting the said two moving pieces, whereby when the bearing surface are substantially parallel with each other the movable pieces will receive no motion and when the bearing surfaces are inclined with respect to each other the moving pieces will be forced by their spring connection to move in the direction of the narrowest portion of the space between the said two bearing surfaces. 5th. In a switch of the character described, the combination with circuit terminals of means for closing the circuit between the terminals comprising the upright c, the lever d pivoted thereto, the shoe a and the roller b and a spring connection forcing the shoe and roller towards each other, whereby upon swinging the lever d the switch may be opened or closed.

No. 65,386. Incandescent Vapour Lamp.
(*Lampe incandescente à vapeur.*)

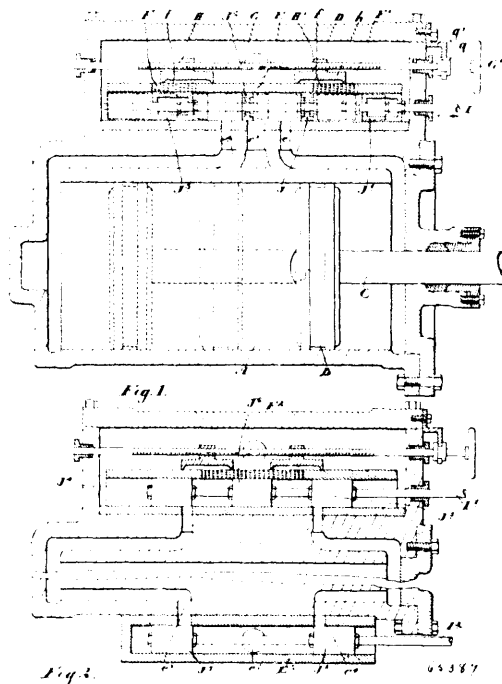


Matthew Charles McGamon, assignee of Robert Laurence Doran, both of Nashville, Tennessee, U.S.A., 18th December, 1899; 6 years. (Filed 5th August, 1899.)

Claim.—1st. In an incandescent vapour lamp, the combination with the lamp body and burners of a generator pipe or tube arranged closely adjacent to said burners and provided with a shut off valve, a mixing tube, and mechanism for regulating the air supply by varying the distance between the mixing tube and the atomizing valve. 2nd. In an incandescent vapour lamp, the combination with a lamp body and burners, of a vapour generator closely adjacent to said burners and provided with a shut off valve and an atomizing valve, and a mixing tube having one end connected with the burners and its other end adjacent to said atomizing valve. 3rd. In an incandescent vapour lamp, the combination with the lamp body of a removable generator pipe having an atomizing valve and a shut off valve attached thereto, a removable mixing tube having a burner integral therewith and adapted to support said generator pipe, and means substantially as described for regulating the air supply by varying the distance between the atomizing valve and the opening of the mixing tube. 4th. An incandescent vapour burning lamp combining a removable generator pipe having an atomizing valve and a shut off valve attached thereto and forming an integral part therewith, a removable mixing tube supported by the body of the lamp, said mixing tube being provided with means for adjustably clamping the generating tube and for regulating the distance between the opening of said mixing tube and the atomizing valve, together with a stop for regulating the closure of the shut off valve, substantially as and for the purpose described. 5th. In an incandescent vapour lamp, the combination of a globe gallery provided with a horizontally extended slot, a mixing tube supported within and by said gallery and having a looped portion depending below the gallery, and two vertically extended ends one of which is open to the atmosphere, two closely adjacent burners connected with the other vertically extended end of said mixing tube, a tubular vapour generator comprising two parallel portions in close contact with each other and located vertically between the two closely adjacent burners, a valve for controlling admission of hydrocarbon fluid to the vapour generator, an atomizing valve connected with the discharge end of the vapour generator and located above the open end of the mixing tube to deliver hydrocarbon vapour into said mixing tube, and an adjusting lever connected with said valve and projecting through the slot of the globe gallery, substantially as described. 6th. In an incandescent vapour lamp, the combination of the mixing tube having two upwardly extended ends, one of which is open to the atmosphere, the vapour distributor on the top of the other upwardly extended end of said mixing tube, two closely adjacent burners mounted on said vapour distributor, the tubular vapour generator extended vertically above said distributor between the two closely adjacent burners and composed of a tube bent upon itself with its two side portions in close parallel contact, a valve connected with one end of said generator tube for controlling admission of hydrocarbon fluid, and an atomizing valve connected with the other end of said generator tube and having its discharge located above the open end of the said mixing tube to deliver hydrocarbon vapour into said mixing tube, substantially as described. 7th. In an incandescent vapour lamp, the combination of a globe gallery, a mixing tube supported within said gallery and comprising a looped portion depending below the gallery and two upwardly extended ends, one of which is open to the atmosphere, the vapour distributor located on the other upwardly extended end of the mixing tube above the gallery, two closely adjacent burners mounted on said vapour distributor, the tubular vapour generator extended vertically above said distributor between the two closely adjacent

burners, a valve for controlling admission of hydrocarbon fluid to the vapour generator, and an atomizing valve connected with the discharge end of the vapour generator above the open end of the mixing tube, substantially as described. 8th. In an incandescent vapour lamp, the combination with a globe gallery, the mixing tube supported within and by said gallery and comprising a looped portion depending below the gallery and two upwardly extended ends, one of which is open to the atmosphere, the horizontally extended vapour distributor located on the other upwardly extended end of the mixing tube, two closely adjacent burners mounted on said vapour distributor between the two closely adjacent burners, a valve for controlling admission of hydrocarbon fluid to the vapour generator, an atomizing valve connected with the discharge end of the vapour generator and located above the open end of the mixing tube, and a casing for the depending portion of the mixing tube, substantially as described. 9th. In an incandescent vapour lamp, the combination of a tubular lamp suspending frame, a globe gallery supported by said frame, a mixing tube supported within said gallery and having two upwardly extended ends, one of which is open to the atmosphere, a vapour distributor located on the other upwardly extended end of said mixing tube, two closely adjacent burners mounted on said vapour distributor, the vapour generator extended vertically above said vapour distributor and comprising two parallel contacting portions located vertically between the two closely adjacent burners, a valve for controlling admission of hydrocarbon fluid to the vapour generator, a supply pipe or tube located in the tubular lamp suspending frame and arranged to communicate with the vapour generator through said valve, and an atomizing valve connected with the discharge of the vapour generator and located above the open end of the mixing tube, substantially as described. 10th. In an incandescent vapour lamp, the combination of the mixing tube having two upwardly extended ends one of which is open to the atmosphere, the vapour distributor on the top of the other upwardly extended end of said mixing tube, two closing adjacent burners mounted on said vapour distributor, the tubular vapour generator extended vertically above said distributor between the two closely adjacent burners and composed of a tube bent upon itself with its two side portions in close parallel contact, a valve connected with one end of said generator tube for controlling admission of hydrocarbon fluid, and an atomizing valve connected with the other end of said generator tube and having its discharge located above the open end of the said mixing tube to deliver hydrocarbon vapour into said mixing tube, substantially as described.

No. 65,387. Steam Engine. (*Machine à vapeur.*)

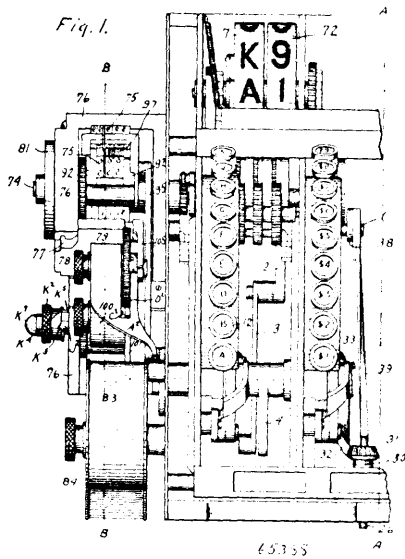


James H. McCollum, Toronto, Ontario, Canada, and Thomas E. B. McCollum, Chicago, Illinois, U.S.A., 18th December, 1899; 6 years. (Filed 24th November, 1899.)

Claim. 1st. In a steam engine, the combination with the cylinder and piston and inlet ports and exhaust ports, of the steam chest the valve and openings connecting with the cylinder inlet and exhaust ports and openings communicating with the steam chest, said valve deriving a reciprocating movement and controlling the admission of steam from the steam chest into the cylinder ports and the auxiliary

controlling valves located outside of the main valve and designed to control the size of the openings communicating with the steam chest, as and for the purpose specified. 2nd. In a steam engine, the combination with the cylinder and piston and inlet ports and exhaust ports, of the steam chest, the valve casing having openings connecting with the inlet and exhaust ports and openings in the casing communicating with the steam chest, the valves and valve rod deriving a reciprocating movement in the casing and controlling the admission of steam from the steam chest into the casing and from the casing into the cylinder ports and from the cylinder ports into the exhaust ports and the valves located outside the casing in the steam chest and designed to control the size of the openings leading into the valve casing and means for manipulating such valves, as and for the purposes specified. 3rd. In a steam engine the combination with the cylinder and piston and inlet ports and exhaust ports, of the steam chest, the valve casing having openings connecting with the inlet and exhaust ports and openings in the casing communicating with the steam chest, the balanced valves and valve rod deriving a reciprocating movement in the casing and controlling the admission of steam from the steam chest into the casing and from the casing into the cylinder ports and from the cylinder ports into the exhaust ports and the valves located outside the casing in the steam chest and designed to control the size of the openings leading into the valve casing, a rod extending through the steam chest provided with a right and left hand thread extending through a corresponding threaded opening in the valves, a collar on the rod and a fork extending into the collar, so as to permit of the rotation of the rod without longitudinal displacement, as and for the purpose specified. 4th. In a steam engine, the combination with the cylinder and piston and inlet ports and exhaust ports, of the steam chest, the cylindrical casing having openings connecting with the inlet and exhaust ports and divided openings in the casing communicating with the steam chest, the balanced cylindrical or piston valves and valve rod deriving a reciprocating movement in the casing and controlling the admission of steam from the steam chest into the casing and from the casing into the cylinder ports and from the cylinder ports into the exhaust ports and the valves located outside the casing in the steam chest and recessed as shown and designed to control the size of the openings leading into the valve casing, and means for manipulating such valves, as and for the purpose specified.

No. 65,388. Cash Register. (Registre à monnaie.)



William F. Bockhoff, Indianapolis, Indiana, U.S.A., 18th December, 1899; 6 years. (Filed 30th October, 1899.)

Claim.—1st. A cash register including a plurality of drawers with means for holding them closed, and means requiring an operation of the machine for the releasing any drawer desired. 2nd. A cash register including a plurality of drawers, means for predetermining which drawer shall be opened, and means dependent upon the further operation of the machine for opening said drawer. 3rd. A cash register including a plurality of drawers, a drawer releasing mechanism common to all the drawers, and means for predetermining which drawer shall be opened when the drawer releasing mechanism is operated. 4th. A cash register including a plurality of drawers, means for holding them closed, and means requiring an operation of the machine for releasing any desired drawer and so arranged that no other drawer may be released except upon another operation of the machine. 5th. A cash register including a plurality of drawers, means for holding them closed, and means requiring an operation of the machine for each drawer released, the arrangement being such that more than one drawer may be open at one time.

6th. A cash register including a plurality of drawers, an indicating mechanism, means predetermining which drawer shall be opened, means for operating the indicating mechanism, and means dependent upon the further operation of the machine for opening said drawer. 7th. A cash register including a plurality of drawers, a registering mechanism, means for predetermining which drawer shall be operated, means for operating the registering mechanism, and means dependent upon the further operation of the machine for opening said drawer. 8th. A cash register including a plurality of drawers, a printing or recording mechanism, means for predetermining which drawer shall be opened, means for operating the printing or recording mechanism, and means dependent upon a further operation of the machine for opening said drawer. 9th. A cash register including a plurality of drawers, an indicating, registering, and printing or recording mechanism, means for predetermining which drawer shall be opened, means for operating the indicating, registering, and printing or recording mechanism, and means dependent upon the further operation of the machine for opening said drawer. 10th. A cash register including a plurality of drawers, a plurality of character keys for predetermining which drawer shall be opened, and means dependent upon the further operation of the machine for opening said drawer. 11th. A cash register including an indicating mechanism, a plurality of drawers, a plurality of character keys for predetermining which drawer shall be opened, means for operating the indicating mechanism, and means dependent upon the further operation of the machine for opening said drawer. 12th. A cash register including a registering mechanism, a plurality of drawers, a plurality of character keys for predetermining which drawer shall be opened, means for operating the registering mechanism, and means dependent upon the further operation of the machine for opening said drawer. 13th. A cash register including a printing or recording mechanism, a plurality of drawers, a plurality of character keys for predetermining which drawer shall be opened, means for operating said printing or recording mechanism, and means dependent upon the further operation of the machine for opening said drawer. 14th. A cash register including an indicating, registering, and printing or recording mechanism, plurality of character keys for predetermining which drawer shall be opened, and means dependent upon the further operation of the machine for opening said indicating, registering, and printing or recording mechanism and for opening said drawer. 15th. A cash register including a plurality of drawers with means for holding them closed, and a common means governed by the operation of the machine for releasing any drawer desired. 16th. A cash register including a plurality of drawers, a plurality of corresponding character keys, and means common to said drawers for unlocking any drawer desired upon the operation of the corresponding character keys. 17th. A cash register including a plurality of drawers, a plurality of corresponding character keys, means for printing or recording the name of each character key and its corresponding drawer, and a common means for actuating such printing or recording mechanism and releasing the drawer. 18th. A cash register including a registering mechanism, a plurality of drawers with suitable locking means, means for releasing said drawers, a common means for actuating the registering mechanism and such drawer releasing means, and means for so setting such drawer releasing means that when it is operated it will release any drawer desired. 19th. A cash register including an indicating mechanism, a plurality of drawers with suitable locking means for releasing said drawers, a common means for actuating the indicating mechanism and such drawer releasing means, and means for so setting such drawer releasing means that when it is operated it will release any drawer desired. 20th. A cash register including a printing or recording mechanism, a plurality of drawers with a suitable locking means, means for releasing said drawer, a common means for actuating the printing or recording mechanism and such drawer releasing means, and means for so setting such drawer releasing means that when it is operated it will release any drawer desired. 21st. A cash register including a registering, indicating and printing or recording mechanism, a plurality of drawers with suitable locking means, means for releasing said drawer, a common means for actuating the registering, indicating and printing or recording mechanism, and such drawer releasing means, and means for so setting drawer releasing means that when it is operated it will release any drawer desired. 22nd. A cash register including a printing or recording mechanism, a plurality of drawers, a plurality of corresponding character keys and means dependent upon the operation of the corresponding key for unlocking any drawer desired after the operation of the printing or recording mechanism and preventing the opening of the other drawers until after another operation of the printing or recording mechanism. 23rd. A cash register including a registering, indicating and printing or recording mechanism, a plurality of drawers, a plurality of corresponding character keys, and means dependent upon the operation of the corresponding key for unlocking any drawer desired after the operation of the registering, indicating and printing or recording mechanism and preventing the opening of the other drawers until after another operation of the registering, indicating and printing or recording mechanism. 24th. A cash register including a plurality of drawers, a plurality of corresponding character keys, a device for releasing said drawers, means for setting it to unlock a particular drawer upon the operation of the corresponding key, and means for actuating said releasing device after said key is operated. 25th. A cash register including a plurality of drawers, a plurality of corresponding character keys, a device for

releasing said drawers, means for setting it to unlock a particular drawer when the corresponding key is operated, and means for so connecting the releasing device with the driving shaft of the machine that said releasing device will be actuated near the end of the operation of the machine. 26th. A cash register including a plurality of individual drawers, suitable catches for locks for the drawers, a releasing device for unlocking a single drawer in one operation, a plurality of character keys, and means for setting the releasing device to unlock a particular drawer, when the corresponding key is operated. 27th. A cash register including a plurality of drawers, locking means for each drawer, a rotatable releasing rod adjacent to said locking means, a series of releasing fingers secured on such rod out of the line with each other, means for rotating such rod to a certain extent when a key is operated and means for vertically moving said rod after it is rotated. 28th. A cash register including a plurality of drawers one below the other, a latch secured to the rear ends that is released by vertical movement, a vertically movable rotatable releasing rod mounted behind the drawers in proximity to the drawer latches, a series of releasing fingers secured on such rod out of line with each other, means for turning rod to a certain extent when a key is operated to set it for unlocking a certain drawer, and means for elevating such rod at each operation of the machine. 29th. A cash register including a plurality of drawers, a stationary frame piece behind each drawer, a catch secured thereto, a latch secured to the drawer to engage the catch and lock the drawer, a spring acting between the drawer and the frame piece to propel the drawer open when released, a rotatable releasing rod extending behind the drawers, fingers secured to said rod out of line with each other to engage and release the latches, means for turning said rod sufficiently far upon the operation of a certain key to cause a finger thereon to open a certain drawer and means for lifting the releasing rod after it is turned. 30th. A cash register including a plurality of drawers, a plurality of character keys, a rotatable rod provided with fingers to open the drawers corresponding to the key operated when turned sufficiently far, and means controlled by said character keys to turn said releasing rod to varying extents depending upon the particular character key operated. 31st. A cash register including a plurality of drawers, a plurality of corresponding character keys, rod provided with finger, that will release a certain drawer when the rod is rotated to a certain extent and then moved vertically, a bevel gear mounted in the shaft in the frame work that meshes with the bevel gear, means for rotating the shaft on which the said segmental gear is mounted to a certain extent depending upon the character key operated and means for vertically moving said rod. 32nd a cash register including a plurality of drawers, a plurality of corresponding character keys, and a rotatable rod for releasing a certain drawer when rotated to a certain extent, a bevel gear mounted on said rod, a segmental gear meshing therewith and secured to a shaft, mounted loosely in the framework, an arm secured to said shaft, an oscillatory segment for driving the various parts of the machine and adapted to move a certain distance depending upon the particular character operated, and a link pivotally connected said segment at one end and at its other end to the arm secured to the shaft, substantially as set forth. 33rd. A cash register including a series of drawers having catches for holding them closed, a longitudinally movable rod provided with fingers thereon to engage and release the drawers when the rod is so moved, a driving shaft for the machine, and means for longitudinally moving the said rod at each rotation of said shaft sufficiently far to release said drawers. 34th. A cash register including a series of drawers, one beneath the other, having catches to hold the drawers closed, a vertically movable releasing rod provided with fingers that extend under all the latches on said drawers, a driving shaft in the machine, a cam mounted thereon, a link riding on said shaft and pivotally connected to said releasing rod, and a pin secured to said link where it will be engaged by the cam and thereby elevate said releasing rod so that the fingers thereon will disengage the latches on the drawers. 35th. A cash register including a series of drawers, a series of corresponding character keys, a vertically movable rotatable releasing rod, fingers extending therefrom and adapted when elevated to unlock a certain drawer when a certain key is operated, a bevel gear mounted on said rod, a segmental gear meshing therewith and secured to an oscillatory shaft mounted in the framework, means for oscillating said shaft whose extent of movement depends upon the character key operated, a driving shaft, a cam thereon, a link supported upon said driving shaft at one end and pivotally connected with the release rod at the other, and a pin extending from said link where it will be engaged by the cam after said releasing rod has been rotated to set it for unlocking the particular drawer.

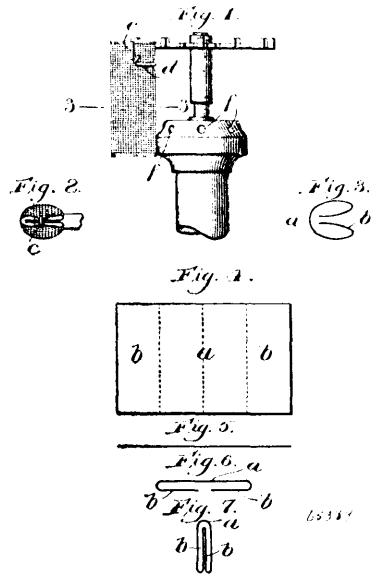
No. 65,389. Incandescing Mantle for Gas Burner.

(Mantleau incandescent pour brûleurs à gaz.)

Charles Fuller Armington, Roxbury, Boston, Massachusetts, U.S.A., 18th December, 1899; 6 years. (Filed 16th January, 1899.)

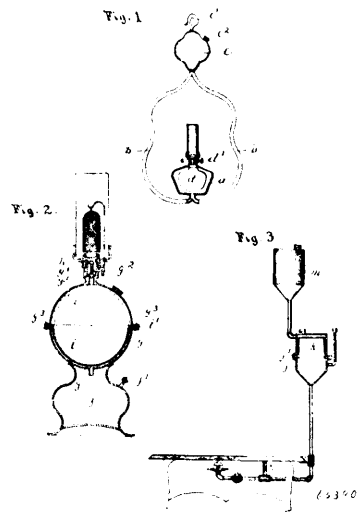
Claim.—1st. A mantle formed of a single piece of incandescing fabric whose lateral edges are infolded to form two longitudinal compartments open at top and bottom to permit the free passage of the flame up through the mantle in contact with substantially the entire surface of the outer and inner walls, thereby rendering the whole mantle incandescent and utilizing the whole volume of gas without waste, substantially as described. 2nd. A mantle formed

of a piece of incandescing fabric, whose lateral edges are infolded to form interior compartments, and having a supporting loop of soft



incombustible material passed through the several thicknesses of the fabric near the top, whereby the transmission of jarring vibrations injurious to the fabric is minimized, substantially as described. 3rd. An incandescing mantle for gas burners comprising a piece of suitable fabric having its lateral edges infolded to admit the flame at the bottom and along one side, and so as to form interior compartments, the mantle being so supported as to leave openings at the top for the escape of the flame, substantially as described.

No. 65,390. Lamp. (Lampe.)



Alexander S. Greenwood, Chicago, Illinois, U.S.A., 18th December, 1899; 6 years. (Filed 25th August, 1899.)

Claim.—1st. A lamp body or receptacle for combustible fluids, composed of sections joined together and provided with a flexible diaphragm having its edges secured between the edges of the sections, substantially as set forth. 2nd. In a device for combustible fluids, a container for the fluid formed in sections secured together, a flexible partition located within said container and adapted to cover one of said sections, a receptacle for a non-combustible fluid, and means for conducting said fluid to the container, as described. 3rd. In a lamp, the combination with a suitable burner, of a lamp body formed in two sections secured together at their peripheries, a flexible diaphragm having approximately the same diameter as one of said sections, a lamp base having a chamber therein adapted to hold air under pressure, said chamber communicating with the interior of the lamp body below the flexible diaphragm, substantially as set forth.

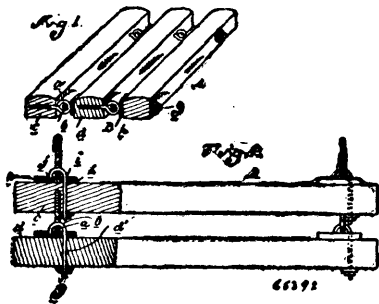
No. 65,391. Wood Preserving Compound.

(Composé pour préserver le bois.)

Edward Gold, Vancouver, British Columbia, Canada, 18th December, 1899; 6 years. (Filed 30th October, 1899.)

Claim.—The herein compound consisting of crude petroleum, lime, asphaltum, cement, brimstone, crude creosote and asbestos, mixed together in the proportions set forth, and heated in a vessel and applied to a wrapper while hot which is wound on the timber and then treated to a covering of sand, substantially as and for the purposes set forth.

No. 65,392. Floor Mat. (Paillasson pour planchers.)

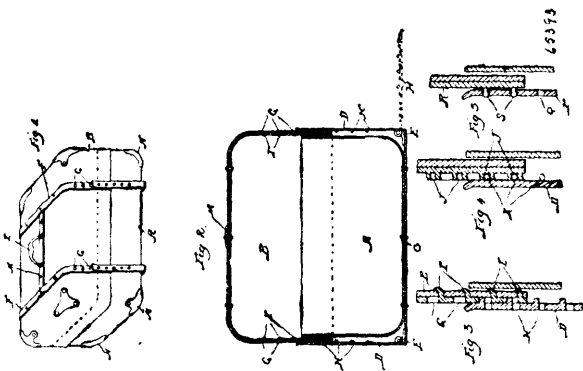


Charles Schmitt, Milan, Michigan, U.S.A., 18th December, 1899; 6 years. (Filed 17th November, 1899.)

Claim.—1st. A floor mat comprising a series of strips and a jointed coupling connecting each adjacent pair of strips. 2nd. A floor mat comprising a series of strips and two series of jointed couplings connecting the strips, each coupling of the series being arranged intermediate the end portions of two adjacent strips. 3rd. A floor mat comprising a series of spaced strips and jointed couplings connecting each pair of strips, each coupling comprising two rigid sections having their opposite ends secured to the adjacent faces of two adjoining strips and their meeting ends hooked one within the other. 4th. A floor mat comprising a series of spaced strips, and two series of jointed couplings connecting the strips, each coupling consisting of a screw eye adapted to be secured within the side of one strip and a staple engaging the eye and secured within the adjacent side of an adjoining strip, the staple having one leg extending through and projecting beyond the strip in which it is secured, and a clamping nut upon the portion of the leg projecting beyond the strip, substantially as and for the purpose described. 5th. In a floor mat, the combination of two spaced strips arranged in parallel alignment, a screw eye secured within the side of one strip, a wear plate arranged opposite the screw eye upon the adjoining strip, having a recess therein, and an aperture extending therethrough, a staple engaging the screw eye, one leg of the staple extending within the recess in the wear plate, and the complementary leg extending through the aperture in said wear plate and through and beyond the strip against which the wear plate bears, and a nut upon the end of the longer staple leg, substantially as described.

No. 65,393. Telescoping Dressing Case.

(Necessaire de toilette telescopique.)



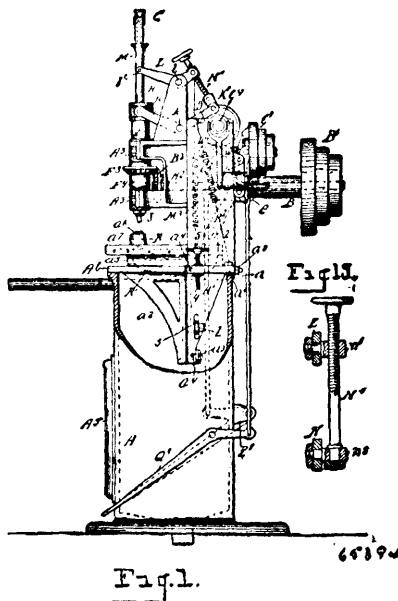
Dougald Stewart McIntyre, Flint, Michigan, U.S.A., 18th December, 1899; 6 years. (Filed 18th November, 1899.)

Claim.—1st. In combination with a telescoping dressing case consisting of a body and a top, metallic strips secured to said top having holes or sockets therein, metallic strips secured to the bottom of the body, fastener strips hinged to the last named strips, and fasteners carried by the fastener strips adapted to engage the holes in the strips upon the top, as specified. 2nd. In combination with a teles-

coping dressing case consisting of a body and a top, metallic strips secured to said top having holes or sockets therein, metallic strips secured to the bottom of the body, fastener strips hinged to the last named strips, fasteners carried by the fastener strips and adapted to engage the holes in the strips upon the top, and springs adapted to hold the fastener strips in position, as specified. 3rd. In combination with a dressing case of the character described, metal strips F secured to the top thereof, said strips having opening therein, metal strips C secured to the bottom of the body, fastener strips hinged to the strips C, springs so arranged as to hold the fastener strips in position, fasteners carried by the last named strips for engaging with the openings in the strips F, a cross strip secured to the top and connecting the strips F, and a handle attached to the cross strip, as specified. 4th. In combination with a dressing case of the character described, metal strips secured to the top thereof, studs projecting from the portion of said strips, straps secured to the bottom and having holes therein for engagement with the studs, as specified.

No. 65,394. Button Blank Cutting Machine.

(Machine à couper les blancs.)



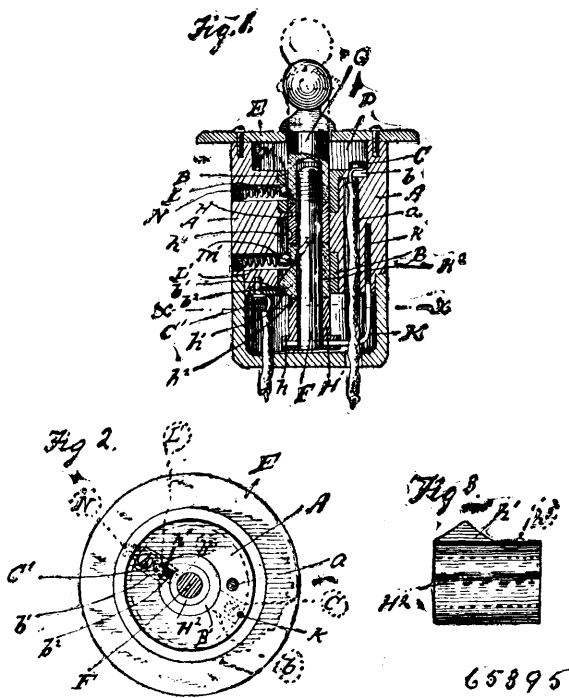
William Allen Pendry, Detroit, Michigan, U.S.A., 18th December 1899; 6 years. (Filed 20th November, 1899.)

Claim.—1st. In a button blank cutting machine, the combination of a rotatable mandrel, a plunger within the mandrel, and a hollow push bar within the plunger open at its extremities, substantially as and for the purpose described. 2nd. In a button blank cutting machine, the combination of a mandrel, a plunger carried by the mandrel and adjustable therein, said plunger threaded upon its exterior and provided with a longitudinal spline, a key for said spline, and a locking device to engage the threaded exterior of the plunger, substantially as and for the purpose described. 3rd. In a button blank cutting machine, the combination of a movable table, a hollow die carried thereupon, a back peg to project upward within said die, and an oscillatory lever fulcrumed to said table and movable therewith to carry said back peg, substantially as and for the purpose described. 4th. In a button blank cutting machine, the combination of a support, a bed thereupon, a movable table upon upon said bed, a hollow die carried by said table, a lever fulcrumed to said table and movable therewith, provided with a back peg to project upward within said die, a bell crank to actuate said lever, and means to actuate said bell crank, said lever having an adjustable connection with the bell crank, substantially as described. 5th. In a button blank cutting machine, a hollow die, a movable support therefor, a back peg to project upward within said die, a lever fulcrumed to said support carrying said back peg, and a device to move said lever to carry said back peg out of normal position within the die, and to restore said back peg to normal position, said lever having an adjustable connection with said device, whereby the back peg will be kept in proper working position whatever may be the position of the support, substantially as described. 6th. In a button blank cutting machine, the combination of a hollow die, a movable support therefor, a movable back peg fulcrumed to said support to project upward within said die, and adjustable mechanism to carry said back peg, whereby the back peg will be kept in proper working position whatever may be the position of the support, substantially as described. 7th. In a button blank cutting machine, the combination of a support, a supporting frame, a rotatable mandrel sleeved through a portion of

said frame, a plunger within the mandrel and carried thereby, means to simultaneously reciprocate the mandrel and plunger, a saw carried by the plunger, a push bar within the plunger, means to reciprocate the push bar, a hollow die carried upon said support, a back peg to project within the die, and adjustable mechanism to retract said back peg, substantially as described. 8th. In a button blank cutting machine, the combination of a support, a supporting frame, a rotatable mandrel sleeved through a portion of said frame, a plunger within the mandrel, means to simultaneously reciprocate the mandrel and plunger, a saw carried by the plunger, a push bar within the plunger, means to reciprocate the push bar, a movable bed upon said support, a movable table carried upon said bed, a hollow die carried by said table, a back peg to project within the die, and adjustable mechanism to retract said back peg, substantially as described. 9th. In a button blank cutting machine, the combination of hollow die, a support therefor, a back peg to project within said die, a lever carrying said back peg, a bell crank to actuate said lever, and a rotatable cam to actuate said bell crank, said lever having an adjustable connection with the bell crank, substantially as described. 10th. In a button blank cutting machine, the combination of a movable table, a hollow die supported thereupon, a back peg to project within said die, a lever fulcrumed to said table carrying said back peg, a rotatable cam and a bell crank actuated by said cam to actuate said lever, said lever having an adjustable connection with said bell crank, substantially as described. 11th. In a button blank cutting machine, the combination of a hollow die, a support therefor, a back peg to project within said die, a lever carrying said back peg, a rotatable cam and a bell crank actuated by said cam to actuate said lever, said bell crank constructed with a slot vertical in position when the machine is operating to cut a blank, said lever engaged in said slot, substantially as described. 12th. In a button blank cutting machine, the combination of a support, a frame pivoted with a downwardly projecting bracket, a vertically movable bed upon said support provided with a downwardly projecting bracket engaged with the bracket of said frame, a table horizontally movable upon said bed, a hollow die carried by said table, a back peg to project within the die, and adjustable mechanism to retract said back peg, substantially as described. 13th. In a button blank cutting machine, the combination of a hollow die, a support therefor, a back peg to project within said die, a lever carrying said back peg, and automatic mechanism to actuate said lever, said lever having an adjustable connection with said mechanism, substantially as described. 14th. In a button blank cutting machine, the combination of a support, a supporting frame formed with a downwardly projecting bracket, and a movable bed provided with a downwardly projecting bracket gibbed to the first named bracket, substantially as described. 15th. In a button blank cutting machine, the combination of a supporting frame, a rotatable mandrel sleeved through a portion of said frame, a plunger within the mandrel and carried thereby, means to simultaneously reciprocate the mandrel and plunger, a saw carried by the plunger within said mandrel, a hollow push bar within the plunger open at its extremities, and means to reciprocate the push bar, substantially as described. 16th. In a button blank cutting machine, the combination of a rotatable mandrel, a plunger within the mandrel and carried thereby, a saw carried by the plunger within said mandrel, a push bar within the plunger, a rotatable shaft, a bell crank actuated from said shaft to simultaneously reciprocate the mandrel and the plunger, a bell crank actuated by said shaft to reciprocate the push bar, a hollow die, a support therefor, a movable back peg to project within said die, and an additional bell crank actuated by said shaft to move said back peg into and out of normal position, substantially as described. 17th. In a button blank cutting machine, the combination of a rotatable mandrel, a plunger within the mandrel, a push bar within the plunger, a rotatable shaft, cams mounted upon the shaft to actuate the mandrel and the push bar, a die, a support therefor, a back peg to project within the die, a lever to carry said back peg, a bell crank to actuate said lever, an additional cam upon said shaft to actuate the bell crank, and means to throw said cams out of operation, substantially as described. 18th. In a button blank cutting machine, the combination of a supporting frame, a plunger, a tubular saw carried by the plunger, a rotatable mandrel sleeved through a portion of the frame carrying said plunger, a die, a support therefor, a back peg to project within the die, a lever carrying said back peg, mechanism adjustably connected with the lever to actuate the lever, and means to actuate said mandrel, substantially as described. 19th. In a button blank cutting machine, the combination of a hollow die, a support therefor, a back peg to project within the die, a lever carrying said back peg, a shaft, a concentric cam provided with a notch upon said shaft, and a bell crank adjustably engaged with said lever actuated by said cam, substantially as described. 20th. In a button blank cutting machine, a hollow die, a movable support therefor, a back peg to project within said die, a lever fulcrumed to said support carrying said back peg, and self-retracting mechanism to actuate said lever and hold the back peg in normal position within the die in the act of cutting a blank, and to remove the back peg from the die to permit the blank being discharged, whereby the back peg will be kept in proper working position whatever may be the position of the support, substantially as described. 21st. In a button blank cutting machine provided with a cutter and with a reciprocatory push rod, of a movable support, a hollow die carried by said

support, a lever fulcrumed to said support and movable therewith, and a back peg carried by said lever projecting within the die arranged to support a blank when being cut, substantially as described. 22nd. In a button blank cutting machine provided with a cutter and with a reciprocatory push rod, of a movable support, a hollow die carried by said support, a back peg to project within the die, and means to remove the back peg from the die before the push rod forces the blank out of the cutter and to restore the same to normal position, and whereby the back peg will be kept in proper working position whatever may be the position of the support, substantially as described. 23rd. In a button blank cutting machine, a hollow die, a support therefor, a receptacle within said support beneath said die to receive the blanks, and an inlet pipe discharging into said receptacle, substantially as described. 24th. In a button blank cutting machine, the combination of a rotatable mandrel, a plunger within the mandrel and carried thereby, a saw carried by said plunger, a push bar within the plunger, a bell crank to actuate the mandrel and the plunger, an additional bell crank to actuate the push bar, mechanism to actuate said bell cranks, and an adjustable device connecting said bell cranks, substantially as described. 25th. In a button blank cutting machine, a support, a movable bed, and a movable table having a transverse movement upon said bed, the movable table gibbed upon the movable bed, substantially as described. 26th. In a button blank cutting machine provided with a cutter and with a reciprocatory push rod, of a hollow die, a support therefor, a movable bed, a movable table upon said bed, a hollow die carried by said table, a back peg to project within said die, a lever carrying said back peg fulcrumed upon said table, and means to actuate said lever to remove said back peg from the die before the push rod forces the blank from the cutter, substantially as described.

No. 65,395. Electrical Switch. (*Commutateur électrique.*)



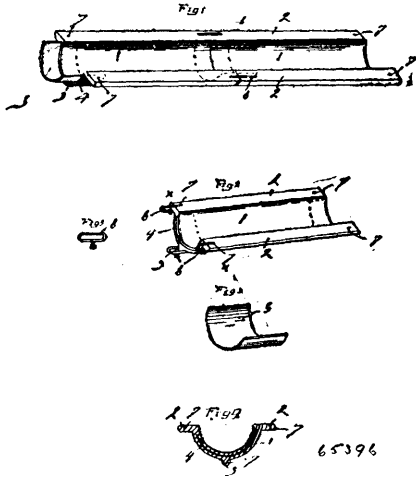
Paul Medary, Cynwyd, Pennsylvania, U.S.A., 18th December, 1899; 6 years. (Filed 21st November, 1899.)

Claim.—In a switch of the character described, the combination with an insulated block having oppositely arranged terminals secured thereon, of a reciprocating push rod having oppositely arranged terminals and an insulated section, a substantially triangular projection carried by the rod and projecting into the block, and spring pressed member in the block arranged to engage the projection during the movement of the rod, for the purposes described.

No. 65,396. Eave Trough. (*Larmier de toit.*)

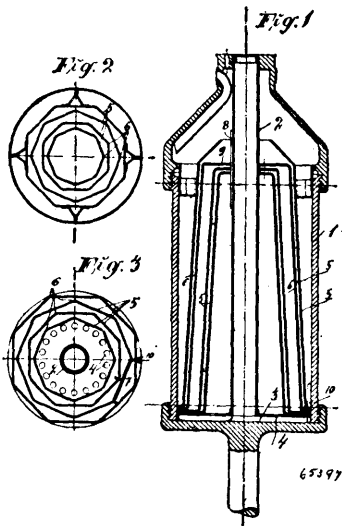
Hiram Stripe, Aukman, Ohio, U.S.A., 18th December, 1899; 6 years. (Filed 21st November, 1899.)

Claim.—The herein described eaves trough sections provided with the flanges 2, the ribs 3, and the grooves 4, formed in the ends of the



sections, the connecting plate 5 located in the grooves of adjacent sections, and the wire clamps, all arranged substantially as and for the purpose specified.

No. 65,397. Insets for Centrifugal Apparatus.
(*Applique pour appareil centrifuge.*)



Olof Ohlsson, Svenska, Centrifugaktiebolaget Sodertelje, Sweden, 18th December, 1899; 6 years. (Filed 23rd November, 1899.)

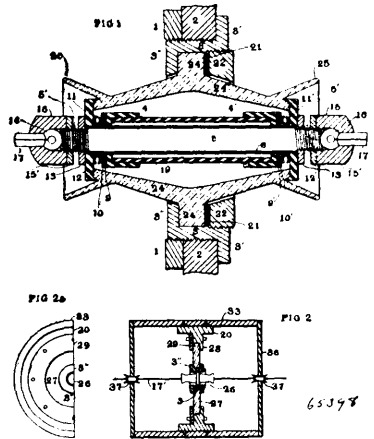
Claim.—Inset for centrifugal separators, consisting of hollow pyramids placed in one another, and provided at their corners with row of perforations, said pyramids being so arranged in relation to one another that radii drawn through the corners of a pyramid, in planes perpendicular to the axis of the centrifugal apparatus, will form right angles with the sides of the pyramid adjoining it on the outer side, and arranged to clear the said corners, in order that liquid in motion toward the periphery may in passing from one pyramid to another be dispersed in as thin layers as possible on the inner sides of the pyramids, so as not to disturb separation in process, while passing through an intermediate space, and so as to facilitate the secretion in these spaces of light particles of liquid still contained in the passing fluid.

No. 65,398. Electric Insulator. (*Isolateur électrique.*)

Joseph Arthur Poché, New Orleans, Louisiana, U.S.A., 18th November, 1899; 6 years. (Filed 24th November, 1899.)

Claim.—1st. The combination with a partition having an aperture, of a conductor passing centrally through said aperture, an insulating enclosure formed in a single piece surrounding said conductor, extending through the aperture to predetermined distances on both sides thereof, and provided with openings at the ends for the passage of said conductor, which are plugged up around the conductor in an air and watertight and electrically insulated condition. 2nd. The combination with a partition having an aperture,

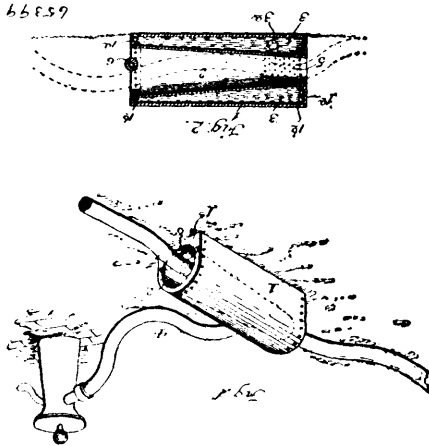
of a conductor passing centrally through said aperture, an insulating enclosure formed in a single piece surrounding said conductor



extending through the aperture to predetermined distances on both sides thereof, and provided with a central external annular projection, and provided with outwardly flaring, conical extensions, and also provided with openings at the ends for the passage of said conductor, which are plugged up around the conductor in an air and watertight and electrically insulated condition, and means for clamping centrally said annular projection to the said wall at the said aperture. 3rd. The combination with a partition having an aperture, of a conductor passing centrally through said aperture, a glass enclosure formed in a single piece surrounding said conductor, extending through the aperture to predetermined distances on both sides thereof, and provided with a central external annular projection, and provided with outwardly flaring, conical extensions, and also provided with openings at the ends for the passage of said conductor, which are plugged up around the conductor in an air and watertight and electrically insulated condition, and means for clamping centrally said annular projection to the said wall at the said aperture, said means consisting of a doubly flanged ring, one flange bearing on one side of said annular projection, and the other flange upon the said partition, and nuts screwed to said doubly flanged ring respectively against the other side of said partition and the other side of said annular projection, and said flaring ends extending beyond said openings in said glass enclosure. 4th. The combination with a partition having an aperture, of a conductor passing centrally through said aperture, an insulating enclosure formed in a single piece surrounding said conductor, extending through the aperture to predetermined distances in both sides thereof, and provided with a central external annular projection, and provided with outwardly flaring conical extensions, and also provided with openings at the ends for the passage of said conductor, which are plugged up around the conductor in an air and watertight and electrically insulated condition, and means for clamping centrally said annular projection to the said wall at the said aperture, said partition consisting of a glass disc, and a tube surrounding the hereinbefore described combination, a clamp for securing said glass disc centrally within said tube, which is closed at the ends, and through which passes the conductor to be insulated by this combination. 5th. The combination with a partition having an aperture, of a conductor passing centrally through said aperture, a glass enclosure formed in a single piece surrounding said conductor, extending through the aperture to predetermined distances on both sides thereof, and provided with a central external annular projection, and also provided with openings at the ends for the passage of said conductor, which are plugged up around the conductor in an air and watertight and electrically insulated condition, and means for clamping centrally said annular projection to the said wall at the said aperture, said means consisting of a doubly flanged ring, one flange bearing on one side of said annular projection and the other flange upon the said partition, and nuts screwed to said doubly flanged ring respectively against the other side of said partition and the other side of said annular projection, and said flaring ends extending beyond said openings in said glass enclosure, the plugging device consisting of washers screwed upon said conductor and locked by means of nuts against the open ends of said enclosure, an insulating tube containing an air drying substance located within the enclosure, and forming a second internal enclosure about said conductor, caps into which said tube fits, slipped over said conductor and backed by insulating washers, and metallic washers thereon, and springs inserted between said metallic washers and those washers which bear against and close the ends of said glass enclosure. 6th. The combination with a partition having an aperture, of a conductor passing centrally through said aperture, a glass enclosure formed in a single piece, surrounding said conductor, extending through the aperture to predetermined distances on both sides thereof, and provided with a central external annular pro-

jection, and provided with outwardly flaring, conical extensions, and also provided with openings at the ends for the passage of said conductor, which are plugged up around the conductor in an air and watertight and electrically insulated condition, and means for clamping centrally said annular projection to the said wall at the said aperture, said means consisting of a doubly flanged ring, one flange bearing on one side of said annular projection, and the other flange upon the said partition, and nuts screwed to said doubly flanged ring respectively against the other side of said partition and the other side of said annular projection, and said flaring ends extending beyond said openings in said glass enclosure, the said conductor being hollow at the ends, and provided with sockets which are screwed upon said ends, and contain ball terminals of external conductors 17, suitable lock nuts being screwed against said sockets upon the conductor, which passes through said aperture.

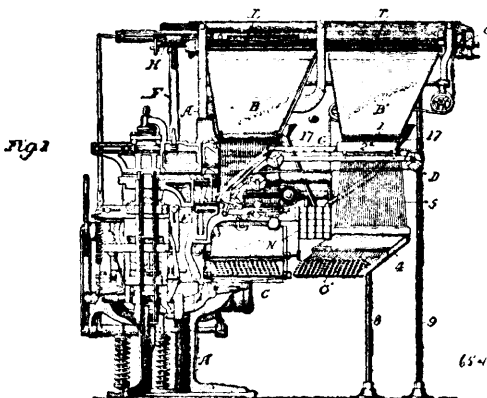
No. 65,399. Fire Hose Washer.
(*Rondelle pour boyaux à incendie.*)



James A. Britton, West Bethlehem, Pennsylvania, U.S.A., 18th December, 1899; 6 years. (Filed 24th November, 1899.)

Claim.—In a hose washing device, the combination with the outer semi-cylindrical casing formed with an opening with which a hose is adapted to be connected, of the conical or tapering inner section secured to said outer section thereby forming a chamber between the two sections, said inner section being provided with perforations and the roller at the large end of said inner section, substantially as described.

No. 65,400. Linotype Machine. (*Machine linotype.*)

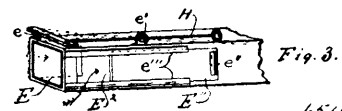
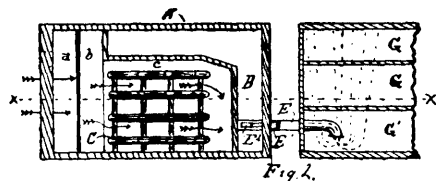
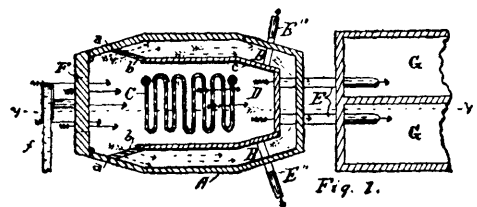


Carl Muehleisen, Berlin, Germany, 18th December, 1899; 6 years. (Filed 5th July, 1899.)

Claim.—1st. In a linotype machine, a plurality of magazines simultaneously operative and each having a plurality of tubes or receptacles, in combination with distributing means in said machine constructed to automatically distribute matrices to all of said magazines. 2nd. In a linotype machine, a composing mechanism, in combination with a plurality of magazines simultaneously operative and each having a plurality of tubes or receptacles, and an automatic distributing mechanism common to said magazines. 3rd. In a linotype machine, a plurality of magazines arranged in line, or tandem, each magazine having a plurality of tubes or receptacles, in combination with a common distributing mechanism for all of said

magazines. 4th. In a linotype machine, the combination of a plurality of magazines, and a keyboard for each magazine, with distributing means in said machine constructed to automatically distribute matrices into said magazines. 5th. In a linotype machine, the combination of a plurality of magazines, a keyboard for each magazine, and a common assembling belt, with distributing means in said machine constructed to automatically distribute matrices to said magazines. 6th. In a linotype machine, a plurality of magazines arranged in line or tandem, each magazine having a plurality of tubes or receptacles, in combination with a common distributor rail and feed screws. 7th. In a linotype machine, a plurality of magazines arranged in line or tandem and each having a plurality of tubes or receptacles, in combination with a common distributor rail having a like plurality of permuted sections, one for each magazine, substantially as described. 8th. In a linotype machine, a plurality of magazines, in combination with a common distributor rail, and common feed screws having intermediate bearings, said bearings having openings to permit matrices to pass, substantially as described. 9th. In a linotype machine, a distributor rail, in combination with matrix feed screws provided with end bearings and with intermediate bearings which have openings to permit matrices to pass, the screw threads being continuous through said intermediate bearings, substantially as described. 10th. In a linotype machine, a plurality of magazines arranged in line, or tandem, each magazine having a plurality of tubes or receptacles, in combination with automatic distributing mechanism in said machine for said magazines, stop mechanism for the distributing mechanism, and a plurality of distributor stop racks arranged in tandem for operating the stop mechanism, substantially as described. 11th. In a linotype machine, the combination with a distributor rail having a given number of ribs, and an elevator rail having a lesser number of ribs, of a series of matrices having V-shaped openings and shoulders corresponding to the distributor rail, and a series of spaces having smaller V-shaped openings corresponding to the elevator rail, substantially as described. 12th. In a linotype machine, the combination with a series of matrices having V-shaped openings and a series of spaces having smaller V-shaped openings, of a distributor rail having a given number of ribs, and an elevator rail having ribs corresponding to all of the ribs of the distributor rail excepting the uppermost rib on each side thereof, said uppermost ribs having no counterpart on the elevator rail, whereby the elevator rail is adapted for the spaces having smaller V-shaped openings than the matrices, substantially as described. 13th. In a linotype machine, the combination with a magazine, of a removable matrix guide channel in which the assembling belt runs, said channel comprising a bottom and two sides and having its front side hinged, substantially as described. 14th. In a linotype machine, the operating rods having notches in their lower ends and the key levers arranged at an angle to said rods and provided with notches in their rear ends, the notches of said rods and levers being adapted to mutually engage each other, substantially as described.

No. 65,401. Heating and Drying Appliance.
(*Appareil à chauffer et sécher.*)

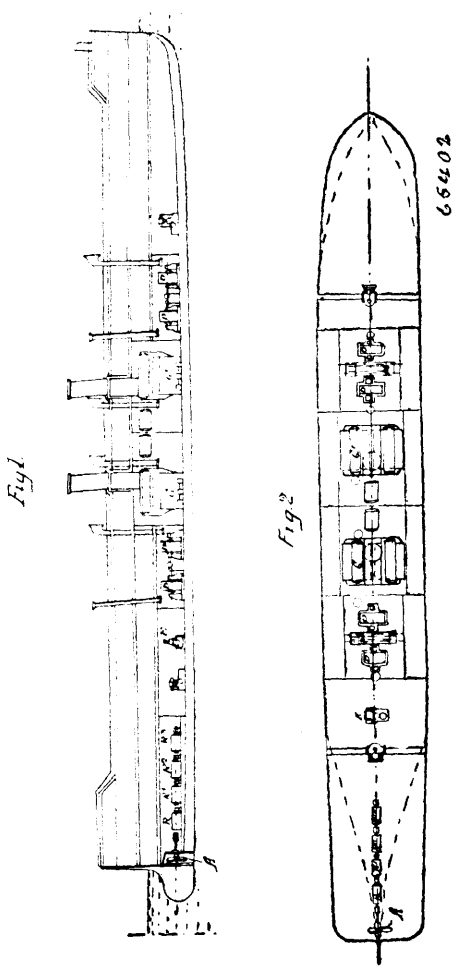


Charles Chauncey Barbour, Grand Rapids, Michigan, U.S.A., 18th December, 1899; 6 years. (Filed 29th July, 1899.)

Claim.—1st. In a drying system, an air fan placed in the wall of an air chamber, an air chamber back of said fan, a heating coil back

of said air chamber, a hot air chamber back of said coil, cold air chambers adjacent to said hot air chamber and coil gates to open and close between the cold air chamber and the chamber back of the fans, air pipes passing from the hot air chamber through the cold air chamber and to the drying rooms, a gate opening from each pipe to the hot air chamber and one to the cold air chamber and arranged to be opened or closed simultaneously or alternately and to any degree desired, substantially as described. 2nd. In a heating and drying system, a cold air chamber, and a hot air chamber within the cold air chamber, said chambers having a common air inlet, a steam coil in the hot air chamber, air distributing pipes communicating with both of the air chambers, means for controlling the flow of air from each of the air chambers to the distributing pipes, and means for causing the flow of air through the apertures, substantially as and for the purpose set forth.

No. 65,402. System of Electrical Propulsion for Navigable Vessels. (*Système de propulsion électrique pour rai-seaux.*)

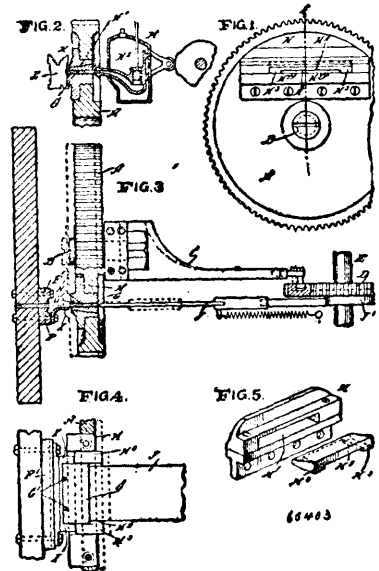


Jean Jacques Heilman, Paris, France, 18th December, 1899; 6 years. (Filed 26th November, 1895.)

Claim.—1st. In a system of electrical propulsion for navigable vessels, the combination with a propeller wheel, of a steam engine having a constant steam admission, two or more generating dynamos having their armatures connected in multiple with the main conductors, and driven by said steam engine, a separately driven constant potential exciting dynamo with which the field coils of the main dynamos are connected in multiple, a rheostat in series with the exciter armatures for varying the field strength of said dynamos, two or more electric motors connected to the propeller shaft, and having their field coils in series multiple with their armatures, and a reversing switch between the field coils and the armatures of said motors, substantially as described. 2nd. In a system of electrical propulsion for navigable vessels, the combination with a propeller wheel, of a steam engine having a constant steam admission, a main generating dynamo driven by said steam engine, a separately driven constant potential exciting dynamo in circuit with the field coils of said main generator, a rheostat in series with the exciter armature for varying the field magnetism of the main generator, and an electric motor in series with the generator, armature and arranged to drive the propeller shaft, substantially as shown and described.

No. 65,403. Linotype Casting Machine.

(*Machine à couler linotype.*)

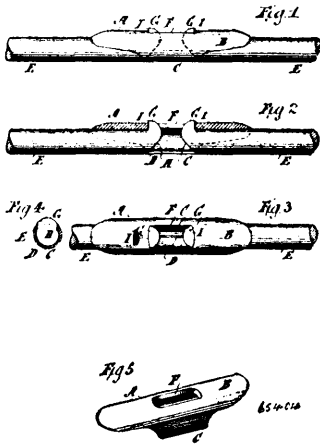


Henry James Derbyshire, Columbus, Ohio, U.S.A., 18th December, 1899; 6 years. (Filed 25th February, 1899.)

Claim.—1st. The combination of the mould comprising a relatively fixed section having a slot for the reception of the material, said slot being entirely in the fixed section, and a member movable in said slot in the direction of the open ends thereof and along one of the walls of the slot, the thickness of said member being less than the width of the slot, so that a space will be left for the reception of the material, between the opposite wall of the slot to that engaged by the movable member and the exposed face of the said member. 2nd. The combination of the mould having a through opening or slot extending from one face of the mould to the opposite face thereof, a member movable in said slot in the direction of the open ends of the slot, the thickness of said member being less than the width of the slot, and an ejector arranged to move in that part of the slot which is between the exposed face of the movable member and the opposing face of the slot. 3rd. A mould having a through opening or slot with an inclined wall, and a wedge shaped member movable in the slot along said inclined wall. 4th. A linotype casting machine provided with a slotted mould having a movable member made wedge shaped for releasing a cast slug or line. 5th. A linotype casting machine provided with a slotted mould having its bottom formed by a movable wedge shaped member, formed at its ends with guide lugs for maintaining the length and thickness of the line, substantially as shown and described. 6th. A linotype casting machine provided with a revolving casting wheel, a mould carried by the said wheel, and provided with a movable member for releasing a cast slug or line, means for reciprocating the said wheel, and a fixed pusher adapted to engage the said movable member, to dislodge it and release the cast slug or line, substantially as shown and described. 7th. A linotype casting machine provided with a revolving casting wheel, a mould carried by said wheel, and having a movable member, and a casting pot for engaging the said member and pushing it into position in the mould, substantially as shown and described. 8th. The combination of the casting wheel mounted to rotate and also capable of axial movement, the mould carried by said wheel, the member movable within the mould in a direction approximately parallel to the axis of the wheel the casting pot arranged to engage one end of said movable member and to push it into the mould, and the pusher arranged to engage the other end of the movable member and to dislodge it from the mould. 9th. A linotype machine, having a mould wheel carrying a mould provided with a slot, one wall of which is perpendicular to the plane of the wheel, while the opposite wall is inclined, and a movable mould member wedge shaped to fit into the said slot and provided on the face opposite to its inclined face with ribs dividing the mould cavity into a series of line spaces. 10th. A linotype machine, having a mould wheel carrying a mould provided with a slot, one wall of which is perpendicular to the plane of the wheel, while the opposite wall is incline, said perpendicular wall of the slot being provided with a recess at that face of the mould wheel which is farthest away from the metal injecting device, and a movable mould member wedge shaped to correspond to said slot.

No. 65,404. Electric Wire Coupling.

(Joint de fil électrique.)

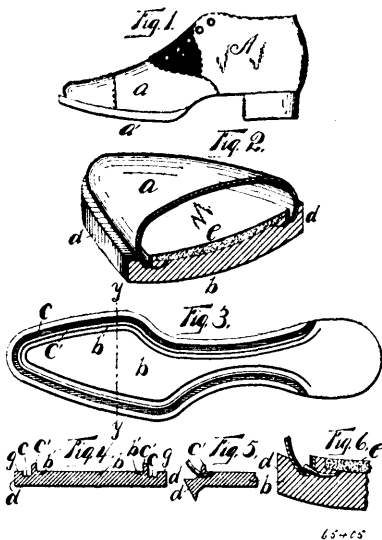


Rolland Thompson, Passaic, New Jersey, and John Dumphy, New York City, U.S.A., 19th December, 1899; 6 years. (Filed 25th September, 1899.)

Claim.—1st. A coupling comprising wires having hook shaped extremities containing shoulders extending upwardly from the upper sides of the wires, and a split sleeve containing a slot to engage the said hooks and having its upper portions adapted to fit around the ends of the wires, and its lower side portions extending around and fitting between the ends of said wires and forming a flush lower side therewith, substantially as described. 2nd. A split coupling sleeve having its upper portion provided with a slot to engage hook shaped extremities of wires to be joined, and adapted to fit around the ends of the same, and having its lower portions of reduced length and adapted to be bent around flush with the lower side portions of the said wire, and fit between the bottom portions of divergent ends thereof, substantially as described.

No. 65,405. Manufacture of Shoes.

(Fabrication de chaussures.)

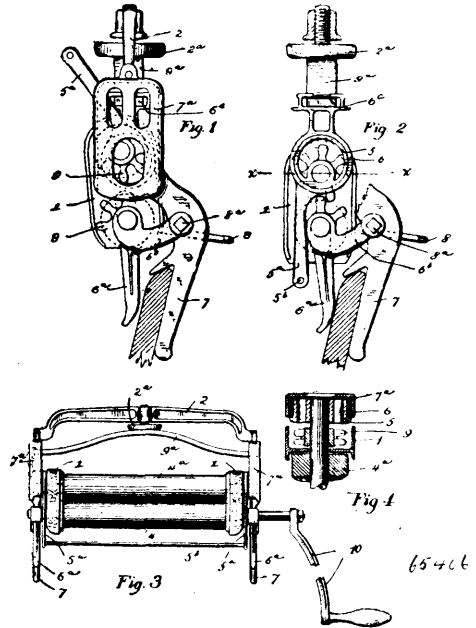


John Arron Kelly and Seward Earl Bowman, Syracuse, New York, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. A sole having a groove or channel *c*, formed around inside of its edges, and a second groove or channel formed inside of the outer one, and having a shoulder formed between the two grooves or channels, combined with an insole which is placed between the shoulders upon opposite sides of the sole and the upper which has its lower bent or doubled edge to catch inside of the groove or channel *c*, so as to relieve the stitching from the lateral pressure exerted by the foot, the insole rising preferably to a level with the top of the shoulders, the stitches being passed through the upturned part of the doubled edge of the upper and the between substance, the outer edge of the doubled portion resting against the shoulder *g*, substantially as specified. 2nd. A sole having a groove

or channel *c*, formed around its outer edge, and of sufficient width and depth to receive the edge of the upper *a*, and a shoulder *g*, formed around its outer edge, and which serves as a support for the edge of the upper, and a channel *b*¹, formed inside of the channel *c*, combined with its doubled edge inserted into the groove *c*, and an insole *c*, which is applied to the centre of the sole and fills the centre of the sole to the level of the between substance *c*¹, substantially as shown and described.

No. 65,406. Wringer. (Essoruse.)



Charles Philander Searles, Columbus, Ohio, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

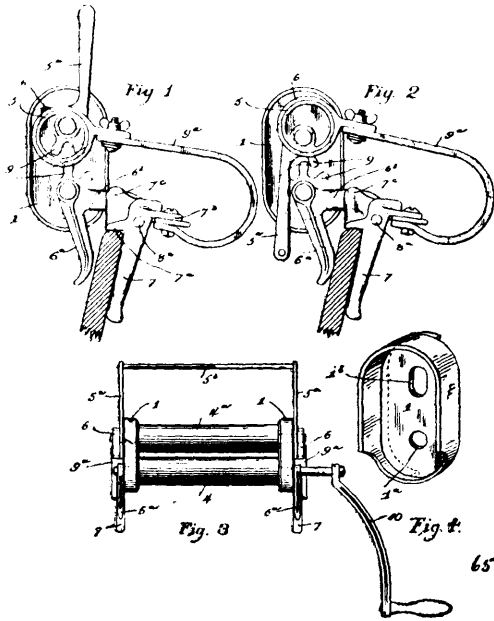
Claim.—1st. In a wringer, curved springs, stationary legs secured to the lower ends thereof, and collars or straps on the upper ends thereof, upper and lower rollers having shafts, movable clamping legs on the shaft of the lower roller, and eccentrics loose on the shaft of the upper roller to turn on the collars on the upper ends of the curved springs, whereby the movable clamping legs may be moved towards the stationary legs, and the upper roller towards the lower roller, substantially as described. 2nd. In a wringer, curved springs, an apron connecting the lower ends of said springs and stationary legs secured to the lower ends of said springs, upper and lower rollers having shafts, movable clamping legs pivoted to said apron and operated by the shaft of the lower roller, and eccentrics loose on the shaft of the upper rollers, and collars on the upper ends of said springs in which the eccentrics turn, substantially as described. 3rd. In a wringer, curved springs, stationary legs secured to the lower ends thereof, and collars on the upper ends thereof, upper and lower rollers having shafts, movable clamping legs on the shaft of the lower roller, and eccentrics loose on the shaft of the upper roller to turn in the collars on the upper ends of the curved springs, and a tie bar connecting with the eccentrics, substantially as described. 4th. In a wringer, curved springs, an apron connecting the lower ends of said springs, and stationary legs secured to the lower ends of said springs, said legs being provided with wings *w*², upper and lower rollers having shafts, movable clamping legs pivoted to said apron and operated by the shaft of the lower roller, means substantially as described, for depressing the upper roller toward the lower one and the movable legs towards the stationary legs.

No. 65,407. Wringer. (Essoruse.)

Charles Philander Searles, Columbus, Ohio, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. In a wringer, a main frame having legs *7*, a spring *9*^a supported in said frame, lower roller *4* carrying movable legs *6*^a, said legs being pivoted to the main frame, upper roller *4*^a, and eccentrics for drawings the rollers together and moving the legs *6*^a towards the legs *7* under the pressure of the spring, substantially as described. 2nd. In a wringer, a main frame having legs *7*, and adjustable spring *9*^a supported in said frame, lower roller *4* carrying movable legs *6*^a, said legs being pivoted to the main frame, upper roller *4*^a, and eccentrics for drawing the rollers together, and the legs *6*^a towards the legs *7*, under the pressure of the spring, substantially as described. 3rd. In a wringer, a main frame having legs *7*, a bow spring *9*^a supported in said frame, upper and lower rollers

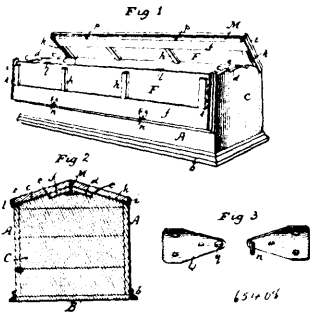
within said frame, eccentrics on the shaft of the upper roller, collars or straps on said eccentrics, and bearings for the ends of said



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springs on said collars, substantially as described. 4th. In a wringer, a main frame having legs 7, a bow spring 9^a supported in said frame, upper and lower rollers within said frame, eccentrics on the shaft of the upper roller, collars or straps on said eccentrics, bearings on the opposite ends of said springs on said collars, and means for adjusting the spring, substantially as described. 5th. In a wringer, a main frame having legs 7, a bow spring 9^a supported in said frame, upper and lower rollers within said frame, eccentrics on the shaft of the upper roller, collars or straps on said eccentrics connected with the opposite ends of said spring, substantially as described.

No. 65,408. Burial Box. (Boite d'inhumation.)



65408

Jacob Wittig, Marinette, Wisconsin, U.S.A., 19th December, 1899; 6 years. (Filed 30th November, 1899.)

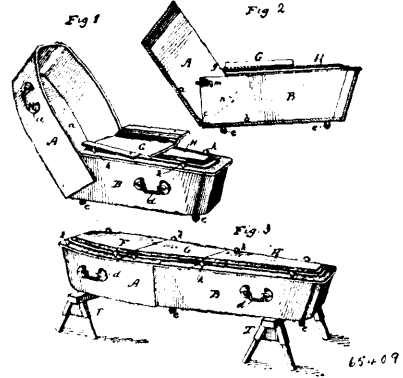
Claim.—1st. A burial box consisting of a bottom board with two side boards, and two end boards, the latter being provided with two upwardly beveled edges having recesses, and shoulders *c* formed by said recesses, with two covers hinged to the sides, each cover having a cleat along its edges to engage with the recesses and a pocket *k* at each end to receive the shoulders on the upper edges of the end boards, substantially as described. 2nd. In a burial box, the combination of a bottom board, two side boards and two end boards, the latter being provided with two upwardly beveled edges having recesses, and shoulders *c* formed by said recesses with two covers hinged to the sides, each cover having a cleat along its outer edge to engage with the recesses, a pendent pin projecting from one of the covers, and from the other cover a plate having a perforation to receive said pin, substantially as described.

No. 65,409. Coffin. (Cercueil.)

Jacob Wittig, Marinette, Wisconsin, U.S.A., 19th December, 1899; 6 years. (Filed 30th November, 1899.)

Claim.—1st. A coffin or body carrier consisting of hollow sections cut transversely and having the bottom of each one hinged to the other, substantially as described. 2nd. In a coffin, the combination

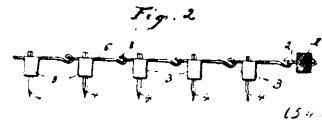
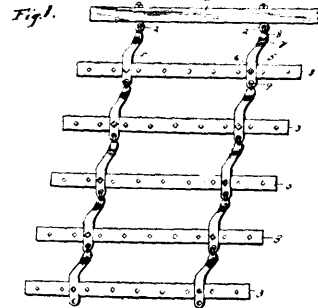
of a head section, a foot section having its front edge narrower than the rear edge of the head section, and hinges uniting the bottom of



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said sections, substantially as described. 3rd. In a coffin, the combination of a head section, a foot section having its front edge adapted to be lapped by the head section, hinges uniting the bottom of said sections, and a cover made in sections, one of which is adapted to overlap a portion of the upper edge of both the head section and foot section, substantially as described.

No. 65,410. Harrow. (Herc.)



65410

Henry Adler, Anthon, Iowa, U.S.A., 19th December, 1899; 6 years. (Filed 29th November, 1899.)

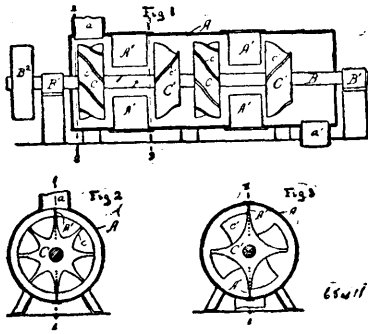
Claim.—1st. A harrow comprising a draft beam and a series of tooth beams having couplings with deflected forward ends and edges at the rear ends, whereby the several tooth beams may be connected to the draft beam and to each other and disposed obliquely to bring the teeth in alternate alignment with the spaces in the preceding tooth beams. 2nd. A tooth beam for a harrow having couplings secured thereto with forward deflected ends terminating in hooks and eyes in the rear ends. 3rd. A harrow comprising a main draft beam with eyes affixed thereto and a series of tooth beams having couplings adjacent to the opposite ends of each, said couplings being provided with forwardly laterally deflected ends terminating in hooks and rearwardly projecting ends formed with eyes, the rear body portions of the couplings being straight and the hooks on the forward ends of the deflections standing in parallel relation to the said body portions.

No. 65,411. Grain Scourer. (Appareil à nettoyer le grain.)

Frederick Augustus McLellan, Fort Worth, Texas, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. In a grain scourer, the combination with the case having an inlet and an outlet, means comprising a conveyor blade for forcing the grain through said case, and a retarding device in said case arranged with a space between it and said forcing means sufficient to allow an accumulation of a mass of grain in said space, comprising a rotating blade pitched to tend to effect movement in a direction opposite to the general direction of the grain through said case, and arranged to rotate in a plane out of the plane of rotation of any forwardly actuating blade, said retarding blade having less conveying power than the forcing blade. 2nd. In a grain scourer, the combination with the case having an inlet and an outlet, means

comprising a conveyor blade for forcing the grain through said case, and a retarding device comprising a whorl of rotating blades pitched



to tend to effect a movement of the grain in the direction opposite to the general movement of the grain through said case, and arranged to rotate in a plane out of the plane of rotation of any forwardly actuating blade, said retarding device being arranged with a sufficient space between it and said forcing means to allow an accumulation of a mass of grain in said space, and with its blades of less conveying power than the forcing means. 3rd. In a grain scourer, the combination of a case having an inlet and an outlet, means for forcing grain forwardly through said case, comprising a whirl of rotating blades pitched to effect said forward movement, and a retarding device in said case comprising a rotating blade pitched to tend to effect movement in a direction opposite to the general direction of the grain through said case, and arranged to rotate in a plane out of the plane of rotation of any forwardly actuating blade, said retarding device being arranged with a sufficient space between it and said forcing means to allow an accumulation of a mass of grain in said space, and with its blades of less conveying power than the forcing means. 4th. In a grain scourer, the combination with the case having an inlet and an outlet, means comprising a conveyor blade for forcing the grain through said case, a retarding device arranged in said case with longitudinal space between it and said forcing means, said device comprising a rotating blade pitched to tend to effect movement in a direction opposite to the general direction of the grain through said case, and arranged to rotate in a plane out of the plane of rotation of any forwardly actuating blade, and a longitudinal blade A' arranged in the space between said forwardly actuating means and said retarding device. 5th. In a grain scourer, the combination with the case A, having an inlet a and an outlet a', the shaft B arranged in said case, a conveying beater C, comprising a whorl of blades c, of a retarding beater C', comprising a whorl of blades c', all of which rotate in a plane out of the plane of rotation of any forwardly actuating blade, said retarding device being arranged at some distance from the conveyor C to allow the accumulation of a mass of grain between the conveyor C and said retarding device, the blades of said retarding device having less conveying power than the blades of the conveying device C. 6th. In a grain scourer, the combination with the case A, having an inlet a and an outlet a', the shaft B arranged in said case, a conveying beater C, comprising a whorl of blades c, a retarding beater C', comprising a whorl of blades c', all of which rotate in a plane out of the plane of rotation of any forwardly actuating blade, said retarding device being arranged at some distance from the conveyor C, the blades of said retarding device having less conveying power than the blades of the conveying device C and the longitudinal blades A' arranged in the space between the conveyor C and the retarding device C'.

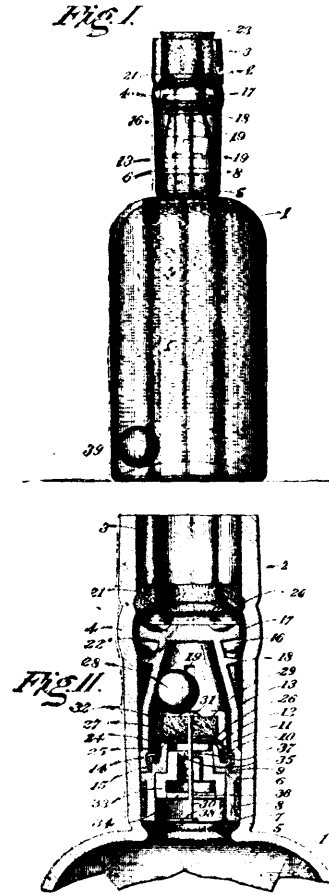
No. 65,412. Non-Refillable Bottle.

(Bouteille non-rechargeable.)

George James Barnes, Marion, Indiana, U.S.A., 19th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim.—1st. The combination of a bottle having a neck with an internal annulus forming in effect a flange near its outer end, and an outward curved portion below such flange, a valve mechanism secured within the neck, and a cap surmounting the valve mechanism and provided with a head located in the outward curved part of the neck, substantially as set forth. 2nd. The combination with a bottle provided with a neck, having a curved portion and an internal annular projection thereabove, of valve mechanism within the neck, a protective cap enclosing the valve mechanism and having a disc head located within the curved portion of the neck, an inferior flange below said curved portion, and apertures below the inferior flange, substantially as specified. 3rd. The combination with a bottle and its neck, of valve mechanism and its cap surmounting the same secured within the neck, a disc head and inferior flange upon the cap, a curved portion in the neck surrounding the head upon the cap, and an internal annulus forming in effect a flange provided within the neck above its curved portion, substantially as set forth. 4th. In valve mechanism, adapted to be inserted into

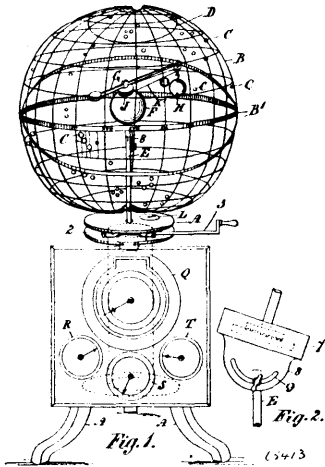
the neck of a bottle, the combination with a ring and an elevated valve seat thereon, of a resilient cup shaped valve inclosing the valve



seat and provided with a vent, a buoyant element connected to the valve and designed normally to leave the vent unobstructed, a weight designed to force the buoyant element against the valve to close the vent, and a cap carried by the ring and inclosing the valve, buoyant element and weight, substantially as specified. 5th. In valve mechanism designed to be inserted into a bottle neck, the combination with a ring provided with an elevated valve seat of comparatively small diameter, of a cup shaped resilient valve inclosing the valve seat and provided with a vent, a buoyant element secured to the valve in a manner to leave the vent unobstructed, a protective cap detachably secured to the ring and inclosing the valve and buoyant element, exterior annular flanges upon the cap and a movable weight within the cap and designed to press the buoyant element against the valve, to obstruct the vent therein, substantially as specified. 6th. In valve mechanism designed to be inserted into a bottle-neck, the combination with a ring provided with an elevated valve seat and with valve stem guide mechanism, of a resilient cup shaped valve inclosing the valve seat, a valve stem extending through the ring and valve, a buoyant element secured to the extremity of the valve stem above the valve, and slightly separated from the last named element, a dash plate carried at the opposite extremity of the valve stem, a protective cap secured to the ring, and inclosing the valve and buoyant element, and a weight within the cap and designed to press the buoyant element against the valve to close the vent therein, substantially as specified. 7th. The combination with a bottle, the neck of which is provided with an enlarged portion and an internal annular projection immediately above said enlarged portion, of a ring designed to be secured within the neck adjacent to its base and provided with an elevated valve seat, a resilient cup shaped valve inclosing the valve seat, a valve stem passing through the ring and valve, a buoyant element secured to the valve stem slightly above the valve, a dash plate secured to the opposite end of the valve stem, a protective cap secured to the ring and inclosing the valve and buoyant element, said cap being provided with a disc head located within the enlarged portion of the neck, with an inferior flange below the head and with apertures below the inferior flange, and a loose weight within the cap designed to press the buoyant element against the valve to close the vent, in the latter, substantially as specified. 8th. The combination with a bottle, the neck of which is constricted at its base and is enlarged at a point intermediate its ends, of an internal annular projection within the neck above the enlarged portion, a ring secured within the neck immedi-

ately above the constriction and provided with an elevated valve seat and with valve stem guides, valve stem extending through and above the ring, a buoyant element secured at the upper end of the valve stem, a dash plate secured to the lower end of the valve stem, a resilient cup shaped valve inclosing the valve seat and provided with a vent, a protective cap secured to the ring and inclosing the valve and buoyant element, a weight within the cap, a disc head upon the upper extremity of the neck, an inferior flange below the head, and apertures below the inferior flange, substantially as specified. 9th. In valve mechanism adapted to be inserted into the neck of a bottle, the combination with a ring, valve seat, and cup surrounding the valve seat, of a vent in the cup, a washer between the buoyant element and the cup, a ponderable body, and a cap adapted to confine the parts within operative relations to each other, substantially as set forth.

No. 65,413. Armillary Spheres. (Sphere armillaire.)



John Ryan, Brockville, Ontario, Canada, 19th December, 1899
6 years. (Filed 28th February, 1899.)

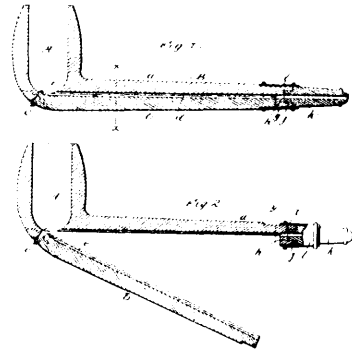
Claim.—1st. The combination with an operating gear, hollow post E, and sun representation F, of the arm G, carrying the earth H, and moon I, near one end and pulleys K, J, and cork K', all operating as and for the purpose set forth. 2nd. An auxiliary sphere having a cycle ring D, and a gear box 2, having a cycle dial L, and pointer geared to indicate the precession of the equinox, as set forth. 3rd. An armillary sphere having a zodiac dial Q, and pointer geared to operate with the planetary motions, as set forth. 4th. An armillary sphere having a dial R, and its pointer geared to operate with the planetary system, to indicate the daily motion of the sun on its axis, as set forth. 5th. An armillary sphere having a dial S, and its pointer geared to operate with the planetary system to indicate by degrees the motion or position of the moon with respect to the earth, during each lunar month, as set forth. 6th. An armillary sphere having a dial T, and its pointer geared to operate with the planetary system, to indicate by degrees the sun's declination or mean obliquity, as set forth. 7th. An armillary sphere, comprising an open sphere of wire formed by meridians and lines of latitude, balls indicative of heavenly bodies attached thereto and to subsidiary wires, equatorial and equinoctial belts attached to the sphere, a representation of the sun mounted within the sphere on a post, an arm supported above the sun and carrying representations of the earth and moon, a cord and pulleys to give motion of natural order as to ascension and declension, a gear giving motion to the sun and operating the earth and moon in their orbits, and below said sphere a zodiac dial and pointer, a dial and pointer giving the sun's daily motion on its axis, a dial and pointer indicating the moon's motion or position around the earth for each lunar month, and a dial and pointer declaratory of the sun's mean obliquity, said pointers operated by a gear timed to gear with the operating gear of the planetary system, substantially as set forth.

No. 65,414. Tobacco Pipe. (Pipe à tabac.)

Ralph K. Hall, Wonsocet, Rhode Island, U.S.A., 19th December, 1899; 6 years. (Filed 25th November, 1899.)

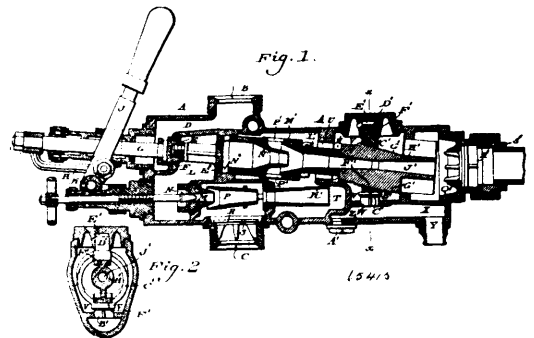
Claim.—1st. A pipe having its stem divided longitudinally through its smoke passage and in a horizontal plane, the upper section of said stem having a depending portion at its mouth end provided with a hole or passage, and the lower section hinged at its outer end to the bowl or body of the pipe, and a slidable ferrule adapted to secure the mouth end of the sections, substantially as specified. 2nd. The improved tobacco pipe comprising the bowl and

the stem divided longitudinally and in a horizontal plane so as to form the two sections a and b and expose the interior of the bowl



from below upwardly, the hinge c at the base of the bowl and outer end of the lower section so that said section may fall from the mouth end, and a suitable means for holding the sections at the mouth end, substantially as specified.

No. 65,415. Injector. (Injecteur.)

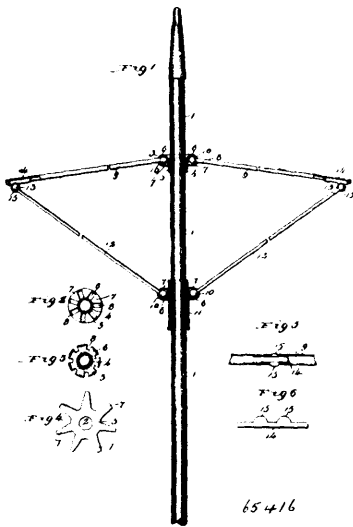


Thomas Morgan Eynon, Philadelphia, Pennsylvania, U.S.A., 19th December, 1899; 6 years. (Filed 27th November, 1899.)

Claim.—1st. In a double tube ejector, a movable forcing steam nozzle, a forcing combining tube attached thereto, and an overflow valve in combination with means for operating said valve simultaneously with the reciprocation of said forcing steam nozzle and forcing combining tube. 2nd. In an injector, a movable forcing steam nozzle, and a forcing combining tube having a cut off barrel constructed on its outside, said forcing steam nozzle and combining tube being inclined at an angle to the axis of the ejector casing, in combination with an overflow valve and connections common thereto, and to said barrel. 3rd. In an injector, the combination of a forcing steam nozzle, a forcing combining tube movable in unison therewith, a cut off barrel constructed on the outside of said combining tube, an overflow valve and means for enabling said barrel to cut off the passage of the water from the suction nozzle to the overflow at the proper period. 4th. In an injector, a cut off barrel constructed on the outside of the forcing combining tube, means for reciprocating the latter, an overflow valve and connections common to said barrel and valve, whereby the latter is actuated in unison with said barrel. 5th. In an injector, a forcing combining tube, inclined at an angle to the injector casing, inclined upper and lower faces on said combining tube, a yoke surrounding said tube, and having inclined ways engaging said faces of the combining tube, and an overflow valve engaging said yoke and operating simultaneously therewith. 6th. In an injector, a suction opening, a threaded coupling therein, and a check valve seated in said coupling and having a port therein. 7th. In an injector, an overflow chamber, a plurality of openings therein, a plug and an overflow nozzle engaging said openings respectively, said plug and nozzle being interchangeable with respect to each other. 8th. In an injector, an overflow valve, an inclined combining tube having a cut off barrel constructed on its outside, and means for operating said barrel and valve in unison. 9th. In an injector, a movable forcing combining tube having a cut off barrel and inclined upper and lower walls constructed on its outside, a yoke

having inclined ways engaged by said walls and an overflow valve actuated in unison with said yoke. 10th. In an injector, a casing, a forcing combining tube provided with a cut off barrel constructed on its outside, a forcing steam nozzle and a steam valve all inclined at an angle to the axis of said casing, in combination with an overflow valve and means for operating the latter and said barrel in unison. 11th. In an injector, a casing, an inclined forcing combining tube, having a cut off barrel and upper and lower inclined faces, a yoke engaging said tube, guiding devices for said yoke and an overflow valve operated by said yoke. 12th. In an injector, a casing, a cut off barrel, a cut off passage in said casing adapted to be throttled by said barrel, an overflow valve and means for operating said valve and barrel simultaneously. 13th. The combination of an injector casing, and a check valve located in the suction thereof, said valve having a port therethrough. 14th. The combination of an ejector casing, a check valve located in the suction thereof, said valve having a port therethrough, and means for permitting steam to flow through said port, whereby freezing in the suction pipe and supply tank is prevented. 15th. In an injector, a casing, a longitudinally movable forcing steam nozzle, a forcing combining tube attached thereto, said nozzle and tube being inclined relatively to the axis of said casing, an overflow valve, and means for operating said valve in unison with said tube. 16th. In an injector, a casing, a longitudinally movable forcing combining tube inclined at an angle to the axis of said casing, an overflow valve, connections common to said valve and tube, and means for actuating the latter. 17th. In an injector, a casing, a longitudinally movable forcing combining tube, inclined at an angle to the casing, a passage through which said tube extends, a shoulder on said tube adapted to throttle said passage, and means for actuating said tube. 18th. In an injector, a casing, a forcing steam nozzle, a forcing combining tube attached thereto, a yoke engaging said tube, an overflow valve operated by said yoke, means for guiding the upper portion of said yoke, and means for operating said nozzle, tube, yoke and valve. 19th. In an injector, a main steam inlet valve E, a steam valve E', a forcing steam nozzle N', a forcing combining tube, the above parts being connected together and movable in unison, suction steam nozzles, an overflow valve, and means for enabling said valve to move in unison with said forcing combining tube. 20th. In an injector, a casing, a longitudinally movable forcing combining tube, an overflow valve, connections common to said valve and tube and located within said casing, and means for actuating said tube. 21st. In an injector, an overflow chamber, a plurality of threaded openings of the same diameter therein, a plug and an overflow nozzle having threaded portions of the same diameter engaging said openings, said plug and nozzle being interchangeable according to requirements.

No. 65,416. Umbrella. (Parapluie.)

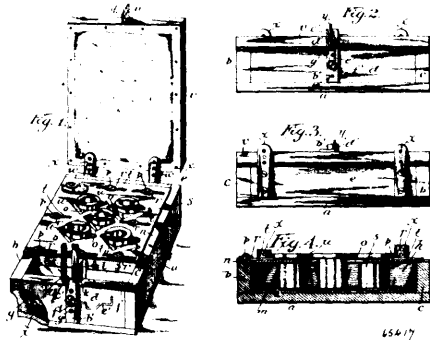


John A. Bedel, Belleville, Illinois, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. An umbrella frame, comprising a suitable rod, a bearing secured to the latter at a suitable distance from the ferrule end of the same, ribs, one end of which are provided with balls adapted to be snugly received by said bearings, a collar adapted to slide upon said rod, a bearing carried by said collar, suitable stretcher members, one end of which are provided with balls which are adapted to be received by the last named bearing, bearings secured to the ribs at a suitable position along their length, and balls forming the opposite ends of said members, and adapted to be received by the last named bearings, as and for the purpose described. 2nd. In an umbrella frame, a suitable collar, a bearing composed of a single piece of metal and provided with an opening, the wall form-

ing said opening being secured to said collar, an annular channel or groove, tongues forming a continuation of said groove, the ends of which are in contact with said collar, whereby suitable spaces are formed, the balls secured to the ends of the members of the frame of the umbrella, and adapted to be received by the bearing thus formed, as and for the purpose described. 3rd. In combination with the ribs of an umbrella frame, of a U-shaped bearing secured thereto, and consisting of a strip of metal semi-circular cup-shaped extensions forming a part of the same, whereby a suitable space is left between said extensions, and a ball carried by one end of the stretcher members, and adapted to be received between the cup-shaped extensions, as and for the purpose described.

No. 65,417. Ink Well Case. (Etui d'ecrrier.)



William H. Barten, Allen, South Dakota, U.S.A., 19th December, 1899; 6 years. (Filed 18th November, 1899.)

Claim.—1st. The combination with a receptacle, of a plate fixed thereto and having angular openings therein, and a second plate having also similar angular openings and adjustable over the first plate, the openings of one plate being arranged to align with those of the other plate, and means for holding the plates upon the receptacle. 2nd. The combination with a receptacle, of a plate fixed thereto and having square openings therein, a second plate having also square openings and adjustable over the first plate, said openings of one plate being arranged to align with those of the other plate and disposed with their diagonals in the line of adjustment of the adjustable plate. 3rd. The combination with a receptacle, of a plate fixed thereto and having square openings therein, a second plate having also square openings therein, the openings of one plate being adapted to align with the corresponding openings of the other plate, the second plate being adapted for adjustment over the first plate, a yieldable pad beneath the plates, and a cover adjustable vertically with respect to the plates. 4th. The combination with a receptacle, of a plate fixed thereto and having square openings therein, a second plate having also square openings therein adapted to align with the corresponding openings of the first plate, said second plate being adjustable over the first plate, perforated straps secured to the receptacle, a cover having pins adapted to enter certain of said perforations, a perforated plate carried by the cover, a corresponding perforated plate carried by the receptacle, and a latch adapted to enter aligning perforations in the last named plates. 5th. The combination with a receptacle divided into compartments, of a plate fixed and covering one of the compartments and having angular openings therein, a second plate adjustable over the first plate and having angular openings adapted to register with the first named openings, the openings in the plates being disposed with their diagonals in line with the adjustment of the plate, a pad beneath the openings, a padded cover having adjustable connection with the receptacle, and an absorptive pad within the second compartment.

No. 65,418. Non-Refillable Bottle.

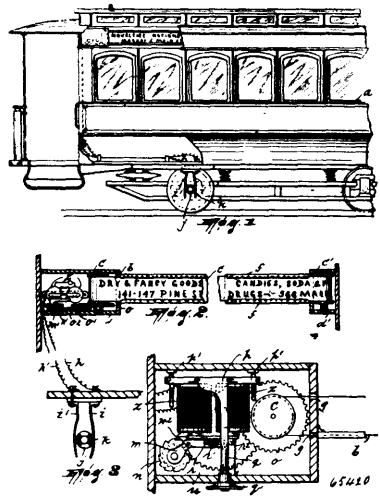
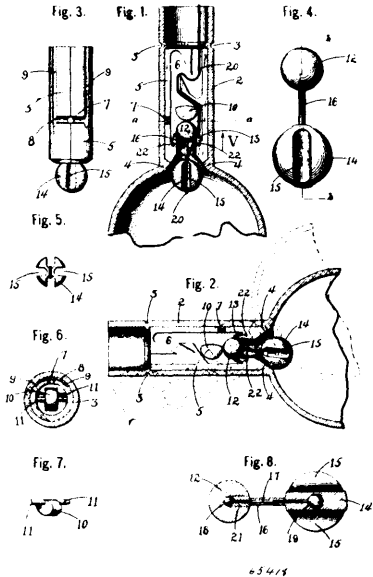
(Bouteille non réemplitable.)

George Wright Adams, Buffalo, New York, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. A non-refillable bottle comprising a bottle having a neck, a separable two part shell within said neck, an annular valve seat supported in said shell, a valve device composed of two balls connected together, and placed one above and one below the seat, the lower of said balls being provided with grooves, and a cam adapted to contact against the upper ball to lock the valve against opening, and having projections forming shafts journaled in depressions in the shell, said cam being adapted to turn on said projections by gravity to free the valve upon the tilting of the bottle, as set forth. 2nd. A non-refillable bottle comprising a bottle having a neck, provided with a flange or shoulder, a non-refilling device composed of a shell formed in separable halves, the interior of which when assembled forms a tortuous channel for the passage of the liquid, said halves each having a bearing opening, an annular valve seat secured to the lower portion of the channel, a ball adapted to fit upon said seat, a lower grooved ball, a rigid connection between the balls, and a locking cam having side extensions forming

shafts adapted to seat in the bearing openings in the shell arranged above the upper ball, and adapted to contact with said ball, as set

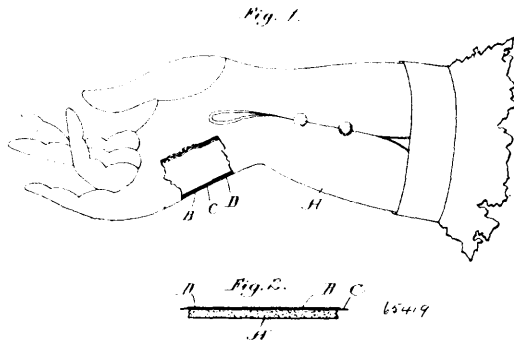
a revolving member of the running gear of said car, said member constituting a circuit making and breaking device between said



forth. 3rd. A non-refillable bottle comprising a bottle having a neck, a separable two part shell secured in said neck, an annular ring forming a valve seat mounted in said shell, an upper ball adapted to seat in said ring, and a lower grooved ball attached to said upper ball by a rigid connection, as set forth.

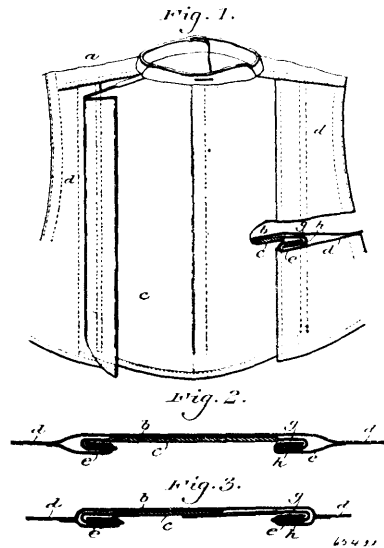
brushes, an armature lever, an armature carried by and adjustable pivotally and longitudinally on said armature lever, and controlled by said magnets, and operative connecting means between said armature lever and the sign, substantially as described. 3rd. The combination with a car or other similar vehicle, of an advertising apparatus carried by said car and consisting of a case, a pair of pins mounted therein, a frame adjustably mounted on said pins, a revoluble sign, an electro magnet or magnets carried by said frame, an electric circuit including said magnet or magnets, brushes also included in said circuits and bearing upon a revolving member of the running gear of said car, said member constituting a circuit making and breaking device between said brushes, a suitably journaled arbor, a ratchet wheel carried by and revoluble with said arbor, an armature lever, and armature carried by and adjustable pivotally and longitudinally on said armature lever, and controlled by said magnets and fulcrumed on said arbor, a spring actuated pawl engaging said ratchet wheel and carried by said armature lever, and operative connecting means between said ratchet wheel and the sign, substantially as described.

No. 65,419. Glove. (Gant.)



No. 65,421. Shirt and Bosom.

(Chemise et devant de chemise.)



Reuben Warner, St. Paul, Minnesota, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. As an improved article of manufacture, a kid glove having a lining, consisting of an absorbent fabric C, and a moisture proof film D, as shown and for the purpose specified. 2nd. A kid glove having on its inner side, first a film of moisture proof material, and then a lining of vegetable textile fabric, for the purposes specified. 3rd. A kid glove having a lining, consisting of an absorbent and moisture proof vegetable fabric suitably attached to the glove, for the purposes specified. 4th. A kid glove, with a thin absorbent lining of vegetable fabric coated with rubber, for the purposes specified.

John Jonas Hagedorn, Philadelphia, Pennsylvania, U.S.A., 19th December, 1899; 6 years. (Filed 27th November, 1899.)

Claim.—1st. A shirt having outwardly extending flaps aside of the bosom portion thereof. 2nd. An independent bosom for a shirt having inwardly extending tongues at the sides thereof. 3rd. A shirt having outwardly extending flaps aside of the bosom portion thereof, and an independent bosom having inwardly extending tongues at the sides thereof, adapted to interlock with said flaps. 4th. A shirt having outwardly extending flaps aside of the bosom portion thereof, and an independent bosom having lateral exten

No. 65,420. Railway Advertising Apparatus.

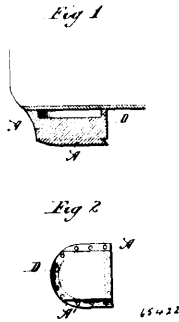
(Appareil d'annonce de chemin de fer.)

Charles Joseph Feder, Paterson, New Jersey, U.S.A., 19th December, 1899; 6 years. (Filed 26th October, 1899.)

Claim.—1st. The combination with a car or other similar vehicle, of an advertising apparatus carried by said car, and consisting of a revoluble sign, an adjustably mounted electro magnet or magnets, an electric circuit including said magnets, and a revolving member of the running gear of said car, said member constituting a circuit making and breaking device, an armature lever, an armature adjustably mounted on said armature lever and controlled by said magnets, and operative connecting means between said armature lever and the sign, substantially as described. 2nd. The combination with a car or other similar vehicle, of an advertising apparatus carried by said car and consisting of a revoluble sign, an adjustably mounted electro magnet or magnets, an electric circuit including said magnets, brushes also included in said circuit and bearing upon

sions and inwardly extending tongues at the outer ends of said extensions, the latter being adapted to be situated between said flaps and bosom portion and said tongues being adapted to occupy and interlock with the members of said flaps.

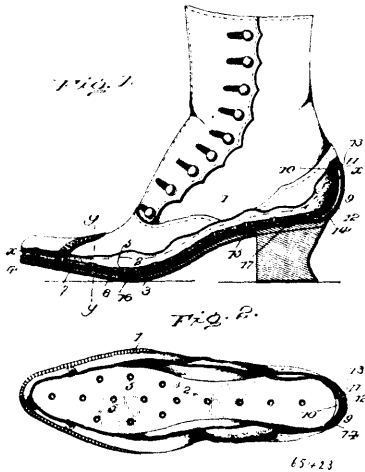
No. 65,422. Cushion and Pneumatic Boot and Shoe Heel. (*Talon pneumatique de chaussure.*)



Charles G. Hainlin Anderson, California, U.S.A., 19th December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. A heel for a boot or shoe formed of elastic material and having a channel or offset surrounding its lower periphery, the portion of the heel interior to said channel or offset projecting below the plane thereof and adapted to contact with the ground. 2nd. A heel for boot or shoes composed of rubber, an open topped chamber formed in the upper part of said heel having a peripheral margin adapted to be cemented directly upon the sole of the shoe whereby a body of air is hermetically sealed within said chamber to form an independent elastic cushion, a groove or channel made around the other periphery of the heel and nails driven through said channel to secure the heel leaving a central projecting elastic surface of contact with the ground, interior to the line of nails. 3rd. A heel for a boot or shoe formed of rubber having an air chamber in its top and having the central portion of its under surface of less diameter than the body to form an elastic tread and a surrounding offset, said offset adapted to receive the securing nails or fastenings.

No. 65,423. Shoe Ventilator and Cushion. (*Ventilateur et coussinet de chaussure.*)

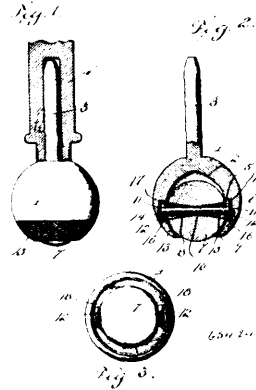


Samuel Arnstield and John Koller, both of Johnstown, New York, U.S.A., 19th December, 1899; 6 years. (Filed 27th November, 1899.)

Claim.—1st. A combined cushion and ventilator for shoes, consisting of a pliable base provided upon its upper side with a series of spaced ribs and projections to form ventilating channels and having a slit opposite one of the medial projections, and a spring shank applied to the bottom side of the base and having a terminal portion thrust into said slit and confined between the base and the projection opposite the said slit, substantially as set forth. 2nd. A combined cushion and ventilator for boots and shoes, consisting of a pliable base or intermediate sole provided upon its upper side with projections to form air channels, a rear concave-convex ventilator provided upon its inner concaved surface with ribs forming an air channel in communication with the said channels in the sole and having the lower ends or edges of its side wings free to allow said wings to yield and conform to the shape of the counter of the shoe and heel

of the wearer, and a covering strip secured to said sole and adapted to be applied to said ribs on the rear ventilator to close the inner side of the channel formed thereby. 3rd. In a boot or shoe of the character described, the combination, with an insole having openings, of a combined cushion and ventilator interposed between the outer sole and insole and comprising a pliable base forming a single intermediate sole proper provided upon its upper side with projections forming longitudinal air channels, a concave-convex rear ventilator formed with upper outlets registering with corresponding outlets in the counter of the shoe and having upon its inner concaved surface longitudinal ribs forming a channel in communication with said outlets and the channels in the sole, eyelets passed through the registering outlets in the rear ventilator and counter of the shoe and connecting said parts, and a flexible covering strip secured directly to the rear portion of the said single intermediate sole and to the ribs upon the rear ventilator and closing the inner side of the channel formed by said ribs, substantially as described.

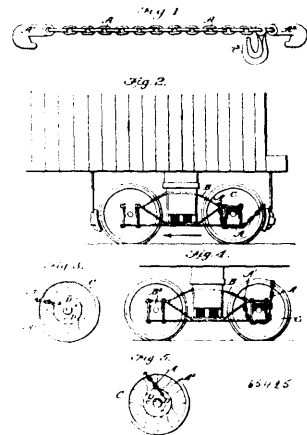
No. 65,424. Caster. (*Roulette de meuble.*)



Esther P. H. Carraway, Portsmouth, Virginia, U.S.A., 19th December, 1899; 6 years. (Filed 24th November, 1899.)

Claim.—1st. A caster, comprising a body portion having a securing stem integral with and having a substantially hemispherical recess in its under side, a groove in the wall of the lower portion of the recess resulting in the formation of a lower increased cylindrical bore, and a race element between the wall of the cylindrical bore and the wall of the hemispherical recess, threads at the lower end of the body portion, a retaining ring engaging the threads of the body portion and having a groove in the upper portion of its inner surface resulting in the formation of an increased cylindrical bore adapted to align with the similar portion of the body, and a race element adapted to lie parallel with the race element of the body to form a race, rollers mounted to travel in the race, a shaft journaled loosely in the rollers and movable therewith, and a ball having a central passage, the ends of which are flared outwardly and through which the shaft is passed, the surface of the ball surrounds the ends of the passage being adapted to contact with the roller to hold the ball from engagement with the body and the ring.

No. 65,425. Car Truck Lifter. (*Appareil à soulever les trucs de chars.*)

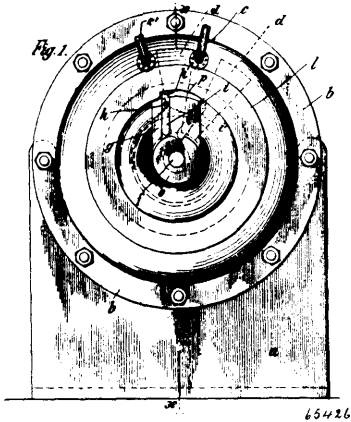


William John Donaldson, La Grange, Texas, U.S.A., 19th December, 1899; 6 years. (Filed 25th November, 1899.)

Claim.—The combination with the wheel and axle and the journal box and frame of a car truck, of a flexible sling having grappling

connections at its ends, connected at one end to the journal box frame and anchored at the other to move with the wheel to cause the rotary movement of the latter to lift the journal box from its bearing on the journal and at the same time hold down the wheel on the track, substantially as and for the purpose described.

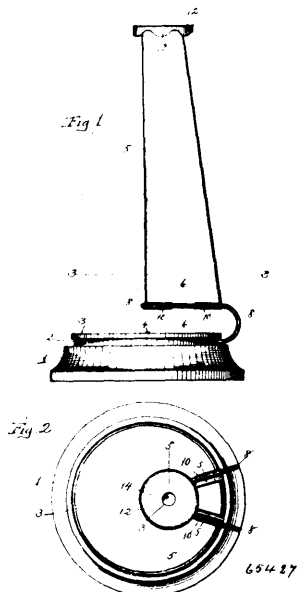
No. 65,426. Rotary Engine. (Machine rotatoire.)



Jacob Ludwig Piening, Elmhorn, near Hamburg, Germany, 19th December, 1899; 6 years. (Filed 6th October, 1898.)

Claim.—1st. A rotary engine comprising a cylinder having two alternately moving pistons loosely mounted on a suitable shaft and adapted to open and close the exhaust port as described, and means for driving the shaft, consisting of collars secured thereto and to the pistons and carrying sliding bolts, substantially as set forth. 2nd. A rotary engine comprising a cylinder having guide rods or rings secured to the inner face of its heads, two alternately moving pistons loosely mounted on a suitable shaft and adapted to open and close the exhaust port as described, means for preventing back strokes of the pistons, and means for driving the shaft, consisting of collars secured thereto and to the pistons and carrying sliding bolts, substantially as described.

No. 65,427. Kaleidoscope. (Kaleïdoscope.)

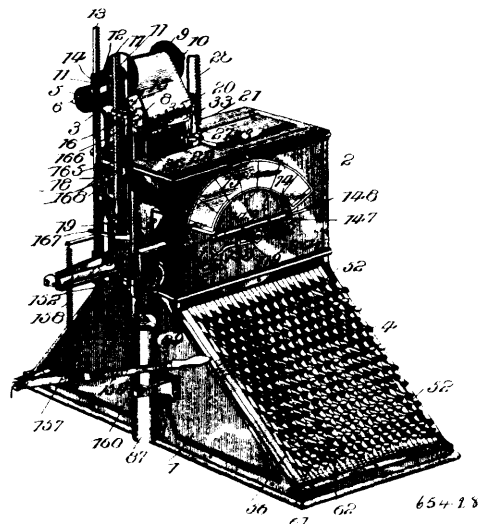


The American Symmetroscope Co., Portland, Maine, U.S.A., assignee of George Wade, Everett, Massachusetts, 20th December, 1899; 6 years. (Filed 2nd October, 1899.)

Claim.—1st. In a kaleidoscope, the combination with a rotary object support, and lens, a pair of kaleidoscope mirrors, and means for supporting said mirrors with their apicillary line approximately in line with the lens and axial centre of the object support and perpendicular to the plane of the object support. 2nd. In a kaleidoscope, the combination with a rotary object support, and a lens, of a pair of mirrors arranged at an acute angle with relation to each other and with an open side approximately their whole length, and means for supporting said mirrors with their apicillary line approximately in line with the lens and axial centre of the object support and perpendicular to the plane of the object support. 3rd. In a

kaleidoscope, a rotatable object support having an approximately plane top surface exposed directly to the rays of light and unobstructed for the application thereto of objects to be viewed, a plurality of mirrors and a mirror holder maintaining the mirrors at an angle with relation to each other, and with their apicillary line approximately perpendicular to the top surface of the object support and in line with its centre of rotation. 4th. In an instrument of the class described, a plurality of elongated mirrors, a mirror holder maintaining the mirrors in an angular position relatively to each other, and eye-piece and compensating lens at the upper end of the holder, a rotatable object support, and means for sustaining the holder with its lower end at a distance above the object support, with its upper end at a less distance from the object support than the distance of normal distinct vision, and the apicillary line of the mirrors approximately in line with the centre of rotation of the object support. 5th. In a kaleidoscope, a pair of elongated upright mirrors arranged with their reflecting surfaces at an acute angle with relation to each other, a superposed aperture eye-piece, a subjacent rotatably pivoted object support and means for supporting and maintaining the eye-piece mirrors and pivotal axis of the eye aperture, the apicillary line of the mirrors and the pivotal axis shall be approximately in the same straight line. 6th. In a kaleidoscope, an elongated open side mirror holder, mirrors held in place within said holder at opposite sides its longitudinal openings, a cap or eye-piece applied to the upper end of said holder and a bracket embracing the lower end of said holder outside the backs of the mirrors, said bracket sustaining said holder and preventing its angular displacement. 7th. In a kaleidoscope, a mirror holder V shape in cross section and tapered from bottom to top, in combination with a pair of kaleidoscope mirrors similarly tapered from bottom to top and secured in said holder by introverted edge portions of the sides and bottom of the holder. 8th. In a kaleidoscope, the combination with a support, of a bracket erected from the support, a pair of mirrors, and a mirror holder having portions of its bottom edge bent to engage the lower edges of the mirrors, and other portions bent to engage the supporting bracket. 9th. In a kaleidoscope, the combination with the mirror holder formed of sheet metal and having portions of its upper end bent outwardly at approximately right angles to form flanges, of an eye-piece superposed upon said flanges and having depending portions introverted beneath the edge of said flanges, whereby the cap is secured to the holder.

No. 65,428. Machine for Preparing Record Strips for Type Forming Machines. (Machine à préparer les bandes pour machines à former les caractères.)



The Laston Monotype Machine Company, Washington, D.C., assignee of John S. Bancroft and William H. Wood, both of Philadelphia, Pennsylvania, U.S.A., 20th December, 1899; 6 years. (Filed 12th May, 1899.)

Claim.—1st. The combination with a series of character designating punches and a series of key levers, of two series of rock bars for operating different punches of the series of punches, and independent connections between the key levers and said two series of rock bars, whereby upon the operation of any key lever, one of the rock bars of each series is operated, substantially as described. 2nd. The combination with a series of character designating punches and a series of key levers arranged in vertical columns and horizontal rows, with finger-pieces for each of said key levers, of independent connections between each one of the vertical columns of key levers and one of the series of punches, and between each of the horizontal rows or lines of key levers and another one of the punches, whereby upon the operation of any key lever, a punch corresponding to the vertical column and another corresponding to the horizontal row or line in which said key lever is located is operated, as set forth. 3rd.

The combination with a series of character designating punches and a series of key levers, each having a finger piece and arranged in vertical columns and in horizontal rows or lines with connections between each of said vertical columns and a punch in the series of punches, and an independent connection between each of said horizontal rows or lines and another punch in said series of punches, whereby upon the operation of any key, two punches will be operated, one corresponding to the vertical column in which the key is located and the other corresponding to the horizontal row or line in which the key is located, substantially as described. 4th. The combination with a series of character designating punches, and a series of key levers, arranged in vertical columns and horizontal rows or lines, of a series of rock bars for operating certain punches in the series of punches and corresponding to the vertical columns of key levers and a second series of rock bars for operating other punches of the series of punches, and corresponding to the horizontal rows or lines of key levers, substantially as described. 5th. The combination with a series of character designating punches and a series of key levers arranged in vertical columns and horizontal rows or lines, of a series of rock bars for operating certain punches of the series of punches and having bails co-operating with the horizontal rows or lines of key levers, a second series of rock bars for operating certain other punches of the series of punches and connections between said second series of rock bars and the vertical columns of key levers, substantially as described. 6th. The combination with a series of character designating punches and a series of key levers arranged in vertical columns and horizontal rows or lines, of a series of rock shafts for operating certain of the punches of the series of punches and having bails with which the key levers directly co-operate, a second series of rock shafts for operating certain other punches of a series of punches and units bars for operating said last-mentioned series of rock shafts, with connections between said unit bars and the vertical columns of key levers, substantially as described. 7th. The combination with a series of character designating punches and a series of vertically arranged units bars with connections between said units bars and punches for operating the latter, of vertical columns of key levers for operating said units bars, the key levers of said vertical columns being arranged alternately on opposite sides of the units bars, substantially as described. 8th. The combination with a series of character designating punches and vertically arranged units bars for operating said punches, having oppositely extending projections or lugs thereon, of a series of key levers arranged in vertical columns corresponding to said units bars, said key levers being arranged alternately on opposite sides of said units bars and adapted to co-operate with the lugs or projections thereon for operating the punches, substantially as described. 9th. The combination with a series of character designating punches, a series of vertically arranged units bars for operating said punches and a series of key levers, arranged in vertical columns corresponding to and adapted to operate said units bars, of a series of rock shafts corresponding to the key levers in each of said columns and adapted to be operated thereby, and connections between said rock shafts and certain punches of the series of punches not operated by the units bars, substantially as described. 10th. The combination with a series of character designating punches, a series of rock shafts having bails directly co-operating with certain punches of said series to operate the same, a series of vertically arranged units bars for operating said rock shafts, and a series of key levers arranged in vertical columns, the key levers in each column co-operating with the same units bars, of a series of rock shafts having bails directly co-operating with the key levers, the key levers in the same horizontal plane co-operating with the same rock shaft and connections between said last-mentioned series of rock shafts and certain of the punches of the series of punches, substantially as described. 11th. In a character designating apparatus, the combination with a series of character designating punches and a series of key levers arranged in vertical columns, the key levers in each column being arranged alternately in different vertical planes, of a series of units bars for operating the punches arranged vertically between the key levers in each vertical column, substantially as described. 12th. In a character designating apparatus, the combination of a series of character designating punches, and a series of key levers arranged in vertical columns, the key levers in each column being located alternately in different vertical planes, of units bars for operating the punches arranged vertically between the key levers of each column, and having oppositely extending projections with which the key levers co-operate, substantially as described. 13th. In a character designating apparatus, the combination with a series of character designating punches, and a series of key levers arranged in vertical columns, of a series of lower unit bars arranged vertically and corresponding to the vertical columns of the key levers and an upper series of units bars for operating the punches resting upon and adapted to be operated by the lower series of units bars, substantially as described. 14th. In a character designating apparatus, the combination with a series of character designating punches and a series of key levers arranged in vertical columns, of a series of lower units bars arranged vertically and corresponding to the vertical columns of key levers and an upper series of units bars for operating the punches resting upon and adapted to be operated by the lower series of units bars, the said upper and lower series of units bars being arranged with their greatest widths in planes at right angles to each other to afford wide bearings at their meeting points, substantially as described. 15th. In a character designating

apparatus the combination with a series of character designating punches and vertically arranged upper punch bars therefor, of a lower series of vertically arranged punch bars upon which said upper punch bars rest, a series of rock shafts for operating said lower punch bars, and a series of key levers for operating said rock shafts, substantially as described. 16th. In a character designating apparatus, the combination with a series of character designating punches and vertically arranged punch bars therefor, of a lower series of vertically arranged punch bars upon which some of said punch bars rest, rock shafts for operating said lower series of punch bars and thereby operating the punches, an upper series of rock bars for operating the punches not operated by the lower series of punch bars, vertically arranged units bars for operating said upper series of rock bars and a series of key levers, each of which co-operates with one of the units bars and one of the lower series of rock bars, whereby two punches are operated by each of the key levers, substantially as described. 17th. In a character designating apparatus, the combination with a paper feed, embodying an escapement and a feed shaft, of a series of vertically arranged punch bars, each having a projection for operating said feed shaft, whereby when any one of the punch bars is moved, the paper will be fed, and a series of key levers with connections between said key levers and punch bars for operating the latter, substantially as described. 18th. In a character designating apparatus, the combination with a paper feed, embodying a motor and an escapement for limiting the movement of said motor and a feed shaft having a bail whereby it is oscillated, of a series of punch bars each having a projection for co-operating with the bail of the feed shaft, and a series of key levers with connections between said key levers and punch bars for operating the latter, substantially as described. 19th. In a character designating apparatus, the combination with a series of character designating punches and mechanism for operating different punches of said series embodying vertically arranged punch bars and horizontally arranged rock shafts having laterally extending bails or projections, of a series of key levers having apertures through which said rock shafts extend and the walls of which apertures are adapted to co-operate with the bails or projections, substantially as described. 20th. In a paper feeding mechanism, such as described, and in combination with the shaft for actuating the paper feed wheel, and an escapement controlling the same, of a motor geared with said shaft for advancing it when released by the escapement, and a spring pressed clutch interposed in the gearing between the motor and shaft. 21st. In a paper feeding mechanism, such as described, and in combination with the shaft for actuating the paper feed wheel and an escapement controlling the same, of a gear wheel or pinion journaled on said shaft, a clutch interposed between said gear wheel and shaft for permitting the reverse movement of the gear wheel and motor rack meshing with said gear wheel, substantially as described. 22nd. In a paper feeding mechanism, such as described, and in combination with the shaft for actuating the paper feed wheel, and an escapement controlling the same, of a gear wheel or pinion journaled on said shaft, a clutch interposed between said gear wheel and shaft for permitting the reverse movement of the gear wheel, a motor rack in mesh with said gear wheel, a motor weight in gear with said rack and restoring mechanism for resetting the rack and weight. 23rd. In a paper feeding mechanism, such as described, and in combination with the shaft for actuating the paper feed wheel, and an escapement controlling the same, of a gear wheel or pinion journaled on said shaft, a clutch interposed between said gear wheel and shaft for permitting the reverse movement of the gear wheel, a motor rack in mesh with said gear wheel, a motor weight in gear with said rack, a vertically movable resetting mechanism for elevating said weight and rack and co-operating projections on said resetting mechanism and motor, substantially as described. 24th. In a paper feeding mechanism, such as described, and in combination with a record ribbon or strip feeding mechanism, embodying a feed shaft and a winding shaft, of a single motor with differential gearing interposed between said shafts and motor whereby the movements of said shafts under the influence of said motor may vary. 25th. In a paper feeding mechanism, such as described, and in combination with a record ribbon or strip feeding mechanism embodying a feed shaft and winding shaft and an escapement for controlling the movement thereof, of a motor and differential gearing interposed between said shafts and motor, whereby the movements of the shafts under the influence of the motor may vary, substantially as described. 26th. In a paper feeding mechanism, such as described, and in combination with a record ribbon or strip feeding mechanism embodying a feed shaft, a winding shaft and an escapement, of racks in gear with said feed and winding shafts, gearing interposed between said racks and a motor applied to said gearing whereby said racks may be moved independently or in unison under the influence of said motor. 27th. In a paper feeding mechanism, and in combination with a record ribbon or strip feeding mechanism, embodying a feed shaft, a winding shaft and an escapement, of racks in gear with said shafts, a gear wheel interposed between and meshing with both of said racks and a motor weight suspended from said gear wheel, substantially as described. 28th. In a character designating apparatus embodying a key controlled mechanism adapted for co-operation with a record ribbon or strip, and in combination therewith, a record ribbon or strip feeding mechanism embodying a feed shaft and a winding shaft, and a motor, with differential gearing interposed between said shafts and motor whereby the movements of the shafts under the influence of

said motor may be varied, substantially as described. 29th. In a character designating apparatus, the combination with the character designating mechanism having controlling keys and adapted to co-operate with a record ribbon or strip, of a record ribbon or strip feeding mechanism embodying a feed shaft and a winding shaft, a motor, gearing interposed between said motor and both of said shafts and a resetting mechanism for restoring the power of said motor, substantially as described. 30th. In a paper feeding mechanism, such as described, and in combination with the record ribbon or strip feeding mechanism embodying an escapement and a motor, of a resetting handle for restoring the motor, operating thereon through an elastic connection. 31st. In a paper feeding mechanism, such as described, and in combination with a record ribbon or strip feeding mechanism embodying a feed shaft, escapement and motor, of a resetting mechanism embodying a resetting handle and a spring through which the movement of the resetting handle is transmitted to the motor for resetting the same. 32nd. In a paper feeding mechanism, such as described, and in combination with a record ribbon or strip feeding mechanism embodying a feed shaft and a motor therefor, of an escapement wheel for said shaft, stiff and limber pawls for co-operating with the said wheel, a longitudinally movable shaft on which said pawls are mounted to oscillate transversely of the escapement wheel, bearings in which said shaft is mounted and an adjustable stop for the forward end only of said shaft, whereby the shaft is free to move rearwardly in its bearings, substantially as described. 33rd. In a paper feeding mechanism, such as described, and in combination with a record ribbon or strip feeding mechanism embodying a feed shaft and a motor therefor, of an escapement wheel for said shaft, stiff and limber pawls for co-operating with said wheel, a longitudinally movable shaft on which said pawls are mounted to oscillate transversely of the escapement wheel, bearings in which said shaft is mounted and a transverse arm constituting a finger piece for throwing said pawls out of engagement with the escapement wheel, and means for limiting the movement of the pawl shaft in one direction, substantially as described. 34th. In a character measuring mechanism for a machine such as described, the combination with a units wheel controlling the movement of the indicator and having a progressively forward movement with mechanism for controlling its movement in accordance with the body widths of the characters, of a motor mechanism for impelling said wheel forwardly with a clutch connection interposed between said motor and wheel, and a resetting mechanism for the motor, whereby the wheel may be held against backward movement, substantially as described. 35th. In a character measuring mechanism for a character designating machine, the combination with the units wheel, having a progressively forward movement, with mechanism for controlling such movement in accordance with the body widths of the characters designated, of an indicator controlled by said wheel, a motor for impelling the wheel and a clutch interposed between the wheel and the motor. 36th. In a character measuring mechanism for character designating machines, such as described, the combination with the units wheel having a progressively forward movement with means for controlling such movement in accordance with the body widths of the characters designated, of a motor connected with said wheel through a clutch connection for advancing it, and an indicator controlled by said wheel and a setting mechanism for arresting the movement of said wheel at a zero point. 37th. In a character measuring mechanism for a designating machine, such as described, the combination with a units wheel, its shaft and the rack bar engaging a pinion on the units wheel shaft and controlling the line indicator, of the units rack reciprocating in ways in a pivoted support and a locking pawl for the units wheel with mechanism intermediate said locking pawl and units rack, whereby when the units rack is moved into engagement with the wheel, the pawl will be withdrawn and the units wheel abandoned to the control of the units rack. 38th. In a character measuring mechanism for a designating machine, such as described, the combination with the units wheel, its shaft, a rack bar engaging a pinion on the units wheel shaft, a motor for advancing the said rack bar and units wheel and an indicator controlled by said units wheel for indicating the extent of such movement, of the units wheel rack reciprocating in ways in a pivoted support, a locking pawl for the units wheel, mechanism intermediate said locking pawl and units rack, whereby when the rack is moved into engagement, the pawl is disengaged from said wheel, abandoning the wheel to the control of the rack, and a clutch interposed between the units wheel and the pinion carried by the units wheel shaft. 39th. In combination with a units wheel, the units rack, the pivoted support for said rack, and the locking pawl, of the series of stop bars operating through intermediate connections to move the units rack support and withdraw the locking pawl, and a series of stops controlled by said bars for arresting the movement of the units rack. 40th. In combination with the units wheel, the units rack, the pivoted support for said rack, and the series of stops working transversely of said support to limit the movement of the rack, of a locking pawl and an operating mechanism for said stops with intermediate connections between said stop operating mechanism, the units rack carrier and the locking pawl, whereby when any one of said stops is operated, the units rack will be thrown into engagement with the wheel and the locking pawl out of engagement therewith, and a motor for advancing the units wheel, substantially as described. 41st. In a character designating apparatus, the combination with an indicator

for indicating the space occupied by said characters, a units wheel controlling said indicator and a feed shaft, of a locking pawl for the units wheel, a units rack for limiting the movement of the units wheel, a units rack carrier for moving the rack towards and from the units wheel, a link connected at one end with the units rack carrier and at the opposite end with the locking pawl and an intermediate connection between said link and the feed shaft, whereby said link will operate as a lever to secure the proper sequence of movements of the rack carrier and pawl. 42nd. In a character designating apparatus, the combination with an indicator and units wheel controlling the same, a locking pawl for said units wheel and a units rack for limiting the movement of said units wheel when released by the locking pawl, of a units rack carrier movable towards and from the units wheel, a link pivotally connected at one end with said units rack carrier and at the opposite end with the locking pawl and an operating rod or connection pivotally connected with said link at an intermediate point, whereby said link will move both the units rack carrier and locking pawl, but will permit them to move independently in order that the units wheel may be held under control at all times. 43rd. In a machine such as described, comprising character designating apparatus, and an indicating mechanism, the combination with a units wheel controlling the indicating mechanism, a units wheel rack mounted to reciprocate in ways movable towards and from the units wheel, and a locking pawl, of a series of stops with which said units rack co-operates to limit the movement of the units wheel, said stops being arranged in two series, the stops of one series forming the supports for the stops of the other series but capable of moving independently thereof, substantially as described. 44th. In a character designating apparatus, such as described, and in combination with the units wheel thereof, adapted to advance in accordance with the body widths of the characters designated, of a units rack adapted to engage said units wheel, a series of pivoted stops with which said rack co-operates to arrest the movement of the units wheel and a guide or slot for each of said pivoted stops, substantially as described. 45th. In a character designating apparatus, such as described, and in combination with the units wheel thereof, adapted to advance in accordance with the body widths of the characters designated, and a units rack, of a units rack carrier movable towards and from the units wheel, a series of guides or slots in said units rack carrier and a series of stops working in said slots and adapted to arrest the movement of the units rack and units wheel, substantially as described. 46th. In a character designating apparatus, such as described, embodying a units wheel adapted to advance in accordance with the body widths of the designated characters, and in combination with said units wheel, of a units rack, a units rack carrier movable towards and from the units wheel and having a series of slots or guides therein, a series of long stops working in said slots or guides, a series of short stops arranged intermediate said long stops and having overhanging portions adapted to co-operate with and move the long stops, whereby when any one of said shorter stops is operated to move into position to arrest the rack, it will carry with it the adjacent long stop for supporting it against lateral movement. 47th. In a character designating apparatus, such as described, embodying a character designating mechanism and a units wheel adapted to advance in accordance with the body widths of the characters designated, and in combination with said wheel, of a units rack carrier movable towards and from the wheel, a units rack mounted to reciprocate in ways in said carrier, stops for arresting said rack, a spring pressed lever and a link connected said lever and rack to return it to normal position. 48th. In a character designating apparatus, the combination with character designating mechanism, and indicating mechanism embodying a units wheel adapted to advance in accordance with the body widths of the characters designated, of a units rack, a units rack carrier movable towards and from the units wheel, a spring set to move said rack towards the units wheel, a locking pawl for the units wheel, a link pivotally connected at its opposite ends with said units rack carrier, and locking pawl, a feed shaft, a connection between said feed shaft and said link intermediate the ends of the latter and a superior spring operating through said connection for holding the units rack carrier away from the units wheel, substantially as described. 49th. In a character designating apparatus, the combination with character designating mechanism and indicating mechanism embodying a units wheel adapted to advance in accordance with the body widths of the characters designated, and an indicator controlled by said units wheel, of a rack for advancing the units wheel, and a motor connected with the rack, substantially as described. 50th. In a character designating apparatus, the combination with character designating mechanism and an indicating mechanism embodying a units wheel adapted to advance in accordance with the body widths of the characters designated, of a pinion connected with the units wheel, a rack meshing with the said pinion, motor connected with said rack and a resetting mechanism for returning the rack to normal position, substantially as described. 51st. In a character designating apparatus, the combination with character designating mechanism, and an indicating mechanism, embodying a units wheel adapted to advance in accordance with the body widths of the characters designated, of an indicator controlled by said units wheel, a rack and pinion connected with said units wheel through a ratchet connection for advancing the units wheel and returning independently thereof, a motor for advancing said rack and a resetting mechanism for returning the rack to

normal position, substantially as described. 52nd. In a character designating apparatus, the combination with character designating mechanism, and an indicating mechanism embodying a units wheel adapted to advance in accordance with the body widths of the characters designated and an indicator controlled by said units wheel, of a pinion connected with said units wheel through a ratchet connection, a motor impelled rack bar meshing with said pinion, a resetting mechanism for said rack bar and a zero stop for positioning the units wheel at the end of the line of character designations, substantially as described. 53rd. In a character designating apparatus, the combination with character designating mechanism and an indicating mechanism embodying a units wheel adapted to be advanced in accordance with the body widths of the characters designated, of a rack bar for advancing said units wheel and a motor weight in gear with said rack bar for advancing the same, with a resetting mechanism for the rack bar, substantially as described. 54th. In a character designating apparatus, the combination with the character designating mechanism, an indicating mechanism embodying a units wheel adapted to be advanced in accordance with the body widths of the character designated, of a rack bar for advancing the units wheel, a gear wheel with which said rack bar meshes having a pinion connected therewith, a verticle rack in mesh with said pinion and a motor weight connected with said last mentioned rack. 55th. In a character designating apparatus, the combination with the character designating mechanism, and the indicating mechanism embodying a units wheel adapted to be advanced in accordance with the body widths of the characters designated, a rack bar for moving said units wheel, a gear wheel with which said rack bar meshes, a motor applied to said gear wheel, a second gear wheel with engaging projections between said gear wheels, whereby one will be rotated by the other, a resetting rack in mesh with said last mentioned gear wheel and a resetting handle for moving said last mentioned rack, substantially as described. 56th. In a character designating apparatus, the combination with the character designating mechanism and indicating mechanism, embodying a units wheel adapted to be advanced in accordance with the body widths of the characters designated, of a rack bar for moving said units wheel, a gear wheel with said rack bar meshes, a motor applied to said gear wheel, a second gear wheel with engaging projections between said gear wheels, whereby one will be rotated by the other, a resetting rack in mesh with said last mentioned gear wheel, a resetting handle and a spring connection between said resetting handle and last mentioned rack for re-energizing the motor and restoring the units wheel impelling rack to normal position, substantially as described. 57th. In a character designating apparatus, the combination with the character designating mechanism, the indicating mechanism embodying a units wheel adapted to be advanced in accordance with the body widths of the characters designated, and a motor rack for advancing said units wheel, of a motor weight and an elastic connection between said motor weight and rack, whereby shock incident to the momentum of the weight is avoided. 58th. In a character designating apparatus, the combination with character designating mechanism, a paper or record strip feeding mechanism embodying a weight motor and a rack for connecting the same with the paper feeding mechanism and an indicating mechanism, embodying a motor weight and a rack for communicating power therefrom to the indicating mechanism of a resetting mechanism for elevating both of said motor weights, substantially as described. 59th. In a character designating apparatus, the combination with character designating mechanism, a paper or record strip feeding mechanism embodying a weight motor and a rack for connecting the same with the paper feeding mechanism, and an indicating mechanism embodying a motor weight and a rack for communicating power therefrom to the indicating mechanism, of a resetting mechanism embodying a vertically movable rack for raising the paper feed motor weight, a resetting handle and a rack and gear for raising the indicator mechanism weight and the vertically movable rack, substantially as described. 60th. In an apparatus, such as described, the combination of the following elements, to wit, a series of keys for characters of unvarying widths, one or more keys representing characters or spaces variable as to width, a series of keys representing different degrees of variation for the variable characters or spaces, a chart containing a plurality of rows or sets of characters, the latter having reference to keys of the series representing variation in width of the variable characters or spaces, an indicating mechanism controlled by the keys for the unvarying and variable width characters or spaces, for shifting the relative positions of the indicator from one character to another in a set or row, and independent connections controlled by the keys for variable width characters or spaces for shifting the relation of the chart and indicator from one row or series of characters to another, whereby the operation of any key of the series denoting characters or spaces of variable widths, will effect a transfer from one set or series of charted characters to another, substantially as described. 61st. In an apparatus such as described, the combination with designating mechanism embodying character designating keys, some one or more of which designate characters, the body width of which are adapted to be varied for justification, of an indicating mechanism embodying a chart having sets or rows of characters referring to different numbers of characters in a line, the body width of which are adapted to be varied and the characters in each row or set of which have reference to the normal body width of the characters designated, and a pointer or indicator for register-

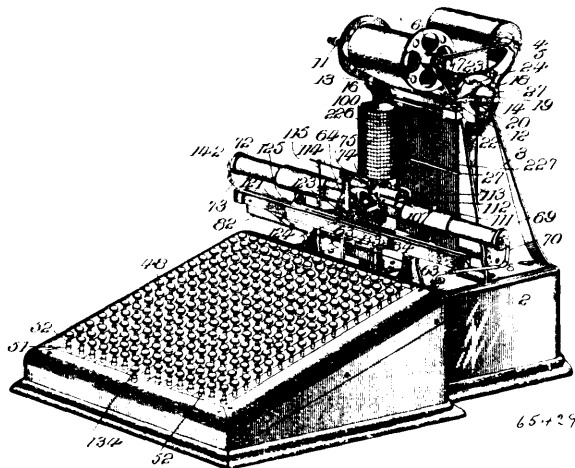
ing with said characters on the chart, said chart and pointer or indicator being adapted to be moved with relation to each other in two directions, the movement in one direction being controlled by all of the character designating keys, causing registration with different characters in each row or set and the movement in the other direction being controlled by the key or keys for designating characters whose body widths are to be varied, for causing registration with different sets or rows of charted characters. 62nd. The combination in an apparatus such as described, embodying designating keys, some one or more of which designate justification characters adapted to have their body widths varied, of an indicating mechanism embodying a chart having rows or sets of characters, each row or set having reference to a given number of justification characters in a line, and a pointer or indicator for registering with the characters on said chart, connections between said designating keys and the indicating mechanism for varying the relative positions of the pointer or indicator and characters in each set or row on the chart, and independent connections between the justification character designating key or keys and the indicating mechanism for varying the relative positions of the pointer or indicator and the sets of characters on the chart, substantially as described. 63rd. The combination in an apparatus, such as described, embodying character designating keys, and a units wheel controlled by the character designating keys, of an indicator controlled by the units wheel, and connections between the indicator and character designating keys, independent of the units wheel, substantially as described. 64th. The combination in an apparatus, such as described, embodying designating keys, some one or more of which designate justification characters adapted to have their body widths varied, and a units wheel controlled by the designating keys, of an indicator controlled by the units wheel and connections between the indicator and the justification character designating key or keys independent of the units wheel, substantially as described. 65th. The combination in an apparatus such as described, embodying designating keys, some one or more of which designate justification characters adapted to have their body widths varied, and a units wheel controlled by the designating keys, of a justification arm controlled by the units wheel and a justification indicator movably supported by said arm with connections between the justification indicator and the justification character designating key or keys, substantially as described. 66th. The combination in an apparatus such as described, embodying designating keys, some one or more of which designate characters adapted to have their body widths varied, a units wheel controlled by the designating keys and a justification arm controlled by the units wheel, a justification indicator for registering with the chart mounted to move longitudinally on the justification arm and connections between the justification indicator and the justification character designating key or keys, substantially as described. 67th. The combination in an apparatus, such as described, embodying character designating keys, some one or more of which designate justification characters adapted to have their body widths varied, a units wheel controlled by the designating keys and a justification chart, of a pivotally supported justification arm controlled by the units wheel, a justification indicator for registering with the chart and connections between the justification indicator and the justification character designating key or keys arranged on an axis coincident to the axis of the justification arm, substantially as described. 68th. In a key board, the combination of the following elements, to wit:—designating keys for designating characters having constant but different body widths, a designating key or keys for designating characters or spaces having variable body widths, a units wheel controlled by the designating keys and having an angular movement proportioned to the relative normal body width of the characters designated, an indicator moved by but movable independently of said units wheel and independent connections between said indicator and the key or keys for designating characters of variable body widths, substantially as described. 69th. In a character designating apparatus, the combination of the following elements, to wit:—keys for designating characters having constant body widths, a key or keys for designating characters or spaces having variable body widths, a units wheel having an angular movement controlled in its extent by the character designating keys, an indicator controlled by the units wheel for indicating the space occupied by the characters designated in a given line but movable independently of said units wheel and connections independent of said units wheel between the indicator and the key or keys for designating characters having variable body widths, and a chart with which said indicator registers having sets or rows of characters thereon, substantially as described. 70th. In an apparatus such as described, for designating character in a record strip or ribbon, the combination of the following elements, to wit:—keys for designating characters having constant body widths, a key or keys for designating characters or spaces having variable body widths, keys for designating justification, a units wheel controlled in its advance movement by said character and space designating keys in accordance with the widths of the characters designated, a justification arm movable in unison with said units wheel, a justification indicator radially movable on said arm, independent connections between said justification indicator, and key or keys for designating characters having variable body widths, and a chart with which said justification indicator registers having sets of characters corresponding to the number of possible operations in any one line of the key or keys for designating characters having variable body widths,

substantially as described. 71st. In a keyboard, the combination with character designating keys for designating characters of constant body widths and a key or keys for designating characters having variable body widths, of a units wheel controlled by said character designating keys and an adjustable chart, a justification arm rotated by said units wheel, a radially movable indicator carried by said arm for registering with said chart, a rack bar and pinion controlling said justification indicator and connections between said pinion and the key or keys for designating characters having variable body widths, substantially as described. 72nd. In a keyboard, the combination with character designating keys embodying a key or keys for designating characters having a variable body width, a units wheel controlled by said character designating keys, and a chart, of an angularly and radially movable indicator with connections between said indicator and units wheel for moving the same angularly and connections between said indicator and the keys for designating variable characters for moving the indicator radially, substantially as described. 73rd. In a keyboard, the combination with the character designating keys embodying a key or keys for designating characters having a variable body width, a units wheel controlled in its angular movement by said character designating keys, an arm adapted to be controlled in its angular movement by said units wheel and carrying a radially movable justification indicator, a rack bar and pinion controlling the radial movement of said indicator, and a second rack bar controlling the movement of the pinion, and a pawl moved by the variable character designating key or keys for advancing the last mentioned rack bar, substantially as described. 74th. In a character designating mechanism, the combination with the following elements, to wit:—keys for designating characters having constant body widths, a key or keys for designating a character or characters having variable body widths, and keys for designating justification, of an indicator advanced by the operation of the key or keys for designating characters of variable body width, and connections between the justification designating keys and the indicator operating mechanism for releasing said indicator upon the operation of any one of the justification keys. 75th. In a keyboard, the combination of the following elements, to wit:—character designating keys embodying a key or keys for designating characters having variable body widths, an indicating mechanism, connections between said indicating mechanism and the key or keys for designating characters having variable body widths, embodying a rack bar, an operating pawl and a holding pawl, justification designating keys and connections controlled by said justification designating keys for releasing the holding pawl of the indicating mechanism, substantially as described. 76th. In a keyboard, the combination of the following elements, to wit:—the character designating keys embodying a key or keys for designating characters of variable body width, keys for designating justification, a justification indicator controlled by said character designating keys for indicating the space occupied by characters of normal width, independent connections between said indicating mechanism and the key or keys for designating characters having variable body widths, embodying a rack bar, an operating pawl and a holding pawl, and connections controlled by the justification designating keys for releasing said holding pawl, substantially as described. 77th. In a keyboard, the combination of the following elements: the character designating keys embodying a key or keys for designating characters having variable body widths, a units wheel controlled in its angular movement by said character designating keys, a justification arm controlled by said units wheel, a justification indicator mounted on said arm, a rack bar on said justification indicator, a pinion and shaft arranged axially of the justification arm and carrying a second pinion, a vertically movable rack bar meshing with said second pinion, a rack bar operated by the key or keys for designating characters of variable body widths, a pawl operated by said rack bar and co-operating with the vertically movable rack, and a holding pawl for said vertically movable rack, with means for releasing said holding pawl to reset the mechanism, substantially as described. 78th. In a keyboard, the combination with character designating keys, and a units wheel controlled in its angular movement by said character designating keys, of a rack bar arranged in horizontal guides, and adapted to advance in unison with the units wheel, a supplemental rack bar also mounted in horizontal guides, a projection on the main rack for co-operation with the supplemental rack to move the latter in a predetermined point in the travel of the main rack, and an indicator moved by the supplemental rack with independent resetting mechanism for the two racks, substantially as described. 79th. In a keyboard, the combination with character designating keys, a units wheel controlled in its angular movement by the said character designating keys, a rack bar arranged in horizontal guides, and adapted to advance in unison with the units wheel, a supplemental rack also mounted in horizontal guides, a projection on the main rack for co-operation with the supplemental rack to move the latter at a predetermined point in the travel of the main rack, and a locking pawl for locking the two racks together for unitary movement, a releasing arm for said locking pawl and resetting mechanism controlling said releasing arm, substantially as described. 80th. In a keyboard, the combination with character designating keys and an indicating mechanism, embodying main and supplemental racks, arranged in horizontal guides with a projection on the main rack for engaging and moving the supplemental rack at a predetermined point, of an indicator moved by the supple-

mental rack, a pinion in mesh with said supplemental rack, and a supplemental rack and indicator resetting mechanism embodying a second rack in mesh with said pinion, and means for moving said second rack, substantially as described. 81st. In a keyboard, the combination with character designating keys and an indicating mechanism embodying main and supplemental racks, arranged in horizontal guides with a projection on the main rack for engaging and moving the supplemental rack at a predetermined point, of an indicator moved by the supplemental rack, a pinion in mesh with said supplemental rack, and a supplemental rack and indicator resetting mechanism embodying a second rack in mesh with said pinion, a weight applied to said second rack, and a spring pressed lever co-operating therewith, as set forth. 82nd. In a keyboard, the combination with character designating keys, of an indicator embodying the following elements, to wit, a main rack with means for controlling the movement in accordance with the body widths of the type designated, a supplemental rack, a projection on the main rack adapted to co-operate with and move the supplemental rack at a predetermined point in the travel of the main rack, an indicator moved by the supplemental rack and a locking pawl interposed between the main and supplemental racks for holding them in their correct relative positions while moving in unison, substantially as described. 83rd. In a keyboard, the combination with character designating keys, of an indicator embodying the following elements, to wit, a main rack with means for controlling its movement in accordance with the body widths of the type designated, a supplemental rack, a projection on the main rack adapted to co-operate with and move the supplemental rack at a predetermined point in the travel of the main rack, an indicator moved by the supplemental rack, a locking pawl interposed between the main and supplemental racks, a releasing arm for said locking pawl and a resetting mechanism for the main rack controlling said releasing arm, substantially as described. 84th. In a keyboard, the combination with the following elements, to wit:—character designating keys, justification designating keys units wheel having zero teeth or projections thereon and adapted to be released and controlled by said keys, an indicator controlled by said units wheel and a zero stop for resetting said units wheel thrown into operative position by the operation of any one of the justification keys, substantially as described. 85th. In a keyboard, the combination with the following elements, the character designating keys, justification designating keys, and indicator, a units wheel controlling said indicator and itself controlled by the character designating keys, a motor for said units wheel, a ratchet connection between said motor and units wheel, a resetting mechanism for the motor and a zero stop for positioning the units wheel controlled by the justification designating keys, substantially as described. 86th. In a character designating apparatus, the combination with character designating keys, justification designating keys and an indicator controlling the units wheel having a series of zero teeth or projections thereon, of a motor for impelling said units wheel constantly in one direction, a ratchet interposed between the motor and units wheel, with a resetting mechanism for the motor, and a zero stop for co-operating with the teeth or projections on the units wheel, and connections between the justification designating keys and the zero stop, whereby when said justification keys are operated, the units wheel is permitted to advance to a zero point prior to the resetting of the motor, substantially as described. 87th. In a character designating apparatus, the combination with character designating keys, justification designating keys, a units wheel, an indicator controlled by said units wheel, and a motor for impelling said units wheel in one direction, a zero stop normally in position to arrest the units wheel at a zero point, a resetting mechanism for the motor and connections between the resetting mechanism and zero stop for holding the stop out of operative position save when the resetting mechanism is being operated. 88th. In a character designating apparatus, the combination with character designating keys, justification designating keys, a units wheel, an indicator controlled by said units wheel, and a motor for impelling said units wheel in one direction, a zero stop normally in position to arrest the units wheel at a zero point, a resetting mechanism for the motor, connections between the resetting mechanism and zero stop embodying a releasing pawl and connections between the justification designating keys and said releasing pawl, whereby when the justification keys are operated, the units wheel will advance under the influence of its motor to a zero point, substantially as described. 89th. In a character designating apparatus, the combination with character designating keys, justification designating keys, a units wheel, an indicator controlled by said units wheel and a motor for impelling said units wheel in one direction, a zero stop normally in position to arrest the units wheel at a zero point, a resetting mechanism for the motor, connections between the resetting mechanism and zero stop, embodying a releasing pawl with means for holding said pawl out of engagement when released, and connections between said pawl and the justification designating keys, whereby upon the operation of said justification designating keys, the pawl is released, the units wheel is permitted to advance under the influence of its motor to a zero point and further movement of the units wheel prevented until the mechanism has been reset, substantially as described. 90th. In a character designating apparatus, the combination of the following elements, to wit:—key controlled character designating mechanism, an indicating mechanism embodying a horizontally movable rack bar, a line scale indicator

controlled by a rack bar, a resetting mechanism for the rack bar, and an adjustable stop for determining the normal position of the rack bar or the length of the line as set forth.

No. 65,429. Machine for Preparing Record Strips for Type Forming Machines. (*Machine à préparer les bandes pour machines à former les caractères.*)



The Lanston Monotype Machine Company, Washington, D.C., U.S.A., assignee of Tolbert Lanston, of Washington, aforesaid, 20th December, 1899; 6 years. (Filed 27th September, 1899.)

Claim.—1st. The combination with a series of character designating punches and a corresponding series of motors for operating said punches, of a series of finger pieces arranged in horizontal rows and vertical columns, each finger piece being located at the intersection of a row and a column, connections controlled by the finger pieces in each row for operating a punch motor, and connections controlled by the finger pieces in each column for operating a punch motor, whereby, upon operating any one finger piece, a motor corresponding to the column in which that finger piece is located is operated, and a motor corresponding to the row in which that finger piece is located is also operated, to produce an indication corresponding to that finger piece alone, substantially as described. 2nd. The combination with a series of character designating punches and a corresponding series of motors for operating said punches, of a series of fluid pressure mains arranged in horizontal rows and in vertical columns, each row and each column controlling an independent punch motor, of a series of finger pieces located at the intersection of said rows and columns for controlling the application of the energizing power through said mains to the motors, whereby upon the operation of any finger piece, a motor and punch corresponding to the row, and a separate motor and punch corresponding to the column in which said finger pieces is located will be operated, substantially as described. 3rd. The combination with a series of punches for designating characters, pressure operated pistons and cylinders constituting motors for operating said punches, and a pressure supply, of two series of mains or ducts, each of the ducts controlling a separate punch motor, and finger pieces, each controlling the admission of pressure to one of the ducts of each of the series, whereby, upon the operation of any finger piece, two punches will be operated, substantially as described. 4th. The combination with a series of character designating punches, a series of motors corresponding thereto and comprising cylinders and pistons for operating said punches and a pressure supply, of a key board having two systems of ducts, each duct communicating with a cylinder, and valved finger pieces, each controlling the admission of pressure to one of the ducts of each system, whereby upon the operation of any one finger piece two punches will be operated, substantially as described. 5th. The combination with a series of character designating punches, a series of motors, one for each punch, and comprising a piston and cylinder and a pressure supply chamber, of a series of ducts arranged in columns and a second series of ducts arranged in rows transverse of the columns, each duct communicating with a cylinder, of a series of finger pieces located at the intersection of the rows and columns of ducts and each provided with a valve for opening communication between the pressure supply chamber and one of the ducts in each of the systems, whereby two punches are operated, substantially as described. 6th. In a character designating machine, the combination with a series of character designating punches and a series of pressure operated motors, one for each punch, of a pressure supply chamber, two series of ducts arranged in proximity to each other above said chamber, each duct of each system communicating with a punch motor, and a series of valved finger pieces extending down into the pressure chamber and controlling the admission of pressure from said chamber to the ducts, substantially as described. 7th. In a character designating apparatus, the combination with the character designat-

ing punches, and the pressure operated motors, one for each of said punches, of the key board formed by a series of bars secured side by side and having rearwardly extending channels or ducts formed therein and independent transverse channels or ducts also formed therein, each of said channels or ducts communicating with a punch motor and a series of valved finger pieces mounted in said bars for controlling the admission of pressure to said ducts, substantially as described. 8th. In a character designating apparatus, the combination with a designating mechanism, comprising punches and pressure operated motors for said punches, of a key board for controlling the admission of pressure to said motors formed by a series of bars secured side by side with channels or ducts formed in the meeting faces of said bars and transverse registering apertures in said bars constituting ducts or channels, each of said ducts or channels communicating with a motor, and vertically movable finger pieces mounted in said bars for controlling the admission of pressure to said channels, substantially as described. 9th. In a character designating apparatus the combination with the designating mechanism and motors for operating the same, of a key board embodying a pressure supply chamber, a series of channels for communicating pressure to the motors of the designating mechanism, valved finger pieces working vertically into said pressure chamber for opening communication between the pressure chamber and passages, and transverse rods for holding said valved finger pieces in alignment, substantially as described. 10th. In a character designating apparatus, the combination with the designating mechanism and motors for operating the same, of a key board embodying a pressure supply chamber, a series of channels for communicating pressure to the motors, of the designating mechanism, valved finger pieces having their lower ends slotted and transverse rods located in said slots for holding the finger pieces in alignment, substantially as described. 11th. The combination with the punches for designating characters, the pivoted levers with which said punches are connected and the motor cylinders and pistons connected with said levers, of the pressure chamber, the ducts or passages communicating with the motor cylinders and the finger pieces for opening communication between the pressure chamber and the motor cylinders, substantially as described. 12th. In a designating apparatus, the combination with the punches, the pivoted operating levers with which said punches are connected, the cylinder block having the cylinders formed therein and the pistons working in said cylinders and connected with the punch operating levers for operating the same, of the pressure supply ducts communicating with said cylinders, a pressure supply, and finger pieces for controlling the admission of pressure to said ducts and cylinders, substantially as described. 13th. In a designating apparatus, the combination with the character designating mechanism and the motors therefor, comprising cylinders and pistons, with exhaust vents for permitting the escape of pressure from the cylinders, of a pressure supply, ducts for supplying pressure to said cylinders and valved finger pieces for controlling the admission of pressure to said ducts and cylinders, substantially as described. 14th. In a designating apparatus, the combination with designating mechanism, of motors for operating said designating mechanism, comprising vented cylinders and pistons working therein, of a pressure supply, ducts for supplying pressure to said cylinders and finger pieces controlling the admission of pressure to said ducts and cylinders, substantially as described. 15th. In a designating apparatus, the combination with designating mechanism, and motors for operating said designating mechanism, comprising constantly vented cylinders and pistons working therein, of a pressure supply, ducts for supplying pressure to said cylinders and a series of finger pieces for admitting pressure to each of said ducts, whereby the finger pieces control only the admission of pressure to said motor cylinders and not the exhaust therefrom, substantially as described. 16th. The combination with a paper feed, a paper feed motor and designating mechanism having motors for operating the same, with finger pieces controlling said motors, of a controlling mechanism for the paper feed motor operated by the motors for the designating mechanism, substantially as described. 17th. The combination with the paper feed mechanism and motor for operating the same, of designating punches, the motors for operating said punches, the finger pieces controlling said motors and the paper feed motor controlling mechanism operated by the punch motors, substantially as described. 18th. In a character designating mechanism the combination with the paper feed mechanism, a motor piston and cylinder therefor, and a valve controlling the admission of pressure to said motor cylinder, of a series of designating punches, a corresponding series of motors for operating said punches, finger pieces for controlling the admission of pressure to said motors and a paper feed motor valve operating mechanism controlled by the punch operating motors, substantially as described. 19th. In a character designating machine, the combination with a paper feed mechanism, and a series of punches for making the character designations, of operating levers for said punches and motor for said operating levers, finger pieces controlling said motors and a paper feed motor controlled by the punch operating levers, substantially as described. 20th. The combination in a designating apparatus, with a paper feed mechanism, a series of punches, a series of punch operating levers, a series of motors for operating said levers, and finger pieces controlling said motors, of a paper feed motor, and a controlling mechanism for said paper feed motor embodying a rocking frame having a bar extending across the punch operating levers

adapted to be operated by movement of any one or more of said levers, substantially as described. 21st. In a character designating apparatus, the combination with the character designating punches, the operating levers therefor, motors for operating said levers, and the finger pieces controlling said motors, of the rocking frame overlying said levers and the spring pressed pin co-operating with said frame for returning the levers to normal position, substantially as described. 22nd. In a paper feeding mechanism, the combination with a feed shaft and a winding roll driven therefrom, with gears interposed between said shaft and winding roll, and embodying a friction connection for permitting said roll and shaft to have differential movements in accordance with the quantity of paper on the winding roll, of a driving mechanism for said feed shaft having a ratchet wheel, a reciprocating pawl carrier for moving said wheel intermittently, a motor for reciprocating said pawl carrier, and a locking pawl for limiting the forward movement of the ratchet wheel having an extension for co-operation with the pawl carrier to throw said locking pawl into operative position, substantially as described. 23rd. In a paper feed, the combination with the paper feeding shaft, the winding roll, gear wheels interposed between said feed shaft and winding roll, friction discs for connecting the gear train with the winding roll, and the adjustable spring tension for regulating the friction of the discs, of a driving mechanism for the feed shaft, comprising a reciprocating pawl carrier and a pawl and ratchet wheel on the feed shaft, substantially as described. 24th. In a paper feed mechanism, the combination with a feed shaft and the winding roll driven therefrom, of a ratchet wheel rigidly mounted on the feed shaft, a pawl carrier journaled on the feed shaft, a pawl on said pawl carrier and a locking pawl thrown into engagement by the advanced movement of the pawl carrier, substantially as described. 25th. In a paper feed mechanism, the combination with the feed shaft, the winding roll driven therefrom, and the two ratchet wheels having reversely arranged teeth rigidly mounted on said shaft, of the pawl carrier, the pawl mounted on said carrier and co-operating with one of the ratchet wheels and a locking pawl mounted on a fixed support, adapted to co-operate with the other ratchet wheel and having a projection for co-operation with the pawl carrier, whereby the locking pawl is thrown into position by the advance movement of the pawl carrier to limit the movement of the feed shaft, substantially as described. 26th. In a designating apparatus, the combination with the character designating mechanism, and finger pieces controlling the same, and an indicating mechanism for indicating the body widths of the characters designated, embodying a driven part adapted to advance in accordance with the body widths of the characters designated and to move reversely in resetting, of motors for moving the said driven part in opposite directions, one of said motors acting during the resetting period, and a finger piece for controlling said motors, substantially as described. 27th. In a measuring mechanism for a designating machine such as described, the combination with a units wheel with means for controlling its advance movement in accordance with the body widths of the characters designated, of a motor for advancing said wheel, a motor for resetting the parts, and a finger piece controlling the application of power to said motors respectively, substantially as described. 28th. In a character measuring mechanism for a character designating machine, such as described, the combination with a units wheel, with means for limiting its forward movement in accordance with the body widths of the characters designated, of a motor rack for advancing said units wheel, motors for moving said rack in opposite directions and a finger piece for controlling the application of power to said motors, whereby the units wheel may be advanced during the indicating period and returned to normal position at the completion of a line of designations, substantially as described. 29th. In a character measuring mechanism for a designating machine, such as described, the combination with a units wheel with means for controlling the forward movement of the units wheel in accordance with the body widths of the characters designated, and a motor rack for moving said units wheel, of oppositely arranged pressure motors for moving said rack and units wheel, a pressure supply, ducts leading from said pressure supply to the motors and a finger piece controlling the admission of pressure to said ducts, substantially as described. 30th. In a designating apparatus, the combination with the designating mechanism, the operating levers, the motors for moving said levers and the finger pieces controlling said motors, of a units wheel, a motor for advancing said units wheel, a units rack movable into and out of engagement with said units wheel, a series of stops connected with the operating levers for arresting the movement of the units rack and units wheel and projections on said stops for moving the units rack into and out of engagement with the units wheel, substantially as described. 31st. In a designating apparatus, the combination with the designating mechanism, a series of operating levers, the series of motors and the finger pieces controlling said motors, of the units wheel, the motor controlling said units wheel, a finger piece controlling said motor, a units rack, a units rack carrier, a series of stops for limiting the movement of the units rack and projections on said stops for co-operating with the units rack carrier to move the units rack into and out of mesh with and units wheel. 32nd. In a designating apparatus, the combination with the designating mechanism, the series of operating levers, the series of motors for said levers, the finger pieces controlling said motors, the units wheel, the units wheel motor and the finger piece controlling said motor, of a units rack, a units rack

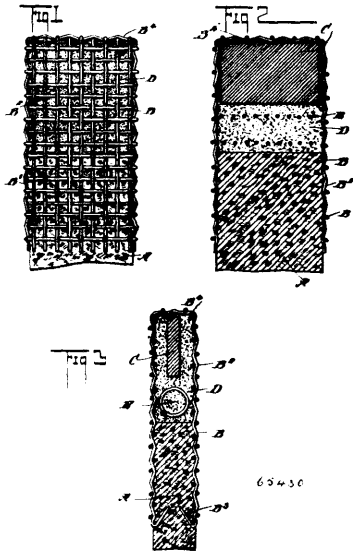
carrier, a series of stops for limiting the movement of the units rack connected with the operating levers and an elastic take up interposed between the stops and units rack carrier, substantially as described. 33rd. In a designating apparatus, the combination with the series of punches for making the character designations, the series of levers with which said punches are connected, the series of motors for operating said levers and finger pieces controlling said motors, of the units wheel, the units wheel motor, the finger pieces controlling said units wheel motor, the units rack, the units rack carrier, the series of stops for limiting the movement of the units rack and the spring pressed wing interposed between the stops and units rack carrier, substantially as described. 34th. In a designating apparatus, the combination with the punches for making character designations, the series of the operating levers for said punches, the series of motors for said levers, the finger pieces controlling said motors, the units wheel, the units wheel motor and the finger piece controlling said motor, of the units rack, the pivoted units rack carrier, the series of stops connected with the operating levers for limiting the movement of the units rack, the projections on said stops and the spring pressed wing pivoted on the units rack carrier and co-operating with said projections for moving the units rack into mesh with the units wheel, substantially as described. 35th. In a character designating apparatus, the combination with the designating mechanism, finger pieces controlling the same, the units wheel and the units wheel motor, of the units rack, the units rack carrier, a series of stops for limiting the movement of the units rack, the wing pivoted on said units rack carrier and co-operating with the stops to move the rack into mesh with the units wheel, the spring connected with said wing and the adjustable stop for limiting the movement of the wing, substantially as described. 36th. In a designating apparatus, the combination with the designating mechanism, the finger pieces controlling the same, the units wheel, the motor for said units wheel, and the series of stops controlled by the designating mechanism, of the units rack, the units rack carrier movable towards and from the units wheel, the locking dog for the units wheel operated by the units rack carrier and mechanism interposed between the units rack carrier and stops whereby the units rack carrier is operated and in turn operates the locking dog, substantially as described. 37th. In a designating apparatus, the combination with the designating mechanism, finger pieces controlling the same, the units wheel with means for advancing the same during the designating period and for resetting the same, of a units rack, units rack carrier, stops for limiting the movement of the units rack and for operating the units rack carrier, a locking dog for the units wheel, a push rod connected with said dog, a loose connection between said push rod and units rack carrier and a resetting mechanism for operating said push rod to release the dog from engagement with the wheel independently of the movement of the units rack carrier, substantially as described. 38th. In an apparatus such as described, the combination of the following elements, to wit, a series of keys for designating characters of unvarying width, a key for designating characters or spaces variable as to width, a series of keys representing different degrees of variation for the variable characters or spaces, a movable chart containing a plurality of rows or sets of characters, the latter having reference to keys of the characters representing variation in width of the variable characters and spaces, an indicator or pointer, mechanism controlled by the keys for the unvarying and variable width characters or spaces for shifting the position of the chart, with respect to the indicator, from one character to another in a set or row, and mechanism controlled by the key for variable width characters or spaces for shifting the position of the indicator with relation to the chart from one row or series of characters to another, whereby the operation of the key for denoting characters or spaces of variable width will effect a transfer of the indicator from one set or series of charted characters to another, substantially as described. 39th. In an apparatus such as described, the combination with the designating mechanism, embodying character designating keys, one of which designates characters the body width of which is adapted to be varied for justification, of an indicating mechanism embodying a chart having sets or rows of characters referring to different numbers of characters in a line the body width of which are adapted to be varied and the characters in each set or row of which have reference to the normal body width of the characters designated, and a pointer or indicator for registering with said characters on the chart, said chart being movable in one direction with respect to the pointer, and the pointer being movable in a direction transverse to the movement of the chart, the movement of the chart being controlled by all of the character designating keys causing registration with characters in a row or set, and the movement of the pointer being controlled by the key for designating characters whose body width is to be varied for causing registration for different sets or rows of charted characters. 40th. The combination in an apparatus such as described, embodying character designating keys, one of which designates justification characters adapted to have their body widths varied, a units wheel controlled by the designating keys, and a chart or dial controlled by the units wheel, of a pointer for registering with said chart and connections between said pointer and the justification character designating key independent of the units wheel whereby said chart will be controlled by the designating keys to register units of body width of the character designated and the pointer will be controlled by the justification character designating key to register the number of the

number of such characters designated, substantially as described. 41st. In a key board, the combination of the following elements, to wit, designating characters having constant but different body widths, a designating key for designating characters or spaces having variable body width, a units wheel controlled by the designating keys and having an angular movement proportioned to the normal body width of the characters designated, a movable chart controlled by said units wheel and an indicator or pointer for registering with said chart controlled by the key for designating characters or spaces having variable body width, substantially as described. 42nd. In an apparatus, such as described, for designating characters in the record strip or ribbon, the combination of the following elements, to wit, keys for designating characters or spaces having constant body widths, a key for designating or spaces having a variable body width, keys for designating justification, a units wheel controlled in its advance movement by said character and spaces designating keys in accordance with the widths of the characters designated, a chart movable in unison with said units wheel and having sets of characters the number of sets corresponding to the number of possible operations in any one line of the key for designating characters having variable body widths, a justification indicator for registering with the character on the chart and connections between said indicator and the mechanism for designating characters having variable body width, substantially as described. 43rd. In a character designating apparatus, the combination with the key controlled designating mechanism, of an indicating mechanism embodying an indicating chart or dial, a motor for operating said indicating mechanism, and a mechanism controlled by the keys for controlling the indicating mechanism and its motor, substantially as specified. 44th. In a character designating apparatus, the combination with the designating mechanism and keys controlling the same, of indicating mechanism embodying two elements, one of which operates throughout the entire line of indications and the other of which operates only during a final and predetermined portion of said line of indications, and a motor for driving the last named element controlled by the movement of the first mentioned element, substantially as described. 45th. In a character designating apparatus, the combination with the character designating mechanism and finger pieces controlling the same, of an indicating mechanism embodying a chart and a motor for operating said indicating mechanism, a units wheel, a motor for advancing the units wheel in accordance with the body widths of the characters indicated, and connections between said motor and the chart motor for operating the latter throughout a final and predetermined portion of the line of designations, substantially as described. 46th. In a character designating apparatus, the combination with the designating mechanism and finger pieces controlling the same, of an indicating mechanism, a normally inactive secondary motor for said indicating mechanism, a motor rack and normally active motor for advancing said rack and connections between the normally active and normally inactive motors for rendering the latter active at a predetermined point in the movement of the former. 47th. In an indicating apparatus, the combination with the indicating mechanism, finger pieces controlling the same, the motor rack controlled by the indicating mechanism to advance in accordance with the body widths of the characters designated, the pressure motor for advancing said rack, and a pressure supply for said motor, of a justification indicator, a motor for operating said justification indicator, connections between said justification indicator and rack, and connections between the justification indicator motor and rack motor, whereby at a predetermined point in the movement of the latter pressure will be admitted to the justification indicator motor to render the same operative, substantially as set forth. 48th. In a character designating apparatus, the combination with the character indicating mechanism and finger pieces controlling the same, of the justification motor rack controlled in its advance movement by the character indicating mechanism, a motor cylinder and piston for advancing said rack, a pressure supply for said cylinder, a justification indicator controlled by said motor rack, a pressure motor for advancing the justification indicator, comprising a piston and cylinder and connections between said cylinders whereby upon the advance of the motor rack and its piston to a predetermined point pressure will be admitted to the justification motor cylinder for relieving the motor rack from the labor of advancing the justification indicator, substantially as described. 49th. In a character designating apparatus, the combination with the designating mechanism and finger pieces controlling the same, the units wheel controlled in its advance by the character designating mechanism, the motor rack and motor for advancing the units wheel and the justification indicator, of a supplemental rack mounted on the motor rack and adapted to operate the justification indicator at a predetermined point in the travel of the motor rack, substantially as described. 50th. In a character designating apparatus, the combination with the designating mechanism, and finger pieces controlling the same, the units wheel controlled in its advance by the character designating mechanism,

the motor rack and motor for advancing the units wheel and the justification indicator, of a yielding supplemental rack movably mounted on the motor rack and adapted to operate the justification indicator at a predetermined point in the travel of the motor rack, substantially as described. 52nd. In a character designating apparatus, the combination with the designating mechanism, finger pieces controlling the same, a motor rack, the units wheel operated thereby, and controlled in its movement by the character designating mechanism and the indicating mechanism embodying a shaft having a pinion thereon, of a supplemental rack yieldingly mounted on the motor rack and adapted to mesh with the pinion on the indicating mechanism at a predetermined point in the travel of the motor rack, and stops connected with said pinion and supplemental rack, respectively, for initiating the movement of the pinion and ensuring the correct engagement of the supplemental rack and pinion, substantially as described. 53rd. In a character designating apparatus, the combination with the character designating mechanism and finger pieces controlling said mechanism, the units wheel, the motor rack for driving said units wheel, the motor and resetting cylinders and pistons for said rack, a pressure supply and ducts leading from said motor and resetting cylinders to said pressure supply, of a rock shaft valves controlled by said rock shaft and interposed in said ducts and operating to simultaneously open communication between one of said cylinders and the pressure supply, and close communication between the opposite of said cylinders and the pressure supply, and a finger piece controlling said rock shaft, substantially as described. 54th. In a character designating apparatus, the combination with the character designating mechanism and finger pieces controlling the same, the units wheel and rack for operating the same, a motor for advancing the units wheel and the indicator controlled by the units wheel, of a resetting mechanism comprising a motor cylinder, piston and pressure supply, a duct leading from said cylinder to the pressure supply, a valve interposed in said duct, and a finger piece controlling said valve, substantially as described. 55th. In a character designating apparatus, the combination with the character designating mechanism and finger pieces controlling the same, the motor for advancing the units wheel, and the indicator controlled by the units wheel, of a resetting mechanism comprising a motor cylinder piston and pressure supply, a duct leading from said cylinder to the pressure supply, a valve interposed in said duct, a finger piece controlling said valve, and the throttling valve located in said duct and operating to permit a free egress of pressure from said cylinder, but adapted to retard the ingress of pressure to said cylinder, substantially as described. 56th. In a character designating apparatus, the combination with the designating mechanism, the justification indicating mechanism, and a rock shaft controlling the resetting of the justification indicating mechanism, of a motor for operating said rock shaft and a finger piece controlling said motor, substantially as described. 57th. In a character designating apparatus, the combination with the character designating mechanism and finger pieces controlling the same, the indicating mechanism embodying a movable chart or dial, and a movable pointer or indicator for registering therewith, the motors for the chart or dial, a pawl and ratchet mechanism for operating the pointer, a rock shaft controlling said motor, a projection on said rock shaft for releasing the pawls on the pointer operating mechanism, and a finger piece controlling said rock shaft, substantially as described. 58th. In a character designating apparatus, the combination with the indicating mechanism, for registering the body widths of the characters designated and embodying pressure motors for advancing and resetting said indicating mechanism, of a spring pressed rock shaft controlling the admission of pressure to said motors, a pressure motor for actuating said rock shaft against the tension of its spring, and a finger piece controlling said rock shaft and motor, substantially as described. 59th. In a character designating apparatus, the combination with the indicating mechanism embodying a chart having horizontal rows of indications thereon, motors for operating said indicating mechanism with means for controlling the same in accordance with the body widths of the characters designated, and a vertically movable pointer for registering with the indications on said chart adapted to be moved vertically in accordance with the number of variable body characters designated, of a rock shaft controlling the admission of pressure to the indicating mechanism motor and a projection on said rock shaft to reset the mechanism, substantially as described. 60th. An indicating mechanism for character designating apparatus, embodying a chartered cylinder with mechanism interposed between said chartered cylinder and the designating mechanism for rotating the same in accordance with the body widths of the characters designated and a pointer for registering with the indications on said cylinders, substantially as described. 61st. An indicating mechanism for use in character designating apparatus, adapted to designate characters having different but constant body widths and also characters having variable body widths, and indicating mechanism embodying a chartered cylinder, a units wheel controlling said cylinder and adapted to advance in accordance with the body widths of the characters designated, and a motor for impelling said units wheel, of a pointer controlled by the designating mechanism for characters of variable body widths for registering with the indications on the chartered cylinder, substantially as described. 62nd. In an indicating mechanism for character designating apparatus, the combination with a units wheel controlled in its advance in accordance with the body widths of the characters designated, a pinion connected with said units wheel and

a motor impelled rack geared with the upper side of said units wheel, of a second shaft having a pinion thereon located above the rack, a supplemental rack carried by the second rack for meshing with the last-mentioned pinion and an indicating mechanism controlled by said second shaft, substantially as described. 63rd. In an indicating mechanism for a character designating apparatus, such as described, the combination with a motor impelled rack, of a units wheel having a pinion connected therewith and gearing with the under-side of said rack, and an indicating mechanism having a pinion connected therewith and gearing with the upper side of the rack, substantially as described.

No. 65,430. Lamp Wicks. (Meche de lampes.)



Hentir Sarafian, New York City, New York, assignee of Commodore Decatur Rindell, Cleveland, Ohio, U.S.A., 20th December, 1899; 6 years. (Filed 12th July, 1899.)

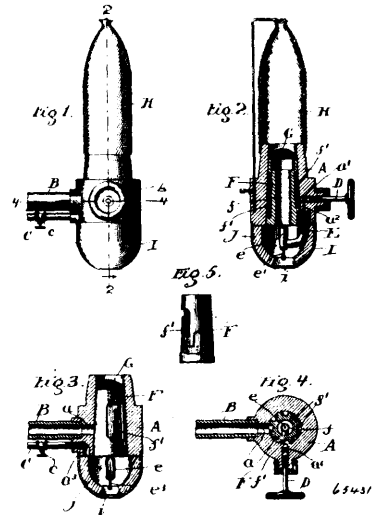
Claim. 1st. An improved wick, consisting of the wick proper, the incombustible tip therefor consisting of loose asbestos in contact with the top of the wick proper, the wire gauze cap embracing the top of the wick proper and secured thereto, said cap being bent and enclosing the said loose asbestos and the comparatively stiff strip of millboard or other material located in the bend of the wire gauze cap and forming a filter tip, substantially as described. 2nd. A lamp wick, comprising a wick proper, an incombustible tip therefor, and a wire gauze cap embracing the tip and the top of the wick proper, said cap having longitudinal wires the projecting ends of which penetrate into the body of the wick proper, and cross wires connecting said longitudinal wires, substantially as described. 3rd. A lamp wick, comprising a wick proper, an incombustible tip therefor, and a wire gauze cap embracing the tip and the top of the wick proper, said cap having longitudinal wires the projecting ends of which penetrate into the body of the wick proper and are bent backward or upward within said body, forming hooks, and cross wires connecting said longitudinal wires, substantially as described. 4th. A lamp wick, comprising a wick proper, an incombustible tip therefor, a perforated cap embracing the tip and the top of the wick proper, and a shield or guard located within the tip between the cap and the top of the wick proper, substantially as described. 5th. A lamp wick, comprising a wick proper, an incombustible tip therefor, a perforated cap embracing the tip and the top of the wick proper, and a shield or guard located within the tip between the cap and the top of the wick proper, said guard consisting of a coiled wire, substantially as described. 6th. A lamp wick, comprising a wick proper, a perforated cap embracing the top of the wick and projecting upwardly beyond the same, a filter tip located at the top of the cap, an asbestos filling between the cap, tip and top of wick proper, and a shield or guard embedded in said filling between the tip and the wick proper, substantially as described. 7th. A lamp wick, comprising a wick proper, a perforated cap embracing the top of the wick and projecting upwardly beyond the same, a filter tip located at the top of the cap, an asbestos filling between the cap, tip and top of wick proper, and a coiled wire embedded in the said filling between the tip and the wick proper and out of contact with each of them.

No. 65,431. Burner. (Brûleur.)

Amos F. Morey and Mortimer Cahill, both of Chicago, Illinois, U.S.A., 20th December, 1899; 6 years. Filed 7th August, 1899.

Claim. In a generating burner, the combination with a tubular jacket or casing, of a tubular plug fitted thereto, the meeting sur-

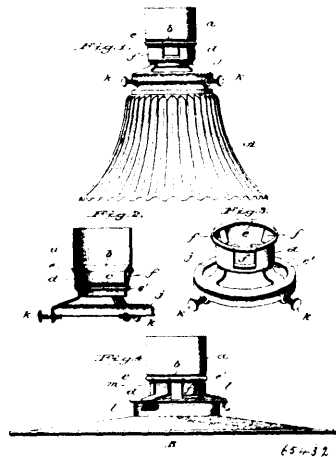
faces forming between them a generating passage, and a holding device screw threaded on one of said parts and bearing upon the



other to hold the plug tightly within the casing, substantially as described. 2nd. In a generating burner, the combination with a tubular jacket, of a tubular plug fitted within the same, said plug being provided upon its exterior surface with a series of channels united alternately at top and bottom, making in combination with the contiguous wall of the jacket, a continuous tortuous channel between the plug and the jacket, substantially as described. 3rd. Vapour generating burner, consisting of a tubular jacket or casing, a tubular plug fitted thereto, the meeting surfaces forming between them a generating passage, a device for holding the plug tightly within the jacket or casing, a fluid pipe connecting a part of said generating passage with a supply, a descending vapour pipe leading from another part of said passage, a valve controlling said descending vapour pipe, and a second valve controlling the flow of vapour to the interior of said tubular plug, substantially as described.

No. 65,432. Globe Holder for Electric Lamps.

(Porte verre de lampe électrique.)

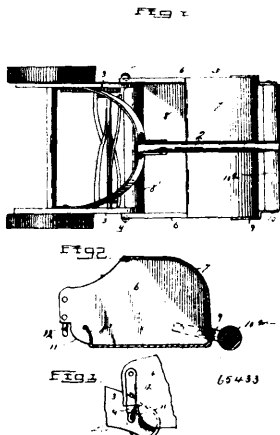


The Scoville Manufacturing Company, assignee of George Wesley Eddy, all of Waterbury, Connecticut, U.S.A., 20th December, 1899; 6th years. Filed 2nd November, 1899.)

Claim. 1st. A holder for lamp shades, globes and the like, comprising means to engage the said shade, globe or the like, and a collar having a shoulder at one end to arrest its movement in one direction and at its other end having depending convergent gripping lugs for automatically engaging some portion of the lamp, to secure the holder and shade thereto, substantially as described. 2nd. A holder for shades, globes and the like, comprising means to engage the shade, globe or the like, a collar having gripping lugs adapted automatically to engage some portion of a lamp, and a releasing device supported on said collar and adapted to disengage said holder from the lamp, substantially as described. 3rd. A holder for shades, globes and the like, comprising means to engage the shade, globe or the like, and a collar having gripping lugs adapted automatically to engage a lamp, and provided with a releasing device, comprising a lever, one end of which is adapted to be forced

against the lamp or some of its adjuncts and thereby disconnect the holder from the said lamp, substantially as described. 4th. A holder for lamp shades, globes and the like, comprising means to engage the said shade, globe or the like, and a collar having a bead at one end, lugs projecting inwardly from said bead and adapted to snap over and thereby engage some projecting portion of the lamp and thus retain the holder in engagement with said lamp, and a shoulder at the other end to arrest the movement of the holder in one direction, substantially as described. 5th. A holder for shades, globes and the like, comprising means to engage the shade, globe or the like, a collar having gripping lugs adapted automatically to engage some portion of a lamp, and a releasing device having an exterior operating handle and an interior lug which is crowded between the collar and the lamp portion engaged by the collar to assist in binding them together, substantially as described.

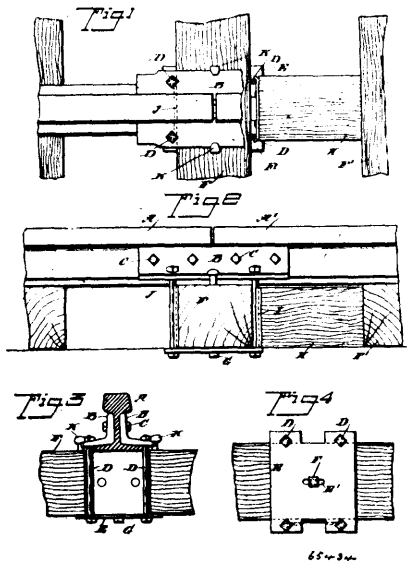
No. 65,433. Mower Attachment. (*Attache de faucheuse.*)



(George Borrett and Joseph R. Crispin, both of Magnolia, Massachusetts, U.S.A., 20th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim. The combination with a lawn mower, of a grass catcher attachment comprising a receptacle having forwardly extending slides cut away on their lower corners and provided with rigidly secured pendent vertical pins removably engaging horizontally disposed eyes on the mower, the bottom of the receptacle having at its forward edge an upturned forwardly curved lip conforming to and operating in close proximity with the rear face of the mower roller, rearwardly projecting side brackets, and a transverse roller journaled in said brackets, said roller conforming in length to the width of cut of the mower, and carrying the rear end of the receptacle, the forward end thereof being carried by the mower, all substantially as and for the purpose described.

No. 65,434. Rail Anchor. (*Ancre à rail.*)



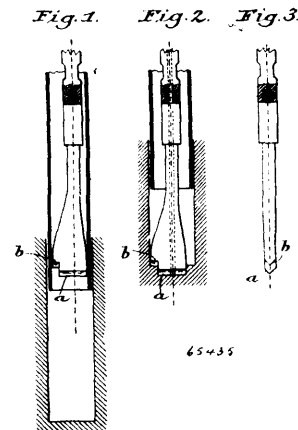
(Seymour Bernhard Anderson, Hartford, Washington, U.S.A., 20th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim.—1st. A rail anchor comprising fish plates adapted to engage the rails, a bottom anchor plate below the railroad tie con-

necting devices secured to said fish plates and anchor plate and located on the outside of the tie, and a wear plate interposed between that side of the tie which is the rear side with respect to the creeping tendency of the rails and the adjacent connecting devices, as and for the purpose set forth. 2nd. A rail anchor comprising fish plates adapted to be secured to the rails, a bottom anchor plate on the under side of the railroad tie, bolts connecting said bottom anchor plate with said fish plates on each side of the tie, a brace block between adjacent ties, and a brace plate secured to said brace block and engaging the set of bolts at this side of the tie, the ends of said brace plate partly encircling said bolts, as set forth. 3rd. A rail anchor, comprising fish plates projecting beyond the side edges of the base of the rails, a bottom anchor plate on the under side of the railroad tie, bolts connecting the said anchor plate with the fish plates at the projecting portions thereof, and a face plate on the side of the tie for a set of bolts to rest against instead resting against the side of the tie, substantially as shown and described. 4th. A rail anchor, comprising fish plates projecting beyond the side edges of the base of the rails, a bottom anchor plate on the under side of the railroad tie, bolts connecting the said anchor plate with the fish plates at the projecting portions thereof, and a brace block between adjacent ties and having a brace plate for engaging the set of bolts at this side of the tie, substantially as shown and described. 5th. A rail anchor, comprising fish plates projecting beyond the side edges of the base of the rails, a bottom anchor plate on the under side of the railroad tie, bolts connecting the said anchor plate with the fish plates at the projecting portions thereof, and means for adjusting the said anchor plate lengthwise of the tie, as set forth. 6th. A rail anchor comprising fish plates adapted for engagement with the rails, a bottom anchor plate on the under side of the railroad tie and connected to said fish plates, the said bottom plate being formed with an elongated slot, and a bolt extending through the tie and into said slot, as and for the purpose set forth.

No. 65,435. Eccentric Enlarging Bits or Chisels.

(*Ciseau et nêche à extension.*)



(William Henry MacFarvey, Glinik Maryampolski, Galicia, Austria, 20th December, 1899; 6 years. (Filed 10th August, 1899.)

Claim.—An eccentric enlarging chisel or bit, the main or fore-bearing edge *a* of which presents at the end of its eccentric side and but slightly above the same, a step to form a one sided second or enlarging edge *b*, substantially as described.

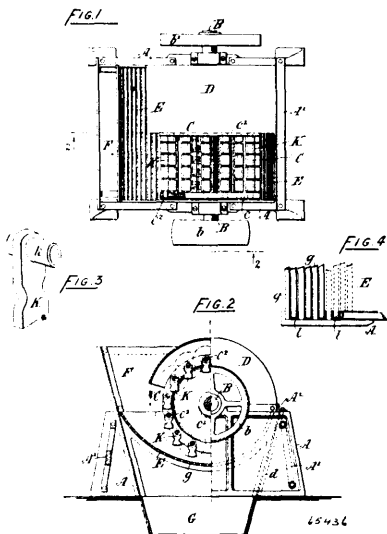
No. 65,436. Disintegrating Machine.

(*Machine à séparer.*)

(Archibald Anderson Dickson, Toronto, Ontario, Canada, 20th December, 1899; 6 years. (Filed 15th May, 1899.)

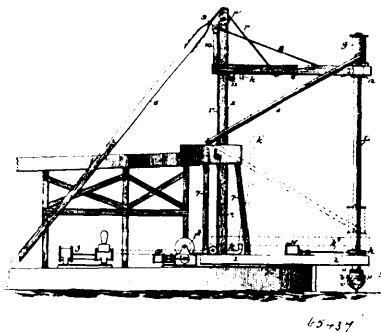
Claim.—1st. In a disintegrating machine, the combination with an enclosed framing having proper inlet and outlet for the material, and a screen forming the bottom of the disintegrating chamber, of a rotary breaker cylinder, journaled horizontally in the frame above the screen, and beaters so mounted upon the cylinder so as to be capable of rotation upon their own axes during its revolution, substantially as and for the purpose specified. 2nd. In a disintegrating machine, the combination of a rotary breaker cylinder having breakers arranged in series at the periphery thereof, and arranged so that each beater may be free to rotate on its own axis as the cylinder revolves, a curved screen set eccentric to the cylinder and forming the bottom of the disintegrating chamber, an enclosed framing affording bearings for the breaker cylinder and supporting the screen, a hood extending from the frame over the cylinder and forming the top of the disintegrating chamber, a feed hopper adapted to deliver the raw material at one side between the cylinder and the screen, all arranged substantially as and for the purpose set forth. 3rd. A rotary breaker cylinder for disintegrating machines,

composed, essentially, of a central shaft, discs fixed upon such shaft, series of parallel bars carried by such discs, and beaters strung



loosely side by side upon such bars so as to be capable of yielding and rotating thereupon when delivering blows at a tangent as the cylinder revolves, substantially as set forth.

No. 65,437. Hydraulic Dredge. (Dragueur hydraulique.)

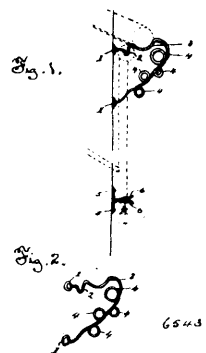


Peter Kirk, Kirkland, Washington, U.S.A., 20th December, 1899; 6 years. (Filed 16th March, 1899.)

Claim.—1st. A hydraulic dredge, comprising a vertical rotary mast, two horizontal supporting arms, a vertical hydraulic pipe having inner and outer tubes, with a boring head at its lower end said hydraulic pipe being mounted on the upper arm and adjustable with it vertically and passing through the lower arm, a turning mechanism for the hydraulic pipe mounted on the lower arm, turning mechanism for the hydraulic pipe mounted on the lower a receiver at the upper end of the hydraulic pipe mounted on its upper end and provided with pipes for carrying away the sand and gravel and means for raising and lowering the upper arm and hydraulic pipe and means for supplying a pressure jet of water and rotating the boring head, substantially as shown and described. 2nd. A hydraulic dredge, comprising a vertical rotary mast 2 with receiving box 3 and lower horizontal arm 1 rigidly connected together, and upper horizontal arm 6 braced and provided with hoisting mechanism as described and sliding vertically on the mast, the double tube hydraulic pipe 1 mounted on the upper arm and provided with an inlet head *a* for water and a supply pipe with flexible connection, the receiving cylinder *g* mounted on the upper end of the inner tube of pipe *L* and having swivelling discharge pipe *s*, a ratchet collar embracing the pipe *L* and connected to it for a rotary movement therewith, but a vertical slip movement therethrough, and a boring head with hydraulic jet nozzle arranged on the lower end substantially as and for the purpose described. 3rd. In a hydraulic dredge, the combination with a double tube hydraulic pipe bearing a boring head at its lower end, and a hydraulic jet nozzle within it, said pipe having an external feather running longitudinally the distance of the vertical adjustment, a ratchet collar embracing said pipe and having a groove fitting the feather, and a double acting oscillating pawl for rotating the ratchet collar and hydraulic pipe, substantially as and for the purpose described. 4th. In a hydraulic dredge having a double tube boring pipe, the combination with the inner and the outer tube, of an inlet head *a* having an inlet opening on one side and an annular chamber surrounding the outer tube and communicating with it, a stuffing box at the upper end fitting the inner tube, and a stuffing box at the lower end fitting the outer

tube, substantially as and for the purpose described. 5th. In a hydraulic boring head, the combination with an inner and outer tube, of a head block with central upwardly projecting nozzle, said block being connected to the lower ends of said tubes and having two sets of passages, one set communicating with the space between the two tubes, and the receiving end of the nozzle, and the other set alternating in position with the first set and opening from without the head laterally into the suction chamber of the nozzle and the interior of the central tube substantially as shown and described. 6th. A hydraulic boring head having lateral inlets for the dredged material made adjustable as to size and arranged to be opened by a reversal of the boring head to release obstruction, substantially as and for the purpose described. 7th. A hydraulic boring head having lateral inlets for the dredged material, said inlets being formed partially in a stationary piece, and partly in a movable piece, and a loose boring cap arranged on the head to turn, and adjust the movable piece of the inlet opening to increase the size of the latter, substantially as and for the purpose described. 8th. A hydraulic boring head having lateral inlets for the dredged material, a movable collar or ring *b* forming the lower part of said inlets and having vertical guides, a subject loosely turning boring cap *v*, said cap having a loose drag connection with the head block by means of can grooves *l* and blocks *t* to raise or lower the cap and the ring *b* by the rotary motion of the cap on the head block, substantially as and for purpose described. 9th. A hydraulic boring head having lateral inlets for the dredged material and a loosely turning ring *e* with wiper arms *e*¹, extending down in front of the said inlet openings, substantially as and for the purpose described. 10th. A hydraulic boring head comprising block *w* with can grooves *i*, lugs *c*, radial openings *p*¹, longitudinal channels *n*, nozzle *w*² and steel throat *f*, in combination with boring cap *v*, rings *b* *d*, loose ring *c*, with wiper arms *e*¹, and the inner and outer tubes *l* and *p*¹, substantially as and for the purpose described.

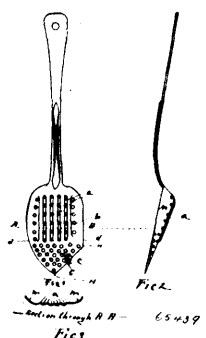
No. 65,438. Curtain Fixture. (Attache de rideau.)



Henry S. Davis, Seymour, Iowa, U.S.A., 20th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim.—A curtain fixture or bracket made up of a single piece of wire, the ends of which are bent into eyes and stand in planes at right angles to the adjacent parts of the bracket, the wire being depressed or looped adjoining the uppermost eye and extending upward from said loop and bent into an arc of a circle, the outer end of which is above the plane of the inner end, and from which the said wire is further bent in separate coils which form an inclined resilient and ornamental brace that terminates in the eye at the lower part of the bracket, the said separate coils being alternately extended on opposite sides of the said brace, substantially as described.

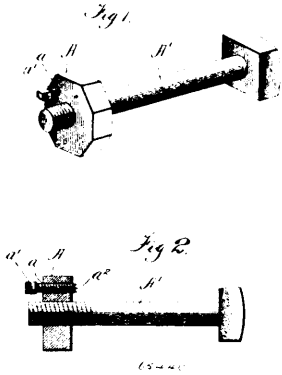
No. 65,439. Egg Spoon. (Cuiller à œufs.)



George F. Goodwin, Douglas, Wyoming, U.S.A., 20th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim. - An egg spoon and lifter as an article of manufacture, consisting of a plane body or flat plate, provided with perforations throughout its entire surface, with corrugations throughout the greater part of its surface, with a cutting edge arranged at an angle as described, and with a flange or rim merging and rising from the outer end of the cutting edge to the handle.

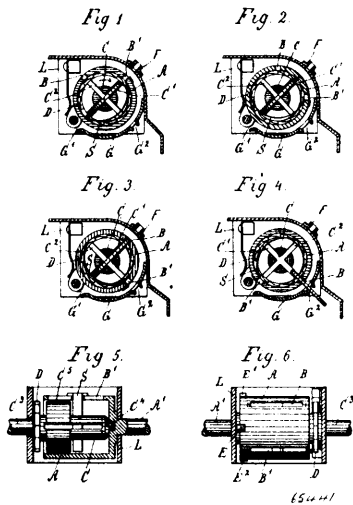
No. 65,440. Nut Lock. (*Arrête-croeu.*)



Narcisse Sauvageau, Grondines, Quebec, Canada, 20th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim. - 1st. A nut lock comprising a threaded bolt, a nut threaded thereon having a threaded opening extending therethrough, and a lock bolt threaded in said opening and adapted to impinge upon the object clamped and prevent the backward rotation of the nut, substantially as described. 2nd. A nut lock comprising a threaded bolt, a nut threaded thereon having a threaded opening extending therethrough near the outer edge of said nut, and a lock bolt threaded in said opening and provided with a sharpened end adapted to engage the object clamped and cant the nut against the bolt, whereby the backward rotation of the nut is prevented, substantially as described.

No. 65,441. Coin Freed Apparatus. (*Appareil d'alimentation actionné par une pièce de monnaie.*)

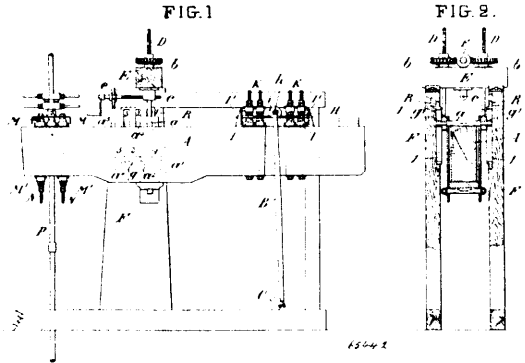


John Tourtel, 67 Aldersgate street, London, England, 20th December, 1899; 6 years. (Filed 6th February, 1899.)

Claim. - 1st. A coin operator for coin freed fluid delivering apparatus, according to which the corresponding operation of the apparatus is effected by the insertion of two coins of different size in such a manner that the coin operator consists of two cylinders A, C and a c respectively, rotating independently of each other, and mounted concentrically one with the other, such cylinders being provided with slots for the introduction of the coins, of which the larger one effects the direct connection of the cylinders, whilst the smaller coin is only brought into the locked position by a spring or incline S and a respectively, after a certain rotation of the cylinder operating the apparatus, substantially as described and shown in the drawings. 2nd. A coin operator for coin freed fluid delivery apparatus, comprising a suitable casing, an outer cylinder rotatably journaled therein, an inner cylinder journaled within said outer cylinder, so as to have a rotation independent of the

outer cylinder, slots formed in the periphery of each cylinder for the reception of coins of different sizes, which slots are adapted to be brought into alignment with each other, and a spring for forcing the smaller coin into the aligned slots, substantially as described.

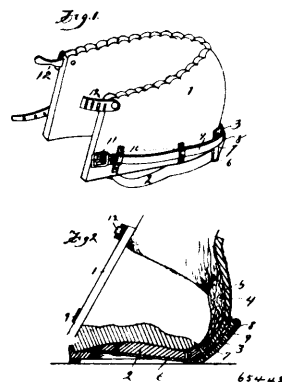
No. 65,442. Deep Boring Apparatus. (*Appareil à creuser.*)



Joseph Vogt, Niederbruck, near Masmünster, Alsatia, Germany, 20th December, 1899; 6 years. (Filed 25th April, 1899.)

Claim. - 1st. In a deep boring apparatus of the kind in which the bore rod rigidly connected to the boring tool or cutter is actuated by a rocking beam, so arranging the trunnions of the said beam that they can be shifted nearer to or farther from the bore rod, whereby the stroke of the bore rod can be varied to suit strata of different hardness without dismounting either the driving connecting rod or the crank shaft apparatus, substantially as described. 2nd. In a deep boring apparatus such as herein referred to, suspending the trunnions of a beam A from two screws D, combined with a mechanism such as the worm gear f, b, which enables the trunnions to be shifted vertically, and with a mechanism such as c, e, which enables the trunnions to be shifted horizontally, the trunnions being engaged with one or other of a series of vertical grooves, 1, 1, 2, 2, 3, 3, connected together by a horizontal groove g, so that the trunnions can be shifted from one pair or grooves to another pair for increasing or decreasing the stroke of the bore rod, substantially as described. 3rd. In a deep boring apparatus such as herein referred to, in which the boring tool is rigidly fixed to the bore rod and in which springs I are interposed between the beam and the connecting rod driving it, the combination with the said springs I, of countersprings I', the tension of the said springs being capable of adjustment according to the weight of the bore rod by means of screw bolts K, substantially as described. 4th. In a deep boring apparatus such as herein referred to, in which the boring tool is rigidly fixed to the bore rod and in which springs M are interposed between the bore rod and the beam, the combination with the said springs M of the countersprings M', the tension of the said springs M, M', being capable of regulation according to the weight of the bore rod by means of screw bolts N, substantially as herein described.

No. 65,443. Horse Boot. (*Sabot de cheval.*)



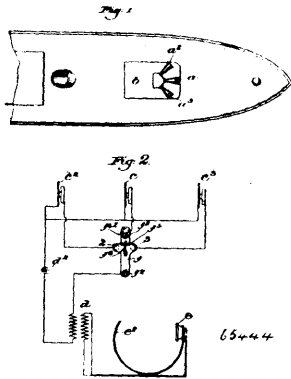
Abraham Shappell, South Bethlehem, Pennsylvania, U.S.A., 20th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim. - A horse boot, comprising the body portion formed in its rear end with a pocket, a sponge located in said pocket, a tread portion hinged to the lower rear end of the body portion, a plate riveted to the underside of the tread portion and having a forwardly projecting end adapted to fit between the horse's hoof and the toe of shoe, and having a rear portion formed with a transverse opening

or eye, loops secured to the external sides of the body portion, and a fastening strap extending through said loops and through the eye or aperture of the upwardly projecting end of the plate, substantially as and for the purpose set forth.

No. 65,444. Sound Locating Device.

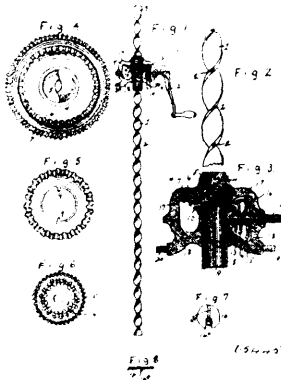
(Appareil à localiser le son.)



Alfred Montgomery Goodale, Waltham, Massachusetts, U.S.A., 20th December, 1899; 6 years. (Filed 22nd November, 1899.)

Claim.—A sound locating device, comprising the combination of two or more sound collecting devices, a telephone transmitter for each of such devices, a telephone receiver connected with all of the several transmitters, and a switch interposed between the said transmitters and the receiver and adapted to be operated by the user of the receiver to ascertain the relative activity of the transmitters, substantially as described.

No. 65,445. Coal Drill. (Forêt pour le charbon.)



George F. Weiss, Springfield, Illinois, U.S.A., 20th December, 1899; 6 years. (Filed 31st August, 1899.)

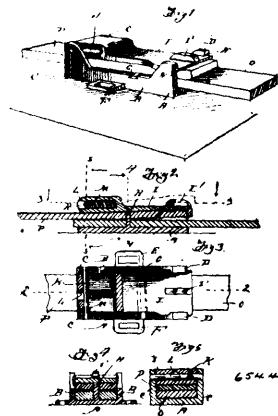
Claim.—1st. In a drill for coal and the like, the combination of a spiral drill shaft having a longitudinal groove or grooves, a rotatable drill sleeve mounted on the drill shaft and having a spline engaging the groove thereof, a rotatable feed collar mounted on the drive shaft and having bearings conforming to the spiral surfaces thereof, a drive shaft at right angles with the drill shaft, a gear wheel fixed on the drive sleeve, a plurality of gear wheels of different diameters fixed on the feed collar, a gear wheel fixed on the drive shaft in mesh with the wheel of the drive sleeve, a plurality of wheels mounted loosely on the drive shaft and meshing one with each of the wheels of the feed collar, and means for fixing either of the loose wheels onto the drive shaft, substantially as set forth. 2nd. In a drill for coal and the like, the combination of the frame, the feed collar journaled in the frame and having a pair of variant gear wheels, the drive sleeve journaled in the frame and having a gear wheel meshing in the wheels of the collar, the transverse shaft journaled in the frame, the gear wheel for the drive sleeve fixed on the shaft, the wheels for the feed collar mounted loosely on the shaft, and the removable key plate attachable to the shaft and applicable to both of the loose wheels, substantially as set forth.

No. 65,446. Harness Buckle. (Boucle de harnais.)

Little Berry Comer, Plano, Texas, U.S.A., 20th December, 1899; 6 years. (Filed 29th November, 1899.)

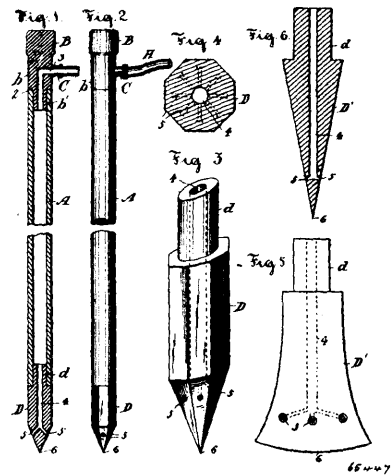
Claim.—A buckle, comprising a base plate A, the sides B thereon, provided with upwardly extending ends C and D, the latter having grooves in their inner sides, the cross bar G, and the pin or tongue

H, of the lock plate I, provided with the slot J in one end, the pin K passing through the slot and pivotally connecting the lock plate



with the extension C of the sides of the frame, and the spring M located within the slot J in a channel formed therein, and having a forward bearing against the forward wall of the slot and a rear bearing against the pivotal pin K, substantially as described.

No. 65,447. Drill. (Forêt.)



James Henry Holme, Dawson City, North-west Territories, Canada, 20th December, 1899; 6 years. (Filed 8th April, 1899.)

Claim.—In a drill, the combination with a tubular stock or stem of a drill point having a shrouded pin extending into the end of the stem and secured therein by shrinking said stem, and provided with a bore extending through said pin to near the cutting point or facets, and terminating in the latter by lateral outwardly flaring orifices, a head adapted to receive hammer blows and provided with a neck having a shrouded pin extending into the stem, which is shrunk upon it, a tubular cavity in said pin and adjacent part of the neck and terminating in a lateral orifice in said neck, and a nipple secured in said orifice adapted for connection with a flexible hose, substantially as set forth.

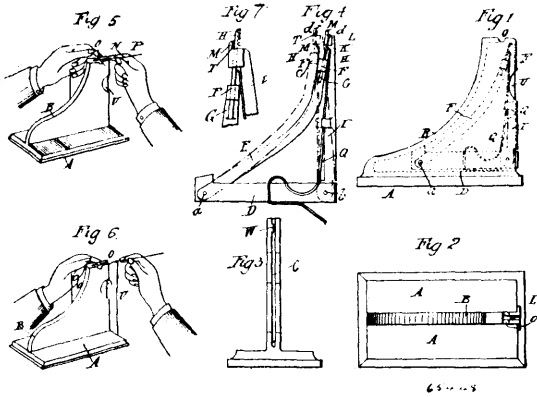
No. 65,448. Needle Threader.

(Machine à enfiler les aiguilles.)

The Gem Needle Threader Company, Glasgow, assignee of John Darling, Gallowflats, Rutherglen, all in Scotland, 21st December, 1899; 6 years. (Filed 13th December, 1898.)

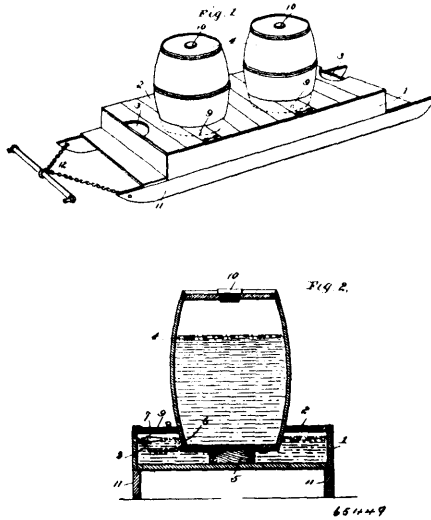
Claim.—1st. In a needle threader, a supporting base, a standard secured thereto, a lever supported by said standard, an arm or threading bar pivoted to said lever, threading mechanism carried by said threading bar, means for raising the threading bar, and means for returning said bar to its normal position, substantially as set forth. 2nd. In a needle threader, a supporting base, a standard secured thereto, a lever D supported on said standard, a threading bar E pivoted to said lever and adapted to hold remov-

ably a threading device as H, an upright lever I pivoted to the lever D, and means for operating said parts, substantially as de-



scribed. 3rd. In a needle threader, a supporting base, a standard secured thereto, the lever D supported on said standard, the threading bar E pivoted to said lever, the threading device H, and means for releasing the thread from said threading device, as described.

No. 65,449. Water Cart and Watering Trough.
(*Traineau de porteur d'eau etauge.*)



Lewis E. Miller, Ottumwa, Iowa, U.S.A., 21st December, 1899; 6 years. (Filed 24th November, 1899.)

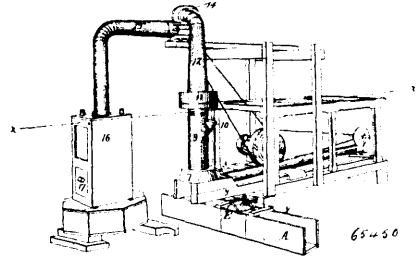
Claim. - In a combined portable water cart and stock trough, the combination of a closed trough provided with a drinking opening in its top, transporting means therefore, a tank having its lower end fitted in an opening in the top of the tank, whereby said top or cover braces the tank, said tank having an opening in its top closed by an air tight removable device and an outlet at its bottom at a point within the trough and below the normal water level thereof, a removable closure for this outlet, and a support within the trough to bring the bottom of the tank up from the bottom of the trough, and near to but below the normal water level of the trough, substantially as and for the purpose set forth.

No. 65,450. Machine for Separating fine Gold Flakes From Sand.
(*Machine pour separer le mincrui.*)

Jonathan N. Marion, Louisville, Kentucky, U.S.A., 21st December, 1899; 6 years. (Filed 21st March, 1899.)

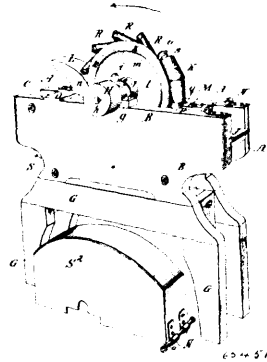
Claim. - 1st. The combination, with a receiving chamber, a supply hopper, and a nozzle, for depositing centrally within the receiving chamber, the mass of material fed from said hopper to the machine, or means for supplying an air blast which operates to force upwardly within said chamber, the finer portions of the sand and also all the finest particles, of the gold, a screen, located at the upper end of said chamber, and adapted to permit the passage through it of only the dust and flour gold, and a pipe extending upwardly from said screen and provided with an exhaust fan, operating to enforce the ascent of said flour gold, and fine particles of dust, and discharge them into a suitable receiver, or receptacle. 2nd. In combination with a vertical, tubular, receiving chamber, provided with a supply

hopper and nozzle as specified, a centrally located receiving pan 6, arranged within the open, upper, end of a blast pipe, located within



the lower end of said receiving chamber, the frustum shaped cape, or deflector, 8, arranged and operating as specified, a force fan 1, and a flume A, located beneath the sand receiving blast devices as shown, the whole arranged and operating so that the overflowing mass of material fed into the pan 6, will be acted upon by the blast which forces upwardly its finer particles, and disintegrates the overflowing mass, while at the same time the coarser sand and the bulk of the entire mass will finally descend into the flume, substantially as and for the purpose hereinbefore set forth. 3rd. The combination, with the vertical, tubular chamber 9, into which the mass of material is centrally discharged and within which the flour gold and dust are separated by a blast operation, and the flume A, into which the coarser sand and gold particles descend from said chamber, of a series of quicksilver receptacles, or amalgamating boxes B, each of which is let into the flume bottom, each of which is provided with a hinged lid and is made as specified, and a series of wheels each arranged relatively to one of said boxes in the manner specified and revolved by the action of the water in the flume, the whole constructed and operating, substantially as and for the purposes hereinbefore set forth.

No. 65,451. Amalgamator.
(*Moulin à amalgamer.*)

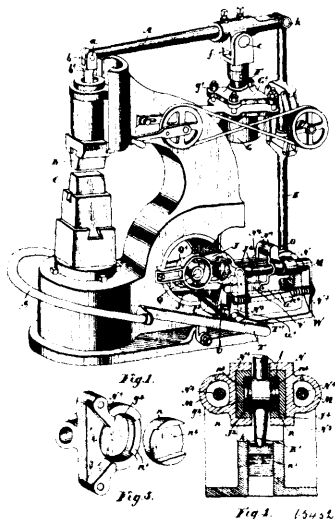


Jonathan N. Marion, Louisville, Kentucky, U.S.A., 21st December, 1899; 6 years. (Filed 29th March, 1899.)

Claim. - 1st. In a machine for extracting therefrom the fine particles of gold mixed with dust, or small particles of earth and other foreign substances, the combination with a quicksilver reservoir or receptacle, means for supplying thereto the mixture of gold particles and other solid substances, and means for affording a supply of water in connection with the mixture of solid substances, of a curved feeder tube, or trough, into the upper end of which the said solid and liquid matters are fed and the lower end of which curved feeder tube is located within said reservoir and near the bottom thereof, and a series of piston like devices which operate to travel within and continuously force downwardly, through said feeder tube, the supply of combined liquid and solid matters, all in substantially the manner and for the purpose hereinbefore set forth. 2nd. The combination, with the quicksilver reservoir, a curved feeder tube having its lower, discharge, end located within said reservoir, near its bottom and having its upper end adapted to receive a supply of combined water and solid matter, a water supply pipe arranged to discharge into the upper end of said feeder tube, and a suitable hopper or supply box arranged to feed the mixture of gold and dust into said feeder tube, of a rotatory wheel, or disc, provided, at its periphery, with a series of plunger like devices which travel within and pass through said feeder tube and which force the combined liquid and solid substances fed thereto, through said tube and out through its lower end into the mass of quicksilver contained in said reservoir, all in substantially the manner and for the purposes hereinbefore set forth. 3rd. The combination, with the quicksilver reservoir, a feeder tube through which the mass of combined liquid and solid matter, to be submerged in the quicksilver, is fed, and a

rotatory wheel, or disc, provided with peripherally arranged piston like devices that force the contents of said feeder tube downwardly through it and thence out into the mass of quicksilver in said reservoir, as specified, of the tubular housing, or tunnel K, having its lower end submerged in the mass of quicksilver, having the diameter of its bore materially greater than that of the said peripherally arranged devices, and having its upper end some distance above the top of the mass of quicksilver, through which housing the said peripherally arranged piston like devices of the said wheel or disc travel, all in the manner and for the purposes hereinbefore set forth. 4th. In an amalgamator of the type shown and described, the combination, with the quicksilver reservoir, the means for supplying thereto the materials to be treated, and the means for forcing the supply of materials down into the mass of quicksilver all as hereinbefore specified, of means for flushing, or washing off, any accumulation of dust or other solid waste substance which may accumulate on the top surface of the mass of quicksilver and round about the parts immersed therein, all substantially as hereinbefore explained. 5th. In combination with the quicksilver reservoir, and a rotatory wheel, the periphery of which is immersed in the mass of quicksilver in said reservoir, of the flange like devices 1, or disc like enlargements at the ends of the hubs of said wheel, the said devices 1, operating, as hereinbefore described, to prevent any quicksilver, or other matter carried upwardly from the reservoir by said wheel, from running down into the axle bearings or journal boxes of the latter, substantially as set forth.

No. 65,452. Power Hammer. (Marteau mécanique.)

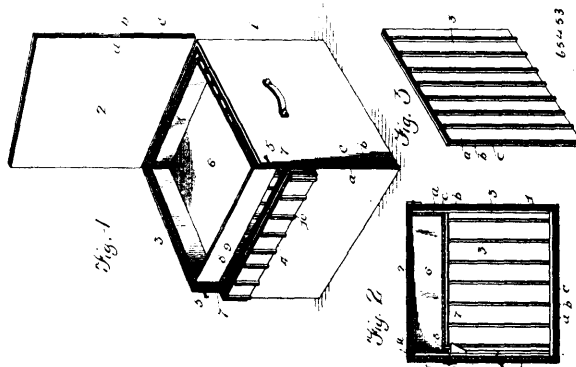


William Hartill Law, Toronto, Ontario, Canada, 21st December, 1899; 6 years. (Filed 23rd October, 1899.)

Claim.—1st. In a power hammer, the combination with the anvil block, the upper lever and the ram having an opening therein, of the rod pivoted to the end of said lever having a bulbous lower end, a socketed piston fitting said bulbous end, a plate screwed on said piston for retaining said end therein, a spring located above and below the piston, a cap having a depending flange screwed in the opening in said ram and bearing on said upper spring, substantially as described. 2nd. In a machine of the class described, the combination with the upper lever and ram and pitman all operated as described, of the screw spindle pivotally supporting the lever, the cushion chamber on the back of the frame of the machine, the nut located therein, the cushion spring located one on each side of the nut and a suitable cover for the cushion chamber, as and for the purpose specified. 3rd. The combination with the pitman, lever, anvil block and ram, of the movable crosshead suitably supported and comprising the parts N and N', having inner circular recesses, circular trunnions oscillating in the same, and the lever J, connected at the forward end to the crank shaft and having the arms at the rear end extending through recesses *n*² in the circular trunnions and the pin connecting the arms to the lower end of the pitman as and for the purpose specified. 4th. The combination with the pitman, lever, anvil block and ram of the movable cross head suitably supported and comprising the parts N and N', having inner circular recesses, circular trunnions oscillating in the same, and the lever J, connected at the forward end to the crank shaft and having the arms at the rear end extending through recesses *n*², in the circular trunnions and the pin connecting the arms to the lower end of the pitman, a tail K', forming part of the lower end of the pitman, and having lateral lugs *k* formed on it, the curvate grooves in the bed plate within which the lugs work and the slot in the bed plate in front of the centre of the same, as and for the purpose specified. 5th. The combination with the pitman, lever, anvil block and ram, of the movable cross head suitably supported and comprising the parts N and N' having inner circular recesses, circular trunnions

oscillating in the same, and the lever J, connected at the forward end to the crank shaft and having the arms at the rear end extending through recesses *n*² in the circular trunnions and the pin connecting the arms to the lower end of the pitman, the oil chambers formed at the outer sides of the parts N' and the round horizontal rods extending through such oil cups and sliding bearing formed on the parts N', and suitable standards for supporting such rods on a line with the pin centre of the cross head, as and for the purpose specified. 6th. The combination with the movable cross head, pitman, lever, anvil block and ram, of the quadruple armed lever having the rear pair of arms extending vertically into and slidably connected to the movable cross head and the forward pair of arms open horizontally and the crank shaft and bearing blocks suitably held between the arms, so that the centre of the crank is in the centre line between the arms, as and for the purpose specified. 7th. The combination with the movable cross head and lower lever suitably supported and connected together, the pitman lever, of the semi-circular U shaped treadle S, extension bars T, pivoted on the arms T', the arm U, the cross spindle *t*¹, the arm on the cross spindle and link connecting it to the cross head, the arm *u*¹ and the spiral spring connected at one end to the arm *u*¹ on the cross spindle and at the opposite end to the rear portion of the frame, as and for the purpose specified.

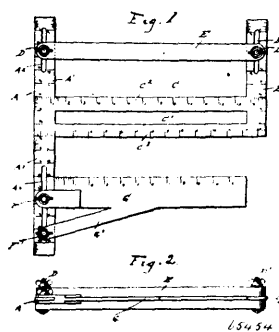
No. 65,453. Refrigerator Box. (Réfrigérant.)



Charles J. Stuart, Puyallup, Washington, U.S.A., 21st December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. A box of the character described, provided with a cover and a hinged section, in combination with an ice pan or receptacle adapted to be inserted through the opening covered by the said hinged section, substantially as and for the purpose set forth. 2nd. A box of the character described having a cover and formed with ducts in its interior walls, a hinged section secured to said box and adapted to cover an opening formed in the side thereof, and an ice pan or receptacle adapted to be inserted through the opening in the box under the cover and be enclosed therein by the hinged section, substantially as and for the purpose set forth. 3rd. A box of the character described provided with a cover, a hinged section, air ducts formed in the interior walls of said box and the interior wall of said hinged section, a drip pipe secured to the side of said box within the same, and an ice pan or receptacle inserted through the opening in said box under the cover and provided with a drip pipe adapted to fit within the upper end of the drip pipe first mentioned, substantially as and for the purpose set forth.

No. 65,454. Framing Square. (Equerre.)



James H. White, Ansonia, Ohio, U.S.A., 21st December, 1899; 6 years. (Filed 18th October, 1899.)

Claim.—A framing square, comprising a graduated bar for laying off a tenon and mortise, a graduated side arm extending at a right angle from one end of the tenon and mortise bar and in an opposite

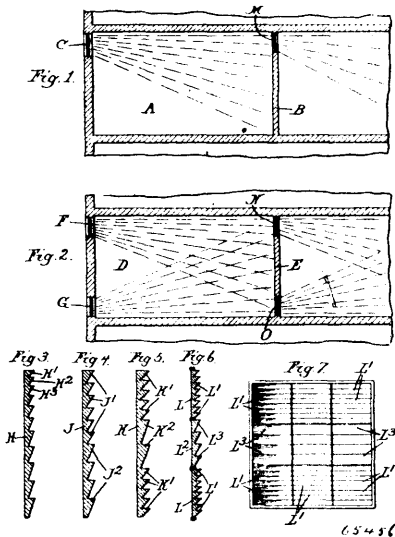
direction therefrom, a second side arm on the other end of the bar and parallel with the first side arm, a head adjustably held on the said arms parallel to the said bar and on one side thereof, and a gauge plate adjustably held on the first named bar and parallel with the other side of said tenon and mortise bar, substantially as shown and described.

No. 65,455. Waterproofing Compound.
(Composé à l'épreuve de l'eau.)

Stefen Hansel and Hugen Hornung, both of Vienna, Austria, 21st December, 1899; 6 years. (Filed 24th January, 1898.)

Claim.—1st. The process which consists in compounding an albuminous substance or body with rubber or its equivalent in about the proportions specified, coagulating the albuminous body and vulcanizing the rubber in the compound, substantially as set forth. 2nd. The process which consists in coating or impregnating a fibrous material with a solution consisting essentially of a coagulated albuminous substance and vulcanized rubber or its equivalent in about the proportions specified, substantially as set forth. 3rd. A waterproofing composition consisting essentially of a coagulated albuminous substance such as albumen or gluten and vulcanized rubber, in about the proportions specified. 4th. A waterproofing composition consisting essentially of a coagulated albuminous substance, such as albumen or gluten, vulcanized rubber, a preserving agent and a saccharine, fatty or oily body, substantially as described, in about the proportions specified.

No. 65,456. Window Glass. (Vitre de fenetre.)



Thomas Walter Horn, Toronto, Ontario, Canada, 21st December, 1899; 6 years. (Filed 12th April, 1897.)

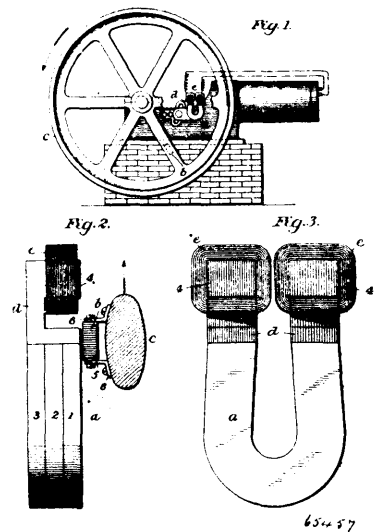
Claim.—1st. As a new article of manufacture a prismatic glass consisting of a flat body of glass with one comparatively smooth side and a series of prismatic ribs raised on the other side, each prism having flat surfaces, and such prisms varying as to size. 2nd. As a new article of manufacture a prismatic glass consisting of a flat body of glass with one side comparatively smooth and a series of prismatic ribs raised on the other side, each prism having flat surfaces, and such prisms varying as to size, the angle of inclination in each increasing from one edge of the glass to the other. 3rd. A compound window glass comprising a series of glass sections each having one surface flat and prismatic ribs on the other surface, the angles of the prisms on one section varying in size from those on another. 4th. In a compound or two part apartment, the combination of prismatic lights at the primary source of light supply in one apartment, such prismatic lights shaped so as to throw the light diagonally through such apartment, with prismatic lights in the source of light for the second apartment to receive such light and throw it diagonally through such second apartment. 5th. A window glass comprising a series of angular or bevelled surfaces, said surfaces made of varying angles so as to direct the light to various parts of the room.

No. 65,457. Electric Generator for Gas Engine Igniters.
(Générateur électro-génétique pour allumer les machines à gaz.)

Benjamin McInnerney, Omaha, Nebraska, U.S.A., 21st December, 1899; 6 years. (Filed 7th July, 1899.)

Claim.—1st. The combination in a generator for the sparking device of a gas engine, of a permanent magnet with laminated wire wound poles and a keeper, and means for carrying one past the other to first reduce the magnetic flux and then increase it suddenly to a maximum, substantially as described. 2nd. The combination

in a generator for the sparking device of a gas engine, of a permanent magnet, and a pole piece for each end thereof provided with a wire



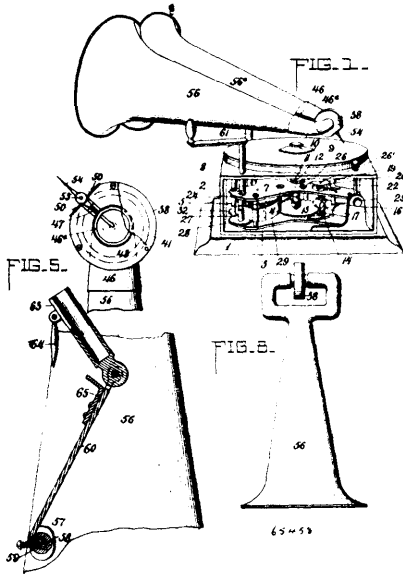
wound core arranged at right angles to the plane of the magnet at a distance from the end thereof but magnetically connected therewith, substantially as described. 3rd. An electric generator for the sparking device of a gas engine, consisting of a permanent magnet, and a keeper, the magnet having a laminated terminal at each end consisting of an assemblage of bent pieces, one limb in contact with the end of the permanent magnet and the other wire wound, substantially as set forth. 4th. An electric generator for the sparking device of a gas engine, consisting of a permanent magnet, a wire wound laminated terminal in contact with each end of the magnet, a keeper, and means for connecting it to a fly-wheel, substantially as set forth. 5th. An electric generator for the sparking device of a gas engine consisting of a permanent magnet, a wire wound laminated terminal in contact with each end of the magnet, a laminated keeper, a laminated keeper, and means for connecting it to a fly wheel, substantially as set forth. 6th. An electric generator for the sparking device of a gas engine, consisting of a horse shoe permanent magnet composed of laminae, and U-shaped laminated terminals, one limb of each terminal in contact with all the laminae of the permanent magnet at one end thereof and the other limb wire wound, substantially as set forth. 7th. A gas engine provided with a sparking device and a fly wheel, a stationary permanent magnet having wire wound pole pieces and a movable keeper, and means for causing the latter to traverse the magnet toward the pole pieces, substantially as set forth. 8th. In a gas engine provided with a sparking device and a fly wheel, a permanent magnet secured to the frame of the engine and having wire wound poles, the wires extending to the sparking device, and a keeper secured to the fly wheel, the parts arranged for the keeper to transverse the permanent magnet and act to short circuit the same before reaching the wire wound terminals, substantially as set forth. 9th. In a gas engine provided with a sparking device and a fly wheel, a stationary permanent magnet secured to the frame of the engine and having wire wound poles, the wires extending to the sparking device, and a movable keeper secured to the fly wheel, the parts arranged so that the keeper acts to short circuit the magnet before the keeper completes the circuit at the poles, substantially as set forth. 10th. In a gas engine having a sparking device and fly wheel, a generator consisting of a permanent magnet upon the frame, and a keeper carried by the fly wheel, the parts arranged to permit the keeper to travel over the magnet towards the terminals thereof, substantially as set forth.

No. 65,458. Graphophone. (Graphophone.)

Charles G. Conn, Elkhart, Indiana, U.S.A., 21st December, 1899; 6 years. (Filed 16th August, 1899.)

Claim.—1st. A reproducing mechanism for a graphophone, comprising a sound box containing a diaphragm, a stylus controlling the diaphragm and supported by and having a flexible connection with the sound box, a double discharging bell having independent inner ends connected with the sound box on opposite sides of the diaphragm, said bell projecting outwardly with its axes on opposite sides of and parallel to the vertical plane of the diaphragm, and a support for the reproducing mechanism connected with the double bell at a point distant from the sound box, substantially as and for the purpose set forth. 2nd. In a graphophone, a double bell, the parts of which have substantially parallel axes, and independent inner ends and a sound box carried by said bell supported between its said inner ends and having a diaphragm dividing it into two chambers, communicating with the respective ends of the bell, substantially as described. 3rd. In a graphophone, the combination of a suitable motor, a platen spindle driven by said motor, an oscillat-

ing post frictionally driven from said motor and receiving therefrom movement bearing a fixed relation to the platen and spindle in one



direction as the motor rotates the spindle in running down, and in the opposite direction as the motor is wound up, a record plate suitably mounted upon said spindle and a sound box and stylus suitably mounted upon said oscillating post, substantially as and for the purposes set forth. 4th. In combination with a motor, a spindle driven positively by said motor, an oscillating post frictionally connected with a segmental rack, gear wheels positively connecting said segmental rack with the motor, and arranged to impart a restricted movement thereto in opposite directions corresponding to the running down and the winding up of the motor, a record plate suitably mounted upon the spindle, and a sound producing or recording device mounted upon said post, substantially as and for the purposes set forth. 5th. In a graphophone, the combination of suitable driving mechanism, a governor shaft connected with said driving mechanism, a friction disc carried by said governor shaft, a pivoted brake shoe secured adjacent to said friction disc, an adjusting screw controlling said brake shoe, a wedge interposed between the brake shoe and a fixed part to permit the brake shoe to be clamped in position, and an adjusting screw for said wedge, substantially as and for the purposes set forth. 6th. In a graphophone, the combination of the sound box 38 formed with a recess 39 and with a ledge 40, the diaphragm 41 mounted upon the ledge 40, the cap plate 23 secured over said diaphragm with an interposed packing 44, and the oppositely projecting tubes 46 46^a carried respectively by the box 38 and plate 43, substantially as and for the purposes set forth. 7th. In a graphophone, a double bell, a sound box connected to and carried by the inner ends of said bell. 8th. In a graphophone, the combination with a double bell, of a sound box entirely supported and carried by the bell, thereby connecting the inner ends of said bell. 9th. In a graphophone, the combination with a double bell, a sound box connecting the inner ends of the same, and a swivel support for the bell adapted to be attached to the motor of the machine, substantially as described. 10th. In a graphophone, the combination of a sound box carrying recording or reproducing means, a double collecting or amplifying bell having independent inner ends to which opposite sides of said sound box are rigidly attached and by which it is supported, and a pivoted mounting for said bell, substantially as and for the purposes set forth. 11th. In a graphophone, the combination of a sound box comprising a diaphragm dividing the same into two sound chambers, and a collecting or amplifying bell formed in two parts having inner ends connected to and supporting the sound box, and with blended or united outer ends, substantially as and for the purposes set forth. 12th. The combination with a collecting or amplifying bell, the supporting arm 60 swivelled at one end to said bell and having hinged to its other end a socket by which the arm and bell may be mounted in position, substantially as set forth. 13th. In combination with a two-part bell, the cross brace 57 secured between the parts of said bell, the supporting arm 60 having swivelled connection with the bell through said cross brace, and the socket carried by the inner end of said arm, substantially as herein explained. 14th. In a graphophone bell, the combination of the supporting arm 60 connected to said bell, the attaching socket 61 and the angle brace 65 secured to one of said parts and bearing against the other for the purpose of maintaining their angle and offering rigid support for the one upon the other, substantially as herein explained. 15th. In combination with the post 37, the socket 61 having a split lower end provided with a clamping screw 64, the supporting arm 60 attached to said socket and supported

through it upon the post, and the bell supported by said arm 60, substantially as and for the purposes set forth. 16th. In a graphophone, the combination of the sound box, containing a diaphragm, the stylus secured at one end to the diaphragm, and the herein described torsion spring 49 comprising a bar 51 having a lateral attaching lug 52 which receives the stylus, and having ears 53 by which it is secured in place, substantially as and for the purposes set forth.

No. 65,459. Car Truck. (Truc de chars.)

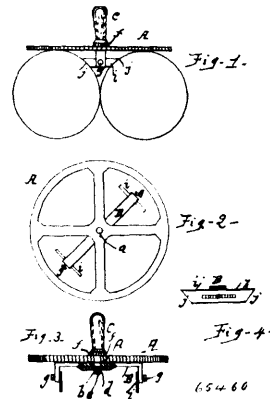


William Peter Bettendorf, Davenport, Iowa, U.S.A., 21st December, 1899; 6 years. (Filed 3rd June, 1898.)

Claim.—1st. A bolster for cars, consisting of one or more trusses each of which is made of flanged beams originally of substantially the same height throughout their entire length, a portion of the web of which near each end is removed from its normal plane and the flanges of said beams bent toward each other so as to gradually lessen the height of the beam as said flanges approach the ends, and a bearing plate secured to the same. 2nd. A bolster for cars, consisting of one or more trusses each of which is made of sections of flanged beams, the ends of which are bifurcated by cutting away a suitably shaped portion of the web thereof and have said bifurcations brought together, edge to edge, and made integrant, and a bearing plate secured to the same. 3rd. A bolster for cars, consisting of one or more trusses, each of which is made of sections of flanged beams, the ends of which are bifurcated by cutting a wedge or V-shaped piece from the web thereof, said bifurcations being equally moved until their edges meet and then made integrant, a bearing plate secured to the centre of length thereof, and column guide blocks secured to the ends of the same. 4th. A bolster for cars, consisting of two parallel trusses, each consisting of corresponding sections of flanged beams, the ends of which are correspondingly bifurcated by cutting out suitably shaped portions of the web thereof, then bringing the edges of said bifurcations together until they meet and then making them integrant, bolts and spacing sleeves for securing the trusses together, and a bearing plate secured to their centres of length.

No. 65,460. Trans for Roller Grinding Mills.

(Chariot pour moulin à moudre.)

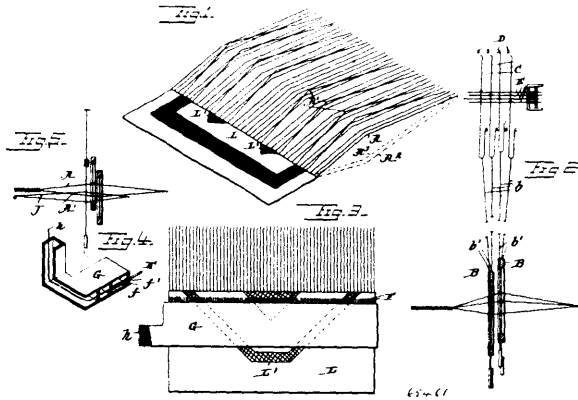


Douglas M. Carey, Enid, Oklahoma Territory, U.S.A., 21st December, 1899; 6 years. (Filed 9th November, 1899.)

Claim.—1st. A testing device for grinding rollers, whereby the rollers are detected when out of alignment, consisting of the horizontally revolvable disc or wheel and a gauge bar arranged below said wheel, the wheel adapted to be laid upon the rollers, with the gauge bar between them, for the purpose specified. 2nd. A detector applicable to grinding mills, whereby the non-alignment of the rollers may be detected, consisting of a portable disc, loosely arranged upon a vertical axle, a handle for the axle and a gauge secured to said axle below the disc and adjustable plates arranged at right angles to said disc, the latter as well as the former adapted to bear upon the surfaces of the rollers, all substantially as described. 3rd. In a gauge for roller grinding mills, the combination of a wheel provided with a central opening, a stem journaled in the opening and formed with a handle on its upper end, a cross bar on the lower end of the stem, having its ends bent downward at right angles, plates *i*, formed with slots *h* on the bent ends of the cross bar, and clamping screws through the parts to hold the said ends and the plates together, substantially as described. 4th. In a device for gauging the rollers of grinding mills, the within described gauge and

testing device, comprising the horizontally revolving disc journaled on the stem of the handle, the latter having a shoulder, the transverse bar secured to the stem, and provided with bent ends and the plates adjustably attached to these ends and held in position by the thumb screws, all substantially as described.

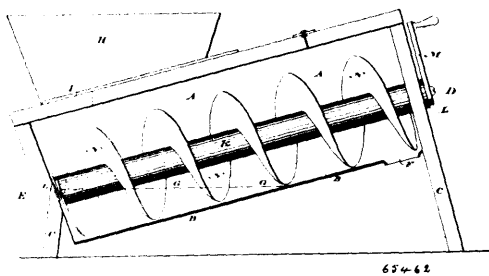
No. 65,161. Method and Means of Weaving Chenille Fabrics. (*Methode et moyen de tisser les etoffes chenille.*)



Harry Hardwick, Philadelphia, Pennsylvania, U.S.A., 21st December, 1899; 6 years. (Filed 14th April, 1899.)

Claim. - 1st. In looms for weaving chenille fabrics, the combination of a plurality of indicating devices extending across the loom, a jacquard mechanism and connection between said indicating devices and the jacquard mechanism, for the purposes specified. 2nd. In looms for weaving chenille fabrics, in combination with the shafts, of a plurality of warp connected therewith, a jacquard machine and connection between said jacquard and the warp, for moving parts of the warp out of the plane of the warp, for the purpose specified. 3rd. In looms for weaving chenille fabrics, in combination with the shafts, of a plurality of warp connected there, with a jacquard machine and connection between said jacquard and the warp, the lift of the jacquard being greater than the lift of the shaft, for the purpose specified. 4th. In looms for weaving chenille fabrics, in combination with the shafts and regular warp connected therewith, of a plurality of supplemental warp, a jacquard, and connection between said supplemental warp and the jacquard, for the purpose specified.

No. 65,162. Machine for Pickling Grain. (*Machine à préserver le grain.*)



Richard N. Lea, Maniton, Manitoba, Canada, 21st December, 1899; 6 years. (Filed 11th March, 1899.)

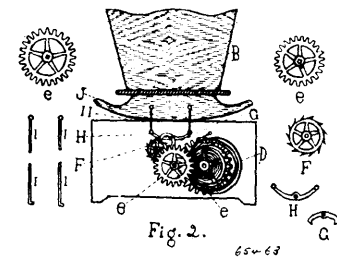
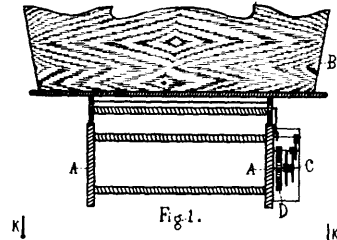
Claim. - A machine for applying liquids to grain, comprising a water tight body A, having a semi-circular bottom B, which has an opening F, for the discharge of the grain, sides, ends and top having an opening I, legs C, of unequal length to support the end D at a greater elevation than the end E, archimedean screw K, secured in bearings L, crank M for operating the screw, and hopper H, having a slide to close opening I to the body, all formed, combined and operated as and for the purpose hereinbefore set forth.

No. 65,163. Cradle. (*Berceau.*)

Thomas Timney, Burnt River, Ontario, Canada, 21st December, 1869; 6 years. (Filed 20th March, 1899.)

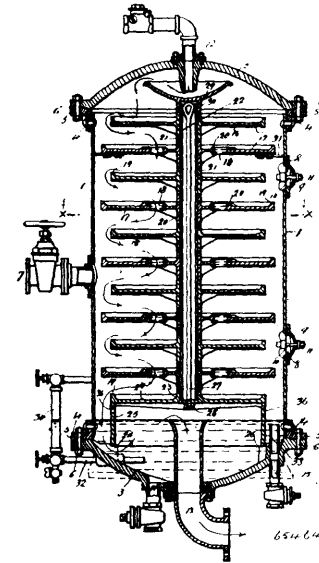
Claim. - 1st. Stand A A, in combination with pins K K, and rocker J, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with lever H, and dog G, to ratchet wheel

F, substantially as and for the purpose hereinbefore set forth. 3rd. The combination with connecting rods I I, with lever H, dog G,



ratchet wheel F, and rocker J, substantially as and for the purpose hereinbefore set forth.

No. 65,164. Feed Water Heater and Purifier. (*Rechauffeur et épurateur d'eau d'alimentation.*)



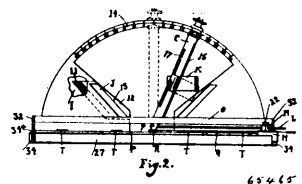
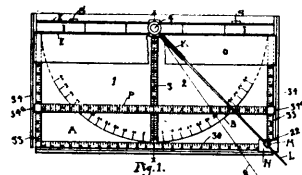
William Thompson Bonner, Montreal, Quebec, Canada, 21st December, 1899; 6 years. (Filed 29th September, 1899.)

Claim. - 1st. In feed water heater and purifier the combination of a casing having a water inlet and a steam inlet, a chamber located near the lower end of said casing, a discharge pipe extending from a point within said chamber near the upper end thereof downwardly to be connected to the boiler, and a communicating passage between said casing and chamber and located completely below the upper end of said discharge pipe, for the purpose set forth. 2nd. In a feed water heater and purifier the combination of a casing having a water inlet and a steam inlet, a chamber located near the lower end of said casing, a discharge pipe extending from a point within said chamber near the upper end thereof downwardly to be connected to the boiler, a communicating passage between said casing and chamber and located completely below the upper end of said discharge, a second discharge pipe extending from a point within the casing but outside of the chamber and approximately on a level with the mouth of said first mentioned discharge pipe to the exterior of the casing, and a valve for controlling said second discharge pipe, and a valve controlled discharge passage communicating with the lower end of the interior of said casing, for the purpose set forth. 3rd. In a feed water heater and purifier comprising a vertically arranged cylindrical casing having a steam inlet, the combination of a centrally supported tube, a series of horizontal

distributing pans carried by said tube, a saucer shaped section carried upon the upper end of said tube, a tubular water inlet projecting downwardly from the top of said casing and extending into said saucer shaped section, a cylindrical section with closed top forming a supporting said tube, a series of shoulders in the interior of the bottom of said casing for supporting said cylindrical section, a water discharge pipe leading from the interior of said chamber near the top thereof downwardly through the bottom of the casing to communicate with the boiler, a valve controlled scum discharge pipe located between the exterior of the chamber and the interior of the casing and extending from a point about on a level with the top of said water discharge pipe downwardly through the bottom of the casing, and a valve controlled and discharge port at the lower end of said casing, substantially as described and for the purpose set forth. 4th. In a feed water heater and purifier, the combination with the casing thereof of a suitably supported series of horizontal distributing pans slightly less in diameter than the interior of the casing and located equi-distant one above the other, a second series of suitably supported horizontal distributor pans slightly less in diameter than the first mentioned series and located intermediate the pans of said series, each of the pans consisting of a plate having upwardly projecting peripheral ridge, the pans of greater diameter being formed with an annular series of openings near the middle thereof, and each opening being encircled by a ridge less in height than the peripheral ridge, substantially as described and for the purpose set forth. 5th. In a feed water heater and purifier the combination of a casing having a water inlet and a steam inlet, a chamber located within said casing near the lower end thereof, a discharge pipe extending from a point within said chamber near the upper end thereof downwardly to be connected to the boiler, a communicating passage between said casing and chamber and located near the lower end of said chamber and one or more perforations through the wall of said chamber near the upper end thereof, for the purpose set forth. 6th. In a feed water heater and purifier, a series of distributing pans, the lowermost pan being formed with a depending circular wall having one or more perforations therein, substantially as described. 7th. In a feed water heater and purifier the combination of a series of horizontally supported distributor pans located one above the other, and a lifting rod connected at its lower end to the lowermost pan and extending upwardly through the other pans, substantially as described and for the purpose set forth. 8th. In a feed water heater and purifier a series of centrally perforated horizontally supported distributing pans located one above the other, and a lifting rod connected to the lowermost pan and extending upwardly through the perforations in other pans, substantially as described. 9th. A feed water heater and purifier having sight holes in the side thereof and detachable caps for closing said sight holes, substantially as described. 10th. A feed water heater and purifier having sight holes in the side thereof and means for closing said sight holes, substantially as described. 11th. A distributor pan for feed water heaters and purifiers having a series of radial arms, substantially as described and for the purposes set forth. 12th. In a feed water heater and purifier, the combination with the casing thereof of a suitably supported series of horizontal distributor pans suitably supported series of horizontal distributor pans slightly slightly less in diameter than the interior of the casing and located equidistant one above the other, a series of radial arms carried by one of said pans and extending into contact with the casing, a second series of suitably supported horizontal distributor pans slightly less in diameter than the first mentioned series and located intermediate the pans of said series, each of the pans consisting of a plate having an upwardly projecting peripheral ridge, the pans of greater diameter being formed with an annular series of openings near the middle thereof, and each opening being encircled by a ridge less in height than the peripheral ridge, substantially as described and for the purpose set forth. 13th. In a feed water heater and purifier the combination of a series of horizontally supported distributor pans located one above the other, the lowermost pan being formed with a seat, means for supporting said lowermost pan, a vertical tube supported at its lower end in said seat, means for detachably connecting said other pans to said tube, and a lifting rod connected at its lower end to said lowermost pan and extending upwardly within said tube to the top thereof, substantially as described and for the purpose set forth. 14th. In a feed water heater and purifier the combination of a series of horizontally supported distributor pans located one above the other, the lowermost pan being formed with a seat, means for supporting said lowermost pan, a vertical tube supported at its lower end in said seat, the uppermost of said pans being formed with a seat to fit over the upper end of said tube, the intermediate pans being formed with cylindrical hubs to take over said tube, and a lifting rod connected at its lower end to said lowermost pan and extending upwardly therefrom, substantially as described and for the purpose set forth. 15th. In a feed water heater and purifier the combination with the casing of a series of horizontally supported distributor pans located one above the other, the lowermost pan being formed with a seat, means for supporting said lowermost pan, a vertical tube supported at its lower end in said seat, the uppermost of said pans being in the form of a saucer and having a seat to take over the upper end of said tube, the intermediate pans being formed with cylindrical hubs to take over said tube, and a tubular water inlet extending from the top of the casing into said saucer shaped pan, a steam inlet and water discharge to and from said casing, and a lifting rod connected at its lower end

to said lowermost pan and extending upwardly within said tube to the top thereof, substantially as described and for the purpose set forth.

No. 65,465. Miter Box and Calculator. (Boite à onglet.)

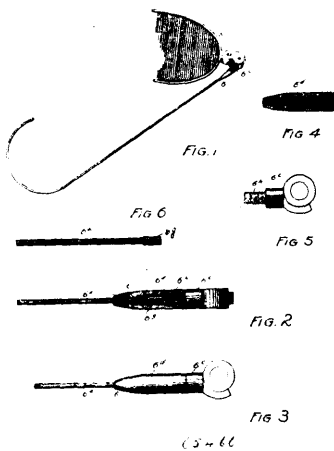


Patrick F. McDonald, Scranton, Pennsylvania, U.S.A., 21st December, 1899; 6 years. (Filed 7th October, 1899.)

Claim.—1st. In a miter box or machine, the combination with a base, a support having a hemispherical socket, of a saw guide carrying post having a ball end bearing in said socket, and means for guiding and holding the upper end portion of said post, substantially as specified. 2nd. In a miter box or machine, a base or support having a bearing cup or socket, a saw guide carrying post, having a ball end bearing in said cup or socket, and means for securing said posts in different positions of rotary and angular adjustments. 3rd. In a miter box or machine, the combination with a supporting base having a hemispherical socket, of a saw guide carrying post having a ball end bearing in said socket, means for guiding and holding the upper end portion of said post, a radial rod connected to said post, and means for securing said rod in different positions, substantially as specified. 4th. In a miter box or machine, the base having on its surface two equal squares having a common side, and whose sides are marked by scales, a subdivided arc inscribed in said squares, with an equal segment in each, and a hemispherical socket at one extremity of the said common side at the centre of said arc, of the saw guide carrying post having a ball end fitted to said socket, guides for the upper end of said post, a radial arm attached to the lower end of said post, and a slide box slidably engaging the free edge of said base and adjustable engaged by said radial arm, substantially as specified. 5th. In a miter box or machine, the base having the hemispherical socket, the work support, the back stops, and the arched guides, of the saw guide carrying post having a ball end fitted to said socket, and engaging the said guides, and means for securing said post in different angular and rotary adjustments, substantially as specified. 6th. In a miter box or machine, the combination of a base or support, having the hemispherical socket, the work support, the back strip, and the arched guide, of the saw guide carrying post having the ball end fitting said socket, and engaging said guides at its upper portion, means for securing said post in different angular positions in said guides, a radial arm connected to the lower portion of said post, and a slide on the opposite edge portion of the base adjustably engaged by said rod. 7th. The combination with a base having on its surface two equal squares having a common side, and whose sides are marked by scales, and also an arc inscribed in said squares, with a segment lying in each, a saw guide carrying post centered at one extremity of said common side and at the centre of the said arc, means for securing said post in different positions of rotary and angular adjustments, and an indicating wire or cord connected to the said post, substantially as specified. 8th. The combination with the base having its upper surface divided into two squares having a common side and whose sides are marked by scales of a post or standard centered at one extremity of said common side, and capable of rotary and angular movement, and a saw guide carried by said post or standard, said base also having inscribed therein an arc of one hundred and eighty degrees whose centre is the centre of movement of said post, and whose radius is the length of the common side, substantially as specified. 9th. In a machine of the character described, a base having its surface divided into two equal squares having a common side, and whose sides are marked by scales, said base also having inscribed therein a subdivided arc of one hundred and eighty degrees, one quadrant of which lies in each of the squares and whose centre is a point marking one extremity of the common side of the squares, and whose radius is equal to the length of such side, in combination with a saw guide movable over said base, substantially as specified. 10th. In a machine of the character described, a base having its surface divided into two equal squares having a common side, and whose sides are marked by scales, said base also having inscribed therein a subdivided arc of one hundred and eighty degrees, one quadrant of which lies in each

of the squares and whose centre is a point marking one extremity of the common side of the squares, and whose radius is equal to the length of such side, together with a saw guide carrying post centered at the centre of the said arc and rotatably and angularly adjustable upon said centre, and an arcuate back portion secured to said base and forming a guide for said post, the arc of said back portion having the same centre and radius as the arc inscribed on the base, substantially as specified. 11th. In a miter box or machine, the combination with the base, a longitudinally slotted guide post mounted thereon, and means for securing said post in different rotary and angular adjustments, of a saw guide consisting of two independent plates secured to the post, said guide being adjustable bodily along the post, and also angularly in the plane of the slot. 12th. In a mitre box or machine of the kind described, the combination with the adjustable post having two longitudinal slots formed therein at right angles to each other, of a saw guide consisting of independent plates arranged within one of said slots, set screws extending through the other slot and connected to said guide plates, friction plates embracing the post, and nuts upon said set screws adapted to bear against the friction plates, substantially as described. 13th. In a miter box or machine, the combination with a rectangular base having a saw guide post arranged at the centre of one of its sides, and a scale line 30, extending along the opposite side and having indicating numerals reading in either direction from the central line, of a set slide movable along said scale line, a radial arm secured to the post and a guide upon said arm, said guide being pivotally mounted in the set slide and centered over said scale line. 14th. In a mitre box or machine, the combination with a rectangular base having a guide post arranged at the centre of one of its sides, a scale line extending along the opposite side of said base, and a guideway adjacent to said scale line of a set slide having a flange fitting within the guideway, a guide pivotally mounted in said set slide and centered over the scale line, and a radial arm connected to the saw guide post and extending through the centre of the pivoted guide, substantially as described. 15th. In a miter box or machine, the combination with a rectangular base having a saw guide post arranged at the centre of one of its sides, and a scale line 30, extending along its opposite side, of a guideway adjacent to and parallel with said scale line, a set slide having a circular aperture whose centre is over the scale line, and a flange fitting within the guideway, a guide having a stud fitting within said aperture, and a radial arm connected to the saw guide post and extending centrally through said guide.

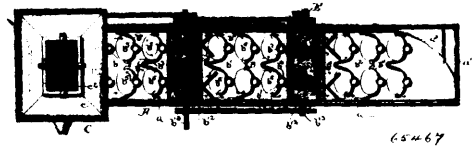
No. 65,466. Temple for Spectacle Frames.
(*Monture de lunettes.*)



Samuel E. Hirst, Pueblo, Colorado, and Thomas J. Lewis, Denver, Colorado, U.S.A., 21st December, 1899; 6 years. (Filed 9th September, 1899.)

Claim.—In a spectacle temple, the combination of a coupling sleeve having an opening extending therethrough longitudinally, said openings being of two different calibres, the smaller portion and the adjacent part of the larger portion being unthreaded, while a part of the larger portion is threaded, and two temple parts connected by the said coupling sleeve, one of the temple parts having an enlarged head adapted to engage the larger unthreaded portion of the opening in the coupling, but which will not pass through the smaller portion of the opening which is large enough to receive the body portion of the temple or the part extending beyond said head, the other part of the temple having a stud provided with a male thread adapted to screw into the larger portion of the opening in the coupling to engagement with the unthreaded head portion of the other temple part, whereby the movement of the head in the coupling may be more or less free as desired.

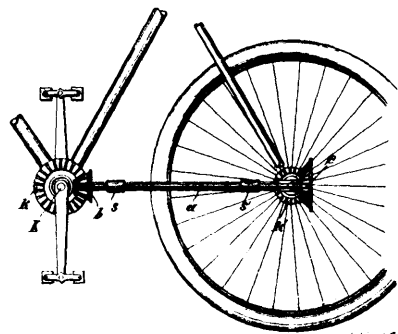
No. 65,467. Ore Separator. (*Séparateur de minéral.*)



Alexander Roy MacDonald, jr., Montreal, Quebec, Canada 21st December, 1899; 6 years. (Filed 23rd December, 1897.)

Claim.—1st. A sluice-way for ore separators, comprising a sluice, a series of depressions formed therein, and bands extending vertically therefrom in series, said bands extending around the lower side of said depressions, the ends of bands of alternate series being joined, whereby the material passing over said sluice will be given a backward rotary movement, said movement being in opposite directions during the passage of successive series of bands. 2nd. A sluiceway for ore separators, and comprising a sluice, a series of depressions formed therein, and semi-cylindrical bands extending therefrom, in series, said bands extending around the lower side of said depressions, the ends of bands of alternative series being joined, whereby the material passing over said sluice will be given a backward rotary movement, said movement being in opposite directions during the passage of successive series of bands. 3rd. A sluiceway for ore separators, comprising a sluice, and bands extending vertically therefrom in series, the ends of bands of alternate series being joined, whereby the material passing over said sluices will be given backward rotary movement, said movement being in opposite directions during the passage of successive series of bands. 4th. A sluiceway for ore separators, comprising a sluice, and semi-cylindrical bands extending upwardly therefrom in series, the ends of bands of alternate series being joined, whereby the material passing over said sluice will be given a backward rotary movement, said movement being in opposite directions during the passage of successive series of bands. 5th. A sluiceway for ore separators, comprising a sluice, and bands extending vertically therefrom in lateral and longitudinal series, the ends of bands of alternate longitudinal series being joined. 6th. A sluiceway for ore separators, comprising a sluice, and semi-cylindrical bands extending therefrom, in lateral and longitudinal series, the ends of bands of lateral longitudinal series being joined. 7th. A sluiceway for ore separators, comprising a sluice, a series of depressions formed therein, and bands extending vertically therefrom in lateral and longitudinal series, said bands extending around the lower side of said depressions, the ends of bands of alternate longitudinal series being joined. 8th. A sluiceway for ore separators, comprising a sluice, a series of depressions formed therein, the semi-cylindrical bands extending vertically therefrom in lateral and longitudinal series, said bands extending around the lower side of said depressions, ends of bands of alternate longitudinal series being joined.

No. 65,468. Vehicle Driving Gear. (*Roue d'engrenage.*)

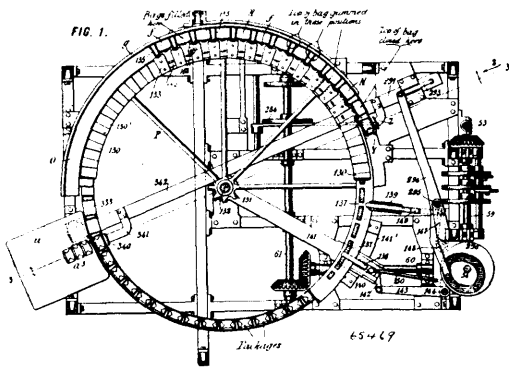


Carl Gustav Irenius Schultz, Hamburg, Germany, 21st December, 1899; 6 years. (Filed 9th June, 1898.)

Claim.—1st. In a bicycle, or like vehicle, the combination with a driving or crank shaft, and a driven wheel, of the laterally arranged power transmitting shaft, bevel gear wheels on the crank shaft and hub of the driven wheel, and bevel gear wheels on the ends of the said lateral shaft gearing with the first mentioned gear wheels, the gear wheels on the lateral shaft comprising rollers forming the teeth thereof, and flanges having recesses, and sleeves of elastic material arranged in said recesses, and in which sleeves the ends of the rollers fit, whereby to absorb vibration and render the power transmission noiseless. 2nd. In a bicycle, or like vehicle, the combination with a driving or crank shaft, and a driven wheel, of the laterally arranged power transmitting shaft, bevel gear wheels on the crank shaft and hub of the driven wheel and bevelled gear wheels on the ends of the said lateral shaft gearing with the first mentioned gear

wheels, the gear wheels on the lateral shaft comprising rollers forming the teeth thereof and having conical ends, end flanges having conical recesses, conical sleeves of elastic material arranged in said recesses in which sleeves the ends of the rollers removably fit, and means for detachably securing the sleeves and rollers in position. 3rd. The combination with a shaft, of a gear wheel consisting of a hub, a flange confined between the hub and a collar on the shaft, a second flange, both flanges having recesses, sleeves of elastic material within the recesses, rollers having their ends seated in said sleeves, and screws working through the said second sleeve and into the hub whereby to detachably secure the parts together.

No. 65,469. Packaging Machine. (Machine d'emballage.)

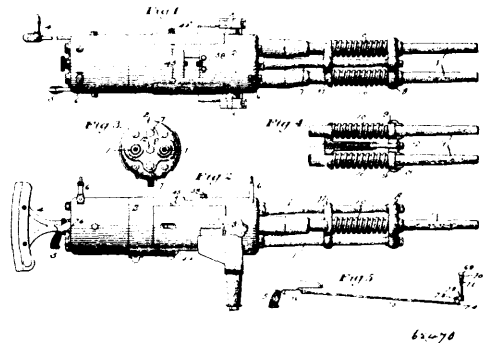


Arbuckle Brothers, New York City, New York, U.S.A., assignee of Walter W. Smyser, Philadelphia, Pennsylvania, U.S.A., 21st December, 1899; 6 years. (Filed 21st August, 1899.)

Claim.—1st. In a packaging machine, the combination with means for operating on and delivering packages, of an endless movable carrier for receiving the packages delivered therefrom having top and bottom plates adapted to receive the folded ends of the packages between them and thereby hold them closed, and means for transferring the successive packages to the carrier by pushing them between said plates. 2nd. In a packaging machine, the combination with a revoluble wheel carrying a series of pockets for holding bags or packages, of a circular carrier for receiving the packages therefrom, fastened to and turning with said wheel, and having top and bottom plates adapted to receive the folded ends of the packages between them, and thereby hold them closed, means for transferring the successive packages from the pockets to the carrier by pushing them between said plates, and means for finally expelling the packages from the carrier. 3rd. In a packaging machine, the combination with a series of pockets for holding bags or packages, comprising side walls embracing such packages, and open at top and bottom, of an endless movable carrier for the packages, consisting of a series of compartments having closed bottoms for supporting the packages, means for transferring the packages successively out of said pockets and into said compartments, and means for finally expelling the packages from said compartments. 4th. In a packaging machine, the combination with a series of pockets for holding bags or packages, comprising side wall embracing such packages, and open at top and bottom, and the packages carried by said pockets with their folded ends at the open top and bottom ends of the pockets, of an endless carrier for the packages, consisting of top and bottom plates between which the folded ends of the packages are received, and by which they are held closed, and intervening partitions by which the carrier is divided into compartments, means for intermittently advancing the pockets and said compartments, means for transferring the packages successively from the pockets to the compartments of the carrier, and means for finally expelling the packages from the compartments. 5th. In a packaging machine, the combination with means for operating on and delivering packages, of an endless movable carrier for receiving the packages delivered therefrom consisting of top and bottom plates adapted to receive the folded ends of the packages between them, and mounted to revolve, and means for transferring the successive packages to the carrier consisting of a pusher Z adapted to push the packages between said plates, with its folded ends in contact with said plates. 6th. In a packaging machine, the combination with a series of pockets N, of an endless rotary carrier moving parallel therewith on a different level, and consisting of top and bottom plates between which the package is held, vertically moving plungers X and Y adapted to grasp the package between them and transfer it out of the pocket and to the level of said carrier, and a pusher Z adapted to push the package from between said plungers into the carrier. 7th. In a packaging machine, an endless carrier for the packages, consisting of continuous top and bottom plates adapted to receive the successive packages between them, combined with a pusher adapted to push the successive packages into said carrier, and a pusher adapted to push the packages successively out from said carrier, with mechanism for operating said pushers connected to move them simultaneously. 8th. In a packaging machine, an endless carrier for the packages consisting of parallel top and bottom

plates, a pusher adapted to push the successive packages into said carrier, another pusher adapted to push them successively out of the carrier, a reciprocating slide carrying both said pushers, and driving mechanism for alternately advancing the carrier and reciprocating said slide at intervals. 9th. In a packaging machine, a carrier consisting of upper and lower plates 331 and 332, with intervening radial partitions 334 forming compartments, combined with two pushers arranged to reciprocate into successive compartments for thrusting packages into and out of said compartments. 10th. The combination with a wheel P carrying pockets N N, of a carrier 330 fastened beneath and turning with said wheel, consisting of top and bottom plates between which to embrace the packages and means for transferring packages from the pockets of said wheel to said carrier. 11th. In a packaging machine, the combination with means for operating on and delivering packages, of a carrier for receiving the packages having top and bottom plates adapted to receive the folded ends of the packages between them, one of said plates mounted to yield vertically to adapt itself to variations in the height of a package. 12th. In a packaging machine, the combination with means for operating on and delivering packages, of a carrier for receiving the packages having top and bottom plates adapted to receive the folded ends of the packages between them the top plate being subdivided and constructed as segmental vertically yielding plates movable to adapt themselves to variation in the height of the successive packages.

No. 65,470. Machine Gun. (Mitrailleuse.)



Frank Milton Garland, New Haven, Connecticut, U. S. A., 21st December, 1899; 6 years. (Filed 19th September, 1898.)

Claim.—1st. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, and fluid cylinders for receiving the pistons, said cylinders opening to a common chamber in front of the pistons and to a common chamber back of the pistons, substantially as specified. 2nd. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, said cylinders opening to a common chamber in front of the pistons and to a common chamber back of the pistons, and springs arranged to hold the barrels forward, substantially as specified. 3rd. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, said cylinders opening to a common chamber in front of the pistons and to a common chamber back of the pistons, a spring frame connected with the casing, a yoke adjustably connected with the spring frame, and springs thrusting between the yoke and parts of the barrels for holding the barrels forward, substantially as specified. 4th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, said cylinders opening to a common chamber in front of the pistons and to a common chamber back of the pistons, and a valve that permits the free flow of fluid in one direction but restricts the flow of fluid in the opposite direction located in the passage between the front ends of the upper cylinders and the front common chamber, substantially as specified. 5th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, firing pins and extractor fingers carried by the breech blocks pistons connected with the breech blocks, and fluid cylinders for receiving the pistons, said cylinders opening to a common chamber in front of the pistons and to a common chamber back of the pistons, substantially as specified. 6th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, spring firing pins, extractor fingers, cocking levers and sears carried by the breech blocks, pistons connected with the breech blocks, and fluid cylinders for receiving the pistons,

said cylinders opening to a common chamber in front of the pistons and to a common chamber back of the pistons, substantially as specified. 7th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, reciprocating breech blocks that move for portions of their travel with the barrels and for other portions of their travel independently of the barrels, pistons connected with the breech blocks, and fluid cylinders for receiving the pistons, substantially as specified. 8th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, reciprocating breech blocks movable to and from the breeches of the barrels, recoil blocks loosely connected so as to have a reciprocation with and oscillation independent of the breech blocks, pistons connected with the breech blocks, and fluid cylinders for receiving the pistons, substantially as specified. 9th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, reciprocating breech blocks movable to and from the breeches of the barrels, recoil levers pivotally connected with the breech blocks, recoil blocks connected with the recoil levers, pistons connected with the recoil levers, and fluid cylinders for receiving the pistons, substantially as specified. 10th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, reciprocating breech blocks movable to and from the breeches of the barrels, recoil levers pivotally connected with the breech blocks, recoil blocks connected with the recoil levers, recoil block locking levers movable with the barrels, pistons connected with the recoil levers, and fluid cylinders for receiving the pistons, substantially as specified. 11th. A machine gun having a casing, barrels movably supported by the casing, barrel frames connected with the barrels, pistons connected with the barrel frames, reciprocating breech blocks movable in guideways in the barrel frames to and from the breeches of the barrels, recoil blocks connected with the breech blocks and movable in guideways in the barrel frames, pistons connected with the breech blocks and recoil blocks, and fluid cylinders for receiving the pistons, substantially as specified. 12th. A machine gun having a casing, barrels movably supported by the casing, barrel frames connected with the barrels, pistons connected with the barrel frames, reciprocating breech blocks movable in guideways in the frames, pistons connected with the breech blocks, movable cartridge supports borne by the barrel frames, and fluid cylinders for receiving the pistons, substantially as specified. 13th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrel, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, cams mounted upon and movable with the breech blocks, and transverse feeds arranged to be moved by the cams, substantially as specified. 14th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, and feeding mechanisms for elevating the cartridges to the level of the barrels operated by the reciprocation of the barrels, substantially as specified. 15th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feed mechanism for elevating the cartridges, mechanisms for forcing the cartridges laterally, and mechanisms for feeding the cartridges into line with the barrels, substantially as specified. 16th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feed mechanism for elevating the cartridges, mechanisms for feeding the cartridges transversely into line with the barrels, and trigger slides moved by the movements of the transverse feeding mechanisms for releasing the firing pins, substantially as specified. 17th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feed mechanism for elevating the cartridges, mechanisms for feeding the cartridges transversely into line with the barrels, cams on the breech blocks for moving the transverse feeds inwardly, springs for moving the transverse feeds outwardly, and trigger slides moved by the movements of the transverse feeds, substantially as specified. 18th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feed mechanisms for elevating the cartridges, mechanisms for feeding the cartridges transversely into line with the barrels, cams on the breech blocks for moving the transverse feeds inwardly, springs for moving the transverse feeds outwardly, fingers for forcing the cartridges laterally from the belt, mounted upon the

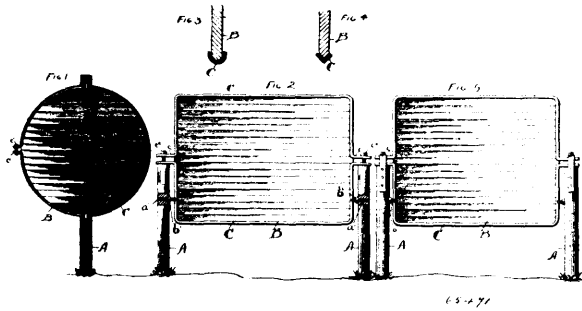
transverse feeds, and trigger slides moved by the movements of the transverse feeds, substantially as specified. 20th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feed mechanisms for elevating the cartridges, cams on the breech blocks for moving the transverse feeds inwardly, springs for moving the transverse feeds outwardly, levers for holding the transverse feeds with the springs under tension, a tripping bar, and a trigger connected with the tripping bar and arranged to draw the tripping bar into the path of the levers, substantially as specified. 21st. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, reciprocating breech blocks movable to and from the breeches of the barrels, recoil levers pivotally connected with the breech blocks, recoil blocks connected with the recoil levers, piston rods connected with the recoil levers, pistons connected with the piston rods, fluid cylinders for receiving the pistons, a rack borne by one of the piston rods, a pinion adapted to mesh with the rack, and a crank handle connected with the pinion, substantially as specified. 22nd. A breech block for an automatic machine gun having a firing pin, a cocking lever adapted to engage the firing pin, a gear arranged to retain the lever cocked, loosely retained extractor fingers, and a spring thrusting the firing pin forward and the extractor fingers backward, substantially as specified. 23rd. A transverse feed mechanism for an automatic machine gun, consisting of an arm, a finger projecting rearwardly from the arm, a shaft supporting the arm, a spring for turning the shaft in one direction and an adjusting device for regulating the tension of the spring, substantially as specified. 24th. An elevating feed mechanism for an automatic machine gun, consisting of a pair of independently oscillating levers, pawls arranged to be oscillated by the movements of the levers, ratchet wheels intermittently advanced first by one and then by the other pawl, and a toothed wheel connected with and intermittently advanced with the ratchet wheels, substantially as specified. 25th. A firing mechanism for an automatic machine gun, consisting of a pair of transversely moving slides thrust in opposite directions by a yielding force, breech blocks with firing pins, cocking levers and sears, studs projecting from the slides into the paths of the sears, transversely moving arms, springs for throwing the arms, studs projecting from the slides into the paths of the arms, levers for retaining the arms from movement, a tripping bar in the paths of the arm levers, and a trigger connected with the tripping bar, substantially as specified. 26th. In combination with the firing mechanisms of an automatic machine gun, having reciprocating barrels, trigger slides movable transversely of the barrels, a spring for thrusting the slides from each other, studs projecting from the slides in position to be engaged for forcing the slides against the thrust of the spring, and studs projecting from the slides in position to engage the firing sears, substantially as specified. 27th. In combination with the feeding and firing mechanisms of an automatic machine gun having reciprocating barrels, frames attached to and movable with the barrels, breech blocks bearing firing pins, cocking levers and sears movable in guideways in the barrel frames, recoil blocks movable in guideways in the barrel frames, levers pivotally connecting the recoil blocks with the breech blocks, and levers mounted in the frames and adapted to lock the recoil block when the barrels are at the forward limits of their movements, substantially as specified. 28th. In a machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feeding mechanisms for elevating the cartridges, mechanism for moving the cartridges laterally, mechanisms for moving the cartridges longitudinally, and transverse feeding mechanisms for passing the cartridges into line with the breech blocks, substantially as specified. 29th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feeding mechanisms for elevating the cartridges, mechanisms for moving the cartridges laterally, mechanisms for feeding the cartridges longitudinally, transverse feeding mechanisms for passing the cartridges into line with the breech blocks, and a trigger mechanism operated by the movements of the transverse feeding mechanisms, substantially as specified. 30th. A machine gun having a casing, barrels movably supported by the casing, pistons connected with the barrels, breech blocks movable to and from the breeches of the barrels, pistons connected with the breech blocks, fluid cylinders for receiving the pistons, feeding mechanisms for elevating the cartridges, mechanisms for moving the cartridges into the paths of the breech blocks, and a trigger mechanism operated by the movements of the feeding mechanism substantially as specified.

No. 65,471. Sign Board. (Ensign.)

William A. Gavett, Detroit, Michigan, U.S.A., 21st December, 1899; 6 years. (Filed 19th December, 1898.)

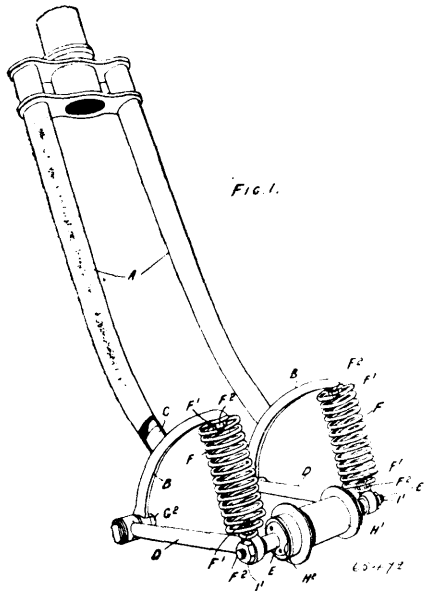
Claim.—1st. The combination of the board, the frame to embrace said board, the outset ends *e e*, of the frame, the posts and the lag screws adapted to draw the frame together and secure said frame to

the posts, substantially as described. 2nd. In a sign board, the combination of a board, a frame adapted to receive the edge of said



board, the free or outset ends of the frame, lag screws adapted to engage the free ends of the frame to put said frame under tension and secure the same to a suitable support, substantially as described. 3rd. In a sign board, the combination of the board, a frame adapted to receive the edge of said board, the free or outset ends of the frame, means for putting the frame under tension by drawing said free ends together, the clamping bolts *a'*, adapted to engage the edge of the board and secure it in a vertical position and the posts for supporting said board, substantially as described.

No. 65,472. Cycle Spring Fork.
(*Fourche à ressort pour cycles.*)

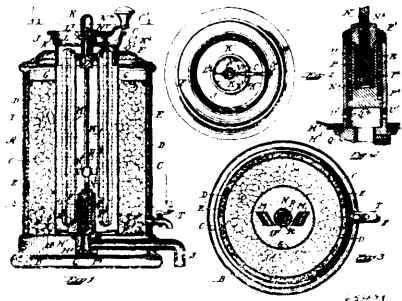


John Boyd Dunlop and John Boyd Dunlop, jr., both of Dublin, Ireland, 21st December, 1899; 6 years. (Filed 21st February, 1899.)

Claim.—1st. In a spring fork for a cycle the combination with the blade *A*, of the cross piece *B*, centrally secured to the blade *A*, the link *D*, pivotally connected at its rear end to the cross piece *B*, the spiral spring *F*, secured between the forward ends of the cross piece *B*, and the link *D*, and the axle *E*, rigidly secured to the link *D*, substantially as described. 2nd. In a spring fork for a cycle, the combination with the cross piece *B*, of the lug *C*, centrally secured to the cross piece *B*, and the blade *A*, adapted to engage with the lug and the horizontal or slightly inclined link *D*, secured to the rear end of the cross piece *B*, and also to the axle *E*, substantially as specified. 3rd. In a spring fork for a cycle the combination with the curved cross piece *B*, centrally secured to the blade *A*, of the horizontal or slightly inclined link *D*, pivotally connected at its rear end to the cross piece *B*, by a ball bearing joint, and rigidly secured at its forward end to the axle *E*, substantially as specified. 4th. In a spring fork for a cycle the combination with the fork blades *A*, of the horizontal and slightly inclined links *D*, pivotally connected by ball bearing joints to each blade of the fork, and the axle *E*, detachably secured to the forward end of the links *D*, substantially as specified. 5th. In a spring fork for cycles the combination with the coiled spring *F*, of the studs *F'*, formed on the forward ends of the cross piece *B*, and the horizontal link *D*, and

the axle *E*, to which the cross piece and link are rigidly secured on an extension of the axle beyond the lock nut *H*, substantially as specified. 6th. In a spring fork for cycles, the combination with the axle *E*, having tapered ends *I*, of the horizontal link *D*, rigidly secured at its forward ends to the tapered ends *I*, and a ball bearing joint pivotally connecting the rear end of the link *D*, directly or indirectly with the blade *A*, substantially as specified. 7th. In a spring fork for cycles, the combination with the axle *E*, having tapered ends *I*, and ball bearing cones *E'* formed integral with the axle, of the horizontal link *D*, detachably connected at its forward end to the tapered ends *I*, and its rear end pivotally connected with the blade *A*, substantially as specified. 8th. In a spring for a cycle, the horizontal or inclined tapered links *D*, rigidly secured to the extended ends of the wheel axle, and pivoted by ball bearing joints directly or indirectly to the fork blades, substantially as specified. 9th. The complete spring fork device constructed and arranged substantially as described and comprising the combination with the blades or prongs *A*, of the curved cross pieces *B*, suitably secured to the prongs, the link *D*, pivotally connected to the rear and lower ends of the cross pieces *B*, the wheel axle *E* secured to the free ends of the links *D*, and the spiral spring *F*, held normally in compression between the upper ends of the cross pieces *B*, and the ends of the links *D*.

No. 65,473. Milk Urn. (*Urne à lait.*)

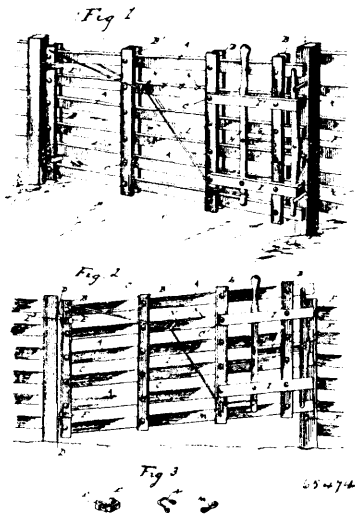


Harry Harlow Fairbanks, Worcester, Massachusetts, U.S.A., 21st December, 1899; 6 years. (Filed 28th November, 1899.)

Claim.—1st. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, means for agitating the liquid in said chamber, means for opening said valve to allow the discharge of liquid through said outlet, and means for holding said valve closed until the liquid has been agitated. 2nd. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, means for agitating the liquid in said liquid chamber, means for opening said valve to allow the discharge of liquid through said outlet, and yielding means for holding said valve closed until the liquid has been agitated. 3rd. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, an agitator for the liquid in said chamber, means for opening said valve, mechanism for operating said agitator to agitate the liquid and for subsequently opening the valve to allow the discharge of liquid through said outlet, and means for holding said valve closed until the liquid has been agitated. 4th. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, an agitator for the liquid in the liquid chamber, means for opening said valve, and an operating device common to said agitator and said valve opening means for agitating the liquid and for subsequently opening the valve to allow the discharge of liquid through said outlet. 5th. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, an agitator for the liquid in said liquid chamber, means for opening said valve, an operating device common to said agitator and said valve opening means for agitating the liquid and for subsequently opening the valve to allow the discharge of liquid through said outlet, and means for holding said valve closed until the liquid has been agitated. 6th. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, an agitator for the liquid in said liquid chamber, means for opening said valve, an operative device common to said agitator and said valve opening means for agitating the liquid and for subsequently opening the valve to allow the discharge of liquid through said outlet, and means for closing said valve upon the removal of said common device for engagement with said valve opening means. 7th. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, an agitator for the liquid in said liquid chamber, means for opening said valve, an operating device common to said agitator and said valve opening means for agitating the liquid and for subsequently opening the valve to allow the discharge of liquid through said outlet, means for closing said valve upon the removal of said common device for engagement with said valve

opening means, and a spring for holding said common device normally in engagement with said valve opening means. 8th. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, an agitator for the liquid in said liquid chamber, means for opening said valve, an operating device common to said agitator and to said valve opening means for agitating the liquid and for subsequently opening the valve to allow the discharge of liquid through said outlet, and yielding means compressed by the opening of said valve for closing said valve upon the removal of said common device for engagement with said valve opening means. 9th. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, a valve normally closing said outlet, yielding means for holding said valve normally closed, a cooling chamber surrounding said liquid chamber, an agitator for the liquid in said liquid chamber, a rod yieldingly connected to said valve and provided on its upper end with a spiral groove, an arm operatively connected to said agitator and having a finger which engages said spiral groove in the valve rod, and a spring normally holding said finger in said spiral groove, the said arm being adapted in its movement to operate said agitator to agitate the liquid and to subsequently open said valve by moving the valve rod upwardly against said yielding means which closes said valve upon the removal of said arm from engagement with said spiral groove in said valve rod. 10th. In an apparatus of the character specified, a chamber for holding liquid, an outlet for said liquid, an agitator for the liquid in said liquid chamber, a valve normally closing said outlet, a cooling chamber surrounding said liquid chamber, an exterior chamber surrounding said cooling chamber, a valve controlled outlet for the water from said cooling chamber, mechanism for operating said agitator to agitate the liquid and for subsequently opening the valve to allow the discharge of liquid from said outlet, and means for holding said valve closed until the liquid has been agitated.

No. 65,474. Farm Gate. (Barrière.)

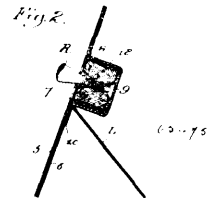
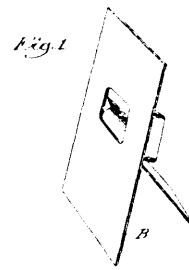


George A. Brown and John B. May, both of New Holland, Ohio, U.S.A., 21st December, 1899; 6 years. (Filed 21st November, 1899.)

Claim.—1st. In a gate, the combination with the horizontal rail, parallel uprights and battens, of the latch bar, the operating rod connected to the centre thereof, the lever to which the operating rod is also connected, said lever being pivoted adjacent to its lower end, and the catches with which the bar is adapted to engage, substantially as shown and described. 2nd. The combination with a gate constructed as described, of the wire doubled upon itself and extending upon both sides of the gate, the ends of said wire being fastened to the rear batten of the gate, a latch bar and a lever for operating same, one end of said lever being connected to the wire, substantially as shown and described. 3rd. The combination with a gate constructed as described, of the latch bar, rod and lever, said lever being pivoted adjacent to its lower end, and the wire connected to the lower end of the lever and attached to the upper end of the rear batten of the gate, said wire passing through an adjustable loop or hanger, substantially as shown and described. 4th. The combination with a gate constructed as described, of the latch bar tapered from the centre in opposite directions, the rod connected to the centre of said latch bar, the operating lever pivoted adjacent to its lower end, the catches secured to the gate post, the wire connected to the lower end of the lever and fastened to the upper end of the rear batten of the gate, said wire passing through guides arranged upon the bottom of the gate, and a loop or hanger adjustable upon the second rail of the gate through which the wire passes, substantially as shown and described.

No. 65,475. Jewellery Exhibition Device.

(Appareil à exhiber des bijoux.)



The Dennison Manufacturing Company, assignee of Charles Henry Buxton, Boston, Massachusetts, U.S.A., 21st December, 1899; 6 years. (Filed 1st December, 1899.)

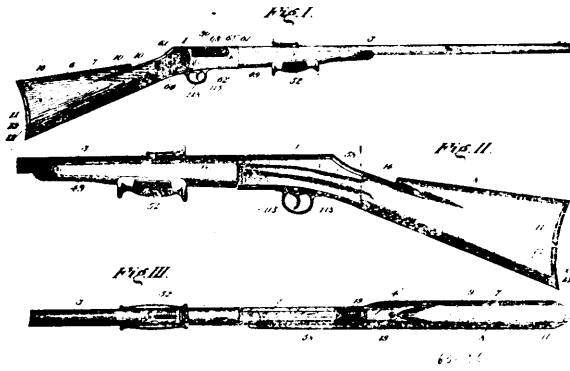
Claims.—1st. A jewellery exhibitor, comprising a display card provided with an opening to receive the article to be displayed, a casing much smaller than the said card and arranged at the back of and carried by said card merely to hold the article the face of which is displayed through said opening at the face of said card, and a supporting member to support said card in elevated display position, whereby the general effect of the device as ordinarily viewed by an intending purchaser is that of a display card. 2nd. A jewellery exhibitor, comprising a display card provided with an opening to receive the article to be displayed and larger than the portion of such article that is to be displayed through said opening, a casing smaller than said card and arranged at the back of and carried by the latter, and containing pads that are exposed at and through said opening and receive between them said article to be displayed, and a support for and to retain said display card in elevated position, the whole producing the general effect of a display card. 3rd. A jewellery exhibitor, comprising a display card provided with an opening to receive the article to be displayed, a casing much smaller than the said card and arranged at the back of and carried by said card merely to hold the article the face of which is displayed through said opening at the face of said card, and a supporting member hinged to the said display card immediately below the said casing to hold the said card in elevated position, said casing serving as a stop for the said supporting member, as described. 4th. A ring exhibitor, comprising a card in two thicknesses, each slotted, the slot of the rear one being larger than that of the forward one, a casing disposed in said larger slot and secured to the back of the front thickness and having ring holding means, and a leg connected with said card for swinging movement. 5th. A ring exhibitor, comprising a card in two thicknesses, each slotted, the slot of the rear one being larger than that of the forward one, a casing disposed in said larger slot and secured to the back of the front thickness, and having ring holding means, and a leg having a turned over portion secured between said thicknesses.

No. 65,476. Magazine Fire Arm. (Magasin d'armes à feu.)

Robert Dinsmore, Baltimore, Maryland, U.S.A., 21st December, 1899; 6 years. (Filed 1st April, 1899.)

Claim.—1st. In a fire arm, the combination with a gun frame, barrel and stock, of a cartridge passage communicating between the gun barrel and the stock, a cartridge feed mechanism, a reciprocating breech block working within the gun frame, a locking block movably secured to the breech block, and an actuating connection between the cartridge feed mechanism and the locking block, arranged to lock the block in place when in firing position, substantially as set forth. 2nd. In a fire arm, the combination with a gun frame, barrel, and stock, of a cartridge passage communicating between the gun barrel and the stock, a cartridge feed mechanism, a reciprocating breech block working within the gun frame, a locking block movably secured to the breech block, and a folding connection between the locking block and the feed mechanism, whereby the block, when moved from its firing position, may be folded down close to the feed mechanism, within the gun frame,

substantially as and for the purpose set forth. 3rd. In a fire arm, the combination with a frame, barrel, stock having a cartridge-



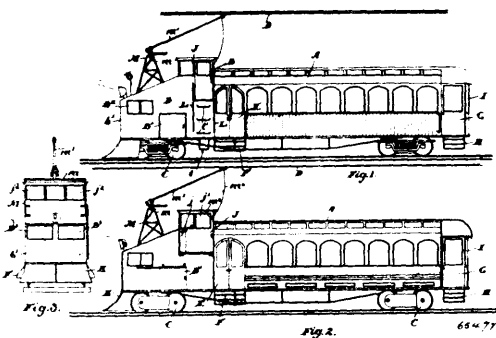
passage therein, and a cartridge passage between the stock and barrel, of a reciprocatory feed slide for advancing the cartridges from the stock, a reciprocatory breech block working within the gun frame in rear of the barrel, a locking block secured to the breech block and movable out of line with the barrel, to a position within the gun frame, and a folding connection between the locking block and the feed slide, substantially as set forth. 4th. In a gun, the combination with a frame, barrel, and stock, of a laterally disposed passage for the cartridges between the stock and barrel, a feed mechanism provided with means extending into the passage and which act upon the cartridges while within such laterally disposed passage to advance them through it, a reciprocatory breech block working within the frame in the rear of the barrel, means for actuating the breech block, and means for actuating the feed mechanism, substantially as set forth. 5th. In a gun, the combination with a frame, barrel, stock, and cartridge chamber or passage within the stock, of a laterally disposed passage establishing communication between the magazine chamber and the barrel, a feed slide provided with means for advancing cartridges through the passage, a reciprocatory breech block working within the frame in the rear of the barrel, and means for actuating the breech block connected with the feed slide, substantially as set forth. 6th. In a fire arm, the combination with a frame, barrel, stock, and cartridge passage within the stock and frame communicating with the barrel, of a feed slide provided with means for advancing cartridges through the passage, a locking block also provided with means for advancing cartridges through the passage, and means for actuating the locking block and feed slide, respectively, substantially as set forth. 7th. In a fire arm, the combination with a frame and section of cartridge passage within the frame, of a breech block and locking block movably secured thereto, means upon the locking block for advancing a cartridge within the passage to a position in front of the breech block, and mechanism for actuating the locking block, substantially as set forth. 8th. In a fire arm, the combination with a frame, stock, and cartridge passage partially within the frame and partially within the stock, of a feed slide provided with means for actuating a cartridge through the passage within the stock, a locking block provided with means for actuating the cartridge through the passage within the frame to a position in front of the breech block, and means for actuating the feed slide and locking block, respectively, substantially as set forth. 9th. In a gun, the combination with a frame adapted to be secured at one end to a barrel, and at the other end to a stock, of a movable breech block within the frame, a locking block movably secured to the breech block, means for operating the locking block, and a connection between said means and the locking block provided with engaging parts which are brought into supporting contact with the frame at the final closing movement of the parts, substantially as set forth. 10th. In a fire arm, the combination with a frame adapted to be secured at one end to a barrel, and at the other end to a stock, of a movable breech block within the frame, a locking block movably secured to the breech block, a feed slide, working in the frame, a link pivotally connected at one end to the locking block, and at the other end to the feed slide, means of direct contact between the link and the locking block at one end, and through the feed slide with the frame at the other, and mechanism adapted to actuate the feed slide, and to interpose the link vertically between the frame and the locking block, substantially as set forth. 11th. The combination with a gun frame, and abutment face on the forward end thereof, of a reciprocatory breech block within the frame, a locking block pivotally secured to the breech block, a fulcrum extension upon the locking block adapted to bear against the abutment face upon the frame, to start the breech block, and means for actuating the locking block, substantially as set forth. 12th. In a fire arm, the combination with a reciprocatory breech block, and mechanism for actuating it, of a firing pin movable within the breech block and having an extension which works in a longitudinal groove in the gun frame, and a stop shoulder against which said extension strikes for intercepting the rearward movement of the firing pin, substantially as set forth. 13th. In a

fire arm, the combination with a reciprocatory breech block, of a spring hook carried thereby and adapted to engage the heel of a cartridge, a stop located at one side of the path of said block, and a firing pin movably mounted in said breech block and extended so as to engage with said stop when the block is drawn backward, substantially as and for the purpose described. 14th. In a fire arm, the combination with a gun frame having one of its sides provided with a groove or depression, of a movable locking block mounted within the gun frame, means for actuating the block, a spring actuated plunger within the block having a lateral projection which enters the said groove or depression, a sear also extending within the said groove or depression for engaging with said projection, and a trigger operatively connected with the sear, substantially as set forth. 15th. In a fire arm, the combination with a breech block, and a relatively movable firing pin carried thereby, of a locking block connected to the breech block, means for actuating said blocks, a spring actuated plunger mounted in the locking block, a sear for engaging said plunger, and a trigger operatively connected to said sear, substantially as described. 16th. In a fire arm, the combination with a movable breech block, of a locking block connected thereto, means for actuating said blocks, a plunger mounted in the locking block, and provision for holding the plunger back as the locking block is advanced, substantially as described. 17th. In a fire arm, the combination with a movable breech block, of a locking block connected thereto, means for actuating said blocks, a plunger mounted in the locking block, and means operative by the trigger for holding and releasing said plunger, substantially as described. 18th. In a fire arm, the combination with a gun frame, and movable sear, a movable plunger containing member, plunger and spring, and means for giving to the plunger containing element irregular movements, whereby in travelling in one direction it is caused to take one path, and when travelling in the other direction, another path, of intermittently operative connecting mechanism uniting the plunger and sear, whereby the plunger is caught by the sear in its movement in one direction and not in the other, substantially as set forth. 19th. In a fire arm, the combination with a gun frame having one of its sides provided with a groove or depression, of a sear extending within such groove or depression, a trigger operatively connected therewith, a movable plunger containing element mounted within the gun frame, a plunger and spring within such element, the plunger being provided with a projection which extends into said groove or depression, and is adapted to engage with the sear, and means for giving to the plunger containing element irregular movements, whereby when it is moved in one direction it is caused to take one path, and when moved in the opposite direction to take another path, substantially as set forth. 20th. In a fire arm, the combination with a gun frame, movable sear, and movable element, for example, a locking block, working within the frame, of a groove in the sear, and in the frame, respectively, and a stud upon the movable element working within the groove in the frame and sear, respectively, substantially as and for the purpose specified. 21st. In a fire arm, the combination with a gun frame, and movable sear, provided with a plunger stud engaging face, of a movable breech block within the frame, a locking block movably secured thereto, a plunger and plunger spring within the locking block, and a plunger stud adapted to engage and ride upon the face of the sear during the movement of the locking block to the firing position, substantially as set forth. 22nd. In a fire arm, the combination of a gun frame provided with a groove having a plurality of guiding edges or surfaces, a reciprocatory breech block, a locking block movably secured thereto, and carrying a projecting stud which extends into the aforesaid groove, whereby when the locking block is moved in one direction it is directed in one course, and when moved in the opposite direction is directed in a different course, a reciprocatory hand grip, and connections between the said hand grip and the said blocks, substantially as set forth. 23rd. In a fire arm, the combination of a gun frame provided with a groove, a reciprocating breech block, a locking block movably secured thereto, and carrying a laterally projecting stud working in said groove, a reciprocating hand grip mounted on the barrel, a feed slide connected thereto, and a link interposed between the feed slide and locking block, substantially as described. 24th. In a fire arm, the combination with a gun frame provided in its inner wall with a groove, of a movable breech block, a locking block connected thereto, locking block actuating mechanism, a reciprocatory plunger within the locking block, and a stud on the plunger working in the groove in the gun frame, substantially as and for the purpose specified. 25th. In a fire arm, a gun frame provided in its inner wall with a groove for the sear, in combination with a movable sear mounted therein, a movable breech block, a locking block connected thereto, a plunger reciprocating in the locking block, a stud on the plunger for engagement with the sear, and a trigger having engagement with said sear and adapted to move the latter into and out of the path of the plunger stud, substantially as described. 26th. A breech loading firearm having one or more cartridge compartments in its stock, in combination with a longitudinally extended magazine located at one side of the centre of the gun, said magazine converging at its ends towards the gun barrel and the said cartridge compartments, respectively, a feed slide for advancing the cartridges through the magazine, a reciprocating breech block, a locking block pivotally connected thereto, and a link connecting said locking block and feed slide, substantially as described. 27th. In a fire arm, a longi-

tudinal magazine deflected to one side, in combination with a feed slide having parts widened to correspond with the deflected part of the magazine and provided with feeders at intervals in its links, and means for actuating the feed slide, substantially as described. 28th. In a fire arm, a longitudinal magazine deflected to one side in combination with a flexible feed slide deflected in its length, and having widened parts, spring feeders at intervals in the length of the feed slide, and located out of line to correspond with the deflected part of the magazine, and means for actuating the feed slide, substantially as described. 30th. In a fire arm, the combination with a laterally deflected magazine, of a feed slide provided with feeders located at different intervals, and arranged out of longitudinal alignment corresponding to the lateral curvature of the magazine, substantially as described. 30th. In a fire arm, the combination with a frame, stock and barrel, of a cartridge passage within the frame and stock, having a deflected portion, a feed slide, feed slide actuating mechanism, and a laterally disposed feeder upon the slide adapted to feed a cartridge through the deflected part of the passage from the stock to the frame, substantially as set forth. 31st. In a magazine repeating gun, the combination with a cartridge passage, and feed mechanism co-operating therewith to advance a series of cartridges through the same, of cartridge point deflecting mechanism adapted to deflect the point of each cartridge from the cap of its advance neighbour comprising yielding detents which bear upon the cartridges as they pass through the passage, substantially as set forth. 32nd. In a fire arm, the combination with a gun frame, movable breech block and locking block movably secured thereto, of a cartridge passage in the frame arranged at the side of the said block, and a yielding feeder upon the forward end of the locking block, moving in a line of the passage and adapted to advance a cartridge from the passage, substantially as set forth. 33rd. In a fire arm, the combination with a laterally deflected magazine, of a reciprocating feed slide provided with spring feeders located at different intervals and arranged out of longitudinal alignment corresponding to the lateral curvature of the magazine, and spring detents arranged in corresponding order for preventing the backward movement of the cartridges, substantially as described. 34th. A fire arm containing a cartridge chamber for holding a supply of cartridges, in combination with a support for confining the cartridges in said chamber, means for moving said support from beneath the cartridges, and mechanism for feeding the cartridges, substantially as described. 35th. A fire arm having a cartridge chamber for holding a supply of cartridges, in combination with a pair of supports, arranged at the discharge of said chamber, means for simultaneously operating said supports from beneath the cartridges and suitable feeding mechanism, substantially as and for the purpose described. 36th. A fire arm having a chamber for containing a supply of cartridges, in combination with spaced supports for confining the cartridges therein, a rotatable disc, arms or links interposed between said disc, and the supports, an arm on the spindle of the disc for turning the latter, and means for engaging and holding said arm, substantially as described.

No. 65,477. Electric Suburban Cars.

(*Char électrique suburbain.*)

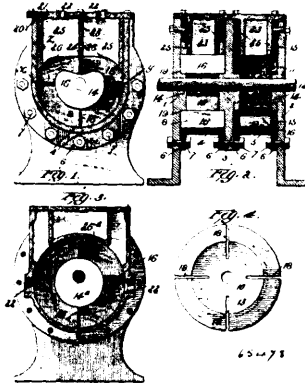


Michael Brillinger and Isaac Newton Devins, 21st December, 1899; 6 years. (Filed 30th March, 1899.)

Claim.—1st. In a motor car, the combination with the passenger compartment occupying the rear portion of the car, of the freight compartment occupying the forward portion and motorman's compartment occupying the upper rear portion of the freight compartment and extending up beyond the top of the car and provided with lookout windows, as shown and for the purpose specified. 2nd. In a motor car, the combination with the passenger compartment occupying the rear portion of the car, of the freight compartment occupying the forward portion, the motorman's compartment occupying the upper rear portion of the freight compartment and extending up beyond the top of the car and provided with lookout windows, and the open trolley pole supporting frame secured to the roof of the freight compartment and leaving a clear space for outlook and the trolley pole pivoted on same and extending rearwardly and having

the cord extending into the motorman's compartment, as and for the purpose specified. 3rd. In a motor car, the combination with the passenger compartment occupying the rear portion of the car, of the freight compartment occupying the forward portion and having an inclined front roof and the motorman's compartment occupying the upper rear portion of the freight compartment and extending beyond the top of the car and provided with lookout windows as and for the purpose specified. 4th. In a motor car, the combination with the passenger compartment occupying the rear portion of the car, of the freight compartment occupying the forward portion, the motorman's compartment occupying the upper rear portion of the freight compartment and extending beyond the top of the car and provided with lookout windows, the door in the side of the motorman's compartment, and the hand rails and steps on the side of the car leading thereto, as and for the purpose specified.

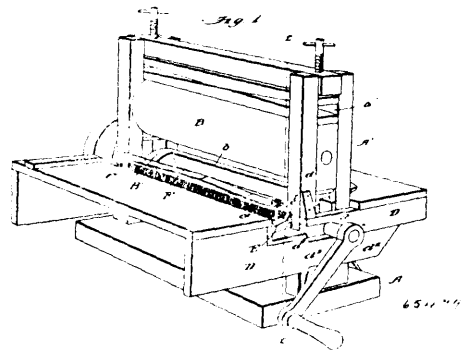
No. 65,478. Rotary Engine. (Machine rotatoire.)



The Wineland Rotary Engine Company, Easton, assignees of William H. Wineland, of Williams Township, all of Pennsylvania, U.S.A., 21st December, 1899; 6 years. (Filed 22nd May, 1899.)

Claim.—In a rotary motor, a cylinder having inlet and outlet ports and a central depending portion, a flanged wheel or hub, the flange thereof extending upon each side of the central depending portion, said hub having recessed sides, blades carried by said wheel or hub and operating means fitting within said recesses and engaging the edges of the blades to force them out, with means for forcing the blades inwardly, substantially as described.

No. 65,479. Machine for Extracting the Meat of Lobsters and Crabs. (Machine pour extraire la chair de homard.)

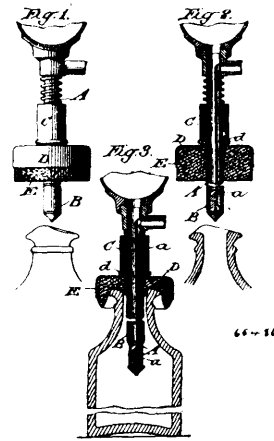


Louis Potier and Evy Leon Potier, both of Yarmouth, Nova Scotia, Canada, 21st December, 1899; 6 years. (Filed 28th March, 1899.)

Claim.—1st. I a machine of the character described, the combination with a support, of a table, rollers revolvably mounted in said support, means for rotating said rollers and a holder mounted on said table adjacent to said rollers and adapted to present the material to be operated upon to the rollers, substantially as described. 2nd. In a machine of the character described, the combination with a support, of a table, an upper and lower roller revolvably mounted in said support, said lower roller being provided with grooves or channels, means for rotating said rollers and a holder mounted on said table adjacent to the lower roller, substantially as described.

3rd. In a machine of the character described, the combination with a support, of a table, an upper and a lower roller revolvably mounted in said support, said lower roller being provided with grooves or channels, means for rotating said rollers, a holder mounted on said table adjacent to the lower roller, and a scraper arranged on the support and adapted to operate on the lower roller, substantially as described. 4th. In a machine of the character described, the combination with a support, of a table, a vertical adjustable roller revolvably mounted in said support, a second roller revolvably mounted in said support, beneath said adjustable roller said lower roller being provided with grooves or channels, means for rotating said rollers and a holder mounted on said table adjacent to the lower roller, substantially as described. 5th. In a machine of the character described, the combination with a support, of a table, an upper and a lower roller revolvably mounted in said support, said lower roller being provided with grooves or channels and having peripheral grooves extending partly around said roller, means for rotating said rollers, a holder mounted on said table adjacent to the lower roller, spring lugs arranged on said holder and adapted to engage the said peripheral grooves, substantially as described. 6th. In a machine of the character described, the combination with a support, of a table, an upper and a lower roller revolvably mounted in said support, said lower roller being provided with grooves or channels, and having peripheral grooves extending partly around said roller and terminating in a shoulder, means for rotating said rollers, a holder mounted on said table adjacent to the lower roller, said holder having a curved and notched face, spring lugs mounted on said holder and adapted to engage the said peripheral grooves and to be struck by said shoulder, substantially as described. 7th. In a machine of the character described, a holder constructed of a lower plate provided with notches at the corners, threaded bolts secured to said plates, binding nuts adjustably mounted upon said bolts, an upper plate provided with a brush on its under side adapted to contact with the lower plate and means whereby the upper plate may be clamped between the said binding nuts, substantially as described. 8th. In a machine of the character described, a holder of a lower plate provided with notches at the corners and corrugated or roughened upon its upper surface, threaded bolts secured to said plate, binding nuts adjustably mounted upon said bolts, an upper plate provided with a brush on its under side adapted to contact with the lower plate and means whereby the upper plate may be clamped between the said binding nuts, substantially as described. 9th. In a machine of the character described, the combination with a support, of a table removably secured to said support, said table being constructed of two parts, each part having arms adapted to pass about the said support, means for detachably securing said parts to the support, substantially as described. 10th. In a machine of the character described, the combination with a support constructed of a base, a standard at each end thereof and an upper and a lower lug secured to each standard, of a two part removable table, each part provided with overlapping arms adapted to pass about said standards and to engage the upper and lower lugs respectively, one of said parts having an offset forming a receptacle adjacent to the said standards, substantially as described. 11th. In a machine of the character described, the combination with a support constructed of a base, a slotted standard at each end thereof and an upper and lower lug secured to each standard, of a two part removable table, each part provided with overlapping arms adapted to pass about said standards and to engage the upper and lower lugs respectively, one of said parts having an offset forming a receptacle adjacent to the said standards, an upper roller adjustably mounted in said standards, a lower roller revolvably mounted in said standards, and provided with channels, means for rotating said rollers, a holder mounted in the receptacle of the table and adapted to bear against said lower roller and means for releasing said holder, substantially as described. 12th. In a machine of the character described, a holder constructed of an upper and a lower plate, means for detachably securing said plates together and means arranged on said upper plate for clamping the material to be operated upon, the said plates being provided with corresponding openings in alignment with one another forming receptacles, substantially as described. 13th. In a machine of the character described, a holder constructed of an upper and a lower plate, depending flanges formed on the sides of the upper plate and having an opening and a notch in one of said flanges, horizontal flanges formed on the sides of said lower plate whereby the two plates are matched together, a spring back located in an opening in the side of the lower plate and adapted to the notch of the upper plate, substantially as described. 14th. In a machine of the character described, the combination with a support, of a table, an upper and a lower roller revolvably mounted in said support, means for rotating said rollers, a holder adapted to be reciprocated between and in contact with each of said rollers said holder having grooves or channels in its upper surface and means carried by said holder for clamping the material to be operated upon, substantially as described.

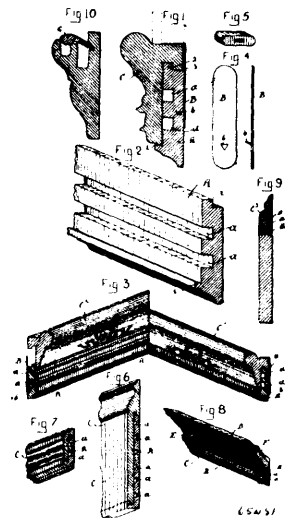
No. 65,480. Bottle Filling Machine.
(Machine à remplir les bouteilles.)



Henry C. Hullbert, assignee of Charles Franklin Bassett, all of New York City, New York, U.S.A., 21st December, 1899; 6 years. (Filed 28th April, 1899.)

Claim.—1st. The combination with a filling tube and the sliding opening and closing device arranged to co-operate with the tube, of a cap plate mounted on the sliding opening and closing device in tilting adjustment and a thick block of yielding material mounted on the sliding opening and closing device in position to be operated upon by the cap plate, substantially as set forth. 2nd. The combination with filling tube and sliding opening and closing device arranged to co-operate therewith, of a cap plate carried by the said sliding opening and closing device and arranged to tilt laterally with respect to the tube and a block of sponge rubber having a diameter and thickness sufficient to surround the margin of the nozzle of the vessel to be filled when pressed upon the latter, substantially as set forth.

No. 65,481. Mouldings for Electric Wires or Other Purposes.
(Mouluire pour fils électriques, etc.)

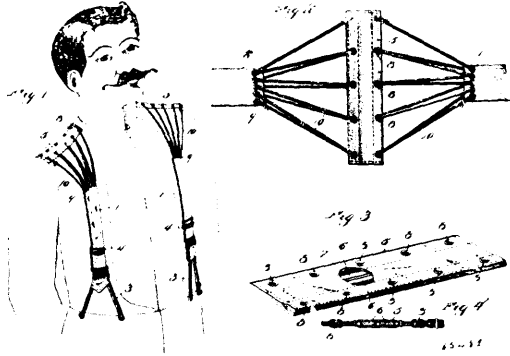


Milton Chase and De Forest W. Chase, both of Boston, and George Code, Boston, and Edwin Planta, Melrose, all of Massachusetts, U.S.A., 21st December, 1899; 6 years. (Filed 26th October, 1899.)

Claim.—1st. A moulding for rooms consisting of two parts, one part adapted to be permanently secured in place, grooves to receive electric wires formed therein and having at its lower end a projection and at its upper end a lip, the other part having a mould-

ing on its face and adapted at its lower end to fit onto the projection and its upper end to fit over the lip at the upper end of the fixed portion, substantially as set forth. 2nd. A moulding for rooms consisting of two parts, one part adapted to be permanently secured in place and having at its lower end a projection and at its upper end a lip, the other part having a moulding on its face and adapted at its lower end to fit onto the projection and its upper end to fit over the lip at the upper end of the fixed portion, substantially as set forth. 3rd. In combination with a moulding for a room consisting of a fixed and removable portion, a flat strip of metal having a spur for securing it to the fixed portion of the moulding, and free to be bent over at its upper end to hold the removable portion in place, substantially as set forth.

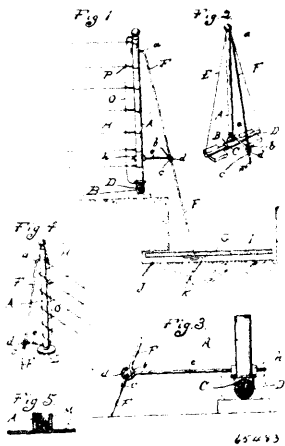
No. 65,482. Suspender. (Bretelles.)



Alva Silas Grimm and Augustine M. Campbell, both of St. Marys, West Virginia, U.S.A., 21st December, 1899; 6 years. (Filed 29th November, 1899.)

Claim.—1st. The combination with a pair of suspenders, of shoulder supports interspersed between the webs thereof. 2nd. The combination with a pair of suspenders, of shoulder supports interspersed between the webs thereof, and means for connecting said shoulder supports with the webs, whereby the weight sustained by the web is diffused over a large shoulder area. 3rd. A pair of suspenders having shoulder supports arranged at right angles to the direction of the webs. 4th. A pair of suspenders having shoulder supports flexibly connected thereto. 5th. A pair of suspenders having shoulder supports with eyelets along the side edges of the same and cords threaded through the said eyelets and connected to the webs. 6th. A pair of suspenders comprising webs intermediately interrupted and having the terminals supplied with eyelets, shoulder supports with eyelets along the opposite side edges at a greater distance apart than those in the webs, and a cord threaded through the eyelets of the supports and webs. 7th. A pair of suspenders comprising webs and shoulder supports flexibly connected thereto having stiffening means therein.

No. 65,483. Wire Fence Post. (Poteau de cloture de fil de fer.)

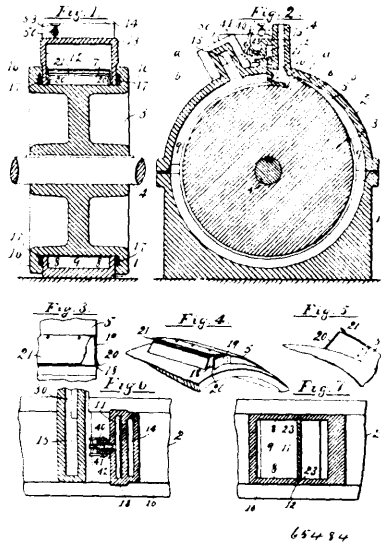


Eli Conley, assignee of Isaac M. Warner, both of Elkhart, Indiana, U.S.A., 21st December, 1899; 6 years. (Filed 21st September, 1899.)

Claim.—1st. In a wire fence, a post to which the wires are connected a foot adapted to rest on the surface of the ground, an anchor

rod extending from the top of the post, an anchor to which the rod connects, and an adjustable tie rod from the base of the post to the anchor rod, whereby the angle of the post may be adjusted thereby. 2nd. In a wire fence, a post to which the wires are connected, a foot adapted to rest on the surface of the ground, an anchor in the rear of the post, an anchor rod made in two sections, the upper section connected to the top of the post and extending down to the bottom, and the lower section connected to an anchor and extending to the lower end of the upper section, of a tie rod to which the adjacent ends are connected and which is adjustably connected to the base of the post. 3rd. In a wire fence, a post to which the wires are connected, a foot adapted to rest on the surface, an anchor rod extending to an anchor below ground, the anchor extending beneath the post, and some distance out from the post, the anchor rod being connected near the end beneath the post, and a tie connecting the base of the post with the anchor rod.

No. 65,484. Rotary Engine. (Machine rotatoire.)

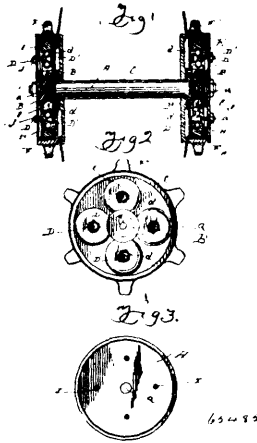


Eusèbe Pierre Couture and Joseph F. Martinez, both of Gualala, California, U.S.A., 21st December, 1899; 6 years. (Filed 21st September, 1899.)

Claim.—1st. In a rotary engine, the combination of an annular casing, a wheel revolving in said casing and having annular flanges extending outwards beyond the inner edge of said casing and outside of said casing, packings between the outer surface of the sides of the casing and the inner surface of said flanges, a shoulder on said wheel, an L shaped valve reciprocating in an extension on said casing and raised by said shoulder, and a steam port closed by said L shaped valve and opening on to said valve in such a direction that the steam tends to open said valve, substantially as described. 2nd. In a rotary engine, the combination of an annular casing U shaped in cross section, a wheel revolving in said casing having a shoulder revolving against the circumferential portion thereof and having flanges extending outwards beyond the inner edge of said casing and outside of said casing, a valve casing on said annular casing, and a valve reciprocating in said casing, said casing having its walls recessed to receive the ends of said valve, substantially as described. 3rd. In a rotary engine, the combination of an annular casing U shaped in cross section, a wheel revolving in said casing having a shoulder revolving against the circumferential portion thereof, said shoulder having spring plates secured at the ends of the sides thereof to pack the same, a valve casing on the annular casing, said casing having a suitable recess for the reciprocation of the valve, said recess having rounded edges to permit said spring plate packing to travel past in a reverse direction, and a valve reciprocating therein, substantially as described. 4th. In a rotary engine, the combination of an annular casing U shaped in cross section, a wheel revolving in said casing having a shoulder revolving against the circumferential portion thereof, a reciprocating L shaped valve raised by said shoulder, a steam port closed by the horizontal member of said valve in its reciprocation, the vertical member having a notch in its rear face, and a latch arranged to engage said notch in said valve to uphold the same and close the port, substantially as described. 5th. In a rotary engine, the combination of two annular casings U shaped in cross section, a wheel revolving in each casing on a common shaft and having a shoulder revolving against the circumferential portion of the casing, a valve in each casing raised by the shoulder therein, and steam and exhaust ports in each casing, said ports in the two casings being oppositely arranged with regard to the valve therein, whereby said wheels are adapted to travel in opposite direction on said shaft

when impelled by steam, substantially as described. 6th. In a rotary engine, the combination of two annular casings U shaped in cross section, a wheel revolving in each casing in a common shaft and having a shoulder revolving against the circumferential portion thereof, a reciprocating L shaped valve in each casing raised by the shoulder therein, steam and exhaust ports in each casing, a conduit from the exhaust port from the first casing to the steam port in the second casing, a valve automatically closing rearward movement of the steam in said conduit, and a suitably controlled steam pipe leading direct to said second casing, substantially as described.

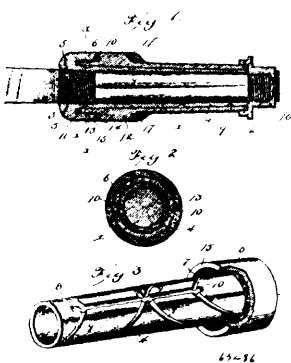
No. 65,485. Roller Bearing. (*Coussinet à roulette.*)



Robert G. Petway, Nashville, Tennessee, U.S.A., 21st December, 1899; 6 years. (Filed 9th August, 1899.)

Claim.—1st. A threaded axle and cones adjustable thereon, in combination with a hub, flanges thereon, a rim at the periphery of each flange, stub axles projecting from said flanges, cones thereon, balls on the cones, and a series of anti-friction rollers on said balls and travelling around in contact with the cones on the main axle, substantially as described. 2nd. In an anti-friction bearing, an axle, sets of cones thereon, one of each set being adjustable, in combination with a hub, flanges thereon, a rim at the periphery of each flange, stud axles connected to said flanges, rollers thereon and travelling around in contact with said cones, and caps fitted to the rims and adapted to receive and aid in supporting said stud axles, substantially as described. 3rd. In an anti-friction bearing, an axle and cones thereon, in combination with a hub, flanges thereon, and detachable caps forming inner and outer walls, stud axles supported in said walls, and anti-friction rollers on said stud axles and travelling around in contact with the cones on the main axle, substantially as described. 4th. In an anti-friction bearing, an axle and cones thereon, in combination with a hub, rigidly attached flanges thereon, a rim at the periphery of each flange, stud axles projecting from said flanges, anti-friction rollers on said axles and travelling around in contact with said cones, caps fitted to said flanges and having openings to receive said stud axles, and securing means for holding said caps in place, substantially as described.

No. 65,486. Axle Spindle. (*Essieu.*)

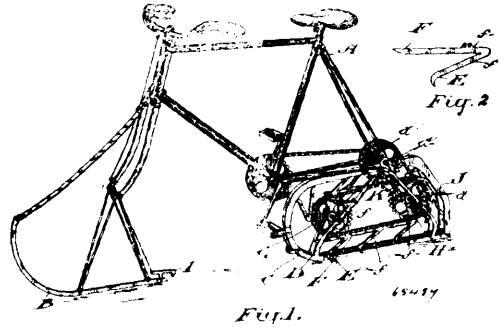


Edward L. Hilderbrand, Sullivan, Indiana, U.S.A., 21st December, 1899; 6 years. (Filed 12th September, 1899.)

Claim.—The combination with an axle spindle, of a skein having an exterior annular flange at its inner end overhanging the body

of the skein and forming therewith an exterior pocket, the upper exterior face of the skein having an oil chamber provided therein and branch grooves leading therefrom, some of the grooves leading into the annular pocket, and an axle box having its inner end seated within the annular pocket of the skein, the grooves leading into the pocket forming means whereby the inner end of the box may be lubricated, substantially as shown and described.

No. 65,487. Snow Velocipedes. (*Vélocipède pour la neige.*)

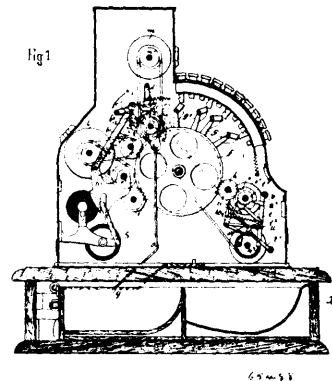


Charles Cecil Casselman, Brunel, Muskoka, Ontario, Canada, 21st December, 1899; 6 years. (Filed 31st August, 1899.)

Claim.—1st. A velocipede to run over packed snow or ice, propelled by grapples attached to a chain which revolves around two wheels which depend for their direct support on the frame of the hind runner or runners, the lowest parts shall revolve a few inches above the snow or ice. 2nd. An arrangement of arms fastened to the grapples and to run under a wheel to press the grapples into the snow or ice to prevent the grapples from slipping. 3rd. An arrangement of arms fastened to the grapples, the hind wheel around which the chain with the grapples and arms attached revolve being higher than the front wheel to raise the grapples out of the snow or ice without having to overcome the resistance of springs before turning around the hind wheel to prevent chipping or clogging.

No. 65,488. Cash Indicator and Recorder.

(*Indicateur et registre de monnaie.*)

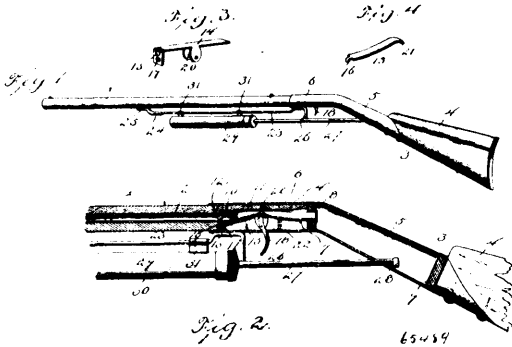


Franz Skerl, Saaz of Bohemia, Austria, 21st December, 1899; 6 years. (Filed 23rd May, 1899.)

Claim.—1st. Cash indicating and recording apparatus, in which, by the winding up of the apparatus, with the assistance of a crank, large tooth wheel *f*, which carry the pawls *g* that strike against the ends or shafts of the depressed keys, are so far rotated that the pawls take a parallel position, whilst upon the crank being moved backwards, the principal tooth wheels are rotated backwards, by means of spring action, until the pawl strikes against the ends or shaft of the depressed keys, and at the same time, by engaging with the small tooth wheel bring about a proportional rotation of the front and back pay cylinders *l*, *m*, as well as of a type wheel *n* for noting the amount paid, belonging to a type-writing machine, *o*, and the addition cylinders *s* of a contrivance for adding up the amounts received. 2nd. In a cash indicating and recording apparatus, of the character described, a locking mechanism which prevents the chief tooth wheels *f* with the pawls, from slipping back upon the depression of a key of higher value than that of those which hitherto held the pawls, and the wheel in such a manner that ratchet pawls *c* engage with the ratchet wheels *d* of the crank shaft *a*, in the wound up position of the apparatus, but

nevertheless are raised by the carriers *c* through striking pins *e* of the same, and hang on spring catch levers *c* until the carriers *c* press back the catch levers. 3rd. In a cash indicating and recording apparatus of the character described, the adding up arrangement in such a manner that the carrying over of a ten to the next following pay cylinder is affected by the pressing down of a spring lever *u*² with sliding or pushing rod *l*¹, which engages in a sliding or pushing wheel *l*² of next following pay cylinder a pin of the carrying over pay cylinder lifting an arm of a double lever, so that the other arm *C* slides away from a projection *u* of the spring lever *u*² whilst the raising of the lever of the crank shaft is affected by the chain gear on a shaft *x*² with rod *z* or the like.

No. 65,489. Pneumatic Gun. (Fusil pneumatique.)

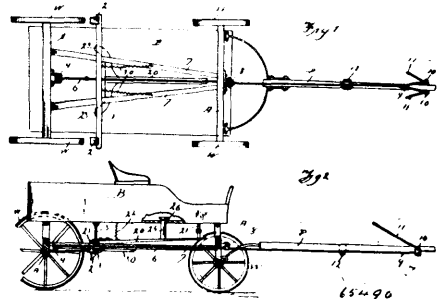


Walter R. Benjamin, Grand Tower, Illinois, U.S.A., 21st December, 1899; 6 years. (Filed 13th July, 1899.)

Claim.—1st. In a pneumatic gun having an air reservoir, and means, including a trigger, for releasing the charge in the air reservoir, a pump mechanism having a movable member mounted for reciprocatory movement in advance of said trigger, and a stationary air conveyor extending rearwardly from said movable member beneath the trigger to form a trigger guard, substantially as specified. 2nd. In a pneumatic gun having an air reservoir, and means, including a trigger, for releasing the charge in the air reservoir, a pump mechanism having a reciprocatory cylinder mounted for movement parallel with the barrel in advance of the trigger, and a tubular piston rod extending rearwardly from said movable part and communicating with the air reservoir, said piston rod extending longitudinally beneath the trigger to form a trigger guard, substantially as specified. 3rd. In a pneumatic gun having an air reservoir, and means, including a trigger, for releasing the charge in the air reservoir, a pump mechanism having a guide disposed longitudinally of the barrel, a cylinder mounted for reciprocation upon said guide, and a tubular piston rod extending rearwardly from said cylinder and communicating with the air reservoir, substantially as specified. 4th. In a pneumatic gun having an air reservoir, and means, including a trigger, for releasing the charge in the reservoir, a pump mechanism consisting of a reciprocatory cylinder, a piston and a tubular piston rod communicating with the air reservoir, substantially as specified. 5th. In a pneumatic gun having an air reservoir, and means including a trigger for releasing the charge in the air reservoir, a pump mechanism located beneath the barrel and including a guide rod disposed longitudinally of the barrel in advance of said trigger, a reciprocatory cylinder mounted upon said guide rod, a stationary hanger depending from the barrel in front of the trigger, a piston, and a tubular piston rod, communicating at its rear end with the air reservoir, supported at an intermediate point by said hanger, and extending longitudinally under the trigger to form a trigger guard, substantially as specified. 6th. A pneumatic gun having its stock provided with a hollow rear grip forming an air reservoir, means, including a trigger, for releasing the contents of the air reservoir into the barrel to discharge a projectile, a pump mechanism having a stationary member arranged beneath the barrel, in relation with said trigger to form the trigger guard, and a movable member for co-operation with said stationary member, substantially as specified. 7th. A pneumatic gun having a barrel and an air reservoir, a transversely compressible conveyor connecting the air reservoir with the barrel, a pivotal trigger for compressing said conveyor, and a bearing plate interposed between the trigger and said conveyor and movable transversely toward and from the latter, for communicating the pressure of the trigger thereto, substantially as specified. 8th. A pneumatic gun having a barrel and an air reservoir, a transversely compressible conveyor connecting the air reservoir with the barrel, a pivotal bearing plate for contact at its free end with the conveyor and provided adjacent to its free end with a trigger seat, and a trigger for actuating said bearing plate, and adapted to be terminally fitted in said seat to compress the conveyor, substantially as specified. 9th. A pneumatic gun having a barrel and an air reservoir, a transversely compressible conveyor connecting the air

reservoir with the barrel, a bearing plate fulcrumed at one end and provided at its free end with a convex bearing surface for contact with said conveyor, and opposite to said convex bearing surface with a concave seat, and a pivotal trigger having an arm arranged in operative relation with the bearing plate, to force the same toward the conveyor and adapted to be terminally fitted in said seat of the bearing plate, substantially as specified. 10th. A pneumatic gun having a barrel and an air reservoir, transversely compressible conveyor connecting the air reservoir with the barrel, a seat plate arranged at one side of the conveyor, a bearing plate mounted at the opposite side of said conveyor for movement toward and from the seat plate, and a trigger arranged in operative relation with said bearing plate for forcing the same toward the seat plate to compress the conveyor, substantially as specified. 11th. A pneumatic gun having a barrel and an air reservoir, a transversely compressible conveyor connecting the air reservoir with the barrel, a seat plate arranged at one side of the conveyor and having a depending ear, a bearing plate fulcrumed at one end upon said ear of the seat plate and adapted at the other end for contact with the conveyor, and a trigger for actuating the bearing plate, substantially as specified. 12th. A pneumatic gun having a barrel and an air reservoir, a transversely compressible conveyor connecting the air reservoir with the barrel, a seat plate arranged at one side of said conveyor and provided with a terminal depending ear, a bearing plate pivotally mounted at one end upon said ear of the seat plate, and adapted at the other end for movement toward and from the seat plate to compress the conveyor, guide ears depending from the seat plate at opposite sides of the free end of the bearing plate, and a trigger mounted between said guide ears for actuating the bearing plate, substantially as specified. 13th. A pneumatic gun having a stock provided with a hollow rear grip forming an air reservoir, and also provided with a forward tubular extension, a barrel removably fitted in said tubular extension, and cut away at its lower side in communication with its bore, front and rear hears fitted in said grip, a pump mechanism in communication with the air reservoir, and means, located in said cut away portion of the barrel, for liberating the contents of the air reservoir into the bore of the barrel, substantially as specified.

No. 65,490. Waggon Brake. (Frein de wagon.)



Louis J. Klein, Bairdstown, Missouri, U.S.A., 21st December, 1899; 6 years. (Filed 20th September, 1899.)

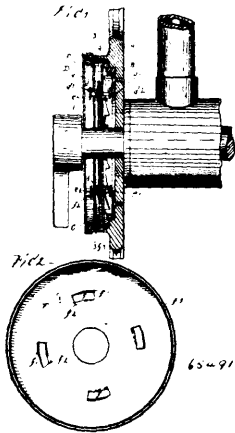
Claim.—1st. In an automatic brake, the combination with the running gear, brake beam and shoes, of a strap connected with the horse's collar and led over pulleys to said beam so as to apply the brake when the horse is drawn in, upright hooks depending in position to pass in rear of the brake beam when the latter stands off the wheels, and means for depressing said hooks at will, as and for the purpose set forth. 2nd. In an automatic brake, the combination with the running gear, brake beam, shoes thereon, and a spring for holding the latter normally off the wheels, of means for applying the brake when the horse is drawn in, a beam pivoted beneath the waggon body, hooks at its rear end standing above the brake beam and in position to pass in rear of the same when such beam is off the wheels, and a rod passing through the bottom of the waggon body, resting on said pivoted beam, and having a foot piece at its upper end, as and for the purpose set forth.

No. 65,491. Bicycle Brake. (Frein de bicyclet.)

William Taylor, Kearny, New Jersey, U.S.A., 22nd December, 1899; 6 years. (Filed 20th September, 1899.)

Claim.—1st. In a bicycle attachment the combination with a spocket wheel provided with ratchet teeth, of a clutch plate adapted to be thrown into and out of engagement with said ratchet teeth, a stud plate fixed upon the pedal shaft, a break plate loosely sleeved upon said shaft, said break plate being adapted to engage said spocket wheel, substantially as and for the purpose set forth. 2nd. In a bicycle attachment, the combination with a spocket wheel provided with ratchet teeth, of a clutch plate adapted to engage said ratchet teeth and provided with curved slots, cams arranged upon each face of said clutch plate adjacent to said slots, a stud plate fixed to the pedal shaft, headed studs arranged on said stud

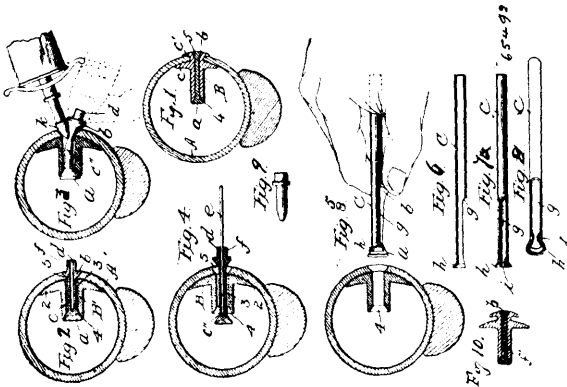
plate and extending through the slots of the clutch plate and adapted to engage said cams, substantially as and for the purpose set forth.



3rd. In a bicycle attachment, the combination with a sprocket wheel, a clutch mechanism connected therewith, a stud fixed upon the pedal shaft, a brake plate sleeved upon said shaft and adapted to engage said sprocket wheel, said brake plates being provided with curved slots, cams arranged on each side of said brake plate adjacent to said slots, headed studs arranged upon said stud plate and extending through said slots and adapted to engage said cams, substantially as and for the purpose set forth. 4th. In a bicycle attachment, the combination with a sprocket wheel provided with ratchet teeth, of a clutch plate adapted to engage said ratchet teeth and provided with curved slots, cams carried by said clutch plate and arranged adjacent to said slots, a brake plate adapted to engage said sprocket wheel and provided with slots and cams corresponding to said clutch plate, a stud plate fixed to the pedal shaft between said clutch plate and said brake plate, a plurality of headed studs arranged on said stud plate, and passed through the slots of the said plate and adapted to bear against said cams, substantially as and for the purpose set forth. 5th. In a bicycle attachment, the combination with a sprocket wheel provided with ratchet teeth, of a clutch plate, sleeved upon the pedal shaft and adapted to engage said ratchet teeth, and provided with curved slots, cams arranged on each face of the said clutch plate adjacent to said slots, a brake plate provided with a flange upon its periphery adapted to engage the inner surface of the brake flange and provided with curved slots, cams arranged on each face of the said brake plate adjacent to said slots, a stud plate fixed to the pedal shaft between the clutch plate and the brake plate, headed studs arranged upon each face of said stud plate and extending through the slots of the clutch plate and brake plate and adapted to engage said cams, substantially as and for the purpose set forth.

No. 65,492. Valve for Pneumatic Tires.

(Soupape pour bandages pneumatiques.)

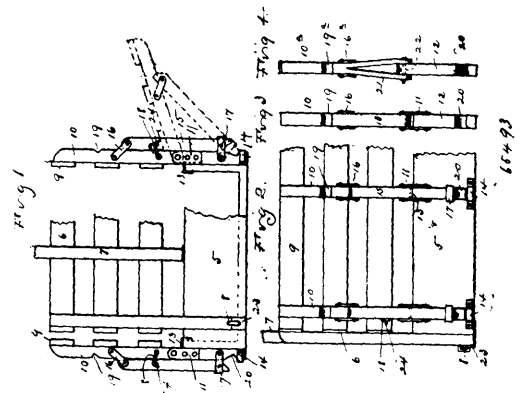


Edward Forbes Pickett, Buffalo, New York, U.S.A., 22nd December, 1899; 6 years. (Filed 9th September, 1899.)

Claim.—1st. The combination with a valve tube or casing valve seats facing in opposite directions, valves arranged against the outer side of said seats and each capable of moving toward and from its seat, and an elastic connecting stem arranged in said bore and holding both valves against their seats while permitting each valve

to rise independently from its seat, substantially as set forth. 2nd. The combination with a pneumatic tire, of a flexible valve tube or casing secured to the tire and projecting into the latter, valve seats facing in opposite directions, valves arranged against the outer sides of said seats and each capable of moving toward and from its seat, and an elastic connecting stem holding both valves against their seats while permitting each valve to rise independently from its seat, substantially as set forth. 3rd. A valve for tires comprising a connecting stem, a valve at each end thereof and a projection or extension at one end for moving the valve. 4th. A valve tube or casing, a valve stem, a valve at each end fitted to seats and a longitudinal recess in the valve adapted to receive a wire to unseat the inner valve part to deflate the tire. 5th. In combination with a valve having a central stem and a valve at each end, an inserter comprising a tube with an open end and a passage through the wall of the tube to receive the stem of the valve, the inner valve part being held in the end of the tube and adapted to be forced through the tire opening into position, substantially as described. 6th. In combination with a valve casing and valve, a pump nipple having a conical unthreaded end adapted to be inserted along side the valve stem, substantially as described. 7th. The combination with a pneumatic tire, of a rubber valve case arranged within the tire and provided at its outer end with integral rubber flanges attached to opposite sides of the tire, substantially as set forth.

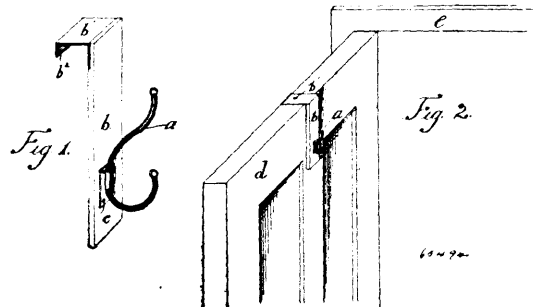
No. 65,493. Waggon Body. (Boîte de wagon.)



Lysander J. Lishness, Bad Axe, Michigan, U.S.A., 22nd December, 1899; 6 years. (Filed 16th October, 1899.)

Claim.—1st. The combination of a waggon body, sides having vertically extending braces attached thereto, a cleat pivoted to the lower end of each brace, an additional brace, a strap pivoted to the lower end of each additional brace, the straps being respectively pivoted to the cleats, links pivotally connecting the upper end of each second-named brace to the first-named braces, and a hook mounted on each of the first-named braces and capable of removably holding the second-named braces inward against the cleat and the first-named braces. 2nd. The combination of a waggon body, a side thereof, a brace fixed to the side, a cleat fixed to the waggon body, a second brace, a link pivotally joining the second brace to the first brace at the upper end of the second brace, and a strap pivotally joining the lower end of the second brace with the cleat.

No. 65,494. Garment Suspender. (Crochet pour vêtements.)

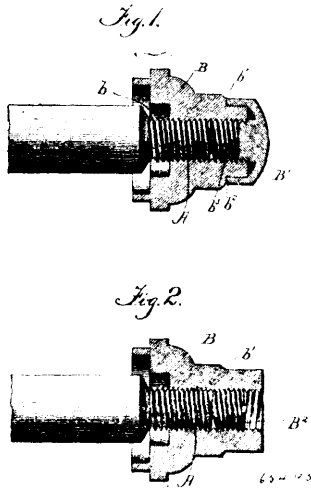


William Henry Foster, Brixton Hill, London, England, 22nd December, 1899; 6 years. (Filed 30th October, 1899.)

Claim.—The improvement in garment suspending devices consisting in a plate to which is fixed the garment suspending peg or hook said plate having a horizontal portion reduced in thickness at it

upper end at right angles to the main portion, and a turned down flange at the extremity of said horizontal portion, said flange being in a parallel position with the main portion of the plate, substantially as described and as illustrated by the drawings.

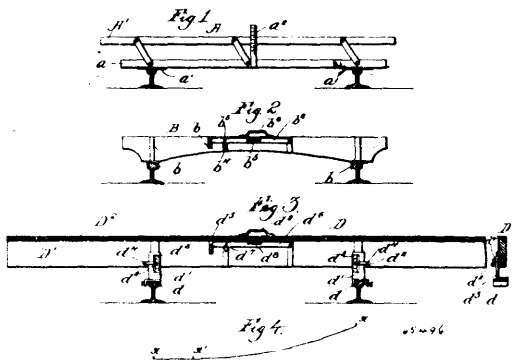
No. 65,495. Nut. (Erou.)



Allen H. Wattles, Oneonta, New York, U.S.A., 22nd December, 1899; 6 years. (Filed 1st December, 1899.)

Claim.—1st. An axle nut, constructed with a central bore extending entirely through said nut and having a shouldered end, a cap adapted to engage said shouldered end, and a threaded shank integral with said cap and adapted to engage the opening of said nut and jam against the end of the axle, whereby the axle nut may be held in its adjusted position upon the axle, substantially as described. 2nd. An axle nut, constructed with a central bore extending entirely through said nut, a threaded nut adapted to engage said bore and to be locked against the end of the axle, whereby the axle nut may be held in its adjusted position upon the axle, substantially as described.

No. 65,496. Railway Track Grading Machine. (Machine pour le réglage de voie de chemin de fer.)

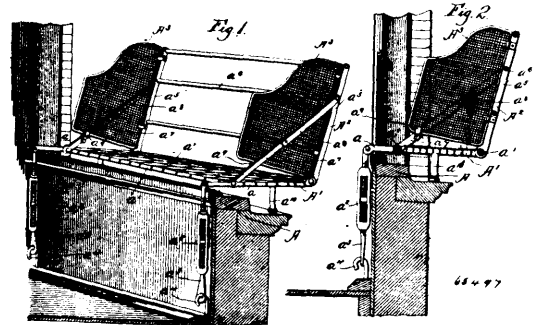


Nicholas Edward Lister, Westfield Centre, New Brunswick, Canada, 22nd December, 1899; 6 years. (Filed 2nd December, 1899.)

Claim.—1st. A device for grading railroads, comprising a fixed sight and a series of adjustable sights, the fixed sight being located upon the rails at true grade and one of the adjustable sights being also located upon the rails at true grade at one side of the fixed sight and one rail length away therefrom and another of the adjustable sights being located on the rails at the other side of said fixed sight, substantially as described. 2nd. A device for grading railroads, comprising a fixed sight and a series of adjustable sights, substantially as described. 3rd. In a device for grading railroads, a fixed sight, a scale mounted thereon, an indicator arm pivoted upon said shaft and having a level mounted upon said arm, and gauge plates secured upon the under side of said sight, substantially as described. 4th. In a device for grading railroads, an adjustable sight comprising a lower bar adapted to rest upon the rails an adjustable bar pivoted by means of links to said lower bar and a scale plate secured to said lower bar, for indicating the adjustment of said adjustable bar, substantially as described. 5th. In a device

for grading railroads, an adjustable sight, supporting standards adjustably secured thereto and adapted to be clamped upon the rails, a scale mounted thereon, an indicator arm pivoted to said sight and a level mounted upon said indicator arm, substantially as described.

No. 65,497. Window Support. (Support de fenêtre.)



Israel Page, St. Charles, Quebec, Canada, 22nd December, 1899; 6 years. (Filed 7th December, 1899.)

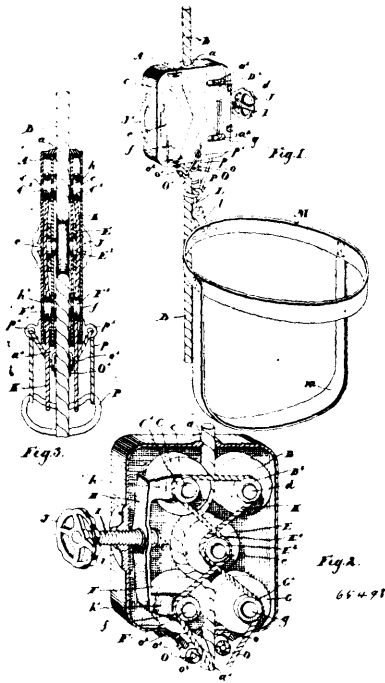
Claim.—1st. A window support, comprising a suitable frame adapted to be supported upon a window sill, rods connected with said frame and adapted to extend downwardly on the inside of the window frame, and an adjusting device connected with said rods and to a fixed point, for retaining the support in its operative position, substantially as described. 2nd. A window support, comprising a suitable frame adapted to be supported upon a window sill, a back support hinged to said frame, rods connected with said frame and adapted to extend downwardly on the inside of the window frame, and an adjusting device connected with said rods and to a fixed point, for retaining the support in its operative position, substantially as described. 3rd. A window support, comprising a suitable frame adapted to be supported upon a window sill, a back support hinged to said frame, side shields hinged to said back supports, rods connected with said frame and adapted to extend downwardly on the inside of the window frame, and an adjusting device connected with said rods and to a fixed point, for retaining the support in its operative position, substantially as described. 4th. A window support, comprising a suitable frame adapted to be supported upon a window sill, a back support hinged to said frame, jointed links pivoted to said frame and to said back support, side shields hinged to said back support, a catch fixed to said links for retaining the side shields in their open position, rods connected with said frame, a rod pivoted to each of said rods and adapted to extend downwardly on the inside of the window frame, and an adjusting device connected with said rods and to a fixed point, for retaining the support in its operative position, substantially as described.

No. 65,498. Fire Escape. (Sauveteur d'incendie.)

Herbert William Racey, Etchemin, Quebec, Canada, 22nd December, 1899; 6 years. (Filed 1st December, 1899.)

Claim.—1st. The combination with the supporting belt and saddle strap and the guiding rope, of a suitable speed regulating casing, means for supporting the band from the same and means connected to the casing for frictionally gripping the rope, as and for the purpose specified. The combination with the supporting belt and saddle strap and the guiding rope, of a casing, means for supporting the band from the same, the top and bottom fixed pulleys at one side of the rope passing through the casing, the centrally arranged pulley at the same side, the upper and lower pulleys having the spindles supported in slots in the casing and means for adjusting such pulleys in relation to the fixed pulleys, as and for the purpose specified. 3rd. The combination with the supporting belt and saddle strap and the guiding rope, of a casing, means for supporting the band from the same, the top and bottom fixed pulleys at one side of the rope passing through the casing, the centrally arranged pulley at the same side, the upper and lower pulleys having the spindles supported in slots in the casing, the bar provided with forked ends through which the spindles of the adjustable pulleys extend and means for manipulating such bar, as and for the purpose specified. 4th. The combination with the supporting belt and saddle strap and the guiding rope, of a casing, means for supporting the band from the same, the top and bottom fixed pulleys at one side of the rope passing through the casing, the centrally arranged pulley at the same side, the upper and lower pulleys having the spindles supported in slots in the casing, the bar provided with forked ends through which the spindles of the adjustable pulleys extend, the threaded spindle extending through the casing provided with a hand wheel and suitably held in the bar, as and for the purpose specified. 5th. The combination with the supporting belt and saddle strap and the guiding rope, extending through the casing, of the five pulleys journaled as specified and through which the rope extends, the screw spindle

and handle, means connected to the pulleys for adjusting the same at one side of the casing and the handle at the opposite side, as and



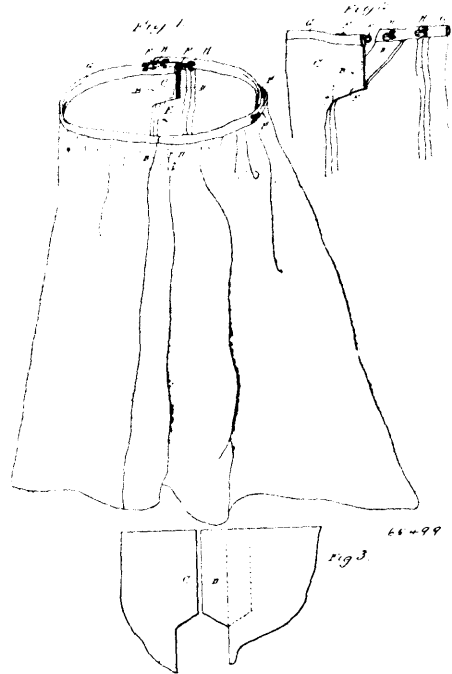
for the purpose specified. 6th. The combination with the supporting belt and saddle strap and the guiding rope extending through the casing, of the five pulleys journalled as specified and through which the rope extends, the minor pulleys situated on the spindles of these pulleys and the endless rope passing over the same and the hook and loop connecting the endless rope to the band, as and for the purpose specified. 7th. The combination with the supporting belt and saddle strap and the guiding rope extending through the casing, of the five pulleys journalled as specified and through which the rope extends, the minor pulleys situated on the spindles of these pulleys and the endless rope passing over the same, the connection between the endless rope and the band, the roller journalled in a stationary bracket at one side of the rope and the roller journalled in the pivoted fork portion of the bracket on the opposite side of the rope, the flexible ring connected to the band and through which the main rope extends and means connected to the pivotally swung roller and the band to cause such roller to be brought against the rope when the weight of the person is upon the band, as and for the purpose specified. 8th. The combination with the supporting belt and saddle strap and the guiding rope extending through the casing, of the five pulleys journalled as specified and through which the rope extends, the minor pulleys situated on the spindles of these pulleys and the endless rope passing over the same, the connection between the endless rope and the band, the roller journalled in a stationary bracket at one side of the rope and the roller journalled in the pivoted forked portion of the bracket on the opposite side of the rope, the flexible ring connected to the band and through which the main rope extends, and the cords connected at one end to the spindles of the pivotally swung roller passing through eyes in the casing and connected at the opposite end to the flexible ring through which the rope extends, as and for the purpose specified. 9th. The combination with the supporting belt, the casing and the guiding rope extending therethrough, of the five pulleys journalled as specified and through which the rope extends, the minor pulleys situated on the axes of these pulleys, and the endless rope passing over the same and connected to the band, as and for the purpose specified.

No. 65,499. Skirt or Garment. (Jupe.)

Jennie Gardner, Springfield, Ohio, U.S.A., 22nd December, 1899; 6 years. (Filed 20th November, 1899.)

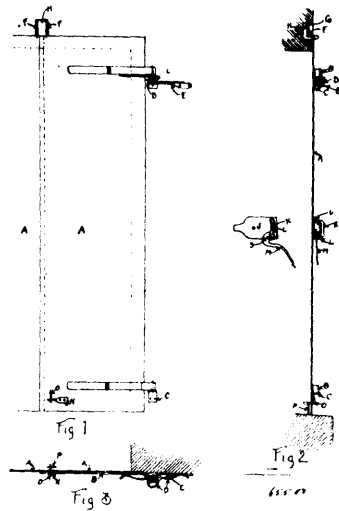
Claim. 1st. In an improved article of manufacture, the herein described placket for women's skirts, the same consisting of a flap C, extending straight out from the goods on one side of the opening, the flap D, extending from the goods at the other side of the opening, but folded back on the inside of the goods, said flaps being united along their lower projecting edges, as at E, and being of substantially the same size so that the flap D will overlap, cover and

substantially match the flap C, when the placket opening is closed, both flaps extending to the waistband, and the flap D being suitably



united with the goods along its upper edge, and fastening devices to secure the flaps in such overlapped and matching position.

No. 65,500. Fire Shutter. (Porte contre le feu.)



Robert Lewis McIntyre, Toronto, Ontario, Canada, 22nd December, 1899; 6 years. (Filed 30th November, 1899.)

Claim.—1st. In fire doors and shutters, a combination of springs and catches and a fusible attachment, substantially as set forth. 2nd. In fire doors and shutters, a combination of springs and catches held in place and released at a dangerous temperature, substantially as set forth. 3rd. In fire doors and shutters, a combination of spring catches holding such doors and shutters open, held in place and released at a dangerous temperature by a fusible attachment, and springs to close such doors or shutters, substantially as set forth.

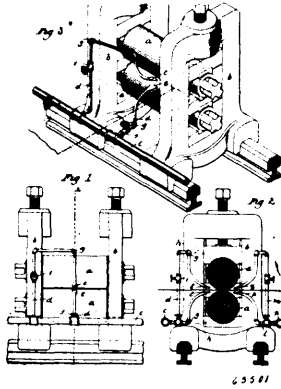
No. 65,501. Sheet Metal Manufacture.

(Fabrication de feuille de métal.)

William Milton Theobald, Wellsville, Ohio, U.S.A., 22nd December, 1899; 6 years. (Filed 26th May, 1899.)

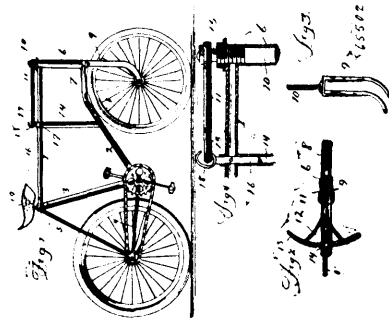
Claim.—1st. The method of rolling sheet metal and maintaining the rolls of proper diameter for rolling, consisting in passing the

sheets while heated between smooth surface rolls, and at the same time projecting a current of cold air against the mid portion only of



the working surface of the rolls, and thereby maintaining the rolls at even temperature throughout. 2nd. The method of forming sheet iron or steel, consisting in annealing the sheets, oxidizing the same by exposure to the atmosphere, and passing the sheets while heated between smooth surface rolls and projecting a current of cold air against the mid-portion of the sheets while passing through the rolls. 3rd. The method of rolling sheet metal, consisting in passing the sheets while heated between smooth surface rolls, and at the same time projecting a current of cold air against the mid-portion of the sheets or rolls on the entering side thereof, and a current of cold air on the mid-portion of the sheets after they pass from the rolls. 4th. The method of maintaining heated sheet rolls at the proper diameter for rolling, consisting in projecting a current of cold air against the mid-portion of the rolls. 5th. In combination with a pair of sheet rolls, having working surfaces of substantially even surfaces throughout, an air jet mechanism suitably arranged for projecting a supply of cold air against the mid-portion only of either roll, substantially as described. 6th. In combination with a pair of sheet rolls, having working surfaces of substantially even surfaces throughout, an air jet mechanism located on the entrance side of rolls, and an air jet mechanism on the delivery side of the rolls, each air jet mechanism being arranged for projecting a supply of cold air midway only of the length of the rolls, and upon the sheets as they pass through the same, substantially as described

No. 65,502. Bicycle. (Bicycle.)

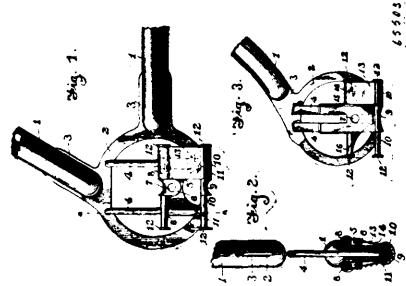


Simon Nefzger, Lima, Iowa, U.S.A., 22nd December, 1899; 6 years. (Filed 24th July, 1899.)

Claim.—1st. In a bicycle or like road machine, the combination with the front fork, a rearwardly extending steadying bar having connection at its front end with the said fork, and a hand bar attached to the rear end of the steadying bar and formed on the arc of a circle having the axis of the fork stem for its centre, of a rest applied to the machine frame and having a portion encircling the hand bar and normally out of contact therewith to admit of the self steering of the wheel and adapted to come in contact with the hand bar and brace it on the application of upward or downward pressure upon the said hand bar, substantially as set forth. 2nd. In a bicycle or like machine, the combination with the front fork, a rearwardly extending steadying bar adjustable vertically with reference to the fork stem and having direct connection therewith at its forward end, and having its rear end portion spread, and a hand bar secured to the rear terminals of the separated parts of the steadying bar and curved on the arc of a circle having the axis of the fork stem for its centre, of an upright bar forming a part of the machine frame and bracing it, a stem having adjustable connection

with the upright bar, and a rest at the upper end of said bar consisting of an open ring or band encircling the hand bar and normally out of contact therewith and adapted to engage with and brace said hand bar on the application of upward or downward pressure to the hand bar, substantially as set forth.

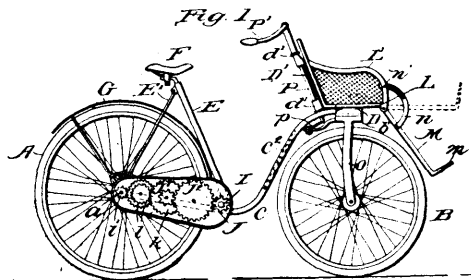
No. 65,503. Bicycle. (Bicycle.)



William B. Spence, Chicago, Illinois, U.S.A., 22nd December, 1899; 6 years. (Filed 2nd August, 1899.)

Claim.—1st. In a bicycle, the combination with an annular carrier provided with vertical guide bars, of a horizontal arm 9 united rigidly and centrally to said carrier at the lower edge thereof and having a flat upper side, a rounded lower side, and headed projected ends, a cross head fitted slidably to said guide bars to rest upon the flat upper side of the arm 9 and provided with the horizontal arms 8 which are disposed parallel to each other on opposite sides of the guide bars and said arm 9, the headed ends of the arms 8 projecting from the cross head to be free from the same and the annular carrier, and looped band springs fitted around the extended ends of the arm 9 and having their loops or bights fitted on the extended ends of the arms 8, said band springs being each arranged wholly on one side of the axle, for the purposes described, substantially as set forth. 2nd. The combination with an axle and a frame, of an arched carrier provided with vertical central guides and united to said frame to be movable vertically therewith, a cross head receiving the axle and fitted slidably to the guides, spaced horizontal upper arms rigid with the cross head and projecting from both sides thereof and arranged on opposite sides of the guides, a lower arm rigid with the carrier and lying in a plane between the upper arms, and looped elastic bands arranged on opposite sides of the axle and connected to the cross head arms and to the carrier arms to have each individual spring lie wholly on one side of the axle, substantially as and for the purposes described.

No. 65,504. Perambulator. (Bicycle.)



August C. Kuster, Brooklyn, New York, U.S.A., 22nd December, 1899; 6 years. (Filed 15th September, 1899.)

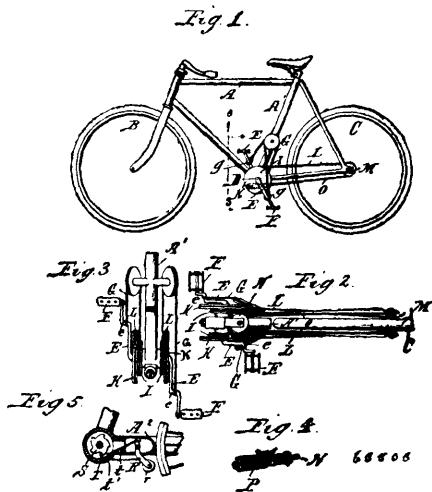
Claim.—A suitable framework, a rear supporting wheel journaled therein, a platform to which the forward end of the frame is secured, the forks pivoted to the ends of the platform, and the front steering wheels journaled in the forks, combined with a seat which is mounted upon the platform directly over the centre of the front wheels, suitable bearings secured to the rear of the seat, a steering post mounted in said bearings mounted upon the seat, a crank on the lower end of the steering post, arms projecting rearwardly from the upper ends of the post, and a connecting rod for uniting the rear ends of the arms, and with which the crank makes connection, substantially as described.

No. 65,505. Bicycle. (Bicycle.)

William J. Otto, Denver, Colorado, U.S.A., 22nd December, 1899; 6 years. (Filed 13th September, 1899.)

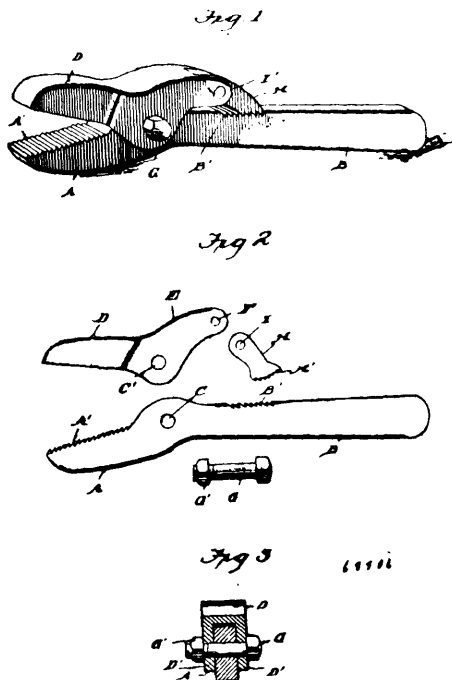
Claim.—In a bicycle, a pair of pivoted operating members, a cord connected to each member, grooved idler pulleys journaled on the

frame over which said cords run, grooved pulleys journaled at the axis of said operating members to which said cords are attached, a



second set of grooved pulleys attached to those at the said axis, drums connected with the driving wheel by suitable clutches, and cords connecting the drums with said second set of grooved pulleys, substantially as described.

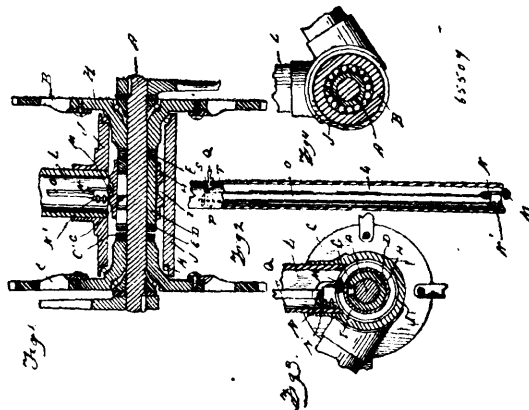
No. 65,506. Wrench. (Clé à écrou.)



Edward Olson, Seattle, Washington, U.S.A., 22nd December, 1899; 6 years. (Filed 31st July, 1899.)

Claim.—1st. The combination in a wrench, of a handle bar and jaw made in one piece, a second jaw pivoted at the junction of the handle bar and jaw first named and provided with an extension arm beyond the pivot in the plane of the handle bar and on the same side thereof as the pivoted jaw, and a pawl loosely pivoted to the end of the extension arm extending away from the jaws and provided at its free end with teeth to engage similar teeth on the adjacent face of the handle bar, substantially as described. 2nd. The combination with the jaw A and the handle bar B, made of a single piece of metal, the handle bar having teeth B¹ on one edge between the handle and pivot, with the jaw D provided with an extension arm E at an angle thereto on the same side of the handle bar and with flanges D¹ and D² embracing the jaw A and handle bar B at their point of junction, the pivotal bolt securing the handle bar to the flanges D¹, D², and the dog or pawl H loosely pivoted to the forked outer end of the extension arm E extending away from the jaws toward the handle and provided with teeth H¹ adapted to engage the teeth B¹ of the handle bar, substantially as described.

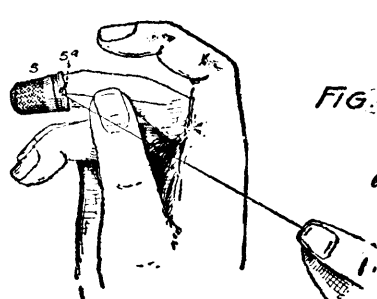
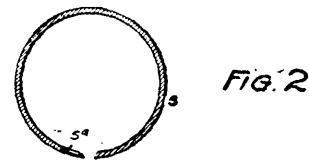
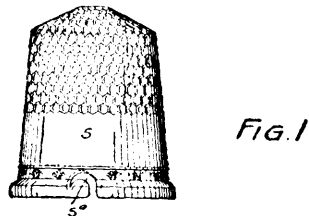
No. 65,507. Bicycle Gearing. (Engrenage de bicyclette.)



Willis A. Tickner, U.S.A., Washington, U.S.A., 22nd December, 1899; 6 years. (Filed 26th August, 1899.)

Claim.—1st. The combination with the tubular portion of the frame, of shifting mechanism arranged within said tubular portion and comprising a roller, a pivotally mounted yoke carrying said roller, a crank axle, a clutch sleeve mounted thereon and adapted to slide lengthwise thereof, and a torsion spring within said tubular portion connected at one end to said yoke, and at its other end connected with the shifting lever, substantially as described. 2nd. The combination with the crank axle, sprocket wheels, sliding clutch, shifting lever and pivoted yoke, a shifting rod in the form of a flat torsion spring arranged within the tubular portion of the frame and connected with said yoke lever and frame, substantially as described. 3rd. The combination with the tubular portion of the frame and a grooved sliding clutch sleeve on the axle, of the yoke pivoted in said tubular portion, the roller carried by the yoke and working in the groove of the sleeve, the flat spring within the tubular part and pivoted at its upper end and at its lower end connected with the yoke, and the lateral arm connected with the spring and working through a slot in the tubular part, as shown and described.

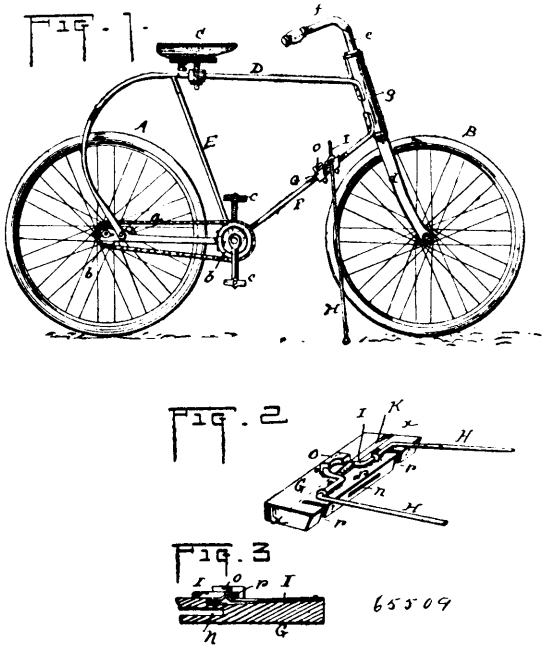
No. 65,508. Thimble and Thread Cutter. (Dé et coupe-ff.)



Edward Hamilton Randell, Denver, Colorado, U.S.A., 22nd December, 1899; 6 years. (Filed 31st October, 1899.)

Claim.—As an improved article of manufacture, a thimble provided with a slot formed in the body of the thimble and having a sharp edge for thread cutting purposes, said slot being open to receive the thread on the free or upper edge of the thimble.

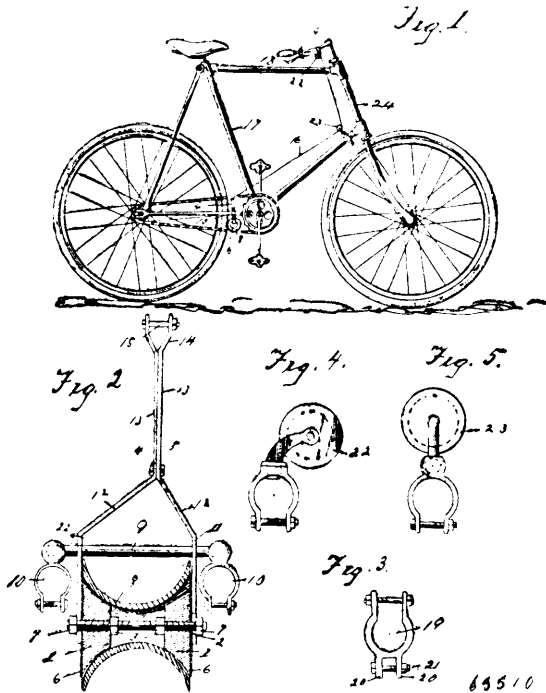
No. 65,509. Bicycle Support. (Support de bicyclet.)



Jonas L. Knoll, Lebanon, Pennsylvania, U.S.A., 22nd December, 1899; 6 years. (Filed 9th August, 1899.)

Claim.—A support for bicycles, consisting of a suitable block connected to the frame of the bicycle, rods connected by a looped cross head pivotally and slidably connected to the block, a keeper and spring for holding the rods in a horizontal position, and slots in the block with which the rods engage when in a vertical position, substantially as and for the purpose described.

No. 65,510. Bicycle Brake. (Frein de bicyclet.)

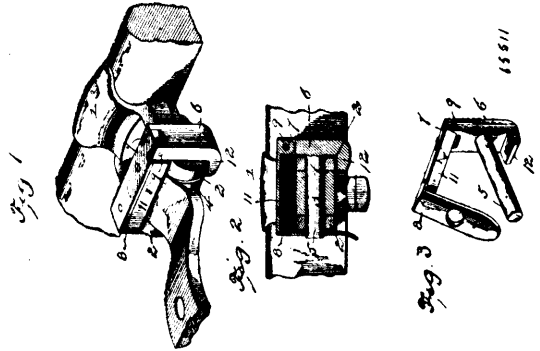


Reuben Reymie Wise, Caro, Michigan, U.S.A., 22nd December, 1899; 6 years. (Filed 26th September, 1899.)

Claim.—1st. In a brake, the combination with a shaft, of a pair of cones adjustably carried upon said shaft, two pair of devices movable on the shaft, the respective members of the pairs being located respectively at opposite sides of and in engagement with the cones, thereby to lock the latter against movement longitudinally of the shaft, and a shell incasing said cones. 2nd. In a brake,

the combination with a shaft screw threaded at its opposite ends, of two cones in threaded engagement with the shaft, two pairs of nuts movable on said shaft, and the respective nuts of the pairs being located at opposite sides of and in engagement with the cones, thereby to prevent movement of said cones longitudinally of the shaft, and a shell incasing and revoluble on the cones. 3rd. In a brake, the combination with a threaded shaft of two cones on the ends of the shaft, two pairs of nuts movable on the shaft and located at opposite sides of and in engagement with the cones, thereby to normally prevent movement yet permit the adjustment of said cones on the shaft, and a one piece shell incasing the cones and having a continuous unbroken surface which is curved in cross section and of less diameter at its centre than that of the smaller end of either cone, as and for the purpose set forth.

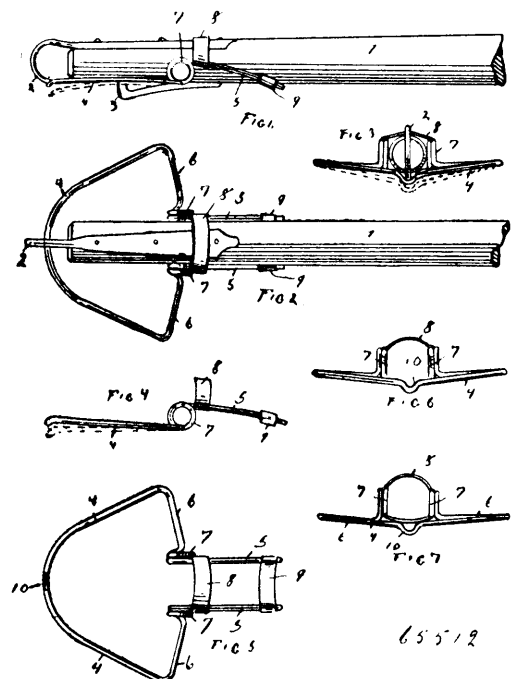
No. 65,511. Thill Coupling. (Armon de limoniere.)



Julia E. Harrison and Willet H. Harrison, both of Marengo, Illinois, and Charles W. Youngs, Willis, Michigan, U.S.A., 23rd December, 1899; 6 years. (Filed 26th June, 1899.)

Claim.—In a device of the class described, the combination with an axle clip having perforated ears, and an iron having an eye arranged between the ears, of a pivot passing through the eye and the perforations of ears and having one end extended beyond one of the latter, the arm rigid with the other end of the pivot and extending above and below the same and provided at its lower end with an inwardly extending lip engaging the lower edge of the adjacent ear to lock the pivot against rotation and to prevent the parts from rattling, and a locking spring hinged to the upper end of the arm and engaging the extended end of the pivot and provided with a cushion, substantially as described.

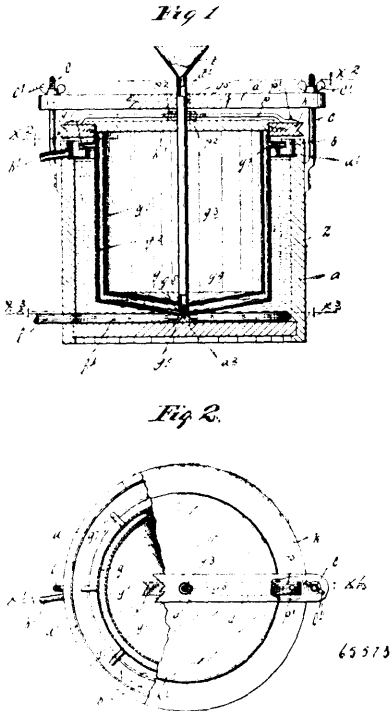
No. 65,512. Helm Guard For Waggon Poles. (Garde-réne pour timons de waggons.)



James F. Sanderson and Charles B. Gray, both of Gray, New York, U.S.A., 23rd December, 1899; 6 years. (Filed 24th July, 1899.)

Claim. 1st. The combination of a rein guard having a front bowed section and rearwardly extending parallel arms fitting the sides of a waggon pole, and means for securing said arms to said pole, substantially as set forth. 2nd. In a rein guard for waggon poles, the combination of the bow portion 4, the inwardly turned portions 6 6, the convolutions 7 7, the arms 5 5, and means for securing the guard to a waggon pole, substantially as set forth. 3rd. The yielding front bow shaped rein guard having rearwardly supporting arms fitting the side of the waggon pole and the securing straps 8 and 9, extending between the said supporting arms, substantially as set forth. 4th. The rein guard consisting of the bow-shaped portion 4, the inwardly turned portion 6, the supporting portions 5, and means for securing the same to the waggon pole, substantially as set forth.

No. 65,513. Pasteurizing Apparatus. (Appareil à pasteuriser.)



Lena G. Hill, assignee of Adelbert D. Hill, both of Northfield, Minnesota, U.S.A., 23rd December, 1899; 6 years. (Filed 3rd March, 1899.)

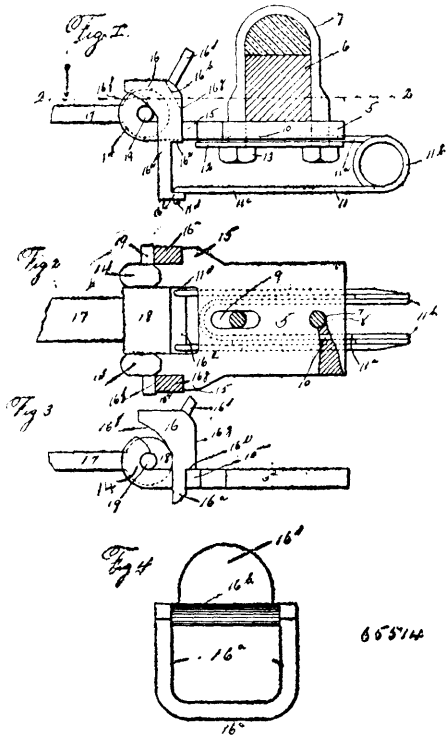
Claim. - 1st. In a pasteurizing or like apparatus, the combination of a tank or vat *a*, the interiorly arranged concentric vessels *g*, *g'* suitably spaced apart to form a narrow annular heating chamber for the reception of the liquid to be treated, the vessel *g'* being fixed in position and the vessel *g* being adapted to rotate, the axial feeding pipe *g''* secured to the vessel *g'* and delivering into the bottom of the chamber *g''*, and means for rotating the vessel *g*, substantially as described. 2nd. In a pasteurizing or like apparatus, the combination of the tank or vat *a*, having the annular catch trough *a'*, the draw bolts and nuts *c*, *c'*, the yoke bar *d* held by said draw bolts, the interiorly arranged concentric vessels *g*, *g'* suitably spaced apart to form a narrow annular heating chamber for the reception of the liquid to be treated, the vessel *g'* being fixed in position and the vessel *g* being adapted to rotate, the axial feed pipe *g''* secured to the vessel *g'* and provided with openings delivering into the bottom of the heating chamber *g''*, and passing through the yoke bar *d* and secured thereto against rotation, the sheave *k* secured to the vessel *g*, and the cross bar *b* attached to the sheave at its ends and having the feed pipe *g''* extending through it, substantially as described. 3rd. In a pasteurizing or like apparatus, the combination of a tank or vat, concentric vessels arranged interiorly of the tank and suitably spaced apart to form a narrow annular heating chamber for the liquid to be treated, a feed pipe delivering into the bottom of the liquid heating chamber, and discharge pipes leading from the upper part of said chamber, the inner one of said vessels being secured in fixed position and the outer one being adapted to rotate and provided with means for rotating it, substantially as described.

No. 65,514. Thill Coupling. (Arnon de linonier.)

George W. Herdman, Jerseyville, assignee of R. H. and W. A. McNair, both of Elmhurst, Illinois, U.S.A., 23rd December, 1899; 6 years. (Filed 4th August, 1899.)

Claim. - 1st. A coupling for thills and poles, consisting of a base plate, parallel open bearings extending forwardly from the plate,

shoulders extending laterally from the forward end of the plate, and a spring actuated vertically reciprocating yoke having wedge



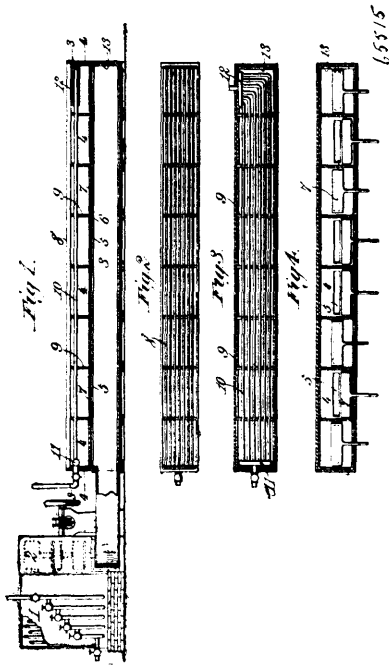
shaped portions to engage said shoulders, substantially as specified. 2nd. A coupling for thills and poles, consisting of a base plate having a rear opening to receive the rear end of a clip and having an elongated forward opening to receive the forward end of a clip, a clip operating in said openings to connect the base plate to an axle, parallel open bearings extending forwardly from the base plate, shoulders extending laterally from the forward end of the plate, and a spring actuated vertically reciprocating yoke having wedge shaped portions to engage said shoulders, substantially as specified. 3rd. A coupling for thills and poles, consisting of a base plate, shoulders extending laterally from the forward end of the base plate, a spring actuated vertically reciprocating yoke having wedge shaped portions to engage the front faces of said shoulders, and having shoulders at the lower ends of said wedge shaped portions to rest upon the first mentioned shoulders when the wedge shaped portions are not in use, substantially as specified. 4th. A coupling for thills and poles, consisting of a base plate, parallel open bearings extending forwardly from the base plate, shoulders extending laterally from the forward end of the base plate, a spring actuated vertically reciprocating yoke having wedge shaped portions to engage the front faces of said shoulders, and having shoulders at the lower ends of said wedge shaped portions to rest upon the first mentioned shoulders when the wedge shaped portions are not in use, and a handle extending upwardly from the yoke, substantially as specified. 5th. A coupling for thills and poles, consisting of a base plate having the groove 10 formed in its lower face, the wire spring 11 operating in said groove, the clamping plate placed against the spring, a clip holding the clamping plate and base plate in position, parallel open bearings extending forwardly from the plate, shoulders extending laterally from the forward end of the plate, a vertically reciprocating yoke connected to said spring and having wedge shaped portions to engage said shoulders, substantially as specified.

No. 65,515. Fruit Evaporator. (Evaporateur pour fruits.)

Platt Bryan Viele, Rochester, New York, U.S.A., 23rd December, 1899; 6 years. (Filed 26th June, 1899.)

Claim. - 1st. A fruit evaporator combining in its structure the following elements, a series of separated heat distributing chambers arranged side by side in the same horizontal plane, a fruit supporting rack arranged over the heat distributing chambers, a continuous hot air box extending beneath all of said chambers and having in its top wall a series of controlled openings communicating respectively with the chambers, an air heater having communication with said continuous hot air box, and means for causing atmospheric air to flow through the air heater into the box, from which it rises through the said controlled openings into the separated heat distributing chambers, substantially as described. 2nd. A fruit

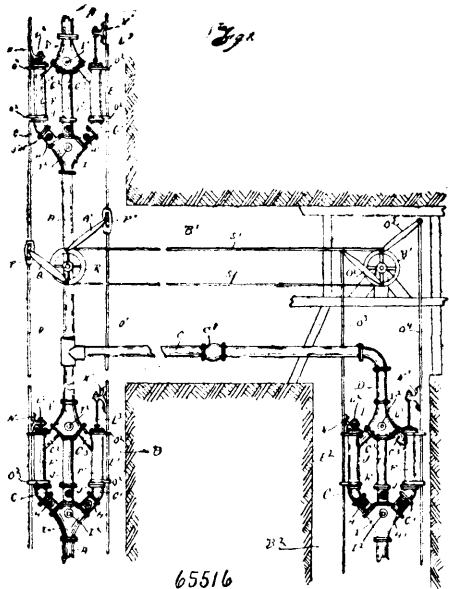
evaporator combining in its structure a series of heat distributing chambers arranged side by side and separated from one another, a



fruit support extended over all of the heat distributing chambers, a continuous hot air box extending horizontally under the said chambers and having in its top wall a series of valve controlled openings communicating respectively with the chambers, an air heater located outside the said hot air box, a fan arranged between the air heater and the hot air box for drawing atmospheric air through the air heater and forcing the heated air into said box, and a system of heating pipes extended horizontally through the separated heat distributing chambers between the fruit support and the hot air box, substantially as described. 3rd. The combination, in a fruit evaporator, of a series of heat distributing chambers arranged side by side in a horizontal plane and separated from each other, a hot air box extending continuously under the heat distributing chambers and having separate communications therewith, an air heater located outside the hot air box and having communication with one end thereof, means for forcing atmospheric air to flow through said air heater into the hot air box, steam heating pipes extended through all of said separated heat distributing chambers, and a fruit supporting rack arranged over the latter and above said steam heating pipes, substantially as described. 4th. The combination, in a fruit evaporator, of a series of heat distributing chambers arranged side by side and separated from each other, a system of steam heating pipes extended horizontally through all of the heat distributing chambers, a fruit supporting rack arranged over the latter and the steam heating pipes and constituting the top of the evaporator, a hot air box extending continuously under said chambers and having its top wall provided with valved openings to place it in communication with said chambers, an air heater located outside the hot air box, and an air suction and forcing apparatus connecting the said air heater with one end of the hot air box and serving to draw atmospheric air through the air heater and to force the heated air into the hot air box, substantially as described. 5th. The combination, in a fruit evaporator, of a series of separated heat distributing chambers arranged side by side, steam heating pipes running horizontally through all of the heat distributing chambers, means for supporting the fruit above said chambers and steam heating pipes, a hot air box extending under all the heat distributing chambers and having a series of openings in its top wall, slide valves for placing any or all of said openings in communication with said chambers or cutting off such communication, an air heater located outside the hot air box and having air heating steam pipes, and an air suction and forcing apparatus connected with the air heater and the hot air box, for drawing air through the air heater and forcing the heated air into the hot air box, substantially as described. 6th. The combination, in a fruit evaporator, of a series of heat distributing chambers arranged side by side and separated from each other, a hot air box extending continuously under the heat distributing chambers and having separate communications therewith, an air heater located outside the hot air box and having communication with one end thereof, means for forcing atmospheric air to flow through said air heater into the hot air box, steam heated pipes extended through all of said separated heat distributing chambers, and a fruit supporting rack arranged over the latter and over the steam heating pipes extending therethrough, substantially as de-

scribed. 7th. The combination, in a fruit evaporator, of a series of heat distributing chambers arranged side by side and separated from each other, a system of steam heating pipes extended horizontally through all of the heat distributing chambers, a fruit supporting rack arranged over the latter and the steam heating pipes, a hot air box extending continuously under said chambers and having its top wall provided with valved openings to place it in communication with any or all of the chambers, an air heater located outside the hot air box, and an air suction and forcing apparatus connecting the said air heater with the hot air box and serving to draw atmospheric air through the air heater and to force the heated air into the hot air box, substantially as described. 8th. The combination, in a fruit evaporator, of a series of separated heat distributing chambers arranged side by side, steam heating pipes running horizontally through all of the heat distributing chambers, means for supporting the fruit above said chambers and steam heating pipes, a hot air box extending under all the heat distributing chambers, means for placing any or all of said chambers in communication with the hot air box, or cutting off such communication, an air heater located outside the hot air box, and an air suction and forcing apparatus interposed between and connected with the air heater and the hot air box, for drawing air through the air heater and forcing the heated air into the hot air box, substantially as described. 9th. The method of evaporating fruit, which consists in slicing the fruit, sprinkling sugar on the sliced fruit, subjecting the fruit to the action of hot air and steam heat, regulating the distribution of hot air throughout the fruit, and finally cutting off the hot air and completing the evaporation or drying of the fruit by steam heat alone, substantially as described.

No. 65,516. Pump. (Pompe.)



George S. Herbolsheimer and Alexander Carmichael, both of Denver, Colorado, U.S.A., 23rd December, 1899; 6 years. (Filed 20th September, 1899.)

Claim.—A deep mine or relay pump comprising a series of pumps arranged in successive pairs at different elevations, a common water main, each pair of pumps comprising two cylinders having suction and discharge connection with the water main, a cut-off valve therein, a piston in each cylinder having a rod extending through a stuffing box in the upper end of the cylinder, two power transmitting rods extending alongside of the corresponding cylinder of each set, connections from said rods to the piston rods, and means for giving the power transmitting rods alternate or opposite reciprocations, substantially as described.

No. 65,517. Liquid Sterilizing Apparatus.

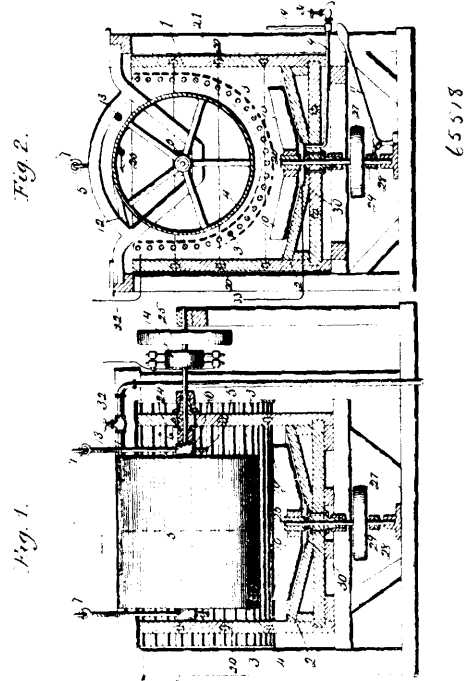
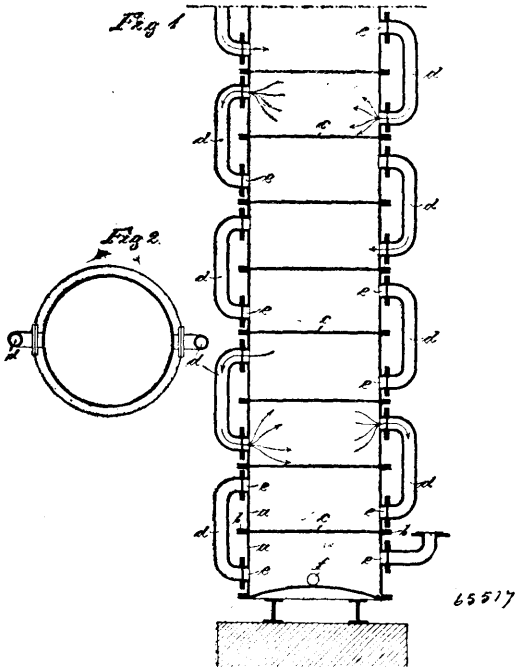
(Appareil à stériliser les liquides.)

Henry Tindal, Amsterdam, Holland, 23rd December, 1899; 18 years. (Filed 17th April, 1899.)

Claim.—1st. In an apparatus for sterilizing liquids by means of ozone, the combination with a sterilizing cylinder, through which the liquid is conducted, of perforated plates *c* arranged between the various chambers of said sterilizing cylinder, whereby the continually repeated finest distribution of the ozone is effected, and of tubes connecting the various chambers and successively conducting the liquid through the said chambers, substantially as and for the purpose hereinbefore set forth. 2nd. In an apparatus for sterilizing liquids by means of ozone, the combination of a sterilizing cylinder

through which the liquid is conducted, of perforated plates *c* arranged between the various chambers of said sterilizing cylinders,

agitator shaft and an outlet pipe for the pan, having a standpipe portion and a stop cock, and electrical connections for a generator



whereby the continually repeated finest distribution of the ozone is effected, and of tubes connecting the various chambers and successively conducting the liquid through the said chambers, the connecting tubes being so arranged, that the outlet of the liquid takes place at the one side of the said chambers and the inlet at the other side of same, substantially as and for the purpose hereinbefore said forth. 3rd. In an apparatus for sterilizing liquids by means of ozone, the combination with two or more sterilizing cylinders communicating with each other, and through which the liquid is connected, of perforated places *c* arranged between the various chambers of said sterilizing cylinders, whereby the continually repeated finest distribution of the ozone is effected, and of tubes connecting the various chambers and successively conducting the liquid through the said chambers, the connecting tubes being so arranged, that the outlet of the liquid takes place at the upper part of the said chambers and the inlet at the lower part of same, substantially as and for the purpose hereinbefore set forth.

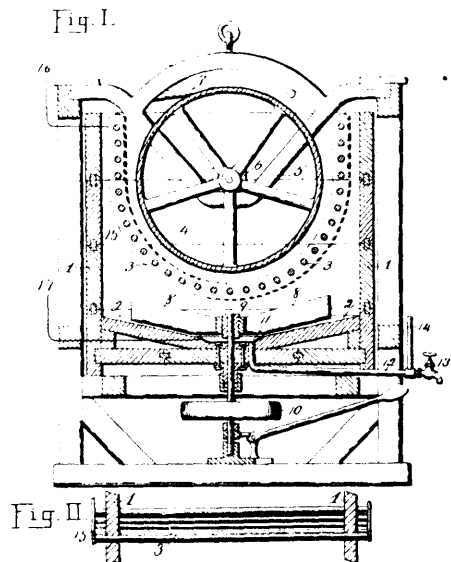
No. 65,518. Electrolytic Apparatus for Extracting Precious Metals. (*Appareil électrolytique pour extraire les métaux précieux.*)

Charles Pembroke Tatro and George Delius, both of Seattle, Washington, U.S.A., 23rd January, 1899; 6 years. (Filed 3rd November, 1899.)

Claim.—1st. In electrolytic apparatus for extracting precious metals, a bath having in it a series of rods and an anode, a drum journaled to revolve partially immersed in the tub and connected as a cathode, the said rods being parallel with the drum, a scraper located tangent to the surface of the drum, and an agitator upon a vertical shaft and having upward slanting arms located to revolve below the said anode rods, substantially as described. 2nd. In electrolytic apparatus for extracting precious metals, a bath tub having a bottom slanting downwardly towards its centre, an agitator mounted on a vertical shaft in the centre of the tub and having vertical, upward slanting radial blades, a lever located beneath the tub and having free connection with the said vertical shaft for raising and lowering the agitator, a drum journaled in bails which are suspended in the tub, a scraper for the drum, a perforated water pipe located above the drum, rods of carbon or electrically similar material located in the tub around the drum, a pan containing mercury or amalgam located in the bottom of the tub around the

with the carbon anodes and the drum and mercury or amalgam cathodes.

No. 65,519. Process of Extracting Precious Metal. (*Procédé pour extraire les métaux précieux.*)



Charles P. Tatro and George Delius, both of Seattle, Washington, U.S.A., 23rd December, 1899; 6 years. (Filed 3rd November, 1899.)

Claim.—1st. In separating precious metals from ores, the process comprising the following steps: first, reducing the ore to a fine pulp, secondly, dissolving the metals from the foreign matter by immersing and agitating the pulp in a bath comprising an aqueous solution of common salt, a small percentage of bromine, caustic lime and other reagents for precipitating undesirable metals from the electrolyte, thirdly, gathering a portion of the precious metals from the bath by revolving a cathode drum partially immersed in

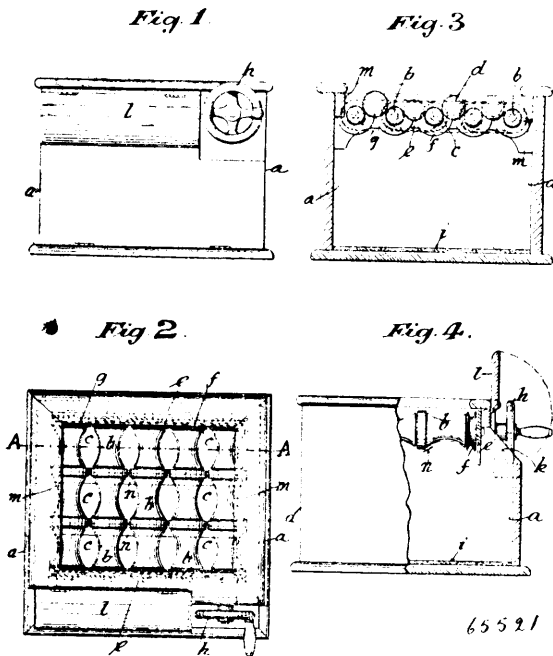
the bath while the latter is in contact with an anode, and at the same time scraping the metallic deposit from the drum, also simultaneously depositing other portions of the precious metals in the same bath upon a cathode of sodium amalgam, an electric current passing through the said anode, cathodes and bath during this third step of the operation. 2nd. In extracting precious metals from ores, the process comprising the following steps: first, pulverising the ore to a fine pulp, secondly, dissolving the metals from the foreign matter by immersing the pulp in a bath comprising an aqueous solution of common salt, sulphuric acid, a small percentage of bromine, fluorspar and saltpeter, thirdly, recovering the precious metals from the bath by means of electrolytic action. 3rd. In the process of extracting precious metals from ores, the steps comprising the reduction of the ore to a pulp, dissolving the precious metals from the ore in the pulp in a bath comprising fluorspar, saltpeter and other solvents, and, thirdly, recovering the precious metals by electrolytic action.

No. 65,520. Aluminium and Magnesium.
(*Aluminium et magnésium.*)

Dr. Ludwig Mach, Jena, Germany, 23rd December, 1899; 6 years. (Filed 20th July, 1899.)

Claim.—1st. An aluminium-magnesium alloy herein described comprising aluminium and magnesium in the proportion of 100 parts of aluminium and 2 to 30 parts of magnesium, substantially as and for the purpose described. 2nd. An aluminium-magnesium alloy herein described comprising aluminium and magnesium in the proportions of 100 parts of aluminium and 2 to 10 parts of magnesium and which alloy is compressed by rolling, drawing, pressing, etc., substantially as and for the purpose described. 3rd. An alloy comprising 100 parts of aluminium, 2 to 30 parts of magnesium and copper, nickle, manganese, tungsten, chrome, molybdena, cobalt, arsenic, antimony, zinc, tin, phosphorus, manganese copper, manganese tin, substantially in the proportions and for the purpose described. 4th. An alloy comprising 100 parts of aluminium, 2 to 30 parts of magnesium and of antimony in quantities to 30 per cent, substantially as described.

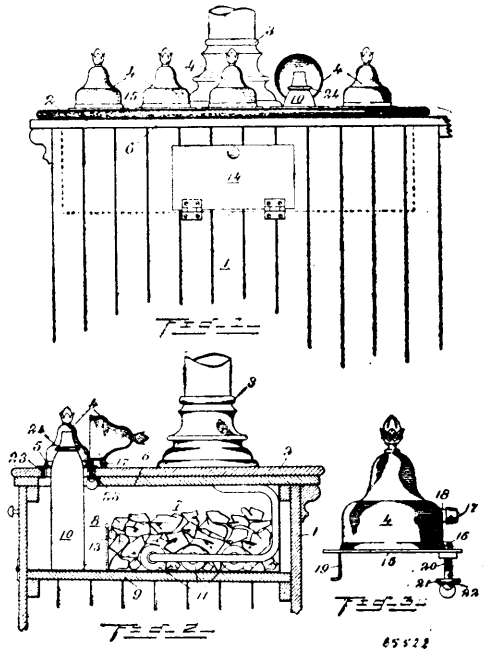
No. 65,521. Egg Tester. (*Appareil à faire l'épreuve des œufs.*)



James Lyons, Alfred Lyons and George Lyons, all of Manchester, Great Britain, 23rd December, 1899; 6 years. (Filed 14th August, 1899.)

Claim.—1st. An apparatus for testing eggs, consisting of a dark box or chamber furnished internally with a source of light or reflector and over the latter with a series of annularly grooved laterally stationary rollers adapted to be jointly rotated and turn the eggs to be tested, all substantially as set forth. 2nd. In an apparatus for testing eggs, having a series of annularly grooved laterally stationary rollers capable of rotation only and a reflector below the same, the box or chamber *a* formed at the side with an opening *k* through which the eggs can be seen on the reflector, all substantially as set forth.

No. 65,522. Drinking Fount. (*Fontaine.*)



Benjamin Fletcher, Toronto, Ontario, Canada, 23rd December, 1899; 6 years. (Filed 5th October, 1899.)

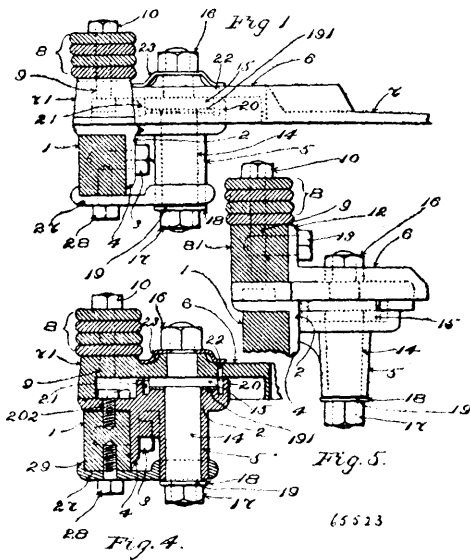
Claim.—1st. In a drinking fount, the combination with the stand pipe and marble slab support or counter top, of a plurality of removable covers, an ice box and cooling chamber below said marble slab, a plurality of openings in said marble slab communicating with said cooling chamber, and a corresponding number of syrup bottles, the upper portions of which protrude through said openings in said marble slab, and enclosed by said removable covers, substantially as shown and described. 2nd. In a drinking fount, the combination with the stand pipe and marble slab support or counter top of a cooling chamber and ice box, substantially as shown, and a plurality of syrup bottles located in said cooling chamber, and protruding through openings in said marble slab, a plurality of removable covers inclosing the protruding portions of said bottles, and an annular collar encircling the neck of said bottles, substantially as shown and for the purpose hereinbefore described. 3rd. In a drinking fount, the combination with the marble slab support or counter top of an annular flange, a removable cover hinged to said flange, means for cushioning said cover when thrown back and coming in contact with said marble slab, said flange secured to said marble slab, and said cover enclosing the opening therein, said opening communicating with the cooling chamber in which stands the syrup bottles, substantially as shown and described.

No. 65,523. Carriage Gear. (*Train de voiture.*)

Isaac Osgood, Amesbury, Massachusetts, U.S.A., 23rd December, 1899; 6 years. (Filed 24th July, 1899.)

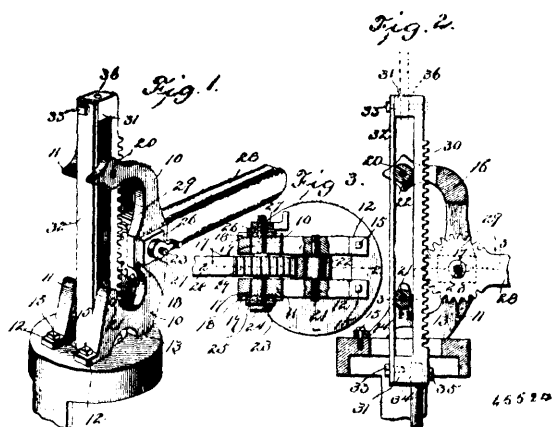
Claim. 1st. The combination with the coupling members having the pipe box or bearing at the rear of the axle, of the opposing coupling member having the king bolt rigidly applied thereto and fitting within said pipe box or bearing, the said king bolt receiving the entire horizontal strain, substantially as described. 2nd. The combination with the coupling member having the pipe box or bearing at the rear of the axle, of the king bolt fitting within said pipe box or bearing and having the projecting collar, and the other coupling member having the said king bolt rigidly applied thereto, substantially as described. 3rd. The combination with the coupling member having the pipe box or bearing, and the oil cup at the upper end of such pipe box or bearing, of the king bolt fitting within said pipe box or bearing, and having the projecting collar located within said oil cup, and the other coupling member having the king bolt rigidly applied thereto, substantially as described. 4th. The combination with the coupling member having the pipe box or bearing, and the stay or brace applied at one end of said pipe box or bearing, of the king bolt fitting within said pipe box or bearing, and having the projecting collar, and the other coupling member having the said king bolt rigidly applied thereto, substantially as described. 5th. The combination with the coupling member having the pipe box or bearing at the rear of the axle, and the stay or brace applied at one end of the said pipe box or bearing, of the other coupling member having rigidly applied thereto the king bolt fitting within the said pipe box or bearing, substantially as described. 6th. The combination with the axle, of the lower coupling member having

the pipe box or bearing, and seated upon the upper side of the axle, the bolts securing the said coupling member to the axle, the bolt



passing down through the said member to the axle to hold the said member to the axle and receive the strain to prevent the axle from drawing out from under the lower coupling member in case of breakage of the securing bolts, the king bolt fitting within said pipe box or bearing, and having the projecting collar, and the other coupling member having the said king bolt rigidly applied thereto, substantially as described. 7th. The combination with the axle and head block, of the lower coupling member applied to the axle and having the pipe box or bearing, the upper coupling member having a seat for the head block, and also the upwardly extending plate or lug bolted to the head block, and the king bolt rigidly applied to said upper coupling member, fitting within said pipe box or bearing, and having the projecting collar, substantially as described. 8th. The combination with the rear axle, of the plate 42 applied thereto and provided with flanges or lips, the block of wood placed on such plate, the spring mounted on said block, and bolts whereby the said parts are secured together, substantially as described. 9th. The combination with the rear axle, of the plate 42 applied thereto and provided with polygonal holes 43, 43, and the flanges or lips, the block of wood placed on said plate, the spring mounted on said block, and the securing bolts having the lower ends thereof screwed into the axle, and the polygonal portions fitting the said holes in the plate, substantially as described. 10th. The combination with the upper and lower coupling members having the king bolt and bearing at the rear of the axle, of stops supplied to one of said coupling members at opposite side of the middle thereof, and engaging with the other coupling member to limit the extent of the relative turning movements of the said coupling members.

No. 65,524. Pump Head. (Tête de pompe.)

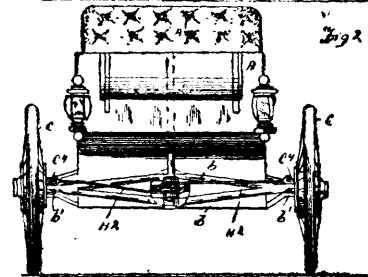
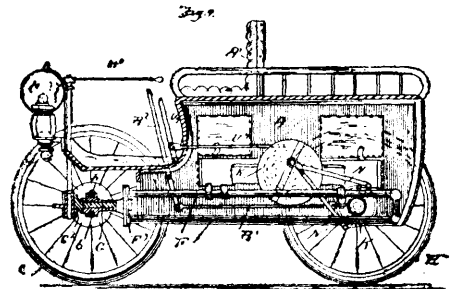


Samuel Strobridge, Boyne City, Michigan, U.S.A., 23rd December, 1899; 6 years. (Filed 3rd August, 1899.)

Claim.—1st. A pump head, consisting of the parallel members having the horizontal slots, in combination with the fulcrum bolt

passing through said slots and provided with a clamping nut, washers or plates having interlocking engagement with said pump head, a lever fitted on the fulcrum bolt and provided with a toothed head, and a reciprocating rack guided in the head and engaging with the lever, substantially as described. 2nd. A pump head, consisting of the parallel members provided with the horizontal slots, the transverse recesses, and the serrations within said recesses, combined with a headed fulcrum bolt having the clamping nut, serrated washers on the bolt and within the recesses to engage with the serrations of the pump head, a serrated lever mounted loosely on the fulcrum bolt, and a rack bar guided in the pump head and meshing with the lever head, substantially as described.

No. 65,525. Motor Vehicle. (Automobile.)



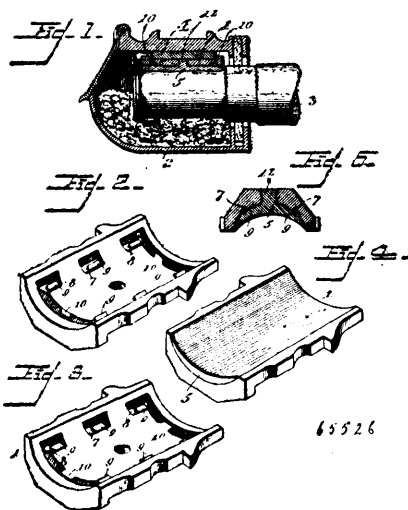
65525.

Elwood Haynes and Elmer Apperson, both of Kokomo, Indiana, U.S.A., 23rd December, 1899; 6 years. (Filed 28th June, 1899.)

Claim.—1st. A running gear for vehicles, comprising a main frame having horizontal frame members and provided at its forward end with a vertical disc to which the frame members are attached at their front ends, and a front axle, which is connected with the frame by a horizontal pivot and is provided with an annular flange in contact with said disc. 2nd. A running gear for vehicles, comprising a main frame having longitudinal frame members, and provided at its forward end with a vertical disc to which the frame members are attached, a pivot shaft extending forwardly from said disc, and a front axle provided with a sleeve which surrounds the pivot shaft and is provided with an annular flange in contact with said disc, said pivot shaft being provided at its forward end with a vertical sleeve which affords bearings for the rock shaft of a steering mechanism, and said axle being provided at its ends with pivoted axle sections on which the wheels are mounted and which have actuating connections with said shaft. 3rd. A running gear for vehicles, comprising a main frame having longitudinal frame members and provided at its forward end with a vertical disc and with a pivot shaft extending forward from said disc, a front axle provided with a sleeve which surrounds said pivot shaft and with a flange in contact with said disc, said pivot shaft being provided at its forward end with a vertical sleeve which affords bearings for the rock shaft of a steering mechanism, and said axle being provided at its ends with pivoted axle sections on which the wheels are mounted and which have actuating connections with said shaft. 4th. A driving gear for motor vehicles, comprising a clutch disc, two oppositely arranged clutch arms, clutch dogs pivoted to said arms, actuating means connected with and giving vibratory motion to both of said clutch arms, shifting levers for said dogs pivoted to the said clutch arms, and means for moving said levers comprising endwise sliding wedges. 5th. The combination with a clutch disc, clutch arms, and clutch dogs pivoted to the arms, of shifting levers pivoted to the clutch arms near the inner ends of said arms and connected at their outer ends with said dogs by elastic or yielding connections and means mounted on the shaft for actuating said shifting levers. 6th. A driving gear for motor vehicles, comprising a clutch disc, two oppositely arranged clutch arms, clutch dogs carried by said arms, a revolving crank pin, and connecting rods uniting the crank pin with said clutch arms, one of said connecting rods being engaged directly with the crank pin and the other connecting rod being pivoted to the first one. 7th. A change speed gear for motor vehicles, comprising a clutch disc, two vibratory clutch arms, a crank pin connected with and giving motion to both of said clutch arms, said crank pin being movable toward and from its centre of motion, and means for shifting or moving said crank pin. 8th. A

change speed gear, comprising a clutch disc, two vibratory clutch arms, a crank pin connected with and giving motion to both of said clutch arms, said crank pin being movable toward and from its centre of motion, and means for shifting said crank pin, comprising a screw shaft having engagement with the crank pin, and means under the control of the operator for giving rotary motion to the screw shaft in either direction. 9th. A change speed gear, comprising a clutch disc, two vibratory clutch arms, a crank disc provided with a crank pin which is movable radially upon the disc, and means under the control of the operator for shifting said crank pin inwardly and outwardly upon said crank disc. 10th. In a change speed gear, comprising a clutch disc, two vibratory clutch arms, a crank disc provided with a crank pin which is radially movable upon the disc, means for shifting or moving the crank pin on the disc embracing the screw shaft which engages the crank pin, and means for actuating said screw shaft. 11th. The combination with a crank disc and crank pin adapted to move radially thereon, of means for moving the crank pin, comprising two rings mounted on the disc, and a friction brake adapted to act upon one or other of said rings at will, said rings being severally connected with and adapted to operate the crank pin. 12th. The combination with a crank disc and a crank pin sliding upon the disc, of two gear rings mounted in said disc, a friction brake arranged to operate upon either of said rings at will, a screw shaft engaging said crank pin, said screw shaft having geared connections with one of said rings, and a countershaft provided with a gear pinion which intermeshes with the other of said rings and which has geared connection with the said screw shaft. 13th. The combination with a crank disc and crank pin which slides upon the disc, of two gear rings mounted in said disc, a friction brake arranged to operate upon either of said rings at will, a screw shaft engaging said crank pin, said screw shaft being provided with a gear pinion which intermeshes with one of the rings, and a countershaft provided with a gear pinion which intermeshes with the other gear ring, said screw shaft and countershaft being provided with intermeshing pinions.

No. 65,526. Journal Bearing. (*Coussinet de tourillon.*)



James Swan, Topcka, Kansas, U.S.A., 23rd December, 1899; 6 years. (Filed 18th July, 1899.)

Claim.—A journal or brass comprising a solid body portion consisting of a single piece of metal and provided at opposite sides with narrow gutters formed by recessing the solid body portion, the malleable projection or lugs formed integral with the body portion and located at the sides of the recesses and adapted to be bent over the latter to form hooks, and a lining of soft material applied to the body portion in a molten condition, and having the projections or lugs embedded in it, whereby it is retained on the body portion, substantially as described.

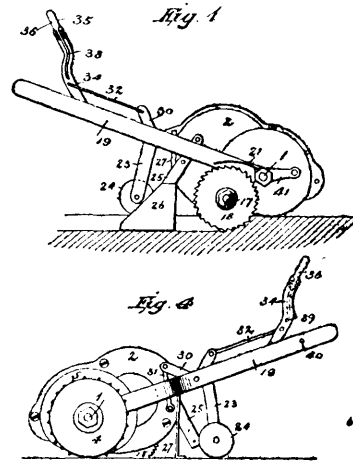
No. 65,527. Ice Cutting Machine.

(*Machin à couper la glace.*)

Charles R. Lawwill, Manchester, Ohio, U.S.A., 23rd December, 1899; 6 years. (Filed 15th April, 1899.)

Claim.—1st. In an ice cutting machine, the combination with the sectional housing, the sleeve at one end thereof, the axle passing therethrough, the side bars to which the ends of said axle are secured and the adjustable marking wheel at one end of said axle, of the driving wheel having peripheral teeth, the ratchet secured thereto, the gear provided with the pivoted dogs engaging with said ratchet, the saw shaft and pinion, and the intermediate gears and pinions, substantially as described. 2nd. In an ice cutting machine, the combination with the sectional housing, the sleeve secured to one

end thereof, the axle passing therethrough, the adjustable marking wheel at one end of the axle and the side bars secured to said axle,



of the driving wheel loose on said axle, the ratchet secured thereto, the gear provided with pivoted dogs engaging therewith, the saw shaft, the pinion secured thereto, the intermediate gears and pinions, the saw, the guide plate located in rear of and in line with said saw, the adjustable gauge and supporting wheel, substantially as described. 3rd. In an ice cutting machine, the combination with the sectional housing, the sleeve secured to one end thereof, the axle, the side bars secured thereto, the saw, and the driving wheel and train of gearing for rotating said saw, of the bell crank lever pivoted to one of said side bars, the link pivoted thereto and to said lever, the connecting rod, the lever pivoted to one of said side bars and the spring detent having a rod, the inner end of which is bent at an angle and adapted to engage with holes in said lever and side bar, substantially as described.

No. 65,528. Treatment of Refractory Sulphide Ores.

(*Traitement de minerai de sulfure réfractaire.*)

Francis Ellershausen, London, England, 23rd December, 1899; 6 years. (Filed 10th March, 1899.)

Claim.—The improved process of smelting refractory sulphide ores in an ordinary cupola or blast furnace consisting in the use together with the ordinary blast of an exhaust sufficiently powerful to prevent any zinc accretions forming in the furnace.

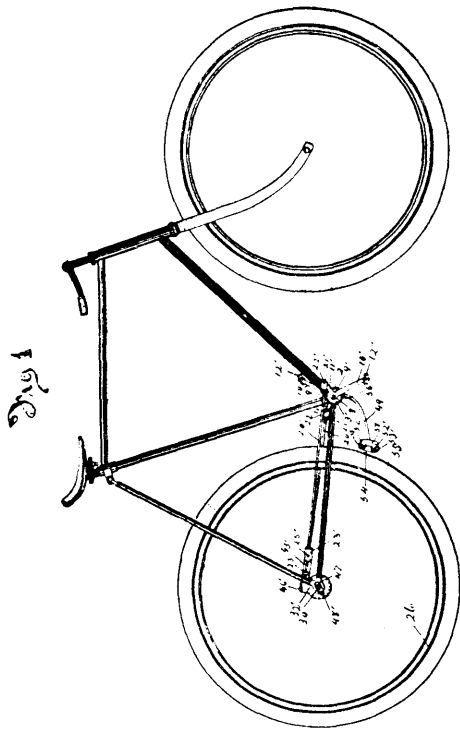
No. 65,529. Bicycle Drive and Brake Mechanism.

(*Mécanisme de marche et frein pour bicyclettes.*)

Albert C. Tanner, Jersey City, New Jersey, U.S.A., 23rd December, 1899; 6 years. (Filed 16th December, 1899.)

Claim.—1st. In a bicycle, or like vehicle, in combination with the drive wheel, mounted to rotate on a fixed axle, a supporting medium, rigidly mounted on said axle, a drum rotatably mounted on said supporting medium, detached clutches movable with said drum, and having their free ends in contact with the drive wheel hub, said clutches being arranged with respect to the drum, in such manner as to lock the drum, when rotated in one direction, to the drive wheel hub, guards, for preventing lateral displacement of said clutches, the latter being each provided with a pin, adapted to engage the adjacent guard, to prevent endwise displacement of said clutches, when said drum is removed from its supporting part, and means for rotating said drum, all substantially as herein described. 2nd. In a bicycle, or like vehicle, in combination with the drive wheel, a bracket firmly mounted on the drive wheel axle, said bracket being provided with an angular offset, and with a central, tubular member, adapted to encircle the drive wheel axle, a drum, rotatably mounted on said tubular member, means for locking the drum, when rotated in one direction, to the hub of the drive wheel, a flexible drive connection, having one end secured to, and capable of being wound upon said drum, and having its opposite end secured to the angular offset of said bracket, means for withdrawing the drive connection from said drum, in the form of a loop, for rotating said drum, and means for returning the latter to its normal position, all substantially as herein described. 3rd. In a bicycle, or like vehicle, in combination with the drive wheel mounted to rotate on a fixed axle, a supporting medium, rigidly mounted on said axle, a bracket, firmly mounted upon the drive wheel axle, a drum rotatably mounted on said supporting medium, and comprising a peripheral portion, having a series of interior recesses, and a central web, and said drum being mounted so that said peripheral portion will overlap the drive wheel hub, detached clutches, disposed, one in each of said recesses, and extending therefrom to the drive wheel hub, means for preventing lateral and endwise displacement of said clutches, springs adapted to urge the free ends of said clutches to

contact with the drive wheel hub, and means for rotating said drum, all substantially as herein described. 4th. In a bicycle, or like

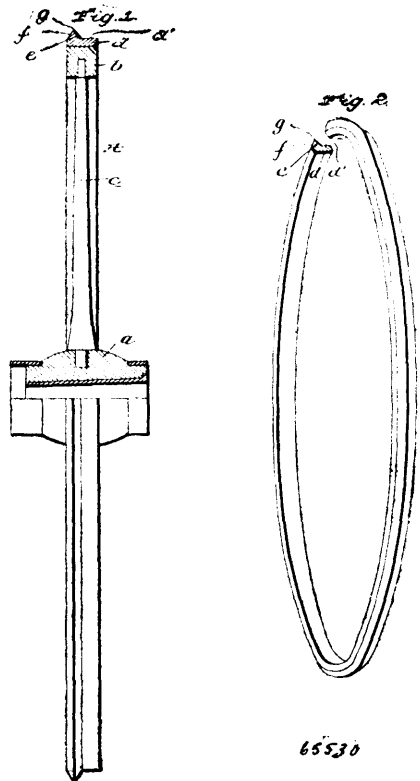


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vehicle, in combination, a rigidly mounted bracket, provided with an angular offset, and a central member, a drum rotatably mounted on said central member, a flexible drive connection, having one end secured to, and capable of being wound upon said drum, and having its opposite end secured to the angular offset of said bracket, a drive rod provided with a clip containing a roller, the latter engaging said drive connection in a manner to withdraw the same from said drum, in the form of a loop, when said drive rod is moved endwise away from said bracket, and means for thus moving said drive rod, all substantially as herein described. 5th. In a bicycle, or like vehicle, in combination with the crank hanger, bearing pieces, rigidly disposed, one in each end of said hanger, and each provided with a suitable concentric opening, an axle, mounted centrally in said bearing pieces, cranks, loosely mounted, one on each end of said axle, a bevel toothed pinion, rotatably mounted midway of said axle, and bevel toothed collars, mounted on said axle, one on each side of said pinion, the said collars meshing at all times with said pinion, and each being provided with an arm, arranged to project outward through the concentric opening in the adjacent bearing piece, and engage the adjacent crank, to the end that said collars may be rotated on said axle in unison with the movements of said cranks, when the latter are moved, all substantially as herein described and for the purpose set forth. 6th. In a bicycle, or like vehicle, in combination with the crank hanger, bearing pieces, rigidly disposed, one in each end of said crank hanger, an axle rotatably mounted in said bearing pieces, means for holding said axle yieldingly against rotation, cranks loosely mounted one on each end of said axle, means within said crank hanger for insuring alternate movement of said cranks, save when simultaneously depressed, and a brake lever secured to, and depending from said axle, and provided at its free end with a suitable contact part, the parts being disposed so that the cranks, when alternately depressed, will work upon said axle, and when simultaneously depressed, a rotary movement will be imparted to the crank axle, whereby the contact part on the brake lever, will be brought into engagement with the tire of the drive wheel, all substantially as herein described. 7th. In a bicycle, or like vehicle, in combination, a rotatably mounted crank axle, means for holding the crank axle yieldingly against rotation, cranks loosely mounted one on each end of the crank axle, a bevel toothed pinion rotatably mounted parallel with, and midway the length of the crank axle, bevel toothed collars loosely mounted on said crank axle, one on each side of, and in mesh with said pinion, and a brake lever secured to and projecting away from said crank axle, said brake lever being provided with a suitable contact part, and said collars being capable of joint movement, each with the adjacent crank, as herein specified. 8th. In a bicycle or like vehicle, having a crank hanger, in combination, bearing pieces, rigidly secured one in each

end of said crank hanger, and each provided with a suitable opening, a crank axle rotatably mounted in said bearing pieces, means for holding the crank axle yieldingly against rotation, cranks loosely mounted one on each end of the crank axle, a bevel toothed pinion rotatably mounted parallel with, and midway the length of the crank axle, bevel toothed collars loosely mounted on said crank axle, one on each side of and in mesh with said pinion, and a brake lever secured to and projecting away from said crank axle, said brake lever being provided with a suitable contact part, and said collars being provided, the one with an arm projecting outward through the opening in the adjacent bearing piece, and engaging the adjacent crank and the other with an arm projecting outward through the opening in the opposite bearing piece, and engaging the opposite crank, as herein specified. 9th. In a bicycle, or like vehicle, in combination with the drive wheel, a suitably disposed crank axle, bell cranks loosely mounted, one on each end of said crank axle drive rods, one loosely connected at its forward end to the shorter member of each of said bell cranks, and each provided with a clip at its rear end containing a roller, brackets firmly mounted on the drive wheel axle, one adjacent to each end of the drive wheel hub, and each provided with an angular offset, and a central member, adapted to encircle the drive wheel axle, drums rotatably mounted, one on the central member of each of said brackets, flexible drive connections, one taking around the roller in the adjacent drive rod clip, and arranged to be wound upon one of said drums, and withdrawn therefrom in the form of a loop for rotating said drum, and the opposite drive connection taking around the roller in the opposite drive rod clip, and arranged to be wound upon the opposite drum, and withdrawn therefrom in the form of a loop, for rotating the last named drum, means for locking the drums, when thus rotated, to the drive wheel hub, means for yieldingly holding said drums, in their normal positions, and means for ensuring alternate action of the bell cranks, all substantially as herein described and for the purpose set forth.

No. 65,530. Vehicle Wheel. (*Roue de vehicule.*)



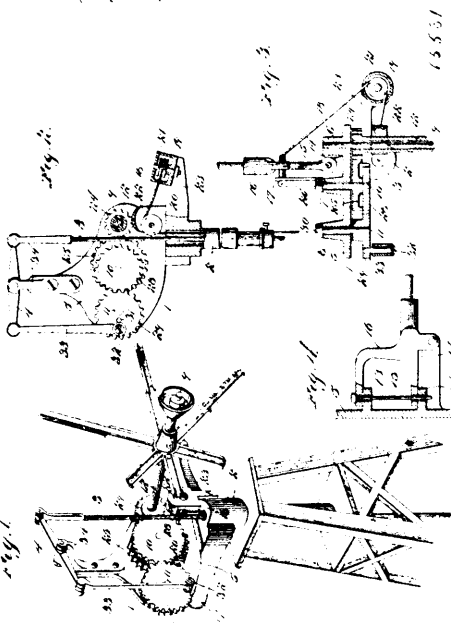
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Charles E. Wingate, Lawrence, Massachusetts, U.S.A., 23rd December, 1899; 6 years. Filed 29th September, 1899.)

Claim. The herein described vehicle wheel having a tire provided with the exterior, plain surface *d'*, and the integral peripheral flange *c* of a less width than the surface *d'*, the said flange having its opposite side straight and bevelled and also having a sharp edge and being adapted to wear sharp, and the plain surface *d'* being adapted to prevent the tire from sinking so far into the surface as to increase the draft and thus without interfering with the operation of the flange, substantially as specified.

No. 65,531. Gear for Windmills.

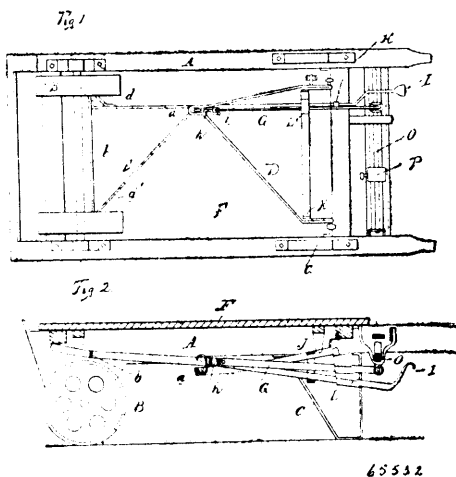
(Engrenage de moulin à vent.)



Charles E. Smith, Napoleon, Ohio, U.S.A., 23rd December, 1899; 6 years. (Filed 2nd November, 1899.)

Claim.—1st. In a device of the class described, the combination with a frame, and a wind wheel, of a walking beam or lever fulcrumed between its ends on the frame, a pump rod connected with one end of the beam or lever, elliptical gears meshing with each other a pitman connecting one of the elliptical gears with the walking beam or lever, the gearing connecting the other elliptical gear with the wind mill, substantially as described. 2nd. In a device of the class described, the combination of a rotary frame, and a wind wheel, a walking beam or lever fulcrumed on the frame, a pump rod connected with the walking beam or lever, elliptical gear meshing with each other, a pitman eccentricly connected with one of the elliptical gears and extending therefrom to the walking beam or lever, the gear wheel 25, connected with the other elliptical gear, and a pinion meshing with the gear wheel 25, and connected with the wind wheel, substantially as described. 3rd. In a device of the class described, the combination of a rotary frame provided with horizontal bearings 6, 7 and 8, a wind wheel shaft mounted in the bearing 6, short shafts extending through the bearings 7 and 8 and provided at their outer ends with heads, elliptical gears mounted on the short shafts, a gear wheel 25 fixed to the short shafts 10, a pinion mounted on the wind wheel shaft and meshing with the gear wheel 25, a walking beam or lever fulcrumed of the frame and connected with one of the elliptical gears, and a pump rod connected with the walking beam or lever, substantially as described.

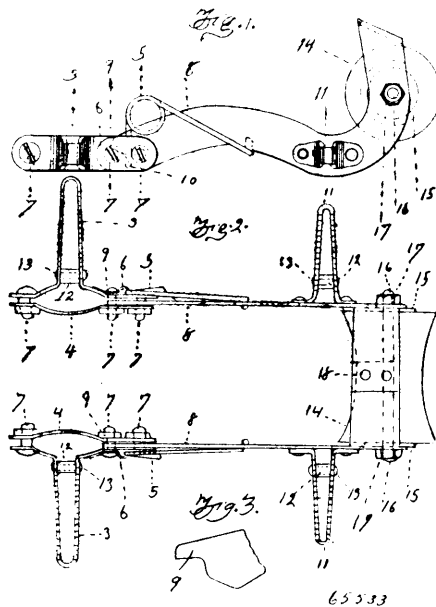
No. 65,532. Weighing Truck. (Balance.)



Orlando W. Parsell, Flushing, Michigan, U.S.A., 23rd December, 1899; 6 years. (Filed 28th August, 1899.)

Claim. 1st. In a scale, a lever formed of bar or band metal comprising the bar *a*, the cross-bar secured to the bar *a* at its end and bent to have pivot supporting extensions and bracing connections between the cross bar and bar *a*. 2nd. In a scale, the combination of a long lever comprising the bar *a*, the end cross bar *b* bent to have the end pivot supporting sections, and the bracing sections *d d*, the bracing section *a* bent to have the two parallel sections *i c* separated therefrom between the other parallel sections for the purposes described. 3rd. In a platform scale, a lever comprising a straight longitudinal bar, a transverse bar secured at the end thereof and bent to form end pivot supporting extensions, and bracing bars extending from said end pivot supporting extensions and secured to the longitudinal bar, substantially as described.

No. 65,533. Bicycle Brake. (Frein de bicyclet.)



William H. Holloway, Brazil, Indiana, U.S.A., 23rd December, 1899; 6 years. (Filed 2nd November, 1899.)

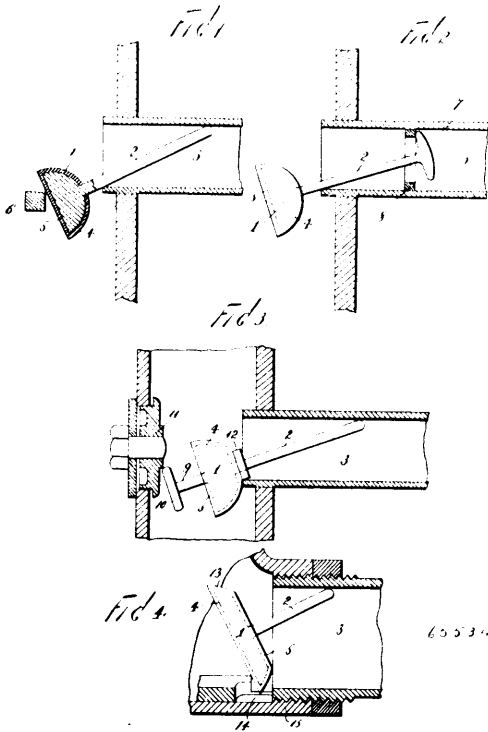
Claim.—In a combined bicycle brake and foot rest, and combination with clamps designed to be secured to the bicycle frame and composed respectively of clamping plates one of which is formed with a laterally extending foot rest, of a plurality of retaining screws passed through one end of the clamping members of each clamp, a brake frame, a roller and heel rests carried by said frame, the brake frame being pivoted upon one of the screws above named and provided with terminal projections designed to abut against either of said screws to limit the movement of the frame in one direction, and springs secured to the clamps and operatively connected to the brake frame for retaining the roller out of engagement with the wheel, substantially as specified.

No. 65,534. Device for Closing Tubes of Water Boilers in Case of Rupture. (Appareil pour brucher les tubes de chaudiere dans cas d'une rupture.)

Sylvain L. Ravier and Armand Janet, both of Paris, France, 23rd December, 1899; 6 years. (Filed 14th September, 1899.)

Claim.—1st. A device of the class described, comprising a body having a projecting rod arranged to interiorly engage the tube end, and means for suspending the device in position with relation to said tube end, substantially as and for the purpose set forth. 2nd. A device of the class described, comprising an approximately hemispherical body adapted to enter the tube end and carrying a rod interiorly engaging the latter, and means for suspending the device in position with relation to the tube end, substantially as and for the purpose set forth. 3rd. An improved device of the class described, comprising body having a core or central portion formed of hard metal or other material which fuses with difficulty and provided with a covering formed of soft metal or other non-metallic material which is adapted to apply itself closely to the edges of the openings of the tube ends, substantially as and for the purpose set forth. 4th. An improved device of the class described, comprising the body having the core or central portion formed of hard metal or other material which fuses with difficulty and carrying a projecting rod of like material and a covering surrounding said body and formed

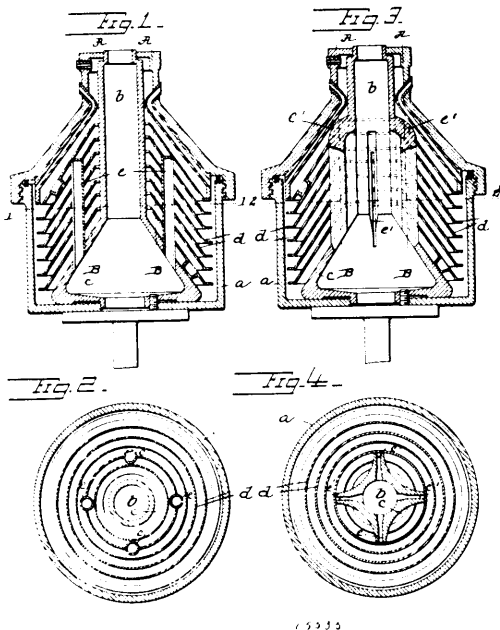
of soft metal or other non-metallic material adapted to apply itself closely to the edges of the openings of the tube end, substantially as



and for the purpose set forth. 5th. A device for automatically closing the tubes of water tube boilers, comprising a body having an exterior of soft metal or other non-metallic material adapted to apply itself to the edges of the openings of the tube ends, and means for suspending said body in operative position with respect to the tube ends substantially as and for the purpose set forth.

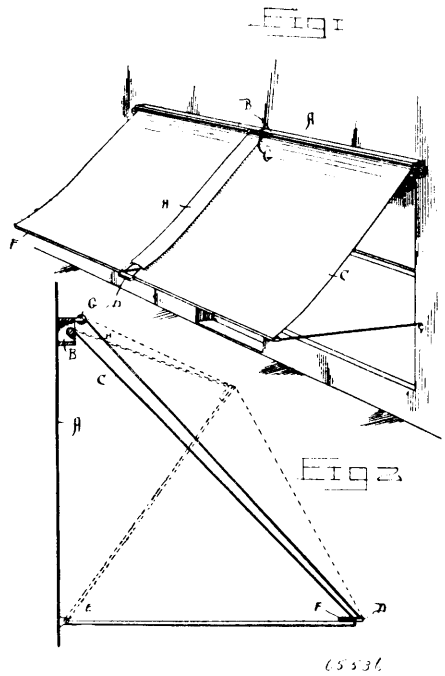
No. 65,535. Cream Separator.

(Separateur centrifuge pour les crèmes.)



periphery of the bowl toward the axis thereof and intersecting both radial horizontal and radial vertical planes of the bowl, of an orificed inlet and distributing device for the whole milk extending vertically through the bowl and opening into the neutral zone of the creamer, between adjacent plates of the division contrivance, between the outer end inner extremities of the division contrivance. 2nd. In a centrifugal creamer, the combination with a division contrivance consisting of a series of superposed conical division plates, the said plates extending from near the periphery of the bowl toward the axis thereof to within the cream zone of the creamer, of an orificed inlet and distributing device extending vertically through and intersecting said plates and opening into the neutral zone of the creamer between adjacent plates of the division contrivance. 3rd. In a centrifugal creamer, the combination with a division contrivance consisting of plates extending from near the periphery of the bowl toward the axis thereof and intersecting both radial horizontal and radial vertical planes of the bowl, of an orificed inlet and distributing device for the whole milk extending vertically through the bowl and openings into the neutral zone of the creamer, between adjacent plates of the division contrivance, between the outer and inner extremities of the division contrivance, the upper end of said orificed inlet being closed.

No. 65,536. Awning. (Aurent.)



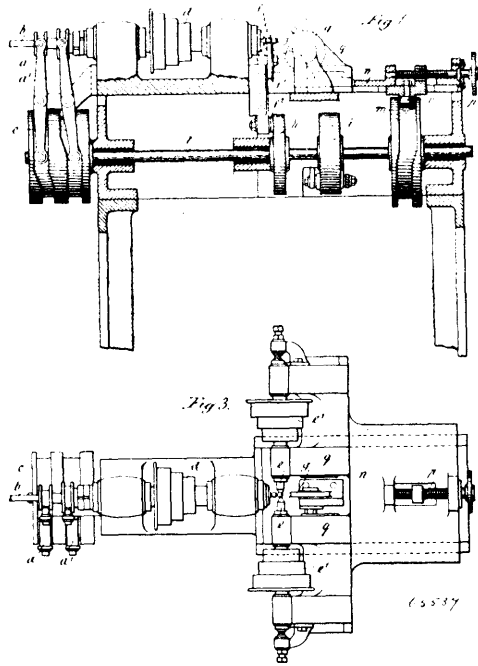
John J. Price, San Jose, California, U.S.A., 26th December, 1899; 6 years. (Filed 1st March, 1899.)

Claim.—1st. In an awning attachment, a spring roller G having a banner H attached thereto, and means for securing said banner to adjacent awnings, substantially as described. 2nd. In an awning attachment adapted to close the space between adjacent awnings, the strip or banner H secured at one end to a spring roller G, and at its one side to a main awning having its other side project over and away from said main awning, substantially as described. 3rd. The combination with two or more awnings rolling on the same main roller or shaft, an intermediate strip or banner having an independent roller upon which it coils, with a tension device actuating the roller and banner fastened directly to the main awning front. 4th. In combination with independent adjacent awnings, of an intermediate strip or banner having an independent roller upon which it coils, with a tension device actuating the roller, an extension fixed to the end of one of the lower awning bars projecting over the adjacent awning and serving as an attachment for the lower end of the banner. 5th. The combination with two adjacent awnings, of an extension piece attached to the lower bar of one of the awning frames having one end extending over the bar of the adjacent awning and out of contact therewith, an independent strip or banner having its lower edge fixed to the extension adapted to overlap and cover the open space intermediate between the awnings and having the upper end secured to an independently journalled roller with a tension device whereby the banner is coiled and uncoiled in unison with the movements of the awning to which it is attached and is capable of yielding when extended to allow the adjacent awning to be moved up or down.

The De Laval Separator Company, assignee of John J. Berrigan, all of New York City, New York, U.S.A., 23rd December, 1899; 6 years. (Filed 14th April, 1899.)

Claim.—1st. In a centrifugal creamer, the combination with a division contrivance consisting of plates extending from near the

No. 65,537. Method of and Apparatus For Making Steel Balls. (*Méthode et appareil pour la fabrication de boules en acier.*)



Carl Albert Hirth, Stuttgart, Wurtemberg, Germany. 26th December, 1899; 6 years. (Filed 10th June, 1899.)

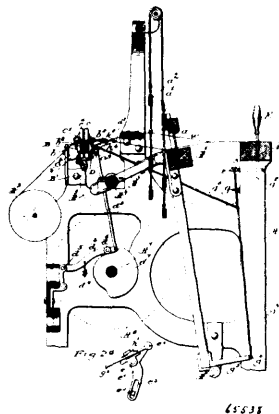
Claim.—1st. In a lathe for turning balls, the combination, with a hollow revolvable spindle, means for feeding a bar step by step through said spindle, and a tool slidable transversely of the said spindle and operating to turn and cut off a partial sphere from the said bar, of two opposed revolvable spindles arranged with their axes in line with each other and crosswise of the said hollow spindle, means for moving the said two spindles towards each other so as to grip the said partial sphere, and a second tool operating to complete the partial sphere, substantially as set forth. 2nd. In a lathe for turning balls, the combination, with a hollow revolvable spindle, means for feeding a bar step by step through the said spindle, and a tool slidable transversely of the said spindle and operating to turn and cut off a partial sphere from the said bar, of two opposed revolvable spindles arranged with their axes in line with each other and crosswise of the said hollow spindle, means for moving the two said hollow spindles towards each other so as to grip the said partial sphere, a second tool operating to complete the partial sphere, and means for moving the two said spindles longitudinally of the said hollow spindle so as to place the said partial sphere in contact with the said second tool, substantially as set forth. 3rd. In a lathe for turning balls, the combination, with two opposed revolvable spindles arranged with their axes in line with each other, and means for moving the said spindles towards each other so as to grip a partial sphere, of a carriage supporting the said two spindles and slidable transversely of their axes, and adjustable bracket connected to the said carriage, means for sliding the said carriage connected to the said adjustable bracket, and a tool for completing the partial sphere, substantially as set forth. 4th. In a lathe for turning balls, the combination with a bed, and a headstock provided with a spindle which supports a blank, of a carriage slidable on the bed parallel with the said spindle and in front of it, two headstocks slidable on the said carriage transversely of the said spindle and one on each side of it, a pair of opposed revolvable spindles carried by the said slidable headstocks, means for sliding the said slidable headstocks and the carriage respectively, and two tool supports arranged one in front and the other behind the said pair of spindles, substantially as set forth.

No. 65,538. Stop Motion for Looms. (*Arrête-navette de métier.*)

The Crompton and Knowles Loom Works, assignee of Horace Wyman, all of Worcester, Massachusetts, U.S.A., 26th December, 1899; 6 years. (Filed 17th August, 1899.)

Claim.—1st. In a warp stop motion for looms, the following instrumentalities, viz.: a shipper handle or device, a series of drop devices, a feeler having an arm, or projection, an actuator, an initiatory device carried by said actuator and co-operating with the arm or projection of said feeler, means to move said actuator and said initiatory device in unison while the drop devices occupy their

normal position, and a suitable intermediate connection between said initiatory device and said shipper handle, whereby when a drop

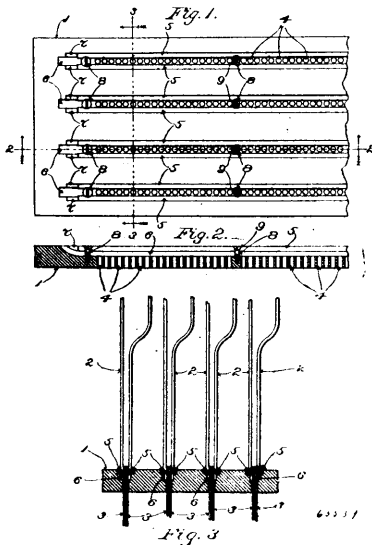


device occupies its abnormal position to arrest said feeler said initiatory device will have imparted to it a secondary motion to start said intermediate connection and affect the release of the shipper handle to stop the loom. 2nd. In a warp stop motion for looms, the following instrumentalities, viz.: a shipper handle, a series of drop devices, a feeler rail carried by a rock shaft, means to support said rock shaft, an actuator, an initiatory device carried by said actuator and operatively connected with the feeler rock shaft, said initiatory device presenting a lever of the first order, means to move said actuator and initiatory device to and fro in unison, the initiatory device moving said feeler so long as the drop devices occupy their normal position, and a suitable intermediate connection between said initiatory device and said shipper handle whereby the movement of a drop device into abnormal position to arrest the feeler rail causes said initiatory device to be moved and effect the release of the shipper handle to stop the loom. 3rd. In a warp stop motion for looms, the following instrumentalities, viz.: a shipper handle, a feeler, a series of drop devices, an actuator pivoted midway said drop devices, means to move said actuator to and fro, an initiatory device carried by and moving normally in unison with said actuator and operatively engaged with said feeler, said initiatory device having its operative and located normally substantially in line with the pivot about which the actuator turns, and suitable intermediate devices operatively joined with said initiatory device and located between it and said shipper handle, whereby the arrest of the feeler by a drop device in abnormal position is made to impart a secondary movement to the initiatory device about its pivot carried by the actuating device, to effect the stopping of the loom. 4th. In a warp stop motion for looms, the following instrumentalities, viz.: a shipper handle or device, a series of drop devices, a feeler, an actuator, operatively joined with said feeler, bearings to support the rocket shaft carrying the feeler, means to move said actuator to and fro, an initiatory device carried by and movable in unison with said actuator and co-operating with and moving the feeler, said initiatory device having its operative end located normally substantially in line with the pivot about which the actuator turns, and suitable intermediate devices operatively joined with said initiatory devices operatively joined with said initiatory device and intermediate it and the shipper handle, whereby when a drop device arrests the movement of the feeler the initiatory device is turned upon the actuator to release the shipper handle and stop the loom. 5th. In a warp stop motion for looms, a series of drop devices, a guide crossing the loom frame and presenting a series of warp rests, fixed bearings, a rock shaft mounted in said fixed bearings, and having an attached feeler, combined with an actuator pivotally mounted at the end of said guide at a point above the lower ends of the drop devices in their normal position, an initiatory device carried by said actuator and in operative engagement with the feeler rock shaft, and means to move said actuator to and fro to move the feeler back and forth under the drop devices in their normal position. 6th. In a warp stop motion for looms, a series of drop devices adapted to be maintained in their normal position by unbroken warps, a feeler, and means to support it, an actuator, an initiatory device pivoted thereon and in operative engagement with said feeler, a shipper handle or device, an intermediate connection controlled by one end of said initiatory device and adapted when the latter is removed to release the shipper handle, and a positioning device co-operating with said initiatory device to retain its upper end in position central with rotation to the axis of motion of the said actuator, whereby said initiatory device may be moved in unison with the actuator so long as the drop devices are in their normal position. 7th. A pivoted actuator, means to move to and fro, an initiatory device made as a lever pivoted upon said actuator, and a positioning device bearing against a part of said initiatory device to ensure a defined normal position for said initiatory device upon or with relation to said actuator. 8th. In a warp stop motion for looms, a pivoted actuator, means to move it,

and an initiatory device pivoted thereon, combined with a spring controlled positioning device carried by said actuator and acting against said initiatory device to maintain it in a yielding manner in its normal position. 9th. In a warp stop motion, a series of drop devices, an actuator, means to move it, an initiatory device carried by and normally movable in unison with said actuator, and a feeler coupled with said initiatory device, said feeler when it meets a drop device in abnormal position being arrested thereby and arresting the movement of the initiatory device, the continual movement of said actuator causing the initiatory device to be moved independently on or with relation thereto, and devices actuated by said initiatory device on the descent of a drop wire into its normal position to stop the loom. 10th. In a warp stop motion, a pivoted actuator, means to move it, an initiatory device carried by the actuator, a feeler under the control of said initiatory device, a shipper, a disengaging device to effect its release when desired, a controller, a connection between it and said initiatory device, means to position said controller in its normal imperative position, and a series of drop devices, the arrival of a drop device in its abnormal position arresting the feeler and putting the controller in its operative position to effect the release of the shipper. 11th. In a warp stop motion, a shipper, an actuator, means to move it, a series of drop devices, an initiatory device pivotally mounted on said actuator, a feeler connected with said initiatory device and moved thereby to and fro under a drop device in its normal position, and a suitable intermediate connection between said initiatory device and shipper, whereby whenever said feeler in either direction of its movement is arrested by a drop device, said initiatory device will have imparted to it an independent additional movement on or with relation to the moving actuator, said initiatory device by its additional movement causing the shipper to be moved to stop the loom. 12th. In a warp stop motion, a double hooked controller, a shipper handle, disengaging means between said controller and shipper handle, said disengaging means having two projections or surfaces to be engaged by the controller, an initiatory device connected with said controller, a feeler, a series of drop devices, and means to move said initiatory device in one or the other direction as said feeler meets one or the other edge of a drop device in its abnormal position, to thus move the controller in one or the other direction, said controller whenever moved by the initiatory device actuating the disengaging means. 13th. In a warp stop motion for looms, drop devices, a shipper, an actuator, means to move it, an initiatory device pivotally mounted on said actuator, and a feeler moved to and fro by said initiatory device under the drop devices when in their normal positions, the arrest of the feeler by a drop device in its abnormal position, the movement of the actuator being continued, turning the upper end of the initiatory device in the direction of movement of the feeler when arrested, causing said device through suitable connections to release the shipper and stop the loom.

No. 65,539. Bottom Board for Jacquard Machines.

(Plancher de métier à la jacquard.)

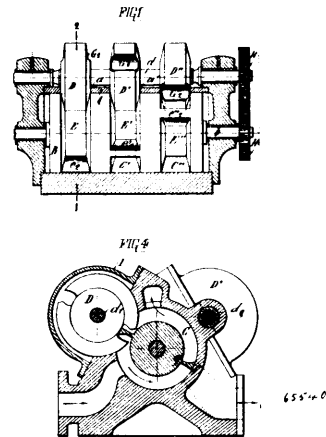


The Crompton and Knowles Loom Works, assignee of George W. Stafford, all of Providence, Rhode Island, U.S.A., 26th December, 1899; 6 years. (Filed 23rd October, 1899.)

Claim.—1st. The combination with the bottom board for Jacquard machines, having the holes therethrough, and having the wires or strips on opposite sides of the said holes, of the uprights having the rounded lower ends making contact with and resting upon the said wires or strips when the uprights occupy their lowest position, and the neck cords applied to the said ends and passing through the said holes, substantially as described. 2nd. The improved bottom

board for Jacquard machines, having the holes therethrough, the groove intersecting the upper ends of the said holes, and the wires or strips located at opposite sides of the said holes and groove, substantially as described. 3rd. The improved bottom board for Jacquard machines, having the holes therethrough, the groove intersecting the upper ends of the said holes, the rabbets at opposite sides of the said groove, and the wires seated in the said rabbets, substantially as described. 4th. The improved bottom board for Jacquard machines, having the holes therethrough, the groove intersecting the upper ends of the said holes, the rabbets on opposite sides of the said grooves, the wire or strips in the said rabbets, and the screws inserted between the said wires or strips and holding the latter in place, substantially as described.

No. 65,540. Rotary Engine and Pump.
(Machine et pompe rotatoire.)

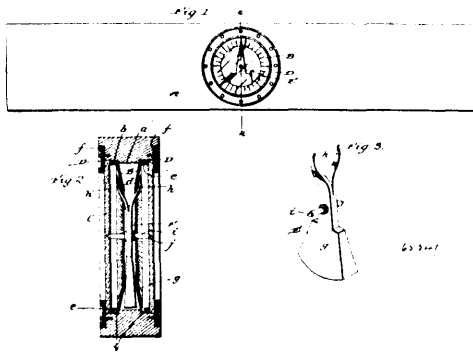


Louis Jules J. B. LeRond, Paris, France, 26th December, 1899; 6 years. (Filed 8th November, 1898.)

Claim.—1st. A new rotary engine, working with or without distributing valves and which can be used either as a motor or as a pump, having a single fixed cylindrical casing with hollowings through it, a motive cylinder set on the main shaft or turned solid with it and bearing any number of annular grooves or female tores, each of them being fitted with any number of diaphragms or pistons of any given profile, a series of male tores, at least as numerous as the female tores, fastened to one or more axes parallel to the main shaft and driven by it, said male tores projecting (with a close fitting and without any friction) through the said hollowings into the cylindrical casing, fitting into the female tores acting as rotary abutments, and rotating uniformly, so as to afford automatically, in order to give way to the pistons, diaphragms, notches, or recess which are cut into their periphery, and gearing, by means of which the main shaft drives the axes of said male tores or rotary abutments, substantially as described. 2nd. In a rotary engine with a single fixed cylindrical casing and one rotary cylinder having several annular grooves or female tores, provided with pistons and rotary abutments, the combination of several female tores acting as the cylinders of a multiplex expansion engine, in order to obtain the multiplex expansion, or compression, of fluid. 3rd. In a rotary engine in which the principle is that of the combination of rotary pistons with rotary abutments and in which two or more such movers are filled or a single main shaft, so as to form a single motive cylinder and rotate in a single cylindrical casing, the use of a telescopic casing, and, in connection with it, of a telescopic motive cylinder. 4th. In a rotary engine, in which the principle is that of the combination of rotary pistons with rotary abutments, the combination, in a single casing and in a single rotating cylinder, of any set of tores acting as motors with any set of tores acting as pumps. 5th. In any rotary engine, in which the principle is that of the combination of rotary pistons with rotary abutments and in which two or more such movers or pumps are filed on a single main shaft, the centre of the rotary abutments of successive movers, mounted on separate shafts all parallel to the main shaft, at proper angles around the main shaft, so as to avoid disturbances from unequal dilatation, and to allow a maximum shortening of intermediate ports, when multiplex expansion is used. 6th. In a rotary engine with a single fixed cylindrical casing and one rotary cylinder bearing grooves provided with pistons and rotary abutments, the location of the distributing valves inside of the shafts of rotating parts. 7th. In a rotary engine with a single fixed cylindrical casing with one rotary cylinder bearing several annular grooves acting as movers, the setting in order to reverse motion, of the grooves or of the diaphragms either at varying angles, or at fixed angles, some tores being, in the latter case, special for progressive and some special for retrograde motion. 8th. In a rotary engine with a single fixed uniform or telescopic cylindrical casing, and corresponding rotary motive cylinder, the connection, by proper means of spaces where

leakage collects, either together or with a same medium, in order to avoid longitudinal strain being set on the motive cylinder. 9th. In a rotary engine, in which the principle is that of the combination of rotary pistons with rotary abutments and in which two or more such movers are filed on a single main shaft, in order to be used for multiplex expansion or compression of fluids, the suppression of any independent distributing valve by using the first mover, or tore, as a distributor, by means of the combination, in said tore, of two or more pistons, with recesses, in the rotary abutment, of so corresponding profile as to realize between both piston and recess, during the rotation, a close fitting and tight joint, and with ports set at greater angle than that of the pistons, so that no direct escape of fluid can happen from inlet to exhaust.

No. 65,541. Level and Plumb. (*Niveau et fil à plomb.*)

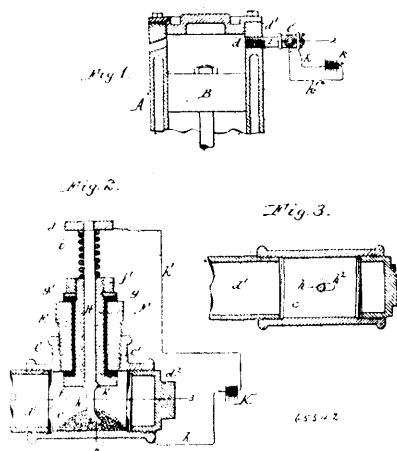


Jacob J. Brakefield, assignee of James Keyser and Charles Roche, all of Slidell, Louisiana, U.S.A., 26th December, 1899; 6 years. (Filed 21st October, 1899.)

Claim.—The improved level and plumb described, consisting essentially of the body A, having the central transverse opening a, and the inner circular grooves or rabbets b, and the outer grooves or rabbets f, in the opposite sides of the body and surrounding the opening, the two discs B, having the inwardly directed, annular portions o, arranged at an interval so as to allow a space between them, and also having the laterally disposed flanges c, arranged in the rabbets b, the two crystals C, placed against the lateral flanges of the discs B, the rings D, securing the crystals and discs in position, and the pendulum E, having the central journal with pointed ends and bearing in the crystals, said pendulum having its lower end weighted and arranged between the discs B, and its opposite end forked and curved as shown, so that one branch will pass on the outer side of each disc, substantially as specified.

No. 65,542. Electric Starting Device For Gas Engines.

(*Appareil de mise en mouvement électrique pour machines à gaz.*)



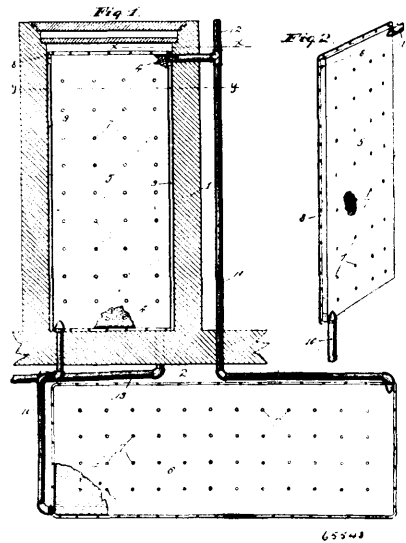
The Standard Automatic Gas Engine Company, Assignee of John Walter Raymond, all of Oil City, Pennsylvania, U.S.A., 26th December, 1899; 6 years. (Filed 4th October, 1899.)

Claim.—1st. In a starting device for explosive engines, the combination with the working cylinder, of a power chamber connected with the cylinder and with one pole of an electric generator and adapted to receive a charge of powder, and an electrode in said chamber connected to the other pole of said generator and movable toward and from the terminal of said chamber for producing a spark, substantially as set forth. 2nd. In a starting device for explosive engines, the combination with the working cylinder, of a chamber connected with said cylinder and with one pole of an electric genera-

tor and adapted to receive a charge of powder, an insulated shifting rod capable of a reciprocating and a rotary movement and adapted to be connected with the other pole of said generator, and a contact finger arranged on said rod within the chamber and provided with a laterally projecting contact point adapted to move toward and from the terminal of the chamber for producing a spark, substantially as set forth. 3rd. In a starting device for explosive engines, the combination with the working cylinder, of a chamber connected with said cylinder and with one pole of an electric generator and adapted to receive a charge of powder, an insulated guide sleeve mounted on said chamber, a shifting rod capable of a sliding and a rotary movement in said sleeve and adapted to be connected with the other pole of said generator, a laterally projecting or crank-shaped electrode arranged on the inner end of said rod and adapted to make contact with the bottom of said chamber, a shoulder arranged on the inner portion of said rod and bearing against a shoulder on the inner end of the guide sleeve, and a spring bearing with its ends against the outer end of said sleeve and a shoulder on the outer end of said rod, substantially as set forth.

No. 65,543. Refrigerating Apparatus.

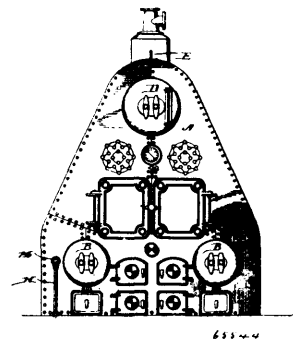
(*Appareil réfrigérant.*)



Madison Cooper and George A. Dole, both of Minneapolis, Minnesota, U.S.A., 26th December, 1899; 6 years. (Filed 28th September, 1899.)

Claim.—A refrigerating apparatus comprising an elevated tank or receptacle for the application of the primary receptacle refrigerant, and a series of multiplicity of independent and non-communicating circulating circuits for the secondary refrigerant, each circuit having an upper portion subject to the action of said primary refrigerant within said elevated tank, and a lower portion exposed at a lower level for cooling purposes, substantially as described.

No. 65,544. Water Tube Boiler. (*Chaudière sectionnelle.*)



Philip J. Keene and George J. Rockwell, both of Chicago, Illinois, U.S.A., 26th December, 1899; 6 years. (Filed 21st March, 1899.)

Claim.—1st. A water tube boiler consisting of two lower drums, an upper drum, a central or intermediate drum and tubes extending from the upper arm to the lower drums, from the lower drums to the central or intermediate drum, and from the central or intermediate drum to the upper drum, whereby a complete circulation

of water is economically effected in the generation of steam. 2nd. A water tube boiler, consisting of two lower drums, an upper drum, tubes for the circulation of water back and forth through the drums and a steam dome or drum surmounting the upper water drum. 3rd. A water tube boiler consisting of four drums, three of which have a triangular arrangement with respect to one another, and the fourth located approximately at the central point, tubes extending from drum to drum whereby to create a circulation of water, and a steam dome or drum surmounting the upper water drum. 4th. A water tube boiler consisting of two lower, one upper and one central or intermediate water drum, partitions extending from the two lower drums to the central or intermediate drum, and water tubes extending from the upper to the lower drums on the outer side of the partitions, from the lower drums to the central or intermediate drum on the inner side of the partitions, and tubes extending from the central or intermediate drum to the upper drum. 5th. A water tube boiler consisting of two lower, one upper and one central or intermediate water drum, partitions extending from the two lower drums to the central or intermediate drum, and water tubes extending from the upper to the two lower drums on the outer side of the partitions, from the lower drums to the central or intermediate drum on the inner side of the partition, tubes extending from the central or intermediate drum to the upper drum, and a steam dome or drum surmounting the upper water drum. 6th. In a water tube boiler, the combination with three drums arranged triangularly, and circulating tubes connecting said drums for a complete circulation of water, and an outer casing or housing enclosing the said drums and tubes. 7th. In a water tube boiler, the combination with three drums arranged triangularly, and circulating tubes connecting said drums for a complete circulation of water, of an outer casing or housing enclosing the said drums and tubes, said casing or housing having a lining of asbestos or other comparatively indestructible material. 8th. In a water tube boiler, the combination with two lower drums, an upper drum, a central or intermediate drum, and water tubes extending from drum to drum whereby a complete circulation of water is effected, of an outer casing or housing lined with asbestos or other comparatively indestructible material. 9th. In a water tube boiler, the combination with two lower drums, an upper drum, a central or intermediate drum, and water tubes extending from drum to drum whereby a complete circulation of water is effected, of an outer casing or housing enclosing the drums and tubes, said casing or housing lined with asbestos or other comparatively indestructible material, and a steam dome or drum surmounting the upper water drum and extending outside of the casing or housing. 10th. In a water tube boiler, the combination with an outer casing or housing, of two lower drums, a central or intermediate drum and an upper drum, of water tubes connecting the several drums, and non-combustible material extending from the lower drums to the central or intermediate drum between certain of the tubes, and dividing them into upper and lower banks. 11th. In a water tube boiler, the combination with an outer casing or housing, of two lower drums, a central or intermediate drum and an upper drum, of water tubes connecting the several drums and non-heat conducting material extending from the lower drums to the central or intermediate drum between certain of the tubes dividing them into lower and upper banks, and a horizontal diaphragm for controlling the direction of the hot air passage. 12th. In a water tube boiler, the combination with a combustion chamber, water drums on each side thereof, and one directly over its top, of tubes extending from one drum to the other in an inclined direction and inclined non-heat conducting material extending from the side drums to the central or intermediate drum over these tubes. 13th. In a water tube boiler, the combination with an outer casing or housing and water drums therein, of a feed water pipe having a circuitous passage inside of the casing at one end and discharging into the drums. 14th. In a water tube boiler, the combination with the outer casing or housing, and water drums therein, of a feed water pipe having a circuitous passage inside of the casing, and emptying into mud pipes leading from the drums. 15th. In a water tube boiler, the combination with the outer casing or housing, of two lower drums, a central or intermediate drum, an upper drum, circulating tubes connecting these several drums, partitions extending from the lower drums to the central or intermediate drum and dividing the circulating tubes into two banks, said partitions extending nearly to the rear wall of the casing, and an upper diaphragm extending across from wall to wall of the casing or housing from the rear end forward nearly to the front, whereby the products of combustion pass upwardly and rearwardly amongst the inner bank of tubes, thence upwardly and forwardly into the larger space outside of the partition among the outer bank of tubes, and finally around the forward edge of the diaphragm, and thence rearwardly over the latter and out of the casing. 16th. In a water tube boiler, the combination with an outer casing or housing, of two lower drums, a central or intermediate drum, an upper drum, circulating tubes connecting these several drums, partitions extending from the lower drums to the central or intermediate drum and dividing the circulating tubes into two banks, said partitions extending nearly to the rear wall of the casing, and an upper diaphragm extending across from wall to wall of the casing or housing from the rear end forward nearly to the front, whereby the products of combustion pass upwardly and rearwardly amongst the inner bank of tubes, thence upwardly and forwardly into the larger space outside of the par-

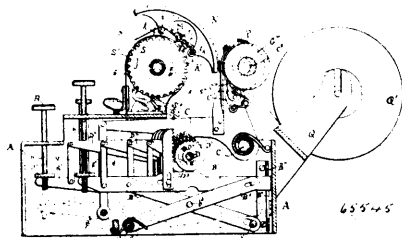
titions among the outer bank of tubes, and finally around the forward edge of the diaphragm, and thence rearwardly and over the latter and out of the casing, and a feed water pipe which draws its supply from a suitable source and extends into the rear end of the casing, thence upwardly to a point at or near the top of the casing, then returning in a circuitous system of coils and finally dividing and entering the two lower water drums. 17th. In a water tube boiler, the combination with a central or intermediate drum, of a series of drums in triangular relation with one another around this central or intermediate drum, water tubes connecting the drums, a portion of said tubes being submerged and a portion above the water level. 18th. In a water tube boiler, the combination with a central or intermediate drum and outside drums in triangular relation with respect to one another, of tubes connecting said drums and a set of grates on either side of the median line of the furnace, whereby all of the drums in triangular relation are exposed to the products of combustion. 19th. In a water tube boiler, the combination with a central or intermediate drum and outside drums in triangular relation with respect to one another, of tubes connecting said drums and a set of grates on either side of the median line of the furnace, whereby all of the drums in triangular relation and the tubes connecting the outer drums directly together are exposed to the products of combustion. 20th. In a water tube boiler, the combination with a central or intermediate drum and three other drums and water tubes connecting all four drums, of combustion chambers placed on either side of one of the drums. 21st. In a water tube boiler, the combination with a central or intermediate drum and three other drums in triangular relation with respect to one another, of tubes connecting the drums together, certain of said tubes being above the water level, of a main steam pipe extending into the steam space of one or more of the drums, a portion of said steam pipe inside of the drum or drums being perforated on the upper surface, whereby to act as a dry pipe or steam separator. 22nd. In a water tube boiler, the combination with a central or intermediate drum, a lower drum beneath the latter, and two other drums arranged above and at either side of the central or intermediate drum, the three outer drums in triangular relation with one another, of water tubes extending from the two upper drums to the lower drum and from the two upper drums to the central or intermediate drum. 23rd. In a water tube boiler, the combination with a central or intermediate drum, a lower drum beneath the latter, and two upper drums arranged above and at either side of the central or intermediate drum, the three outer drums in triangular relation with one another, of water tubes extending from the two upper drums to the lower drum and from the two upper drums to the central or intermediate drum, a portion of these latter tubes being submerged and the remaining portion above the water level. 24th. In a water tube boiler, the combination with a central or intermediate drum, a lower drum and two upper drums, said outer drums in triangular relation with one another, of tiling extending from the lower drum to the two upper drums, tubes connecting said drums and located below said tiling, and horizontal tiling extending from the diagonal tiling to the central or intermediate drum. 25th. In a water tube boiler, the combination with a central or intermediate drum, a lower drum and two upper drums, said outer drums in triangular relation with one another, of tiling extending diagonally from the lower drum to the two upper drums, tubes connecting said drums and located below said tiling, horizontal tiling extending from the diagonal tiling to the central or intermediate drum, tubes leading from the upper drums to the central or intermediate drum, said tubes constituting a wall above the space between them and the tiling, and tiling extending across vertically at the rear of the furnace and closing the space above the horizontal tiling and between it and the upper drums. 26th. In a water tube boiler, the combination with a central or intermediate drum, a lower drum and two upper drums, said outer drums in triangular relation with one another, of tiling extending diagonally from the lower drum to the two upper drums, tubes connecting said drums and located below said tiling, horizontal tiling extending from the diagonal tiling to the central or intermediate drum, and tubes leading from the upper drums to the central or intermediate drum, said tubes constituting a wall above the space between them and the tiling. 27th. In a water tube boiler, the combination with a casing, of a feed water pipe coiled in several vertical rows, the coils of said rows interlocking each other, thus making practically a solid water back for the protection of the casing from the intense heat. 28th. In a water tube boiler, the combination with drums and tubes connecting the same for the circulation of water, of feed water coils, a pipe extending therefrom to one or both of the drums, and a valve or valves in said pipe. 29th. In a water tube boiler, the combination with an outer casing of sheet metal lined with non-combustible material, of drums, combustion chambers and heater coils arranged in interlocking rows and located close to the rear end of the casing, and tiling which deflects the products of combustion in a direction toward said coils.

No. 65,545. Calculating Machine. (Machine a calculator.)

The Commercial Adding Machine Company, assignee of John C. McLeland, all of Cleveland, Ohio, U.S.A., 26th December, 1899; 6 years. (Filed 26th September, 1899.)

Claim. 1st. In a computing and recording machine, recording mechanism consisting of the combination of operating means type,

a suitable type support means for carrying a sheet, said type support and sheet carrying means relatively retractable, means for shifting

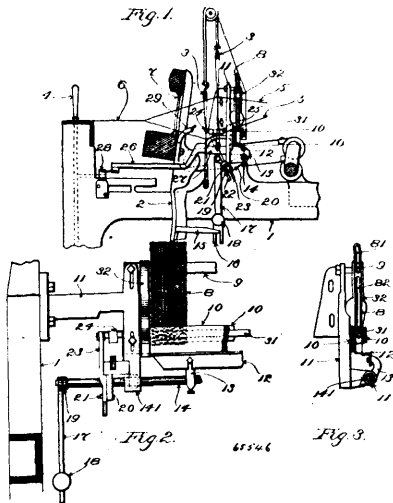


said type support on each movement of the operating means a distance equal to that between two digits in successive orders of the numbers to be recorded and computing mechanism, substantially as set forth. 2nd. In a computing and recording machine, recording mechanism consisting of the combination of operating means, type, a single type segment on which said type are mounted, means for carrying a sheet, said type support and sheet carrying means relatively retractable and means for shifting said type segment on each operation of the operating means a distance equal to that required to print the number in the next lower order of the number to be recorded, substantially as set forth. 3rd. In a computing and recording machine, recording mechanism consisting of the combination of operating means, a single type segment or carrier having a line of type numbers arranged thereon, means for carrying a sheet, said type segment and sheet carrying means relatively retractable, said operating means capable of moving said segment in the direction of the said line of type and also a distance equal to that required to print the digit in the next lower order in the number to be recorded, substantially as set forth. 4th. In a computing and recording machine, the combination of a plurality of operating keys and mechanism, a series of type mounted upon a carriage capable of having a longitudinal and a transverse movement, said operating keys and mechanism capable of imparting transverse movement to said type carriage, and means for intermittently imparting said longitudinal movement to said carriage, substantially as set forth. 5th. In a computing and recording machine, the combination of operating means, a series of type mounted upon a carriage, means for rotating said carriage about an axis and for intermittently advancing it in the direction of said axis, interdependent computing discs, and means for actuating each disk successively from left to right on each operation of the operating means, substantially as set forth. 6th. In a computing and recording machine, the combination of operating means, a plurality of interdependent computing discs, a type carriage having rotary and a longitudinal motion and provided with means for engaging said discs, means for intermittently advancing said carriage from left to right and bringing said engaging means successively into operative communication with each disc, and means for actuating said carriage to have said rotary motion on each operation of the operating means, substantially as set forth. 7th. In a computing and recording machine, the combination of operating means, a series of type mounted upon a carriage about an axis and for intermittently advancing it in the direction of said axis, and interdependent computing discs, said carriage provided with means for actuating said computing discs, said carriage provided with means for engaging separately and successively from left to right said computing discs, substantially as set forth. 8th. In a computing and recording machine, the combination of operating means, a series of type mounted upon a carriage, means for rotating said carriage about an axis and for intermittently advancing it in the direction of said axis, and interdependent computing discs, said carriage provided with a reversible dog for engaging and actuating said discs whereby said discs may be rotated in either of their two circumferential directions, substantially as set forth. 9th. In a computing and recording machine, the combination of operating means, a series of type mounted upon a carriage, means for rotating said carriage about an axis and intermittently advancing it in the direction of said axis, and interdependent computing discs, said carriage provided with a rotatable dog provided with a plurality of teeth having a pitch substantially equal to the distance from centre to centre of said discs, and capable of engaging and actuating said discs, substantially as set forth. 10th. In a computing and recording machine, the combination of operating means, a plurality of interdependent computing discs, a carriage, means for imparting to said carriage a rotary and longitudinal motion, rotatable means for engaging said discs, means for intermittently advancing said carriage from left to right whereby said engaging means is successively brought into the vicinity of each disc, means for bringing said engaging means into operative communication with each disc, and means for actuating said carriage to have rotary and longitudinal motion on each operation of the operating means, substantially as set forth. 11th. In a computing and recording machine, the combination of operating means, a plurality of interdependent computing discs, a carriage, means for imparting to said carriage a longitudinal and a rotary motion, a rotatable dog provided with a plurality of teeth adapted to engage said discs, said dog mounted upon an arbor on said carriage, substantially parallel with the axis

of said discs, whereby said dog may be reversed, and means for rotating and advancing said carriage longitudinally from left to right on each operation of the operating means, substantially as set forth. 12th. In a computing and recording machine, the combination with a series of interdependent computing discs, of a type carriage having an intermittently longitudinal and a revolving movement relatively to and in the vicinity of said discs, said carriage provided with means adapted to engage the peripheries of said discs, whereby said revolving motion may be communicated to said discs, said engaging means adapted to engage successively each of said discs from left to right on each intermittent longitudinal movement of the carriage, substantially as set forth. 13th. In a computing and recording machine, the combination of a series of interdependent computing discs, a carriage having concomitant intermittent longitudinal and a revolving movement relatively to and in the vicinity of said discs, said carriage provided with a reversible dog adapted to successively engage said discs from left to right whereby said revolving motion may be successively communicated to said discs on each longitudinal and revolving movement of said carriage, substantially as set forth. 14th. In a computing and recording machine, the combination of a series of computing discs, a hollow sleeve forming the bearing for said discs and mounted in a suitable housing, a type carriage, a hollow arbor journaled in said sleeve, a shaft mounted in said arbor, a guide adapted to guide said carriage and suitably secured to said arbor, and means adapted to rotate and reciprocate said shaft, said type carriage being secured to said shaft, substantially as set forth. 15th. In a computing and recording machine, the combination of a series of computing discs, a sleeve forming the bearing for said discs, and mounted in a suitable housing, a shaft concentric with said sleeve, means for rotating and reciprocating said shaft, and a type carriage secured to said shaft, substantially as set forth. 16th. In a computing and recording machine, the combination of a sleeve secured to a suitable housing, a series of computing discs mounted upon said sleeve, a hollow arbor journaled in said sleeve, a type carriage, a carriage guide secured to said arbor, a shaft rotatably and slidably mounted in said arbor, and means for reciprocating and rotating said shaft, said guide being operatively connected with said carriage, whereby said guide rotates with said carriage, substantially as set forth. 17th. In a computing and recording machine, the combination of a shaft mounted in a suitable bearing and provided with projections, reciprocating means adapted to engage said projections to intermittently move said shaft in the direction of its axis, means for reciprocatively rotating said shaft, and operating means for actuating said reciprocating means and said rotating means, substantially as set forth. 18th. In a computing and recording machine, the combination of a key stems cross levers, and an operating bar mounted upon said cross levers, said levers adapted to move said bar, the initial and final position, of the latter being parallel with the other, substantially as set forth. 19th. In a computing and recording machine, the combination of a key stem, cross levers, and an operating bar mounted upon said cross levers the latter journaled to said bar and to a stationary part of the machine, said levers adapted to move said bar and the initial and final positions of the latter being parallel with each other, substantially as set forth. 20th. In a computing and recording machine, the combination of a key stem, an operating bar, and two cross levers, one extremity of each being journaled on said bar, the other extremities journaled upon a stationary part of the machine, substantially as set forth. 21st. In a computing and recording machine, the combination of a key stem, an operating bar, and two cross levers, one extremity of each lever journaled on said bar and the other extremities journaled upon the frame of the machine, one journal of each lever being elongated, substantially as set forth. 22nd. In a computing and recording machine, the combination of a key stem, an operating bar, and two cross levers, one extremity of each lever journaled on said bar and the other extremities journaled upon the frame of the machine, each lever having one elongated journal, and both said levers pinned to each other at their crossing, substantially as set forth. 23rd. In a computing and recording machine, the combination of operating bars, a shaft, levers mounted upon said shaft, each lever adapted to be actuated by one of said bars, and means for controlling the computing mechanism, said levers each adapted to actuate said controlling means, substantially as set forth. 24th. In a computing and recording machine, the combination of operating bars, a shaft, a rocking rod mounted upon said shaft, and means for controlling the computing mechanism, said rod adapted to actuate said controlling means, said bars each adapted to operate said rod actuating means, substantially as set forth. 25th. In a computing and recording machine, the combination of a shaft, a rod supported upon supports journaled upon said shaft, computing mechanism, oscillating means journaled upon said shaft, and connecting means for operatively connecting said oscillating means with said computing mechanism, said rod adapted to actuate said oscillating means, substantially as set forth. 26th. In a computing and recording machine, the combination of a shaft, a rod supported upon supports journaled upon said shaft, computing mechanism, a pulley journaled upon said shaft, and connecting means for transmitting motion from said pulley to said computing mechanism, said rod operatively connected with said pulley, substantially as set forth. 27th. In a computing and recording machine, the combination of a shaft, an arm and pulley, a rod supported upon

said arm and pulley, each of the latter being journaled upon said shaft, computing mechanism, and connecting means for transmitting motion from said pulley to said computing mechanism, said rod operatively connected with said pulley, substantially as set forth. 28th. In a computing and recording machine, the combination of a shaft, an arm and pulley, a spring actuated rod supported upon said arm and pulley, each of the latter journaled upon said shaft, computing mechanism, and connecting means for transmitting motion from said pulley to said computing mechanism, substantially as set forth. 29th. In a computing and recording machine, the combination of a shaft, an arm and a spring actuated pulley, each journaled upon said shaft, a rod supported upon said arm and pulley, computing mechanism, and connecting means for transmitting motion from said pulley to said computing mechanism, substantially as set forth. 30th. In a computing and recording machine, the combination of a shaft, an arm and a pulley each journaled upon said shaft, a rod supported by said arm and pulley, computing mechanism, and elastic connecting means for transmitting motion from said pulley to said computing mechanism, substantially as set forth. 31st. In a computing and recording machine, the combination of a shaft, an arm and a pulley each journaled upon said shaft, a rod supported upon said arm and pulley, computing mechanism, and connecting means for transmitting motion from said pulley to said computing mechanism, substantially as set forth. 32nd. In a computing and recording machine, the combination of a shaft, a rod supported upon supports journaled upon said shaft, computing mechanism, means for transmitting motion from said rod to said computing and recording mechanism, and a plurality of means independent of each other, each adapted to be operated to actuate said rod, substantially as set forth. 33rd. In a computing and recording machine, a platen mounted at one end and having the other end free, substantially as set forth. 34th. In a computing and recording machine, a platen supported at one end only and adapted to be extended at the free end, substantially as set forth. 35th. In a computing and recording machine, a platen having one end free, substantially as set forth. 36th. In a computing and recording machine, the combination with a platen, of a platen shaft for supporting said platen and mounted at one end only and having a removable portion at said unmounted end, substantially as set forth. 37th. In a computing and recording machine, the combination of a platen, a platen shaft for supporting said platen and supported at one end only, a secondary platen adapted to be secured at the free end of said first named platen, whereby the length of the platen may be adjusted, substantially as set forth.

No. 65,546. Stop Motion for Looms.
(*Mouvement d'arrêt pour métiers.*)

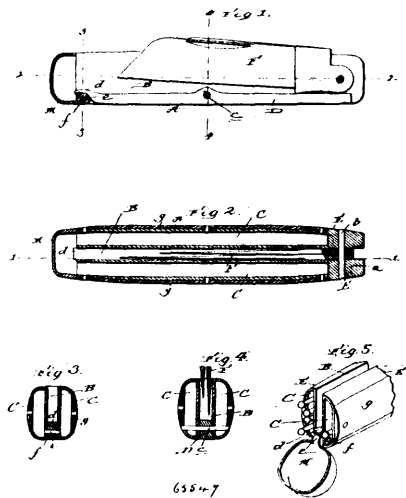


Edwin A. Robinson and Victor Piron, both of Lowell, Massachusetts, U.S.A., 26th December, 1899; 6 years. (Filed 1st June, 1899.)

Claim.—1st. In a warp stop motion for looms, the combination with the harnesses, and the series of detectors or drop wires provided with slots strung upon the warp threads and moved by the latter as they are shed, of the independently movable rod 31 passing through said slots in the said detectors or drop wires, raised by the latter and operating to steady the said detectors or drop wires through engagement with the lower ends of the said slots, substantially as described. 2nd. In a warp stop motion for looms, the combination with the harnesses, and the series of detectors or drop wires provided with slots strung upon the warp threads and moved by the latter as they are shed, of the independently movable rod 31 passing through said slots in the said detectors or drop wires, raised by the latter, and operating to steady the said detectors or drop wires through

engagement with the lower ends of the said slots, and the blocks 32 at the ends of the series of detectors or drop wires, substantially as described. 3rd. The combination with a series of detectors co-acting with the warp threads in a loom and provided with slots, of the independently movable gravitating rod 31 passing through said slots, supported by the lower ends thereof, and raised by the detectors as they ascend, substantially as described.

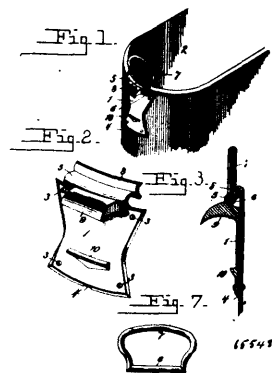
No. 65,547. Pocket Knife and Match Safe.
(*Couteil et boîte à allumettes.*)



James N. Burton and J. Frank Beck, both of Atlanta, Georgia, U.S.A., 26th December, 1899; 6 years. (Filed 17th November, 1899.)

Claim.—1st. A combined pocket knife and match safe comprising a handle having a blade compartment, and match receptacles arranged at opposite sides of the blade compartment and open at one end of the handle, a blade pivotally mounted in the blade compartment adjacent to one end of the handle, a cover for the match receptacles pivotally connected to the handle at the opposite end thereof, and a spring forming the bottom of the blade compartment and arranged to act against both the blade and cover, substantially as specified. 2nd. A combined pocket knife and match safe, comprising a handle having a blade compartment and a match receptacle, a blade, a cover for the match receptacle and a spring arranged to act against both the blade and cover, substantially as specified. 3rd. In a combined pocket knife and match safe, the combination of a handle comprising a longitudinal blade compartment and longitudinal match receptacles disposed at opposite sides of the compartment, said handle being made up of a spring bar and hollow sections open one end, which constitute the match receptacles and serve in conjunction with the spring bar to form the blade compartment, a blade pivoted in the handle and arranged to be engaged by the spring bar, and a cover for the match receptacles having a lug pivoted in the handle and also arranged to be engaged by said spring.

No. 65,548. Handle for Wash Boilers.
(*Anse pour bouillotte à linge.*)



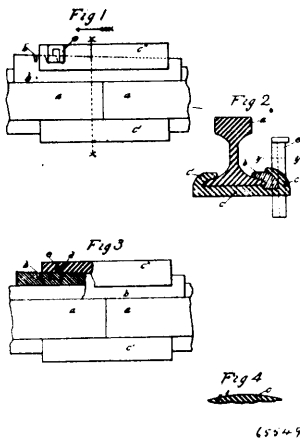
Max M. Wald, August J. Southoff and Frederick G. Southoff, all of Madison, Wisconsin, U.S.A., 26th December, 1899; 6 years. (Filed 1st December, 1899.)

Claim.—1st. As an article of manufacture, a handle attaching device for wash boilers and the like, consisting of a body portion

having integral lips or stops on its outer surface, arranged one at the upper and the other at the lower portion of the body, and an integral handle socket extending in a curved line from the top of the upper lip toward the boiler to embrace the handle and open on its inner side to receive the handle, said parts being formed in one piece, substantially as and for the purpose specified. 2nd. As a new article of manufacture, a handle attaching device for wash boilers and the like, formed of sheet metal in one piece, and comprising a body portion having an outbent lip or stop forming an angular continuation of its bottom edge, a handle socket formed by bending the upper edge of the body portion into substantially a half circle, so as to leave the socket open at the inner side, and a lip at the upper end of the body portion formed by punching a portion of the metal outward from the handle socket and bending the same to form a stop which is independent of the handle socket, substantially as specified. As an article of manufacture, a handle attaching device for wash boilers and the like, formed in one piece of sheet metal, and comprising a body portion having its lower edge bent outward to form a lip or stop, the upper edge being bent into substantially semi-circular form to provide a handle socket open at the inside, an upper lip or stop formed by punching a portion of the metal from the handle socket and bending the same outward and downward, and a hook extending upward from the upper portion of the handle socket, and designed to embrace the rim or upper edge of a wash boiler or the like, substantially as described.

No. 65,549. Railway Rail Joint.

(*Joint de rail de chemin de fer.*)



Smith Ferris New York City, New York, and Edward Shelton, Hartford, Connecticut, U.S.A., 26th December, 1899; 6 years. (Filed 13th November, 1899.)

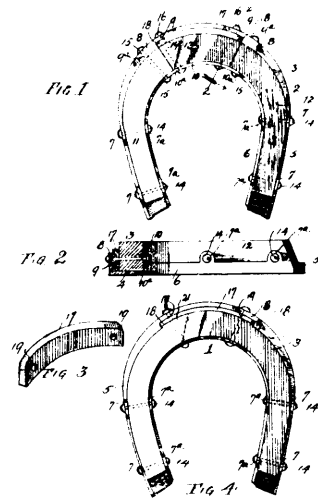
Claim.—1st. In combination, the two double foot rails, the wedge adapted to make contact interiorly with the top and, in lesser degree, with the bottom of one foot of both rails, and the shoe adapted to make contact with nearly the whole surface of that portion of both rails which it underlies and with the bottom of said wedge, provided on one side with an incurved flange adapted to make contact interiorly with one foot of both rails, and provided on the other side with an incurved flange adapted to make contact interiorly with the top of said wedge, all substantially as described and for the purposes set forth. 2nd. In combination, the two double foot rails, the wedge adapted to make contact interiorly with the top and, in lesser degree, with the bottom of one foot of both rails, and the top curved shoe adapted to make contact with nearly the whole surface of that portion of both rails which it underlies and with the bottom of said wedge, provided on one side with an incurved flange adapted to make contact interiorly with one foot of both rails, and provided on the other side with an incurved flange adapted to make contact interiorly with the top of said wedge, all substantially as described and for the purposes set forth. 3rd. In combination, the two double foot rails, the edge-mortised wedge adapted to make contact interiorly with the top and, in lesser degree, with the bottom of one foot of both rails, the shoe provided with the angular mortise, and the tapering angular key, all substantially as described and for the purposes set forth.

No. 65,550. Horse Shoe. (Fer à cheval.)

Hugo Elder Ewart and James Milne, both of Toronto, Ontario, Canada, assignees of Felix Galley, Buffalo, New York, U.S.A., 26th December, 1899; 6 years. (Filed 7th September, 1899.)

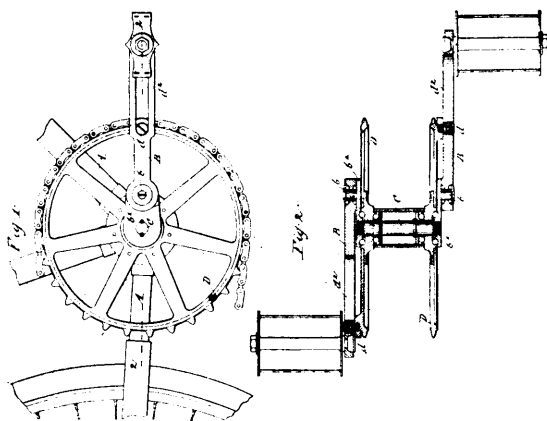
Claim.—1st. An elastic tread horse shoe comprising a skeleton metallic shoe, an elastic cushion fitted to said skeleton shoe, a wear plate interposed between the cushion and the toe portion of the shoe and held in place by the elasticity of the cushion, and means for attaching said cushion and the wearing plate to the shoe, substantially as described. 2nd. An elastic tread horse shoe comprising

a skeleton metallic shoe, an elastic cushion held therein, and a metallic wear plate confined between the skeleton shoe and the



elastic cushion and exposed to the pressure of said cushion, substantially as described. 3rd. The combination with a skeleton shoe and an elastic cushion held therein, of a metallic wear plate attached loosely to the skeleton shoe at the toe thereof and subjected to the pressure of the elastic cushion to be held between said cushion and shoe against play or movement, substantially as described. 4th. An elastic tread horse shoe comprising a skeleton shoe, a divided elastic cushion having its members fitted within said skeleton shoe and with its toe portion between the side portions thereof, means for fastening the side sections of the divided cushion to said shoe, separate means for attaching the toe section of the cushion to the corresponding part of the shoe and a metallic wear plate fitted between the toe portion of the shoe and the toe section of the cushion and held loosely in place by means which attach said toe section of the cushion to the shoe, substantially as described. 5th. An elastic tread horse shoe comprising a skeleton shoe, a divided elastic cushion fitted to said skeleton shoe and having its sections secured in place independently of each other, and a metallic wear plate co-extensive with the toe section of the cushion and secured loosely in place between said cushion and the shoe, said wear plate being subjected to the pressure of said cushion, substantially as described. 6th. An elastic tread horse shoe comprising a skeleton metallic frame provided on its outer edge with the recessed flanges, a divided elastic cushion fitted in the skeleton shoe, means for fastening the side sections of the cushion to said shoe, a metallic wear plate fitted in the recessed flanges of the shoe to be held thereby against endwise displacement, and fastening devices which attach the toe section of the cushion to said shoe and loosely confine the wear plate against endwise displacement, substantially as described.

No. 65,551. Bicycle Gear. (Engrenage de bicyclet.)

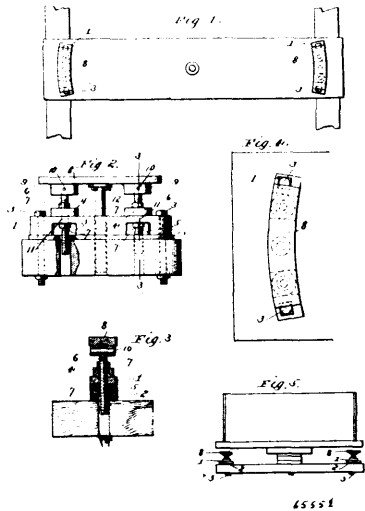


Robert Vile Thompson, Melbourne, Charles Albert Horton, Brunswick, and William Murphy, Caulfield, all in Victoria, Australia, 26th December, 1899; 6 years. (Filed 5th April, 1899.)

Claim.—In driving gear for bicycles and other machines driven or propelled by crank mechanism, a crank such as B, mounted upon a pin such as b, or other fixed support at any desired distance from the centre of the sprocket or drive wheel axle, and connected with said wheel by a pin or antifriction roller, either working within a slot or groove in said crank or else encircling said crank, substantially as herein described and explained and as illustrated in the accompanying drawings.

No. 65,552. Railway Car Bearing.

(*Cousinet de chars de chemin de fer.*)



James P. Hatcher and George Henkle, both of Huntington, West Virginia, U.S.A., 26th December, 1899; 6 years. (Filed 24th November, 1899.)

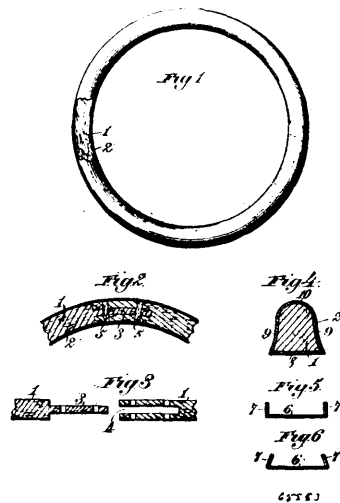
Claim.—1st. The combination of a base plate arched upward at opposite sides of its centre, forming transverse under-cut recesses b, each of said arches having a vertical opening therethrough, means for fastening said base plate to the truck beam, a vertical screw passing through each of said recesses, a supporting nut on each screw, and a bearing plate supported on the upper ends of the screws, substantially as and for the purposes set forth. 2nd. In a side bearing for cars, the combination of a base plate arched at points on either side of its centre, each of said arches forming a recess in the underside of the plate and extending transversely thereof, and each arch having a vertical passage through it, a vertical screw passing through each of said passages, two binding nuts on each screw, one resting on top of the arch and one underneath thereof, a removable bearing plate supported on the upper ends of said screws, and means for fastening the base plate to the truck frame. 3rd. The combination of a supporting plate 2, a base plate 1 supported thereon and arched on either side of its centre and each arch having a vertical passage, means for fastening both plates to the truck beam, a screw passing through each passage and depending through a recess in plate 2 and into an opening in the beam, supporting nuts on said screws, and a removable bearing plate supported on the screws. 4th. The combination of a base plate and means for fastening it to the truck, said base plate being arched transversely equal distances from its centre, and provided with a vertical central passage and also a vertical passage through each arch, a screw passing through each passage in the arches, supporting nuts on the screws, a bearing plate on the upper ends of the screws, and a guide and brace depending from the bearing plate and working through said central recess in the base plate. 5th. The combination of a base plate and means for fastening it to the truck, two supporting screws adjustably supported upon said base plate, a bearing plate supported on the upper ends of said screws, and a guide and brace carried by the bearing plate and working through an opening in the base plate. 6th. The combination of a base plate adapted to be fastened to a truck, two vertical screws adjustably supported on said base plate and separated a suitable distance, one on each side of the centre, and a bearing plate supported on the upper ends of said screws, said screws being independently adjustable.

No. 65,553. Vehicle Tire. (*Bandage de véhicules.*)

Joseph Dudley Prescott, Boston, Charles N. Bacon, Winchester, and Albert W. Griffith, Beaumont, all in Massachusetts, U.S.A., 26th December, 1899; 6 years. (Filed 29th September, 1899.)

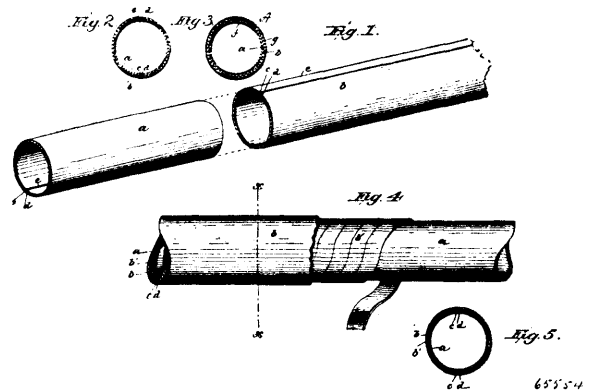
Claim.—A vehicle comprising a core made in a single piece from felt, one end of said core having a tongue formed thereon provided

with lateral openings, and the other having a socket therein in which said tongue fits and lateral openings intersecting said tongue,



felt pins extending through both sets of openings, and a covering vulcanized upon said core, as and for the purpose set forth.

No. 65,554. Metallic Tubing. (*Tube métallique.*)



Thomas Midgley, George C. Umlin, and Lewis Fink, all of Columbus, Ohio, U.S.A., 26th December, 1899; 18 years. (Filed 26th April, 1899.)

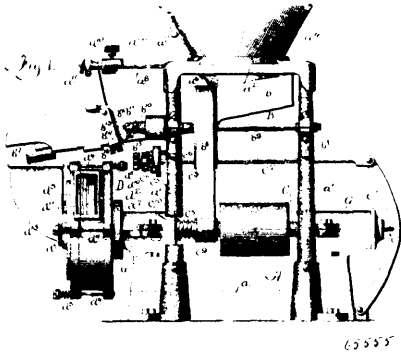
Claim.—1st. Tubing composed of multiple concentric metallic sections, metallicly joined together and the inner surface coated with soft metal. 2nd. Tubing composed of multiple concentric metallic sections, of hard metal joined together by an interposed body of soft metal and having the inner surface coated with soft metal. 3rd. Tubing composed of multiple concentric metallic sections brazed together and the inner surface coated with brass. 4th. Tubing composed of multiple concentric metallic sections of hard metal with their joints overlapping, metallicly joined together and the inner surface coated with soft metal. 5th. Tubing composed of multiple concentric tubular metallic sections one of which is spiral and brazed together. 6th. Tubing composed of inner and outer tubular metallic sections and an intermediated spiral tubular section brazed together. 7th. Tubing composed of multiple concentric tubular metallic sections, one of which is spiral, brazed together and the inner surface coated with soft metal.

No. 65,555. Grain Grinder. (*Broyeur à grain.*)

Samuel Vessot, Joliette, Quebec, Canada, 28th December, 1899; 6 years. (Filed 9th December, 1899.)

Claim.—1st. A grain grinder, comprising a stationary disc and a co-acting rotary disc, means for adjusting the grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 2nd. A grain grinder, comprising a stationary disc and a co-acting rotary disc, each having grinding faces, means for adjusting the grinding faces relatively to each other, auxiliary means for automatically relieving said adjustment, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 3rd. A grain grinder, comprising a stationary disc and a co-acting rotary disc each having grinding faces, one of said disc being yielding mounted

means for adjusting the grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces.



said grain being fed radially. 4th. A grain grinder, comprising a stationary disc and a co-acting rotary disc, interchangeable grinding faces removably connected to each of said disc, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 5th. A grain grinder, comprising a stationary disc and a co-acting rotary disc, interchangeable grinding faces removably connected to each of said discs, means for adjusting said grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces, said grain being fed radially. 6th. A grain grinder, comprising a stationary disc and a co-acting rotary disc, interchangeable grinding faces removably connected to each of said discs, each face being formed of a plurality of sections, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 7th. A grain grinder, comprising a stationary disc and a co-acting rotary disc, interchangeable grinding faces, removably connected to said discs, each face being formed of a plurality of sections, means for adjusting the grinding faces, relatively to each other, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 8th. A grain grinder, comprising a stationary disc and a co-acting rotary disc, interchangeable grinding faces removably connected to said discs, each face being formed of a plurality of sections, each section being interchangeable, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 9th. A grain grinder, comprising a stationary disc and a co-acting rotary disc, interchangeable grinding faces, removably connected to said discs, each face being formed of a plurality of sections, each section being interchangeable, means for adjusting the grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 10th. A grain grinder, comprising a stationary grinding face, a drive shaft, a grinding face mounted at the inner end of said drive shaft in juxtaposition to said stationary face, means for holding said drive shaft in an inoperative position automatically, means for adjustably moving said shaft longitudinally, whereby said faces will be brought to an adjusted co-acting position, and means for automatically feeding the grain to said faces, the grain being fed radially. 11th. A grain grinder, comprising a stationary grinding face, a drive shaft held normally in a rear position, a grinder face mounted at the inner end of said shaft in juxtaposition but out of operative contact with said stationary face, means for adjustably moving said shaft longitudinally, whereby said faces will be brought to an adjusted co-acting position, means for holding said shaft in its adjusted position, means for automatically returning said shaft to its normal position when said adjusting means is released, and means for feeding the grain to said faces, said grain being fed radially. 12th. A grain grinder comprising a stationary grinding face and a co-acting rotary grinding face, one of said faces being yieldingly mounted, means for adjustably varying the amount of resistance of said yielding face, and means for automatically feeding the grain to said grinding faces, said grain being fed radially. 13th. A grain grinder comprising a stationary grinding face and a co-acting rotary grinding face, one of said faces being yieldingly mounted, means for adjustably varying the amount of resistance of said yielding face, means for adjusting the grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 14th. A grain grinder, comprising a stationary grinding face, and a co-acting rotary grinding face, one of said faces being yieldingly mounted, means for adjustably varying the amount of resistance of said yielding face, means for adjusting the grinding faces relatively to each other, said means serving to hold said faces in their adjusted positions, and means for automatically feeding the grain to said grinding faces, said grain being fed radially. 15th. A grain grinder, comprising a stationary grinding face and a co-acting rotary grinding face, one of said faces being yieldingly mounted, the mounting being at a plurality of points, means for adjusting the grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 16th. A grain grinder, comprising a stationary grinding face and a co-acting rotary grinding face, one of said faces being yieldingly

mounted, the mounting being at a plurality of points, means for adjustably varying the amount of resistance of said yielding face, means for adjusting the grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 17th. A grain grinder, comprising a stationary grinding face and a co-acting rotary grinding face, one of said faces being yieldingly mounted, the mounting being at a plurality of points, means for adjustably varying the amount of resistance of said yielding face, said adjusting means being independent for each point of mounting, means for adjusting the grinding faces relatively to each other, and means for automatically feeding the grain to said grinding faces, the grain being fed radially. 18th. A grain grinder comprising a vibrating screen, a feed nose, adapted to receive the screened grain from said screen, a perforated plate mounted in said feed nose, said plate serving as an additional screen, a feed screw, and a series of grinding faces adapted to be adjustably moved into and out of operative contact with each other, said faces being adapted to receive the grain from said screw radially. 19th. A feed screw for grain grinders having its surface inclined, said surface being provided with a spiral rib, said rib terminating in a pocket, whereby the grain will be forced radially therefrom. 20th. A feed screw for grain grinders having its surface inclined, said face being provided with a spiral rib also inclined, said rib terminating in a pocket, and an auxiliary radially extending rib secured to said screw diametrically to said pocket, whereby the grain will be forced radially therefrom. 21st. A feed screw for grain grinders, comprising the body portion inclined toward its rear, a circular plate formed at the rear end of said body portion, a spiral rib formed integrally with and extending from said body portion, said spiral rib having its rear end formed at substantial right angles to said plate and connected thereto, whereby a pocket will be formed serving to force the grain radially therefrom. 22nd. A feed screw for grain grinders, comprising the body portion inclined toward its rear, a circular plate formed at the rear end of said body portion, a spiral rib formed integral with and extending from the body portion, said rib having its rear end formed at substantial right angles to said plate and connected thereto, whereby a pocket will be formed, and an auxiliary radially extending rib formed on said body portion and said plate approximately diametrical with said pocket, said pocket and said plate and said rib serving to force the grain radially from said screw. 23rd. The combination with the framework of a grain grinder, of a vibrating screen removably secured thereto, said screen being adjustable vertically at a plurality of points, and means for varying the lateral vibrations of said screen. 24th. The combination with the frame work of a grinder, of a vibrating screen removably secured thereto, said screen being adjustably at a plurality of points, and means for adjustably varying the length of the lateral vibrations of said screen. 25th. A screen for grain grinders, comprising a frame having its lower end open, an opening formed in the bottom, said opening being provided with a perforated plate having large openings, a supplementary bottom formed with a perforated plate having smaller perforations, said supplementary bottom being adapted to deliver the grain at a different point from the first mentioned bottom, and a chamber formed below said supplementary bottom, said chamber terminating in a lateral inclined conduit, whereby the contents of said chamber will be delivered at a point away from the delivery ends of said bottom and said supplementary bottom. 26th. The combination with a disc, of a grinding face removably secured thereto. 27th. The combination with a disc, of a grinding face removably secured thereto, said face being formed of a series of independent sections. 28th. The combination with a disc, of a grinding face removably secured thereto, said face being formed of a series of independent sections of approximately the same shape and size. 29th. The combination of a disc, of a grinding face removably secured thereto, said face being formed of a series of independent sections, each section being secured independently of said disc. 30th. A grinding face for grain grinders having its operating face inclined inwardly toward its centre, and a series of radially extending and cross ribs formed on said inclined face. 31st. A grinding face having its operating face formed of a series of projecting ribs and cross ribs, each series being duplicated in sequential order. 32nd. A grinding section for grain grinders, having its operating face provided with a series of tangential radially extending ribs, and cross ribs arranged between said radial ribs. 33rd. A grinding face for grain grinders having its operative face provided with a series of tangential radially extending ribs diverging toward the centre, and cross ribs arranged between said radial ribs. 34th. A grinding face having its operating face provided with a series of tangential radially extending ribs diverging toward the centre, each rib being of different length, and cross ribs arranged between said radial ribs. 35th. A grinding face having its operating face provided with a series of tangential radially extending ribs diverging toward the centre, each rib being of decreased length, the inner ends being in approximate tangential alignment, and cross ribs arranged between said radial ribs. 36th. A grinding face having its operating face provided with a plurality of series of tangential radially extending ribs, and cross ribs arranged between said radial ribs. 37th. A grinding face having its operating face provided with a plurality of series of tangential radially extending ribs, the inner ends of which are arranged in an approximate tangential alignment, whereby an open space will be formed between each series of ribs, and cross ribs arranged between said radial ribs. 38th. A grinding face having its operating face provided with a series of tangentially radially extending ribs, and cross ribs arranged between said radial

ribs, said ribs and cross ribs being arranged to provide passage-ways for air currents radially to the face. 39th. A grinding face having its operating face provided with a series of intermittently broken tangential radially extending ribs, and cross ribs arranged between said ribs, the openings formed in said ribs serving as passage-ways for air currents. 40th. A grinding disc having its operating face provided with a series of tangential radially extending ribs, the spaces between the ribs being of increased depth toward the centre, and cross ribs formed within said spaces. 41st. A grinding disc having its operating face provided with a plurality of series of tangential radially extending ribs diverging towards the centre, the spaces between the ribs being of increasing depth toward the centre, and cross ribs formed within said spaces. 42nd. A grinding disc having its operating face provided with a series of tangentially radially extending ribs, and cross ribs arranged between said ribs, the top face of said cross ribs being inclined away from the grinding edge of said ribs, whereby passage-ways for air currents will be formed extending radially over said face. 43rd. A grinding disc having its operating face provided with a series of tangential radially extending ribs, and cross ribs arranged between said ribs, the top face of said cross ribs being below the top plane of said ribs, whereby air passage-ways will be formed extending radially over said face. 44th. A grinding disc having its operating face provided with a series of tangential radially extending ribs, and cross ribs arranged between said ribs, the top face of said cross ribs being below the top plane of said ribs, and inclined away from the grinding edge thereof, whereby air passages will be formed extending radially over said face. 45th. A grinding disc having its operating face provided with a series of intermittently broken tangential radially extending ribs, and cross ribs connecting the outer ends of said broken portion of said ribs and the inner end of the succeeding broken portion, whereby air passages will be formed through the open spaces formed by said broken ribs. 46th. A grinding disc having its operating face provided with a series of intermittently broken tangential radially extending ribs, and cross ribs connecting the outer ends of said broken portion of said ribs and the inner end of the succeeding broken portion, the top face of said cross ribs being inclined away from the grinding edge of said ribs, whereby air passage-ways will be formed through the open spaces formed by said broken ribs and through the space formed between the top plane of said broken ribs and said cross ribs. 47th. A grinding disc having its operating face provided with a plurality of angular grinding edges arranged in tangential radially extending series. 48th. A grinding disc having its operating face provided with a series of grinding edges arranged in rounded contour, said contours being arranged in tangential radially extending series. 49th. A grinding disc having its operating face provided with a plurality of angular grinding edges arranged in tangential radially extending series, and means for providing passage-ways for currents of air radially through said cutting edges. 50th. A grain grinder, comprising a stationary grinding face, a drive shaft, a grinding face secured to the front end of said shaft, a series of bearings for said shaft, said bearings serving to automatically bathe said shaft with oil, an anti-frictional device mounted at the rear end of said shaft, means for adjustably moving said shaft longitudinally, and means for feeding the grain to said grinding faces. 51st. A grain grinder comprising a stationary grinding face, a drive shaft, a grinding face secured to the front end of said shaft, an anti-frictional device mounted at the rear end of said shaft, means for adjustably moving said shaft and said device longitudinally, and means for feeding the grain to said grinding faces. 52nd. A grain grinder comprising a stationary grinding face, a drive shaft, a grinding face secured to the front end of said shaft, a supplemental bearing plug secured at the rear end of said shaft, an anti-frictional device mounted to operate against the face of said bearing plug, means for adjustably moving said shaft and said device longitudinally, and means for feeding the grain to said grinding faces. 53rd. The combination with a shaft mounted in bearings, of an anti-frictional device located at the end of said shaft, and means for adjustably moving said shaft longitudinally. 54th. The combination with a shaft having an end thrust, said shaft having a hardened plug secured in one end thereof, of an anti-frictional device mounted to operate against the face of said plug, and means for adjustably moving said shaft longitudinally. 55th. The combination with a shaft having an end thrust, said shaft having a hardened plug secured in one end thereof, of a cylindrical casing mounted in juxtaposition to said plug, a series of rollers pivotally mounted in said casing, said rollers being adapted to operate against the face of said plug, a pin, having a bearing face adapted to rest against the opposite sides of said rollers, and means for imparting an adjusted longitudinal movement to said pin, whereby said shaft will be given an end thrust. 56th. The combination with a shaft having an end thrust, said shaft having a hardened plug secured in one end thereof, of a cylindrical casing mounted in juxtaposition to said plug, a series of rollers pivotally mounted in said casing, said rollers being adapted to operate against the face of said plug, said rollers contacting on diametrically opposite sides of the centre of said plug, a pin having a bearing face adapted to rest against the opposite sides of said rollers, said pin being mounted centrally of

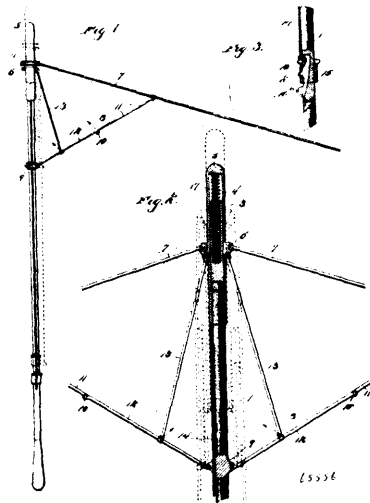
said casing, whereby a rotary movement of said shaft will cause a decreased movement of said casing in the same direction, and means for adjusting said shaft longitudinally by imparting a longitudinal movement to said pin. 57th. The combination with a journal box, of a bearing removably secured therein, said bearing being provided with a longitudinal opening to receive a shaft, and means operated by the movement of the shaft within the bearing, for automatically injecting oil to said shaft and said bearing. 58th. The combination with a journal box forming a receptacle for the oil, of a bearing removably secured within said box, said bearing being adapted to receive a rotary shaft, a series of cut out portions formed in the top of said bearings, and a series of rings mounted within said cut out portions, on said drive shaft, said rings extending below the surface of the oil, said rings being adapted, upon a rotation of said shaft, to automatically inject oil within said bearing and on said shaft. 59th. The combination with a journal box, formed of an upper and lower portion a semi-spherical recess formed within the top portion, a cross rib formed in the lower portion, said rib having a semi-spherical portion coinciding with said upper portion, and a semi-spherical bushing secured within said semi-spherical recesses, of a bearing removably secured within said bushing, said bearing having a semi-spherical portion adapted to rest within said bushing, said bearing also having elongated lateral extending portions, cut out portions formed in each of said lateral extending portions, and a ring mounted within each of said cut out portions, each ring being adapted to extend below the surface of the oil located within said lower portion, said rings serving to automatically carry the oil within the bearing and on to the drive shaft mounted therein. 60th. The combination with a shaft, of a bearing held in fixed position, an oil receptacle located below said bearings, a cut out portion formed on said bearing, a ring mounted within said cut out portion, and extending into the oil receptacle, and means, connected with said bearing, for automatically receiving the oil from said ring and carrying it to a predetermined point in said bearing. 61st. The combination with a rotary shaft, of a bearing held in fixed position, an oil receptacle located below said bearing, a cut out portion formed on said bearing, a ring mounted within said cut out portion and resting on and deriving movement from said shaft, said ring extending below the surface of the oil within said receptacle, a lateral channel terminating in an opening, formed in said bearing said channel leading from said cut out portion and a sharpened edge formed in connection with said channel for directing the oil from said ring to said channel. 62nd. The combination with a rotary shaft, of a bearing therefor mounted fixedly within a closed chamber, an oil receptacle formed within said chamber, cut out portions formed in said bearing, oil feeding rings located within said cut out portions, said ring serving to automatically inject oil within said bearing and on to said shaft and a collar, having radial openings, mounted fixedly on said shaft, for preventing the escape of oil from said chamber. 68th. A grain grinder, comprising a drive shaft, a grinding head located at opposite ends of said drive shaft, a rotary grinding face secured at opposite ends of said shaft, and a series of adjustably mounted stationary grinding faces secured in juxtaposition with said rotary grinding faces. 64th. A grain grinder, comprising a drive shaft held from longitudinal movement, a grinding face secured thereto a yieldingly mounted stationary grinding face mounted to co-act with said rotary grinding face, said stationary face being normally held in a position away from operative contact with said rotary face, means for holding it in its normal position, and means for adjustably moving said face to a position in operative contact with said grinding face on said shaft. 65. A grain grinder comprising a rotary drive shaft, held against longitudinal movement, a grinding face removably secured thereon, a yielding mounted stationary grinding face mounted to co-act with said rotary face, a series of pins adapted to contact against said stationary face, and means for adjustably moving said pins simultaneously for adjusting the position of said stationary face relative to said rotary face. 66th. A grain grinder, comprising a drive shaft, a rotary grinding disc secured thereto, a stationary disc adapted to co-act with said rotary disc, a casing for said grinding discs, a series of pins located on said casing adapted to operate against said stationary disc, a rotary plate secured to said casing adapted to move said pins adjustably, and a lever, operatively connected to said plate for adjustably moving said plate to an adjustably moving said plate to an adjusted position. 67th. In a grain grinder, the combination with a rotary grinding disc co-acting with a stationary disc, each having a series of interchangeable grinding sections, of a section, carrying a sharpening portion, adapted to be used interchangeably with said sections, whereby the said faces may be sharpened without removal from the grinder.

No. 65,556. Umbrella Frame. (Monture de parapluie.)

Addison B. Cameron, Ennis, Montana, U.S.A., 28th December, 1899; 6 years. (Filed 9th December, 1899.)

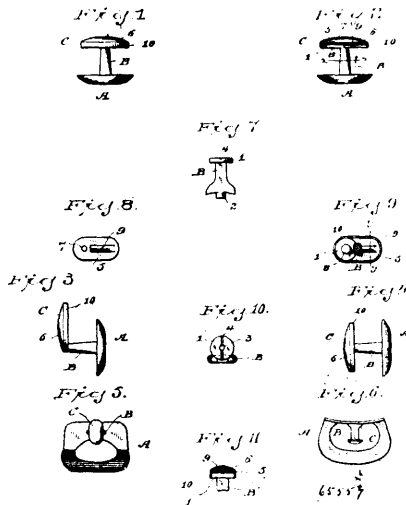
Claim.—In an umbrella, the combination of a stick, a sleeve movably mounted on the outer end of said stick, a spring interposed between the said sleeve and stick, ribs movably attached to the said sleeve, stretchers having intermediate hinged joints opening

upwardly and respectively connected to the stick and the ribs, braces movably attached to the inner portions of the stretchers and



also to the sleeve, and means for holding the sleeve drawn inwardly against the repellant action of the spring.

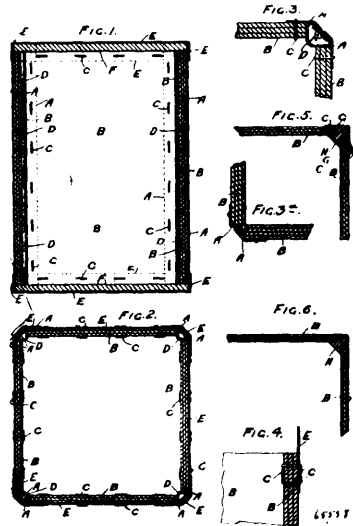
No. 65,557. Collar Button. (Bouton de cols.)



Willis R. Austin and William N. Craw, both of South Norwalk, Connecticut, U.S.A., 28th December, 1899; 6 years. (Filed 9th December, 1899.)

Claim.—1st. A collar button comprising a base plate, a shank rigidly secured thereto and provided with a disc lying in a plane at right angles to the axis of the shank and wholly at one side of the shank, and a head pivoted directly to the upper face of said disc and bodily rotatable relatively thereto, said head having a flange fitting closely around the disc and shielding the same, substantially as described. 2nd. A collar button comprising a base plate, a shank rigidly secured thereto and provided with a disc lying in a plane at right angles to the axis of the shank and wholly at one side of the shank, said disc having a groove 4 across its face, and a head pivoted directly to said disc and eccentrically to the shank and having a spring which is adapted to engage the groove so as to retain the head at either the receiving or holding position, said head having a flange fitting closely around the disc and shielding the same, said flange being rotatable relatively to the disc. 3rd. A collar button comprising an enlarged thin base having an upright portion and a lower portion at an angle thereto, a shank rigidly secured to the upright portion of the base and provided with a disc lying in a plane at right angles to the axis of the shank and wholly at one side of the shank, and a head pivoted directly to the upper face of said disc and bodily rotatable relatively thereto, substantially as described.

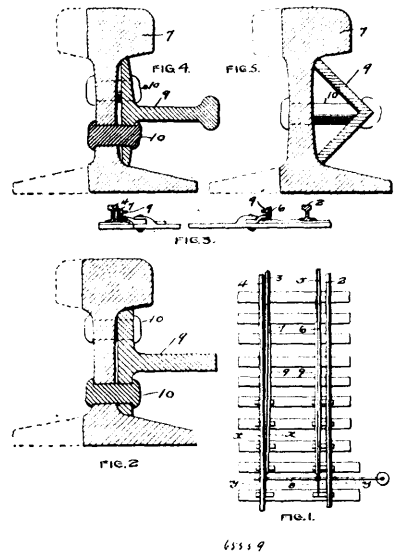
No. 65,558. Box Manufacture. (Fabrication de boîtes.)



Peter Stuart Brown, Bothwell Park, Bothwell Lanark, Scotland, 28th December, 1899; 6 years. (Filed 9th December, 1899.)

Claim.—1st. A chest or box whose sides or ends and ends are made of built-up veneer boards, to which are attached by wire sewing or stapling sheet metal strips or straps extending beyond the ends of the boards and so doubled or bent to U-shape as to be adapted to engage with each other or to be bound together by means of open joint tubes or slips entered endwise. 2nd. For use in the manufacture of chests or boxes boards of built-up veneer having attached near their edges by wire sewing or stapling sheet metal strips or straps extending beyond said edges and doubled or bent to U-shape. 3rd. A chest or box whose sides are composed of boards secured to each other by flexible strips, and retained in box form by grooved bars slipped endwise into spaces between the ends of the side boards and the flexible strips, said grooved bars being removable in order to permit of the box being collapsed. 4th. A veneer or wooden board having a deposit or protective coating of metal or metallic alloy applied thereto by smearing the same with sago flour or other paste in admixture with the metal in an amorphous state and subsequently calendaring or burnishing the surface so smeared.

No. 65,559. Switch Point. (Pointe d'aiguille de chemin de fer.)

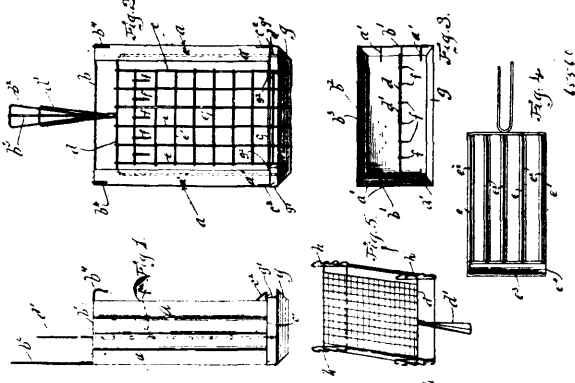


Horward G. Kelley, Minneapolis, Minnesota, U.S.A., 28th December, 1899; 6 years. (Filed 9th December, 1899.)

Claim.—1st. The combination, with a movable switch rail, of a laterally extending inflexible reinforcement thereon. 2nd. The combination, with the movable switch rail, of a laterally extending inflexible reinforcement extending beyond the gauge of the side rail head. 3rd. The combination, with the movable switch rail, of a bar secured to the gauge side of the rail, and having a part extending laterally therefrom, for the purpose specified. 4th. The combination, with the movable

switch rail, of the reinforcement or aligning bar having a laterally extending portion projecting beyond the gauge side of the rail and below the path of a wheel flange there on, substantially as described. 5th. The combination, with the movable switch rail, of an aligning bar secured to the gauge side thereof by rivets or equivalent devices passing through the rail web, and said bar having a horizontal portion of substantially the length thereof, substantially as described. 6th. The combination, with the movable switch rail, of the T-bar, the head flanges of which are riveted to the rail web. 7th. A railroad switch comprising the main and side track rails, and the swinging switch points having their free ends only connected, and the laterally extending aligning bars upon the gauge sides of said switch points. 8th. A railroad switch comprising the main and side track rails and the swinging switch points, having their free ends connected, and the aligning bars secured to the gauge side of said switch points and having horizontal webs or projections below the parts of the wheel flanges, substantially as described.

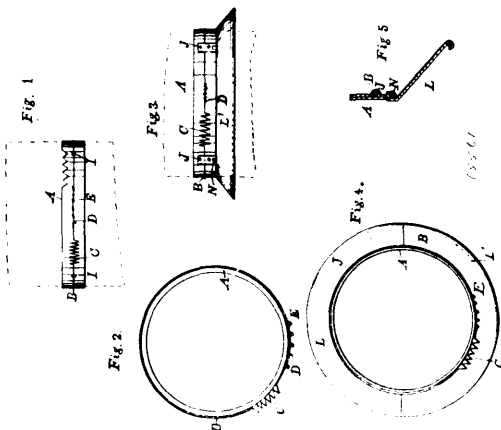
No. 65,560. Gridiron. (Gril.)



Teresa Emilie Shepherd, Hyde Park Mansions, London, England, 28th December, 1899; 6 years. (Filed 7th December, 1899.)

Claim—1st. In gridirons and toasters, the frame composed of parallel end wires *b*, *c*, bent up at the ends *b*¹ *c*¹, and formed into loops *c*² and hooks *b*³, one of said end wires being looped to form a handle, and having rigid hooks for suspending the device from the bars of a grate, the other end of the frame having loops for the suspension of a drip tray therefrom, and sides *a* formed of rectangular metal strips fastened at their ends to the vertical portions *b*¹ *c*¹, the longitudinal edges of said strips being bent at right angles to the main portions to form shelves or racks *a*¹, in combination with a grid proper composed of a bent wire frame *d* having at one end a looped handle *d*¹, to which frame are fixed transverse and longitudinal wires *e* *e*¹, swing hooks being mounted on one of the transverse bars of the said grid proper, substantially as described and illustrated. 2nd. The modified form of gridiron in which the turned up or vertical ends *b*¹ and *c*¹ of the frame are provided with hook like members *h* for adjustably supporting the grid proper, said grid proper being channelled upon its upper side to communicate with an open ended trough, substantially as described and illustrated.

No. 65,561. Tree Protector. (Protecteur pour arbres.)

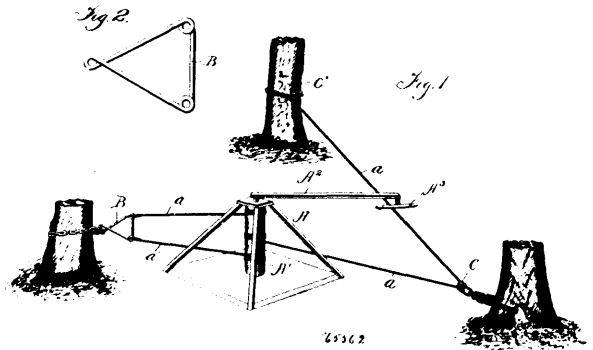


Willis Henry Coon, Rochester, New York, U.S.A., 28th December, 1899; 6 years. (Filed 7th December, 1899.)

Claim.—1st. The combination in a tree protector, of the band of absorptive textile material, the expansible belt surrounding the

band and secured thereto, and the flexible divided sheet metal apron attached to the band, as and for the purposes set forth. 2nd. The combination with the band of absorptive textile material, provided with the perforated clips, of the outer expansible belt, and the apron having ears adapted to engage with the band, as and for the purposes set forth.

No. 65,562. Stump Puller. (Arrache-souche.)

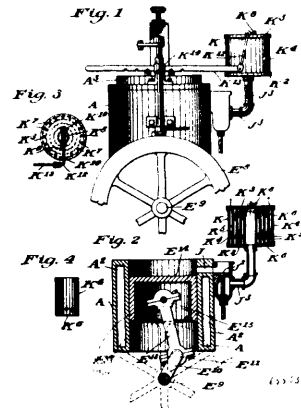


Joshua Fletcher, Vancouver, British Columbia, Canada, 28th December, 1899; 6 years. (Filed 7th December, 1899.)

Claim.—1st. A stump puller, comprising a suitable frame, a winding drum mounted therein, a cable centrally wrapped about said drum and secured at its outer end to the stump to be pulled, means for rotating said drum, a triangular coupler adapted to be secured to a fixed support, and a cable attached to each of the angles at the base of the said coupler, and wound respectively about the upper and lower ends of said drum, substantially as described. 2nd. In an apparatus for pulling stumps, a triangular coupler, adapted to be attached to a fixed support by rope secured to the apex thereof and adapted to be connected to the drum by means of a cable secured to each angle at the base thereof, whereby said cables are spread or separated, substantially as described.

No. 65,563. Exhaust Muffler for Engines. (Manchon pour tuyaux d'emission de la vapeur.)

(*Manchon pour tuyaux d'emission de la vapeur.*)



Frank Van Duzen, Marion, Ohio, U.S.A., 28th December, 1899; 6 years. (Filed 6th December, 1899.)

Claim.—In an engine, the combination of an exhaust, and a muffler, consisting of concentric cylinders with holes alternately at adjacent ends, and held between plates, one of which has a hole of exit, the central passage of the muffler being in connection with the exhaust, and a valve for closing this passage into the open air, and compelling the products of the exhaust to go through the muffler, the valve and the operating rod *K*² rigid with said valve and a lever *K*¹² fixed thereto, and at its other end pivotally connected to a rod *K*¹³, the rod having detents and a stationary detent for engaging any one of the detents of the rod, substantially as and for the purpose specified.

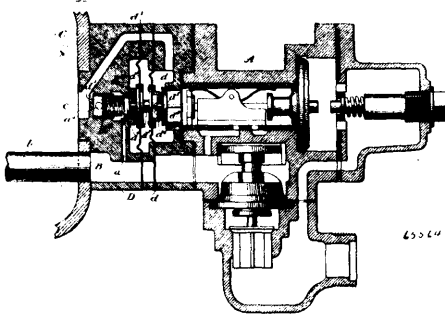
No. 65,564. Fluid Pressure Brake. (Frein a pression hydraulique.)

(*Frein a pression hydraulique.*)

William Henry Clarke, Brooklyn, New York, U.S.A., 28th December, 1899; 6 years. (Filed 6th December, 1899.)

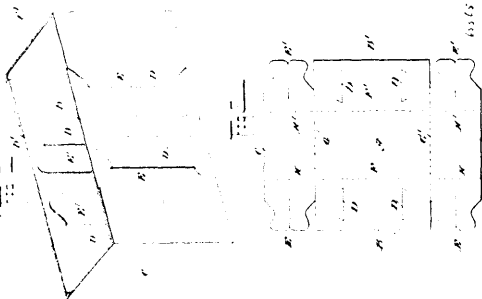
Claim.—1st. In an air brake system, the combination of a brake cylinder and auxiliary reservoir, a triple valve, a port between the reservoir and triple valve and an intercepting valve controlling said port, an escape port for brake cylinder pressure and a discharge

valve controlling the same, said intercepting valve and discharge valve being on the same stem, and means whereby the pressure in



the brake cylinder will serve to close the intercepting valve and open the discharge valve, substantially as described. 2nd. In an air brake system, the combination of a brake cylinder and auxiliary reservoir, a triple valve, a port between the reservoir and triple valve and an intercepting valve controlling said port, an escape port for brake cylinder pressure and a discharge valve controlling the same, and means whereby the pressure in the brake cylinder will serve to close the intercepting valve and open the discharge valve, and the auxiliary reservoir pressure thereafter close the discharge valve, substantially as described. 3rd. In an air brake system, the combination of a brake cylinder and an auxiliary reservoir, a triple valve, a port between the reservoir and triple valve and an intercepting valve controlling said port, an escape port for brake cylinder pressure and a discharge cylinder valve controlling the same and means whereby the pressure in the brake cylinder will serve to close the intercepting valve and open the discharge valve, and the auxiliary reservoir pressure thereafter close the discharge valve and open the intercepting valve, substantially as described. 4th. In an air brake system, the combination of a brake cylinder and auxiliary reservoir, a triple valve, a port between the reservoir and triple valve and an intercepting valve controlling said port, an escape port for brake cylinder pressure and a discharge valve for controlling the same, and two diaphragms or pistons of different areas acting together to control the intercepting and discharge valves, said diaphragms or pistons being respectively subjected to pressure from the auxiliary reservoir and the brake cylinder, substantially as described. 5th. In an air brake system, the combination of an auxiliary reservoir, a triple valve, a brake cylinder, a port connecting the same, an escape port for the brake cylinder pressure, valves controlling said ports and a differential diaphragm actuating said valves, said diaphragm being subjected on one side to the auxiliary reservoir pressure and on the other side to brake cylinder pressure, substantially as described. 6th. In an air brake system, the combination of an auxiliary reservoir and triple valve, a port connecting the same, a valve controlling said port and a differential diaphragm actuating said valve, said diaphragm being subjected to auxiliary reservoir pressure on one side and to brake cylinder pressure on the other side. 7th. In an air brake system, the combination of an auxiliary reservoir, a brake cylinder, passage connecting the same, and a valve device exposed to auxiliary reservoir and brake cylinder pressures and adapted to automatically produce and maintain a predetermined ratio between said pressures, substantially as described.

No. 65,565. Paper Box. (Boite de papier.)

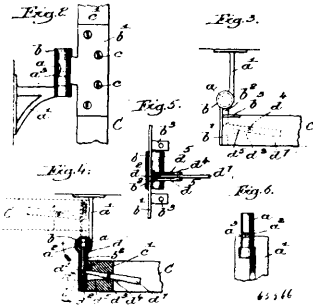
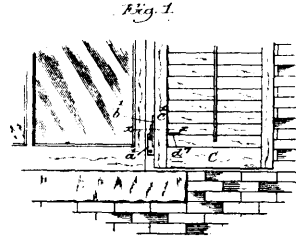


Edward E. Pinkerton, Sioux City, Iowa, U.S.A., 28th December, 1899; 6 years. (Filed 6th December, 1899.)

Claim. 1st. A paper box formed from a single piece of material, and comprising a bottom, sides having vertical slots, and ends having divided tongues adapted to engage the slots and the sides, substantially as shown and described. 2nd. A paper box formed from a single piece of material, and comprising a bottom, sides hav-

ing vertical slots, and ends having divided tongues adapted to engage the slots and the sides, each pair of tongues having a head and a neck, the width of the neck corresponding to the length of the corresponding slot with which the tongue is to be engaged, substantially as shown and described.

No. 65,566. Lock Hinge. (Penture.)

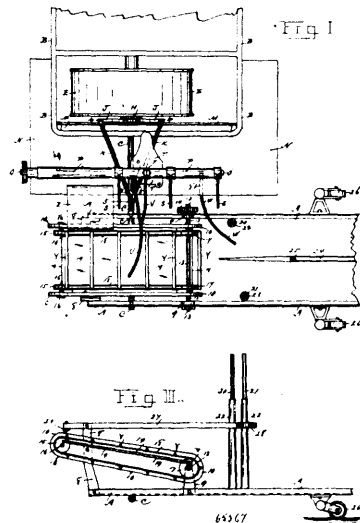


Michael C. Mulcahy, Everett, Massachusetts, U.S.A., 28th December, 1899; 6 years. (Filed 5th December, 1899.)

Claim.—1st. In a hinge, a pintle having recesses and a peripheral groove, and a leaf provided with a locking bolt adapted to enter said recesses respectively to lock said pintle and leaf in a plurality of rotative positions and to travel in said groove, said bolt and groove co-operating to maintain the parts of the hinge in their normal operative position and prevent unshipping thereof, and means by which said bolt may be withdrawn from said groove to permit the separation of said hinge parts. 2nd. The combination with a shutter or blind, of a hinge provided with means to lock said shutter in desired position, said locking means having its operating parts confined wholly within the frame of said shutter, and a controlling lever to be operated at a point within and free from projections beyond said shutter frame.

No. 65,567. Grain Shocking Machine.

(Machine à engorber.)

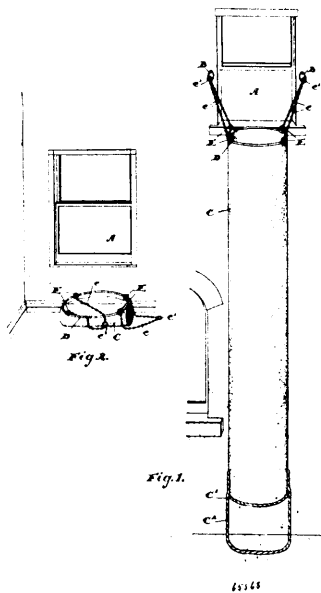


Thomas Arthur Wooley and Herbert Fox, both of Hamilton, Ontario, Canada, 28th December, 1899; 6 years. (Filed 5th December, 1899.)

Claim.—1st. A shocking machine attachment to the discharge side of a binder, comprising a transverse bar or tube, the binder end of said bar turned to vertical position and concaved to fit against

the underside of the stationary axle of the binder, and between the hub of the ground wheel and the axle housings thereof, a bracket fitting on the top of said axle and against said end of hub, vertical ends to said bracket a distance apart, a double brace rod secured to the ends of the bracket and to the lower transverse bar to support the receiving end of the shocking machine, independently to the adjustment of the binder, as described. 2nd. A shocking machine attachment to the discharge side of a binder comprising a transverse support, the binder end of said support extended vertically to fit to the underside of the stationary axle of the ground wheel, and the end of the hub, a bracket extending across and fitting on the said axle and against the said end of hub, and between the binder frame and the wheel, vertical extensions to said ends of bracket, a double brace rod secured to said vertical extensions, and apart, the lower end of said brace rod secured to the said transverse bar to support the same, the receiving end of a shocking machine frame secured on the outer part of said transverse bar, as described. 3rd. In a binder machine, sheaf guide rods secured to the discharge side of the binder and above the incline sheaf deck thereof, the forward said rod with stay branch forwardly and upwardly curved to guide the butt end of the discharge sheaf downwards, in combination with the rear guide rod positioned and suitably curved upwards and to the rear to guide the head of the sheaf upwards and place the same in a vertical position on the carrier of a shocker by the power of the discharging arms of the binder. 4th. A binder and shocker comprising sheaf guide rods secured to the discharge side of the binder, one forward said rod positioned and curved to guide the butt end of the discharged sheaf downwards and on an incline plate secured to the incline deck of the binder, and extending to the attached shocker, the rear positioned guide rod secured to the discharge side of the said binder deck, and curved upward and rearward to guide the head of the sheaf upward and place the same in a vertical position on the carrier of the shocker by the power of the discharging arms of the binder. 5th. A shocking machine, the receiving end of the machine supported on a transverse bar or tube, connected to the under part of the stationary axle of the drive wheel of a binder, and at the discharging side of the binder stay rods connecting said transverse bar to the upper extended ends of a bracket supported on by the said stationary axle and against the hub of said wheel, a carrier at the receiving end of said machine, and in oblique position inclining towards the discharging end thereof, supporting brackets secured to the frame of the shocker and to the sides of said carrier, and supported by said brackets carrier sprockets on said shaft, a gear or sprocket wheel secured on said shaft, at the binder end, to connect the binder mechanism and receive continuous power, side studs at the receiving end of the carrier to support the carrier sprockets, a board between the sides of the carrier and beneath the sheaf carrying slats thereof, and an incline plate secured to the deck of the binder and projecting to the receiving end of the shocker to carry the butt ends of the sheaves when being changed from a horizontal to vertical position, as described.

No. 65,568. Fire Escape. (*Sauveteur d'incendie.*)

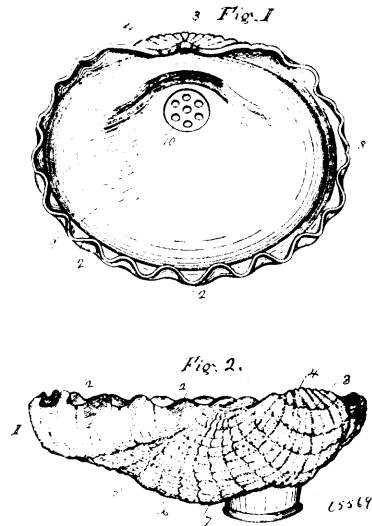


Frank Nutter Barnett, Toronto, Ontario, Canada, 28th December, 1899; 6 years. (Filed 5th December, 1899.)

Claim.—1st. A fire escape consisting of a cylindrical flexible casing and means for attaching it to the building as and for the purpose specified. 2nd. A fire escape comprising a flexible cylindrical casing and a rigid upper ring and means for securing it to the

building in proximity to an avenue of escape as and for the purpose specified. 3rd. A fire escape comprising a flexible cylindrical casing and a rigid upper ring, the chains attached to the ring and hooks at each side of the window for supporting the chains and casing as and for the purpose specified. 4th. The combination with the flexible cylindrical casing and means for holding the top open and supporting the same from the top, of a loop connected to the bottom of the casing, as and for the purpose specified.

No. 65,569. Cuspidor. (*Crachoir.*)

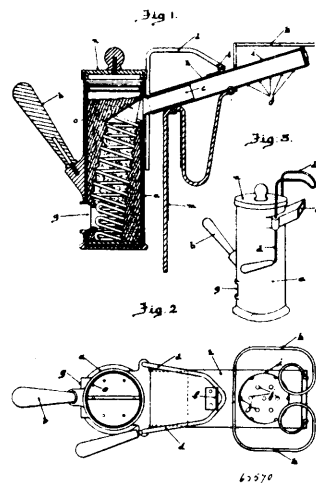


George E. Johnson, Fort Wayne, Indiana, U.S.A., 28th December, 1899; 6 years. (Filed 4th December, 1899.)

Claim. 1st. The design for a dental cuspidor, as herein shown and described. 2nd. The herein described design for a cuspidor consisting of the imitation of one section of a bivalved sea shell corrugated and decorated as described. 3rd. The herein described design for a dental cuspidor consisting of the imitation of a corrugated section of a bivalved sea shell.

No. 65,570. Heating and Cooking Device.

(*Appareil à chauffer et cuire.*)



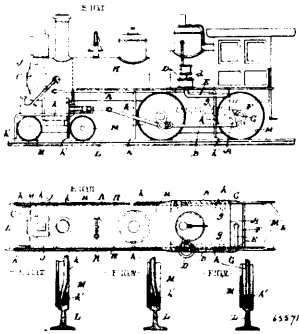
James Massey Hollinhead, Newcastle under Lyne, Staffordshire, England, 28th December, 1899; 6 years. (Filed 2nd December, 1899.)

Claim.—1st. The device for heating, cooking and other purposes, substantially as described and illustrated herein and for the purpose set forth. 2nd. In devices for igniting fires and cooking and other purposes, an outer casing adapted to be carried or supported upon a grate or other suitable position, an inner casing carrying absorbent material supported upon a coil of metal solid or hollow, for the purpose of carrying inflammable oil or substance, an aperture in outer and inner casing for the purpose of ignition of the combustible material, said products of combustion passing to the required point through a suitable outlet, a casing adapted to engage upon said outlet and having a clip for holding same in the desired position, a

catch for maintaining the two parts in position, a lid for covering said outer casing, a support upon which the vessel, such as a kettle may be placed upon the casing aforesaid which is perforated and so arranged as to cause the products of combustion to be carried to the required position for heating purposes such as boiling the kettle, cooking and the like, substantially as described and illustrated herein and for the purpose set forth.

No. 65,571. Track Clearing and Drying Device.

(Appareil à nettoyer et sécher les rails.)

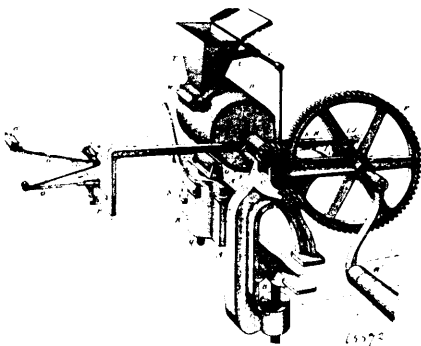


James Dixon, Painesville, Ohio, U.S.A., 28th December, 1899; 6 years. (Filed 2nd December, 1899.)

Claim.—1st. In a track clearing and drying device of the type set forth, the combination with a track, and a wheel operating upon the said track, of a pipe having its outlet in close proximity to the track and in advance of the wheel, and means for supplying the said pipe with heated air under pressure. 2nd. In a track clearing and drying device of the type set forth, the combination with a traction wheel and a track upon which the said wheel operates, of means located in proximity to the track and in advance of the wheel for ejecting heated air under pressure onto the track, and means for heating the air. 3rd. In a track clearing and drying device of the character indicated, the combination with a traction wheel of a locomotive, and the track upon which the said wheel operates, of means for ejecting heated air under pressure upon said track in advance of the wheel, means for heating the air and also means for supplying the air under pressure. 4th. In a track clearing and drying device for railroad tracks, the combination with the wheels of a locomotive or traction engine and its track, of pipes located in advance of the traction wheels and having their outlets located in close proximity to the track, and means for supplying the said pipes with air under pressure, and the lower ends of the said pipes being so arranged as to project the air inwardly and toward the flanges of the wheels, for the purpose set forth. 9th. A locomotive having a track clearing and drying device comprising the following pipes arranged to discharge upon the track in advance of traction wheels of the locomotive, and means for supplying un-oil-stened heated air under pressure to the said pipes, substantially as and for the purpose set forth.

No. 65,572. Knife and Fork Cleaner.

(Nettoyeur de couteau et fourchette.)

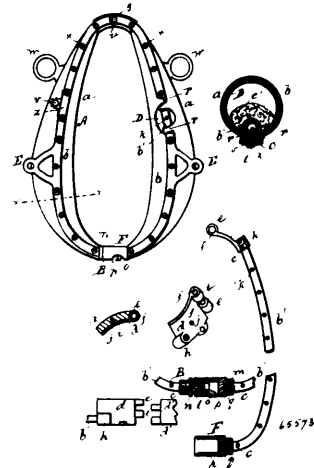


August Rantala, Navarro, California, U.S.A., 28th December, 1899; 6 years. (Filed 2nd December, 1899.)

Claim.—1st. In a cleaning and polishing device, a journaled revolvable roller having a surface adapted to carry the polishing material, a pressure roller between which and the cleaning roller the article to be cleaned is introduced, an automatically adjustable support and stop for the handle of the article, a rack bar by which said support is carried, a pinion with which said rack bar engages and mechanism by which the pinion and the cleaning roller are revolved in unison. 2nd. A cleaning and polishing device consisting

of a journaled revolvable roller having a surface adapted to carry the polishing material, a pressure roller journaled upon a spring pressed stem by which it is forced into contact with the cleaning roller, a cam lever fulcrumed and acting upon said stem to withdraw the pressure roller or to allow it to be forced into contact with the cleaning roller, a hinged automatically adjustable handle support for the article to be cleaned and a rack bar upon which said support is carried, and means for advancing said rack bar in unison with the revolution of the cleaning roller. 3rd. A device for cleaning and polishing, consisting of revolvable cleaning pressure roller, a holder and guide for the article to be cleaned, and means for advancing it in unison with the revolution of the cleaning roller, a hopper containing the polishing material supported above the cleaning roller, and a journaled roller upon which the hopper rests, said idle roller being rotatable by contact with the cleaning roller. 4th. A device for cleaning and polishing consisting of a revolvable cleaning roller, a pressure roller adapted to retain the article to be cleaned in contact with the cleaning roller, a hinged automatically adjustable support and stop for the handle of the article to be cleaned whereby its movement toward the cleaning roller is regulated, a rack bar upon which said support is carried, gearing by which the cleaning roller is revolved, a pinion driven by said gearing with which the rack bar engages and by which it is advanced in unison with the revolution of the roller, and a device for disengaging the rack bar from its pinion after it has reached the end of its travel so that it may be freely returned to its first position. 5th. In a cleaning and polishing device, the revolvable cleaning roller, the support and guide for the article to be cleaned, a rack bar upon which said support is carried, a guide through which said bar is slidable, said guide being hinged at one end, a spring by which the opposite end is normally moved to bring the rack bar into contact with its driving pinion, and a toothed cam fulcrumed to said guide adapted to raise its free end and the rack bar out of engagement with the pinion teeth by a reverse movement of the crank shaft.

No. 65,573. Horse Collar. (Collier de cheval.)



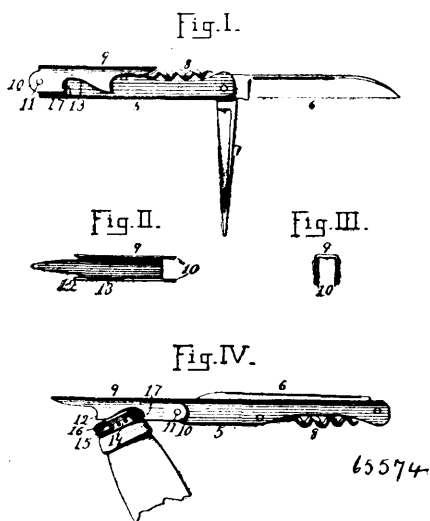
Frederick Richard Brooke, New York City, New York, U.S.A., 28th December, 1899; 6 years. (Filed 29th November, 1899.)

Claim.—1st. The combination in a horse collar, comprising two sections, of the hinged plates provided with the female screw threads and the brace frame having the end male threads adapted to engage the threads in the plate, substantially as described. 2nd. The combination with the sectional horse collar, comprising an outer casing, an inner inflated pad, of a hollow brace frame formed of two sections, and plates secured to the upper end of said frame having perforated lugs adapted to receive a bolt whereby the two sections of the frame are hinged together, substantially as described. 3rd. In combination with the inflated inner pad, casing and brace frame, of the hinged plates and filling therefor, the catch sleeve or tube provided with a solid portion having the opening to receive the lower end of the brace frame, and provided with the spring catch and the tubular end or socket having the opening to engage the hook of the spring catch, and provided with the opening in the solid portion to receive the lower end of the brace frame, substantially as described. 4th. In a pneumatic horse collar, the combination with the inflated pad and casing therefor, of the sectional brace frame formed in two parts, the plates secured to the upper end of each section, forming a hinged connection, and means substantially as described for locking the lower ends to one another. 5th. In a pneumatic horse collar, the combination with the casing, inflated sack and clamping plates, of the brace frame comprising the hollow sections provided with the female screw threaded perforations, and upper hinged plate composed of two sections and provided with the enlarged portion, female screw threaded to engage the male threads on the upper end of each section of the frame, and the locking device, each portion thereof having the female screw threads adapted to engage the male screw

threads on the lower end of each frame section, substantially as described. 6th. The combination with the T shaped plate having perforations, inflated sack provided with the inflating tube, the brace frame and outer clamping plates, said T shaped plate adapted to engage said inflating tube, whereby the latter is held in position on the collar, all substantially as described. 7th. In a horse collar, the combination with the inflated pad, casing, frame and clamping stripes, of the hinged plate having the enlargement to engage the upper end of each section of said frame, substantially as described. 8th. In a horse collar, the combination with the casing, brace frame, securing plates and inflated sack, of the filling composed of soft material arranged within the sack and adapted to serve the purpose of a pad when the sack is not inflated, substantially as described. 9th. In a pneumatic horse collar, a partial stuffing for the inflated sack interposed between the rear portion of the casing thereof and the pressure frame at the front of the collar, substantially as described. 10th. In a pneumatic horse collar, the loose filling arranged within the inflated sack thereof and interior of the casing and interposed between the shoulder portion of the sack and casing and the pressure frame or frames, substantially as described.

No. 65,574. Bottle Stopper Extractor.

(Extracteur de bouchon de bouteille.)



Bertin Toulotte, New York City, New York, U.S.A., 28th December, 1899; 6 years. (Filed 25th November, 1899.)

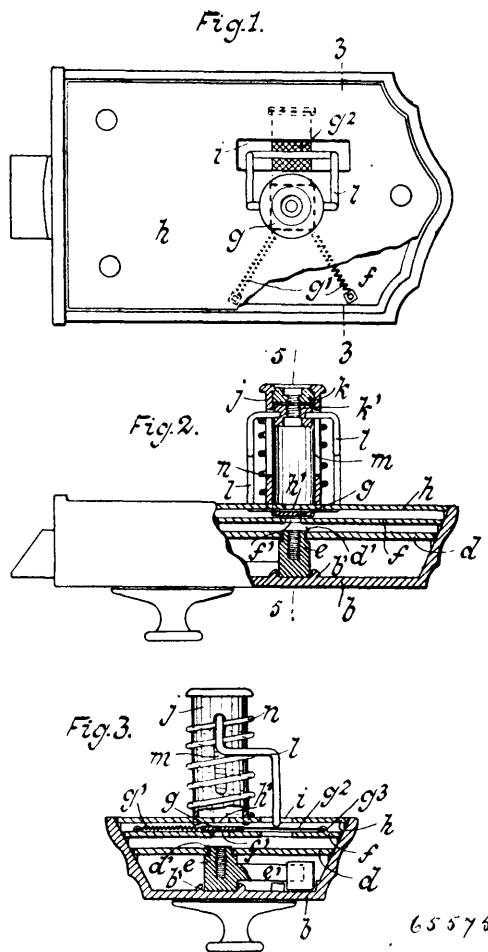
Claim.—In stopper extractors, a pocket knife handle, a blade in the shape of a trough whose sides terminate in ears adapted to straddle the handle and to be pivoted thereto, the said sides being adapted to pinch upon the handle when the blade is closed, and each side being shaped with a notch and a hook, substantially as described.

No. 65,575. Safety Lock. (Serrure de sûreté.)

Theodore Brand, Brooklyn, and Max Fehrmann, New York City, New York, U.S.A., 29th December, 1899; 6 years. (Filed 31st December, 1898.)

Claim.—1st. A safety attachment to a lock, comprising a plug set turnably in the lock and having an arm adapted to operate the bolt, a slide covering the aperture for the passage of the key into the lock, springs holding the slide in its normal position and returning it thereto automatically, a plate set above the slide and provided with an aperture for the passage of the key in corresponding position, a tubular keyway secured to this plate, a stationary block provided with a screw threaded hole and secured in the mouth of the keyway, a sliding block or blocks provided with screw threaded apertures for the passage of the key, set in the keyway between the stationary block and the plate, a spiral spring supporting this block or blocks in normal position, and means for moving the slide from its normal position by pushing the sliding block downward. 2nd. The combination with a lock, provided with a plug set turnably in the lock and having an arm adapted to operate the bolt, a slide covering the aperture for the passage of the key into the lock, springs holding the slide in its normal position and returning it thereto automatically, a plate set above the slide and provided with an aperture for the passage of the key in corresponding position, a tubular keyway secured to this plate, a stationary block provided with a screw threaded hole and secured in the mouth of the keyway, a sliding block or blocks provided with screw threaded aper-

tures for the passage of the key, set in the keyway between the stationary block and the plate, a spiral spring supporting this block



or blocks in normal position, and means for moving the slide from its normal position by pushing the sliding block downward, of a key provided with screw threads of different sizes, pitch and grade, corresponding with the size, pitch and grade of the screw threads provided in the blocks and in the plug set in the lock.

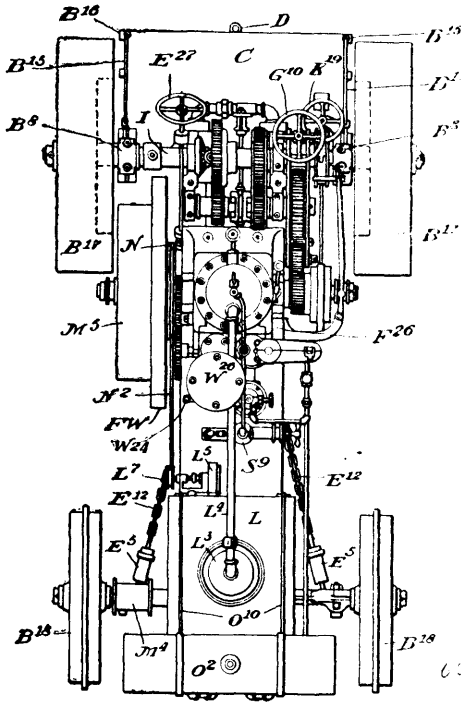
No. 65,576. Traction Engine. (Machine de traction.)

The Vanduzen Gasoline Engine Company, Cincinnati, assignee of Benjamin Cadwell Vanduzen, Winton Place, all in Ohio, U.S.A., 29th December, 1899; 6 years. (Filed 30th June, 1899.)

Claim.—1st. In a traction engine, having chains for guiding the front axle, the drum E¹⁶ for operating the chains, supported in a bracket E¹⁷ partially embracing the reaches and being connected to a superincumbent jaw, substantially as and for the purposes specified. 2nd. In a traction engine, having chains for guiding the front axle, the drum E¹⁶ for operating the chains, supported in a bracket E¹⁷ partially embracing the reaches, and being connected to a superincumbent jaw, and the rods E¹⁸ connecting the bracket E¹⁷ to the rear axle saddle B⁴, substantially as and for the purposes specified. 3rd. In a traction engine, having chains for guiding the front axle, the drum E¹⁶ for operating the chains, supported in a bracket E¹⁷ partially embracing the reaches and being connected to a superincumbent jaw, provided with worm wheel E²⁰, and also carrying the journal bearings E²⁴, E²⁴, worm E²¹, on the shaft E²², journaled in the bearings E²⁴ and E²⁵, substantially as and for the purposes specified. 4th. In a traction engine, having chains for guiding the front axle, the drum E¹⁶ for operating the chains, supported in a bracket E¹⁷, partially embracing the reaches, and being connected to a superincumbent jaw, and the bracket B³² clamped to the reaches and carrying and pivotally holding one end of the oscillating reaches B²⁹, and front axle to which are attached the chains E¹², and the king-bolt holding the forward end of the oscillating reach, substantially as and for the purposes specified. 5th. In a traction engine, the rear axle and the saddle B⁴ provided with the vertical flange B⁵ arranged to lie against one side of the axle, and the vertical bolts B⁶ and the eyebolts B⁷ respectively embracing the other side of the axle and the bottom thereof, substan-

tially as and for the purposes specified. 6th. In a traction engine, the rear axle provided with the saddle supporting and connected to

Fig. 1



the journal bearings B⁸, the saddle being provided with the downwardly extending flange B⁵, to which are secured the bars B¹² of the platform, the bars being supported at rear by the diagonal brace B¹⁴ connected to the platform at one end and to the journal B⁸ on the other, substantially as and for the purposes specified. 7th. In a traction engine, the rear axle provided with the saddle supporting and connected to the journal bearings B⁸, the saddle being provided with the downwardly extending flange B⁵, to which are attached below the axle, bars B¹² of the platform, these bars being connected together by the brace B¹⁴ and receiving support at the rear by the braces B¹⁴ respectively connected to the brace B¹⁶ of the journal bearings B⁸, substantially as and for the purposes specified. 8th. In combination with the rear axle and saddle B⁴ provided with the flange B⁵ extending down at the side of the axle, the draw bar D supported at one end in said flange and at the other in the bracket D² supported by the platform, substantially as and for the purposes specified. 9th. In a traction engine, the supporting frame consisting of reaches between the front and rear axles, said reaches being made of piping, forming a conduit for the passage of water through the same for the purposes substantially as specified, and the front cross head or head block B²³ provided with sleeves B²⁴ shrunk upon the piping and the king-bolt B²⁸ connected thereto and to the saddle B²⁵ on the front axle, substantially as and for the purposes specified. 10th. In a traction engine, the supporting frame consisting of reaches (between the front and rear axles) made of piping, and forming a conduit for the passage of water through the same for the purposes substantially as specified, and the front cross head or head block B²³ provided with sleeves B²⁴ shrunk upon the piping, and the king-bolt B²⁸ connected thereto, and to the saddle B²⁵ on the front axle, the saddle B²⁵ having vertical flanges E²⁶, and a central enlargement for the passage of the king-bolt, the king-bolt receiving the oscillating reach B²⁹, whose rear end is pivoted to a portion of the frame at the rear, substantially as and for the purposes specified. 11th. In a traction engine, the combination of the parallel conduits A², A², and the cylinder engine bed set directly on the conduits, and partly embracing the same, and clamped thereto, substantially as and for the purposes specified. 12th. In a traction engine, the rear axle B, saddle B⁴ mounted thereon, and a supporting frame, comprising the cylindrical reaches or perches of the vehicle, and sleeves B³ respectively shrunk on the adjacent perches, and rigidly secured to the saddle B⁴, substantially as and for the purposes specified. 13th. In a traction engine, the rear axle B, saddle B⁴ mounted thereon, and a supporting frame, comprising the cylindrical reaches or perches of the vehicle, and sleeves B³ respectively shrunk on the adjacent perches, and rigidly secured to the saddle B⁴, and the front cross head B²³, and sleeves B²⁴ shrunk upon the reaches or perches, and the king bolt B²⁸ connected thereto and to the saddle B²⁵ on the front axle, substantially as and for the purposes specified. 14th. In a traction engine, the combination of

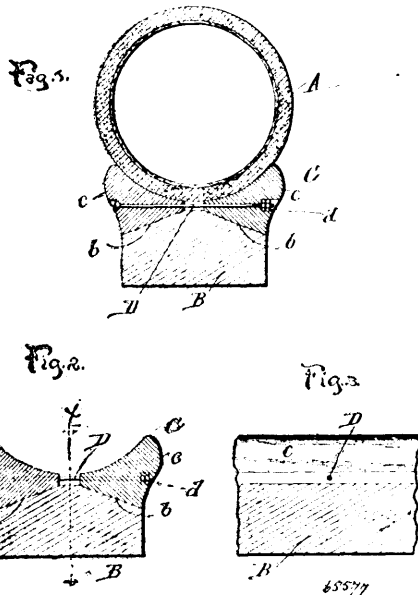
the reaches forming the sides of the frame, the bracket B³² consisting of the lower portion B³⁵, holding the idlers B¹⁴ and the lower half of the clamp B³⁶, partially embracing the reaches, and the lower portion of the engine bed resting upon said reaches and partially embracing the same, and forming the opposite jaw of the clamp, and clamped by bolts B³⁷, and the oscillating reach brace B²⁹, secured at one end to the clamp B³², and at the other end to the king bolt, substantially as and for the purposes specified. 15th. The clamp bracket B³², secured to the supporting reaches, and carrying idle pulleys E¹⁴, as abutments for guiding the chains E¹² to the drum E¹⁶, and partially holding one end of the oscillating reach B²⁹, substantially as and for the purposes specified. 16th. In combination with the rear axle and saddle B⁴ provided with the flange B⁵ extending down at the side of the axle, the draw bar D supported at one end in said flange and at the other in the bracket D² supported by the platform, the said draw bar being provided with means for making it elastically yield in the direction of its length within limits, namely, spring D¹ surrounding the draw bar D and compressible between the flange B⁵ and the enlarged head preferably consisting of the washer D⁵ and the nut D⁶, substantially as and for the purposes specified. 17th. In combination with the rear axle and saddle B⁴ provided with the flange B⁵ extending down at the side of the axle, the draw bar D supported at one end in said flange and at the other in the bracket D² supported by the platform, the said draw bar being provided with means for making it elastically yield in the direction of its length within limits, namely, spring D¹ surrounding the flange B⁵ and the enlarged head preferably consisting of the washer D⁵ and the nut D⁶, the spring being surrounded by the tube D³, substantially as and for the purposes specified. 18th. In a traction engine whose supporting frame consists of piping A² forming the reaches of the gear, the clamp brackets B³² secured to the piping, substantially as described, and carrying the idle pulleys E¹⁴, substantially as and for the purposes specified. 19th. In a traction engine, the combination of the piping forming the reaches between the axles, the sleeve surrounding the conduit and the head block, connected to the said sleeve, saddle or axle, king bolt connecting said axle and head block and also receiving the forward end of the oscillating reach B²⁹, and the bracket clamp B³² at rear, connected to the piping and holding the pivot E³⁴ upon which the rear end of the said oscillating brace oscillates, substantially as and for the purposes specified. 20th. The combination of the piping A forming the reaches of a traction engine, the bracket B³² consisting of the lower portion B³⁵ holding the idlers E¹⁴ and the lower half of the clamp B³⁶ partially embracing the piping A², A², and the lower portion of the engine bed resting upon said piping and partially embracing the same and forming the opposite jaw or complementary portion of the clamp and being connected to the opposite portion of the clamp by bolts B³⁷, substantially as and for the purposes specified. 21st. In a traction engine, the piping A², A², forming a part of a conduit for the flow of water for cooling the engine, the lower jaw E³⁶ of the clamp whose upper jaw or complementary portion is the engine bed, each jaw partially embracing the piping, the jaws being connected together by bolts, and the lower jaw carrying the bolt or projection B³, forming the pivot of the rear end of the oscillating brace, substantially as and for the purposes specified. 22nd. In a traction engine, having the conduit piping as a supporting frame between the rear axle and the front head block, the chains E¹² connected to the front axle and guiding against deflecting abutments as E¹⁴ and wound in opposite directions around the drum E¹⁶, the drum being supported in a bracket E¹⁷, partly embracing the piping, and being connected to the complementary portion or opposing clamp, resting on the piping, substantially as and for the purposes specified. 23rd. In a traction engine having the conduit piping as a supporting frame between the rear axle and the front head block, the chains connected to the front axle and guiding against deflecting abutments as E¹⁴ and wound in opposite directions around the drum E¹⁶, the drum being supported in a bracket E¹⁷, partly embracing the piping, and being connected to the complementary portion or opposing clamp, forming the engine bed, substantially as and for the purposes specified. 24th. In a traction engine, where the main portion of the frame constitutes a conduit pipe for the purposes specified, the bracket E¹⁷ fastened to the piping and provided with the journal bearings E²⁴ and the drum and worm wheel E²⁰ and worm E²¹, the said bracket also being provided with the journal bearings E²⁴, E²⁴, in which the journals of the said worm revolve, shaft E²³ of said worm, the shaft being further provided with the journal bearing E²⁵ connected to the frame of the machine, and the band wheel E²⁷, substantially as and for the purposes specified. 25th. The combination of the bracket clamp E¹⁷, clamped to the frame A², A², of the machine, and the rear axle, saddle B⁴ secured to the axle, having downwardly extending flange B⁵, the said bracket being connected to the machine by tie rods E¹⁸, the bracket carrying the drum E¹⁶, provided with a concentric worm E²⁰, and also carrying the journal bearings E²⁴, E²⁴, worm E²¹, on shaft E²³, revolving at its lower end in the said journals E²⁴, and revolving in its upper end in the journal E²⁵, support E²⁶, of the journals E²⁶, connected to the saddle B⁴, substantially as and for the purposes specified. 26th. In a traction engine having front axle, capable of being turned on a pivot connected to the frame of the machine, and chains connected respectively to the outer or end portions of the axle and converging rearwardly against the deflect-

ing abutments, and connected with means for drawing in one chain and loosening the other simultaneously, the spring being suitably connected with the bolt E² having semispherical bearing E¹³, rotating against the curved bearings in the saddle or projection, the recess in said saddle through which the bolt passes being enlarged rearwardly, substantially as and for the purpose specified. 27th. In a traction engine having front axle, capable of being turned on a pivot connected to the frame of the machine, and chains connected respectively to the outer or end portions of the axle and converging rearwardly against the deflecting abutments, and connected with means for drawing in one chain and loosening the other simultaneously, the spring being suitably connected with the bolt E², having buttons or semispherical bearing E¹³, rotating against the curved bearings in the axle saddle or projection, the recess in said saddle through which the bolt passes being enlarged rearwardly, the bolt E², being provided with the head E³, and the cylinder E⁵, the said head lying within the cylinder E⁵, and against the head E⁴, of the latter, and the spring E⁶, within the cylinder, and held in place by the cap E⁹, and the draw bolt E⁷, whose head E⁸, is within the cylinder and against that end of the spring which is opposite to the one which bears against the cap E⁹, the bolt E⁷ passing through the cap being provided with the hook E¹⁰, for connection with the chain, substantially as and for the purposes specified. 28th. In a traction engine having front axle, capable of being turned on a pivot, connected to the frame of the machine, and chains connected respectively to the outer or end portions of the axle and converging rearwardly against the deflecting abutments, and connected with means for drawing in one chain and loosening the other simultaneously, the spring being suitably connected with the bolt E², having semispherical bearing E¹³, rotating against the curved bearings in the axle saddle or projection, substantially as and for the purposes specified. 29th. In a traction engine having front axle, capable of being turned on a pivot connected to the frame of the machine, and chains connected respectively to the outer or end portions of the axle and converging rearwardly against the deflecting abutments, and connected with means for drawing in one chain and loosening the other simultaneously, the spring being suitably connected with the bolt E², having semispherical bearing E¹³, rotating against the curved bearings in the axle saddle or projection, the recess in said saddle through which the bolt passes being enlarged rearwardly, substantially as and for the purposes specified. 30th. In a traction engine, the frame for supporting the machine and constituting the reaches between the front head or cross block and the rear axle, consisting of piping A², A³, forming the conduit, the piping at one end of the machine being connected by the conduit A³, and the other end of the machine, one of the pipes A², being connected with the pipe A⁶, connected in turn to the space between the jacket of the engine and the cylinder thereof, the adjacent end of the other pipe being connected by the auxiliary pipe A⁴, to the pump, substantially as and for the purposes specified. 31st. In an engine, the crank or driving shaft F, carrying the expander F², fixed thereon, the expander having the opening F³, in its outer portion, and the friction shell F³, surrounding the expander and connected to the driving gear F⁴, the shell and gear mounted loosely on the shaft, and the beveled expander key F⁶, and expander lever F⁷, arranged to be moved outwardly from the shaft by key F⁶, and still farther separate the portions of the expander opposing each other at the slit or opening F³, thereby increasing the diameter of the expander, substantially as and for the purposes specified. 32nd. In an engine, the crank or driving shaft F, the driving gear F⁴, provided with the shell F³, turning loosely on the shaft, and an expander F², fixed to the shaft and provided with a lever pivoted substantially at F⁸, in connection with the slot F⁹, of the expander for enabling the movements of the lever to increase the size of the expander, the free end of the lever carrying the adjustable set screw F¹⁰ and expander key F⁶, in contact with the set screw and sliding in the groove F²⁵ in the shaft and means for reciprocating the expander key, substantially as and for the purposes specified. 34th. In an engine, the crank or driving shaft F, the driving gear F⁴, provided with the shell F³, turning loosely on the shaft, and an expander F², fixed to the shaft and provided with a lever pivoted substantially at F⁸, in connection with the slot F⁹, of the expander for enabling the movements of the lever to increase the size of the expander, the free end of the lever carrying the adjustable set screw F¹⁰ and expander key F⁶, in contact with the set screw and sliding in the groove F²⁵ in the shaft, and means for reciprocating the expander key, and the shifter sleeve F⁶, provided with abutments F¹¹ and the forked lever F¹², operating between said abutments and pivoted at F¹⁴, to the bracket F²⁶ to the engine, substantially as and for the purposes specified. 35th. In an engine, the combination of the driving shaft F and driving gear F⁴, pinions G and G² meshing with the spur wheel G³, mounted on the clutch gear shaft G⁴, the said pinions and gear being located in the frame G⁵, G⁶, oscillating on the said shaft G⁴, and the nut G⁹ located in said frame

and screw G⁷, passing through and engaging the nut G⁹ and journaled in the bracket G¹³, substantially as and for the purposes specified. 36th. In an engine, the combination of the driving shaft F and driving gear F⁴, pinions G and G², meshing with the spur wheel G³, mounted on the clutch gear shaft G⁴, the said pinions and gear being located in the frame G⁵, G⁶, in the frame G⁵, G⁶, said frame oscillating on the said shaft G⁴, and the nut G⁹, located in said frame, and the screw G⁷, passing through and engaging the nut G⁹ and journaled in the bracket G¹³, set screw rod being provided with the collar G¹⁴, provided with the notch G¹⁹ and the lever G¹⁵, pivoted at G¹⁷, having the latch G¹⁸, for engaging said notch G¹⁹, and tail piece G²⁰ and having the elastic spring set G²¹, having a point provided with two beveled sides engaging the point G²³, on the bracket, which latter point also has two beveled sides, screw shaft having nut or detent G¹⁵, preventing it from riding out of the bracket G¹³, substantially as and for the purposes specified. 37th. In combination with the oscillating frame G⁵, G⁶, pivoted on a shaft G⁴, the spur gear G³ and pinions G², and driving gear F⁴, mounted on its separate shaft, the screw G⁷, working in the notch G¹⁹ in one portion of the oscillating frame G⁵, G⁶, and mechanism for preventing the rotation of the rod except by human agency, to wit, lever G¹⁵, pivoted at G¹⁷, and having latch G¹⁸, for engaging the notch G¹⁹ of the screw and tail piece G²⁰, spring set G²¹, pressed down by means of the spring G²⁷, located in the chamber G²⁶ of the lever, and the spring set being provided with the nut or detent G²⁵ and at its free or operating end being alternately provided with two bevels for engagement with two bevels on the latch point of the bracket, G¹³, substantially as and for the purposes specified. 38th. In combination with the oscillating frame G⁵, G⁶, carrying the gears in combination with the driving gear, the screw G⁷ arranged for oscillating the frame G⁵, and passing through the bracket G¹³ and provided above the bracket with collar G¹⁴ and below the bracket with the nut or detent G¹⁵, the passage through the bracket being enlarged from the center in both directions to allow the necessary oscillation of the groove as frame G⁵, G⁶, oscillates, substantially as and for the purposes specified. 39th. In combination, the driving wheels, a shaft I for operating one of said driving wheels, and a sleeve 12 for operating the other of said wheels, the shaft being received into said sleeve, and the eye 13 located in the recess 14 of said sleeve, and surrounding the shaft I, the eye having a bolt 15 and a cap 17 over recess 14, the bolt 15 passing through the cap and nut 16 thereof, substantially as and for the purposes specified. 40th. In the mechanism for enabling the driving wheels to rotate the one faster than the other, while both are positively driven, the combination of the driving wheels shaft I supported near one end in journal bearings B⁸ and pinion I²⁰ fixed on said shaft I and internal gear BD on the adjacent driving wheel B¹⁷, sleeve 12 loosely receiving the other end of the shaft and journaled in a bearing as B⁸, a pinion I⁸, fixed on said sleeve and engaging internal gear BD, and said internal gear located on the adjacent driving wheel B¹⁷, a driving wheel positively driven by the engine and engaging a pinion I¹⁰ or I¹¹, said pinion being journaled on shaft I, and bevelled pinions I¹² on opposite sides of hub of pinion I¹⁰ revolving loosely on shaft I, and the adjacent beveled gear I⁹ and I¹⁶ respectively engaging said pinion I¹² on opposite sides thereof, one of these beveled gears being fixed to the shaft I and the other to the sleeve I², the sleeve I² having a recess I⁴, an eye I³ surrounding the shaft, and a bolt I⁵ connected to the eye and means for drawing the eye against the shaft I, substantially as and for the purposes specified. 41st. In the mechanism for stopping the K, fixed on shaft I, operating the driving wheels B¹⁷, through suitable intermediate mechanism, and the brake band K⁴, K⁵, attached at one end to the frame of the machine, and at the other end at K⁷, to the nut K³, nut K¹³, and screw sleeve K¹⁶, and screw rod K¹⁵, screwing through the nut K¹³, secured in the sleeve by the collars K¹⁷, substantially as and for the purposes specified. 42nd. In the mechanism for stopping the machine, the brake wheel K, fixed on shaft I, operating the driving wheels B¹⁷, through intermediate mechanism, and the brake band K⁴, K⁵, attached at one end to the frame of the machine and at the other end at K⁷, to the nut K¹³, nut K¹³, and screw sleeve K¹⁶, and screw rod K¹⁵, screwing through the nut K¹³, secured in the sleeve by the collars K¹⁷, substantially as and for the purposes specified. 44th. The combination of the shaft M, and the pulley M⁶, friction shell connected to gear wheel meshing with gear on the crank shaft F, and an expander and expander key fixed to shaft M, and device for shifting the expander key, substantially as and for the purpose specified. 45th. In combination with the piping A², A³, A⁴, and A⁵, the caps P², P², on said piping A², A³, and the buffer P, whose ends are connected to the said caps, substantially as and for the purposes specified. 46th. In combination with the piping A², A³, A⁴, and A⁵, the caps P², P², on said piping A², A³, and the buffer P, whose ends are connected to the said caps, and whose centre is provided with the concave piece P³, centrally located therein, the buffer being of a box shape, substantially as and for the purposes specified.

No. 65,577. Wheel Rim for Elastic Tires.

(Jante de roue pour bandages elastiques.)



Morgan & Wright, assignee of George A. Smith, all of Chicago, Illinois, U.S.A., 29th December, 1899; 6 years. (Filed 14th October, 1899.)

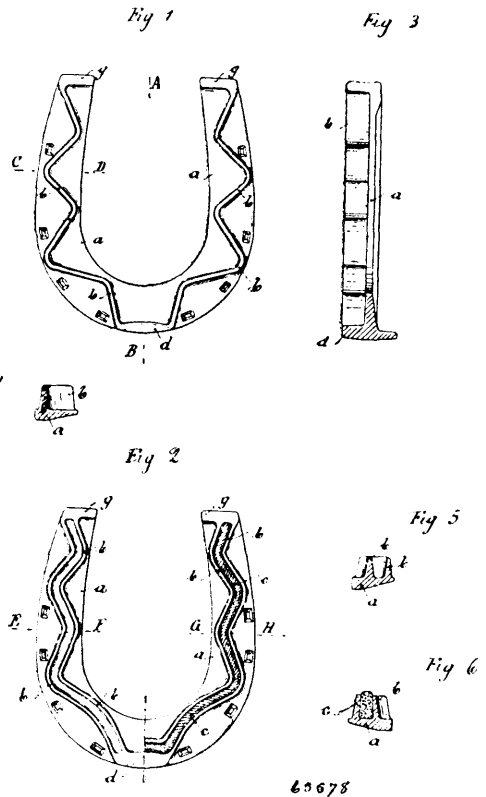
Claim.—1st. A wooden felly having its perimeter bevelled at each side of a centre line, and a channelled metal rim comprising a couple of rings or annular sections fitted to seat upon the bevelled portions of the felly and adapted when in place thereon to conjointly form an annular channel for the base portion of an elastic tire, said rings or sections being adjustably held upon the felly by bolts or screws. 2nd. A wooden felly having its perimeter bevelled at each side of a centre line, and a channelled metal rim comprising a couple of rings or sections adjustably drawn the one towards the other and clamped upon the felly by bolts and tightening nuts, the inner sides of the rings or sections being bevelled in conformity with and fitted to the bevelled portions of the felly, and having their outer sides adapted to conjointly provide a channel for receiving the base portion of an elastic tire, and said rings or sections being primarily applied with intervening space. 3rd. The combination of a wooden felly having annular, bevelled, peripheral seats respectively at opposite sides of a centre line, a sectional metal rim providing an annular channel and composed of a couple of rings or annular sections having inner bevelled sides fitted to the bevels of the wooden felly, tie bolts and nuts whereby the rings or annular sections are adjustably clamped upon the wooden felly, and an elastic tire having its base portion held within the annular channel of the sectional metal rim.

No. 65,578. Horse Shoe. (Fer à cheval.)

Bruno Wesselmann, Prussia, Germany, 29th December, 1899; 6 years. (Filed 4th November, 1899.)

Claim.—1st. A horse shoe comprising a base plate *a*, and a rib or ribs *b* of serpentine or zig-zag form on the lower face, for the purpose of offering resistance in every direction against slipping, substantially as described. 2nd. A horse shoe comprising a base plate

a, parallel ribs *b* of serpentine or zig-zag form on the lower face and packing material *c* between said ribs, for the purpose of offering



resistance in every direction against slipping, substantially as described.

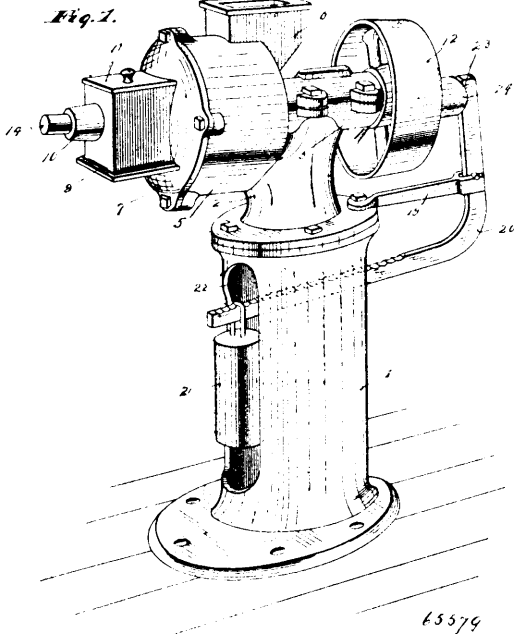
No. 65,579. Grinding Mill. (Moulin à farine.)

Emil R. Draver and Henry C. Draver, both of Winchester, Indiana, U.S.A., 29th December, 1899; 6 years. (Filed 16th September, 1899.)

Claim.—1st. In a grinding mill, the combination with a feed trough or propeller case and a suitable non-rotary resistance plate, of a grinding screw or propeller having an extended hub which passes through said resistance plate, with said parts mounted to afford a yielding action between said plate and said propeller, substantially as described. 2nd. In a grinding mill, the combination with a feed trough or propeller case and a suitable non-rotary resistance plate, of a grinding screw or propeller within said case held under yielding pressure to move toward and from said resistance plate, and a discharge opening which is automatically varied in size under the longitudinal movement of said propeller, substantially as described. 3rd. In a grinding mill, the combination with a feed trough or propeller case and a stationary resistance plate, of a screw or propeller within said feed trough having an extended hub or shaft acting as a gate for co-operation with a perforation in said resistance plate, said propeller and gate being mounted to move to and from said resistance plate to vary the size of the discharge opening from said grinding chamber, substantially as described. 4th. In a grinding mill, the combination with a feed trough or propeller case and a stationary resistance plate of a screw or propeller within said feed trough having an extended hub or shaft serving as a gate for co-operation with a perforation in said resistance plate, said propeller being under yielding pressure and movable to and from said resistance plate to automatically vary the size of the discharge opening from the grinding chamber, substantially as described. 5th. In a grinding mill, the combination with a feed trough or propeller case and a stationary resistance plate, of a screw or propeller within said trough or case mounted to move to and from said resistance plate under yielding pressure, a driving sleeve affording a bearing for said propeller shaft, and a clutch connecting said sleeve and shaft for common rotation but permitting said shaft

to slide in said sleeve, substantially as described. 6th. In a grinding mill, the combination with a feed trough or propeller case hav-

the shelves arranged within said cabinet and extending nearly to the rear of the same, the guide rods arranged across the front of each



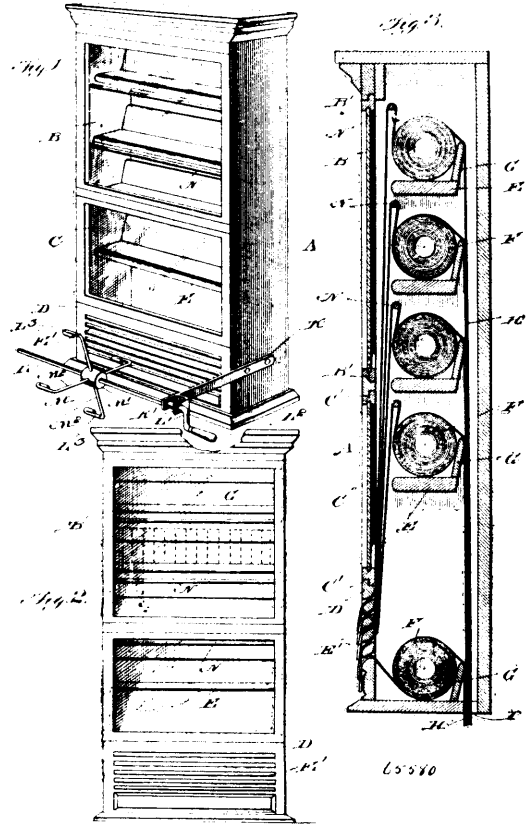
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ing rigidly secured to it the tapered annular resistance plate, of a screw or propeller within said feed trough or casing mounted for movements to and from said annular resistance plate and provided with an extended hub portion which serves as a gate for co-operation with the opening through said resistance plate to give a variable discharge opening from the grinding chamber under the axial movements of said screw or propeller, substantially as described. 7th. In a grinding mill, the combination with a feed trough or propeller case provided with the tapered annular resistance plate 7 with flights or radial ribs 8, of the screw or propeller rotatively mounted within said trough or case for movements to and from said annular resistance plate, and provided with a hub serving as a gate for co-operation with the opening through said resistance plate to give a variable discharge opening from the grinding chamber under the axial movements of said propeller, substantially as described. 8th. In a grinding mill, the combination with a feed trough or propeller case and a stationary resistance plate, of a screw or propeller within said trough or case mounted for movement to and from said resistance plate, the pivoted lever 20 having the adjustable weight 21, mounted to bear against the end of the propeller shaft for holding the same under yielding pressure to move the propeller blades towards said resistance plate, substantially as described. 9th. In a grinding mill, the combination with a feed trough or propeller case and a suitable resistance plate, of a grinding screw or propeller within said casing, held under yielding pressure to move toward and from said resistance plate, and a discharge gate controlled by the longitudinal movement of said propeller to vary the size of the outlet from the grinding chamber, substantially as described.

No. 65,580. Ribbon Display Cabinet.
(Cabinet à étaler du ruban.)

John D. Leen, Braggville, Maine, U.S.A., 29th December, 1899; 6 years. (Filed 10th May, 1899.)

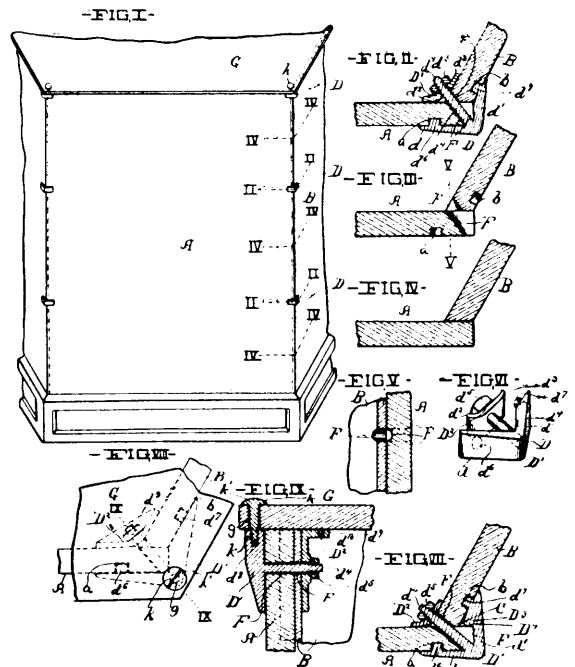
Claim.—1st. A ribbon display cabinet divided into a series of compartments adapted to contain ribbon, each compartment having a passageway at the rear thereof, and the cabinet having an opening at the bottom through which the paper is passed, the front of the cabinet having a slotted strip at the bottom thereof through which the ribbons pass, substantially as described. 2nd. A ribbon display cabinet divided into a series of compartments adapted to contain ribbon, the upper and lower sliding doors having glass panels, and a strip arranged below the lower sliding door and having a series of guide slots, substantially as shown and described. 3rd. The combination with a ribbon cabinet having a series of guide openings in the bottom thereof, a bracket arm attached to the cabinet and projecting forwardly therefrom, the rotary shaft and the reel adapted to slide longitudinally upon said shaft and turn therewith, substantially as described. 4th. The combination with a ribbon display cabinet, of



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compartment, and a strip arranged at the bottom of the case and having a series of guide slots, substantially as described.

No. 65,581. Show Case. (Vitrail.)



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James Leo Craine, Cleveland, Ohio, U.S.A., 29th December, 1899; 6 years. (Filed 12th May, 1899.)

Claim.—1st. In a show case or show front, two abutting glass plates arranged at an angle to each other and tightly fitted together, an external jaw formed and arranged to bear against the outer sides of the said plates, an internal jaw formed and arranged to bear against the inner sides of the plates, an operative connection between the two jaws, and the glass being recessed, at the joint between the plates, for accommodating the location of the said operative connection. 2nd. The combination of two glass plates arranged at an angle to each other, and tightly fitted together and having registering recesses in their meeting ends, an outer angle piece or jaw D¹ arranged to bear against the outer sides of the said plates, an inner piece or jaw D² arranged to bear against the inner sides of the said plates, and a connection between the said parts D¹ and D², extending through the aforesaid recesses. 3rd. In a show window, the combination with an upright front plate A having the recess F in its edge, and the side plate B fitting against the rear side of the front plate at the aforesaid edge, and having a recess F formed at the junction of its forward edge and inner side and registering with the recess in the front plate, an angle piece or jaw arranged to conceal the recess in the front plate from the exterior and to bear against the outer sides of the two plates, an inner jaw arranged to bear against the inner sides of the said plates opposite the external jaw, and a connection, between the said jaws, extending through the aforesaid recesses, substantially as and for the purpose set forth. 4th. The combination of two glass plates arranged at an angle to each other, and one of them overlapping and projecting a short distance beyond the adjacent edge of the other, and both plates being tightly fitted together and having the glass recessed at the joint between them, an outer jaw D¹ arranged to bear against the outer sides of the said plates and enlarged inwardly, as at D², into the angular space formed between the two plates by the projection of the one plate beyond the edge of the other plate, an inner jaw D² arranged to bear against the inner sides of the said plates, and a connection, between the said jaws, extending through the recessed portion of the aforesaid joint. 5th. A show case or show front comprising two upright glass plates arranged at an angle to each other and tightly fitted together, and having in their meeting or adjacent edges, and at different points located a suitable distance apart vertically, registering recesses, and a corner fastener at each pair of registering recesses, which fastener has a number extending through the said recesses, substantially as and for the purpose set forth. 6th. In a show case or show front, two abutting glass plates arranged at an angle to each other and tightly fitted together, an external jaw formed and arranged to bear against the outer sides of said plates, an internal jaw formed and arranged to bear against the inner sides of the plates, two lugs formed upon the inner side of one of the jaws at opposite sides, respectively, of the joint between the plates, a operative connection between the jaws at the joint between the plates, and the glass being recessed at the joint between the plates for accommodating the location of the said operative connection, and having recesses or niches engaged by the aforesaid lugs. 7th. In a show case or show front, the combination with two upright abutting glass plates arranged at an angle to each other and tightly fitted together, and a top plate resting upon and overlapping the upper ends or edges of the upright plates, of a corner clamp provided with the following elements: an external jaw forward and arranged to bear against the outer sides of the upright plates, an internal jaw formed and arranged to bear against the inner sides of the plates opposite the external jaw, an operative connection between the two jaws, an upright screw threaded hole formed in the upper end of one of the jaws, and a screw engaging the said hole and extending through the top plate and having a head arranged to bear downwardly upon the said top plate.

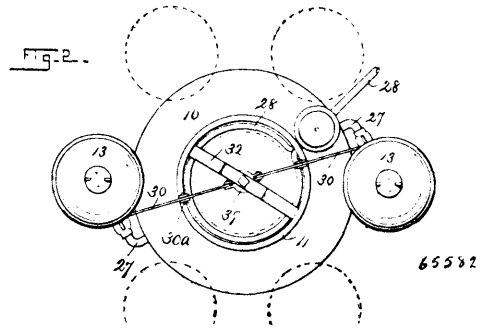
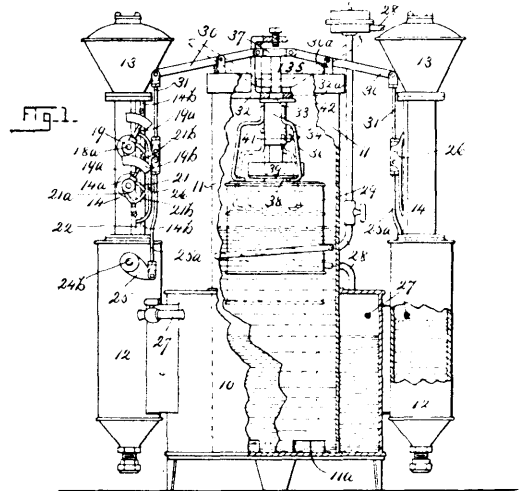
No. 65,582. Acetylene Gas Machine.

(Machine à gaz acétylène.)

Edwin P. Gardner and Timothy Kelly, both of Norwick, Connecticut, U.S.A., 29th December, 1899; 6 years. (Filed 24th July, 1899.)

Claim. 1st. In combination, in acetylene gas apparatus, a water chamber, a super imposed carbide storage chamber, an enclosed passage connecting said chambers, and mechanism for releasing from said storage chamber and for measuring and delivering into the water chamber, a specified charge of carbide, consisting of two tapered chutes suspended in said passage with surrounding clear space as set forth, and cut off gates located at the delivery ends of said chutes, said gates consisting of curved plates so hung that they may be swung into the space surrounding the chutes when opened to permit the carbide to be discharged from said chutes, all substantially as specified. 2nd. In combination, in acetylene gas apparatus, a water chamber, a super imposed carbide storage chamber, an enclosed passage connecting said chambers, and mechanism for releasing from said storage chamber and for measuring and delivering into the water chamber, a specified charge of carbide, consisting of two tapered chutes suspended in said passage with surrounding clear space as set forth, and cut off gates located at the delivery ends of said chutes, said gates consisting of curved plates adapted to be swung across the delivery ends of said chutes, and so located that space approximately equal to the size of the carbide granules is provided between the gate and the delivery end of the chute with which it co-operates, all substantially as specified. 3rd. In combination,

in acetylene gas apparatus, a water chamber, a super imposed carbide storage chamber, an enclosed passage connecting said chambers,

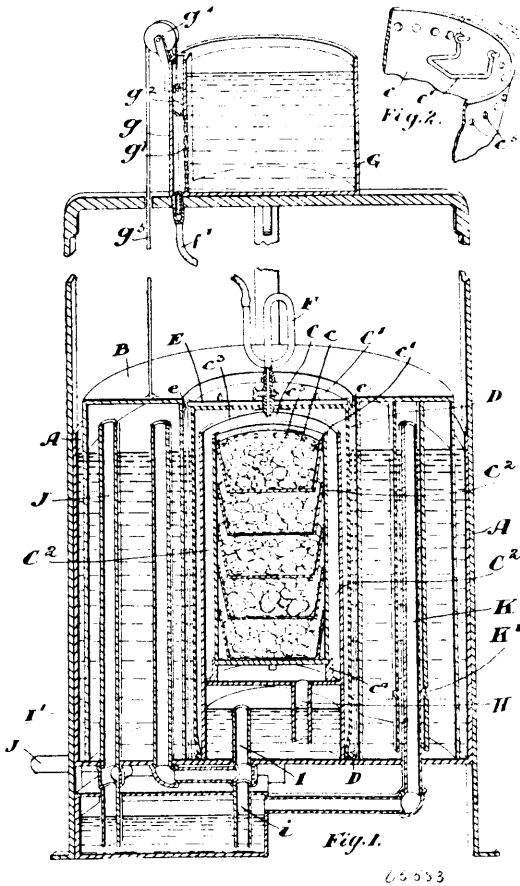


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and mechanism for releasing from said storage chamber and for measuring and delivering into the water chamber, a specified charge of carbide, consisting of two tapered chutes suspended in the said passage with surrounding clear space as set forth, and cut off gates located at the delivery ends of said chutes, said gates consisting of curved plates adapted to be swung across the delivery ends of said chutes and so located that space approximately equal to the size of the carbide granules is provided between the gate and the delivery end of the chute with which it co-operates, the said gates being also greater in width than the delivery ends of the chutes to prevent the undue passage of the carbide when the gate is closed, all being substantially as specified. 4th. In combination, in apparatus of the class referred to, a storage chamber, an enclosed passage depending therefrom, a chute suspended within said passage, a trunnioned cut off gate located at the delivery end of said chute, a hub 19, secured to one of said trunnions, means for rocking said hub, and means for rocking said hub and the connected gate against rotation, all substantially as specified. 5th. In acetylene gas apparatus, a reservoir for the carbide, a generating chamber located below the reservoir, an inclosing passage connecting the reservoir and chamber, a gate for controlling the flow of carbide, a weighted counter balance connected to the shaft of the gate, and two arms connected with the trunnions of the gate, combined with an endwise moving bar provided with a stud which operates in connection with the arms, a moisture cut off placed at the lower end of the passage comprising a gate supported by trunnions, one of which bears an arm connected by a link with the vertically moving bar, substantially as shown. 6th. In an acetylene gas apparatus, a reservoir, a generator located below the reservoir, a connecting passage between the reservoir and the generator, a tapered chute placed in the passage, a pivoted swinging gate operating in connection with the lower end of the chute, a counter balance connected with the gate, two arms extending from the trunnions of the gate, combined with a vertically moving bar provided with a stud which operates in connection with the two arms, a moisture cut off placed at the bottom of the passage, an arm secured to the trunnion thereof, and a link connecting said arm with the vertically moving bar, substantially as specified. 7th. In an acetylene gas apparatus, a reservoir, a generator, a passage connecting the reservoir and the generator, a tapered chute placed in the passage, a pivoted swinging gate operating in connection with the lower end of the chute, a counterweight, and two arms placed at an angle to each other and extending from the trunnion of the gate, combined with a vertically moving bar provided with a stud which alternately engages with the arms connected with the gate, and by means of which bar the gate

is alternately opened and closed as the bar is moved endwise, substantially as set forth. 8th. In gas apparatus, in combination in and with a gas controlled water chamber, a float, a weighted slide, means for retaining said slide in its elevated position and for releasing the same when the said float reaches its lowest position, substantially as specified. 9th. In gas apparatus, in combination in and with a gas controlled water chamber, a float, a weighted slide, means for retaining said slide in its elevated position and for releasing the same when the said float reaches its lowest position, and a lever supported by a fixed fulcrum and having one end connected with the said weighted slide substantially as specified. 10th. In gas apparatus, in combination in and with a gas controlled water chamber, a float, a weighted slide, means for retaining said weighted slide in its elevated position and for releasing the same when the said float reaches its lowest position, carbide feeding mechanism substantially as set forth, and mechanism connecting said feeding mechanism with said weighted slide whereby the feeding mechanism is caused to operate with a rapid movement, as and for the purpose specified. 11th. In gas apparatus, in combination, a receiver, a generating chamber and pipe connections between said receiver and chamber, carbide measuring mechanism over the generator, a float and an independently operated weighted slide within said receiver, and connections between the said carbide measuring mechanism and the weighted slide and float whereby the said carbide measuring mechanism is caused to operate with a rapid movement, substantially as specified. 12th. In gas apparatus, in combination in and with a gas controlled water chamber, a float, a weighted slide, means for retaining said weighted slide in its elevated position and for releasing the same when the said float reaches its lowest position, carbide feeding mechanism, a generating chamber, a moisture cut-off between the said generating chamber and feeding mechanism, and mechanism connecting the said moisture cut-off with the said weighted slide, all substantially as specified.

No. 65,583. Acetylene Gas Machine.
(Machine à gaz acétylène.)

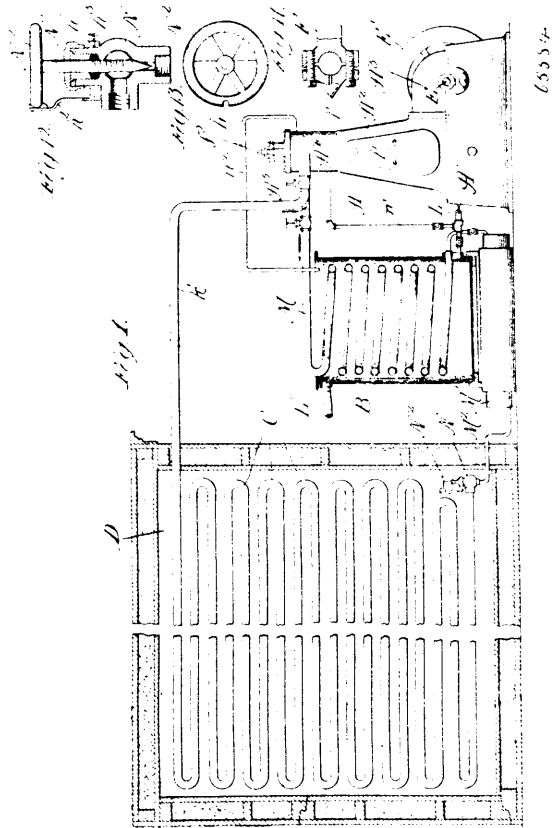


John McLean, Ormstown, Quebec, Canada, 29th December, 1899; 6 years. (Filed 25th July, 1899.)

Claim.—1st. The combination with an annular gasometer having a well, of a generator and carbide receptacle situated in the well, with a trapped water supply pipe attached thereto at the upper end, and a plurality of carbide buckets, with inwardly folding handles, arranged to rest one upon the other, as and for the purpose

specified. 2nd. The combination with an annular gasometer having a well, of a generator and carbide receptacle situated in the well and connected to the water supply by a trapped pipe, and a plurality of carbide buckets having inwardly folding handles so arranged that the bucket next above will rest upon the handles, as and for the purpose specified. 3rd. The combination with an annular gasometer having a well, of a generator and carbide receptacle situated in the well and connected to the water supply by a trapped pipe, and a plurality of carbide buckets having inwardly folding handles so arranged that the bucket next above will rest upon the handles, the straps securely attached to the lower end of the well in the gasometer and extending to the top of the outer casing, and locking bolts extending through the top of the straps, as and for the purpose specified. 4th. The combination with an annular gasometer having a well, of a generator and carbide receptacle situated in the well, and connected to the water supply by a trapped pipe, and a plurality of carbide buckets having inwardly folding handles so arranged that the bucket next above will rest upon the handles, means for retaining the carbide receptacle in position, and a water receptacle immediately below the generator through which the gas passes before rising into the gas holder, as and for the purpose specified. 5th. The combination with an annular gasometer having a well, of a generator and carbide receptacle situated in the well, with a trapped water supply pipe attached thereto at the upper end, and a plurality of carbide buckets, with inwardly folding handles, arranged to rest one upon the other, a cistern suitably supported above the gasometer having a stand pipe with perforations, a drop valve located in said pipe and connected by a cord passing over a pulley to the top of the gas holder, such cistern forming the water supply for the carbide, as and for the purpose specified.

No. 65,584. Ice Making Machine.
(Machine à faire de la glace.)



The Ideal Refrigerating and Manufacturing Company, assignee of Eliel Long Sharpneck, all of Chicago, Illinois, U.S.A., 29th December, 1899; 6 years. (Filed 18th February, 1899.)

Claim. 1st. In a refrigerating machine, the combination of the compressor cylinder having in its discharge end an eduction port communicating with its discharge conduit, an inwardly closing valve at said port, a piston in the cylinder, and toggle mechanism for driving the piston to avoid clearance at the end of its discharge stroke and for interrupting the movement of the piston for a period sufficiently prolonged to allow the valve to become seated before the piston advances upon its suction stroke. 2nd. In a refrigerating machine, the combination with the compressor cylinder and the gas return and discharge conduits, of an eduction port in the cylinder

head communicating with the discharge conduit, an inwardly closing valve at said port, a piston in the cylinder, and means for operating the piston to move the same to the cylinder head approximately without clearance, comprising a toggle leader mounted to rock at one of its arms on a fulcrum and operatively connected at its other arm with the piston, and toggle lever driving means geared to the toggle lever to flex the same to one side, to produce the suction stroke of the piston, and to extend the same to a dead centre, to produce the discharge stroke of the piston, and at the end of the discharge stroke to interrupt movement of the piston for a period sufficiently prolonged to permit seating of the eduction valve before the piston advances upon its suction stroke, substantially as and for the purpose set forth. 3rd. In a refrigerating machine, the combination with the compressor cylinder and the gas return and discharge conduits, of an eduction port in the cylinder head communicating with the discharge conduit, an inwardly closing valve at said port, a piston in the cylinder, and means for operating the piston to move the same to the cylinder head approximately without clearance, comprising a toggle lever mounted to rock at one of its arms on a fulcrum and operatively connected at its other arm with the piston, and toggle lever driving means comprising a crank shaft geared to the toggle lever, to flex the same to one side and produce the suction stroke of the piston, in the movement of the crank to one dead centre, and to extend the toggle lever to a dead centre, and produce the discharge stroke of the piston, in the movement of the crank to its other dead centre, and interrupt movement of the piston at the end of its discharge stroke for a prolonged period, whereby the seating of the eduction valve is effected during such interruption, substantially as and for the purpose set forth. 4th. In a refrigerating machine, the combination with the compressor cylinder and the gas return and discharge conduits, of an eduction port in the cylinder head communicating with the discharge conduit, an inwardly closing valve at said port, a passage extending from the cylinder head to the opposite end portion of the cylinder, a valve for opening and closing said passage, a piston in the cylinder, and means for operating the piston to move the same to the cylinder head approximately without clearance, comprising a toggle lever mounted to rock at one of its arms on a fulcrum and operatively connected at its other arm with the piston, and toggle lever driving means geared to the toggle lever to flex the same to one side, to produce the suction stroke of the piston, and to extend the same to a dead centre, to produce the discharge stroke of the piston, and at the end of the discharge stroke to interrupt movement of the piston for a period sufficiently prolonged to permit seating of the eduction valve before the piston advances upon its suction stroke, substantially as set forth. 5th. In a refrigerating machine, the combination with the compressor cylinder, and the gas return and discharge conduits, of an eduction port in the cylinder head communicating with the discharge conduit, an inwardly closing valve at said port extending when seated flush with the inner face of the cylinder head, an induction port toward the opposite end of the cylinder communicating with the return conduit, a passage through the piston, an induction valve on the piston for opening and closing said passage and extending when seated flush with the end of the piston, and means for operating the piston to move the same to the cylinder head approximately without clearance, comprising a toggle lever mounted to rock at one of its arms on a fulcrum and operatively connected at its other arm with the piston, and toggle lever driving means geared to the toggle lever to flex the same to one side, to produce the suction stroke of the piston, and to extend the same to a dead centre, to produce the discharge stroke of the piston, and to extend the same to a dead centre, to produce the discharge stroke of the piston, and at the end of the discharge stroke to interrupt movement of the piston for a period sufficiently prolonged to permit seating of the eduction valve before the piston advances upon its suction stroke, substantially as and for the purpose set forth. 6th. In a compressor, the combination with the compressor cylinder, piston in the cylinder, and drive shaft, of a toggle lever mounted to rock at one of its arms on a fixed fulcrum, and operatively connected at its other arm with the piston, a pitman connected in a centric operative relation to the shaft, and intermediate toggle mechanism forming a connection between the said pitman and toggle lever, substantially as and for the purpose set forth. 7th. In a compressor, the combination with the shell having a base portion forming an oil reservoir and supporting the cylinder, drive shaft, piston, piston stem and piston driving cross head, of bearings for the drive shaft on the inner sides of the said base provided with oiling openings, a chamber in the cross head having outlets to the cross head guides, an oil pump in the said base portion actuated from the compressor driving mechanism and discharging into the said chamber, and oil conveying ducts extending from below said cross head guide to the said oiling openings at the drive shaft, substantially as and for the purpose set forth.

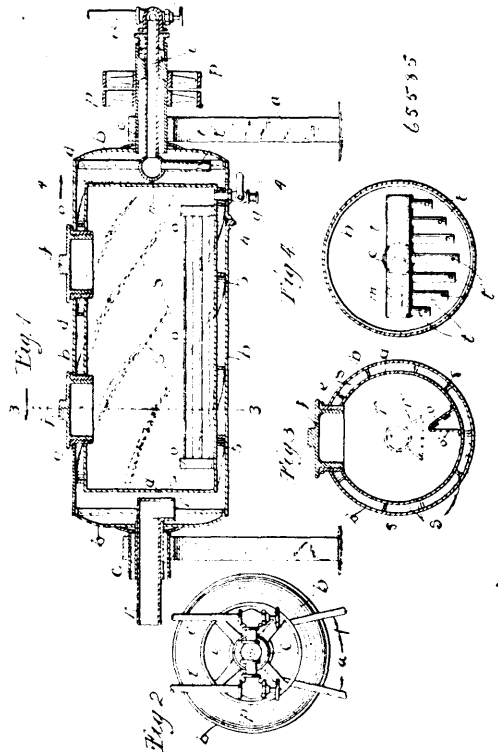
No. 65,585. Liquid Pasteurizing or Sterilizing Apparatus.

(Appareil à stériliser les liquides.)

The Creamery Package Manufacturing Company, Chicago, Illinois, assignee of Charles E. Bushnell, Appleton, Wisconsin, U.S.A., 29th December, 1899; 6 years. (Filed 2nd May, 1899.)

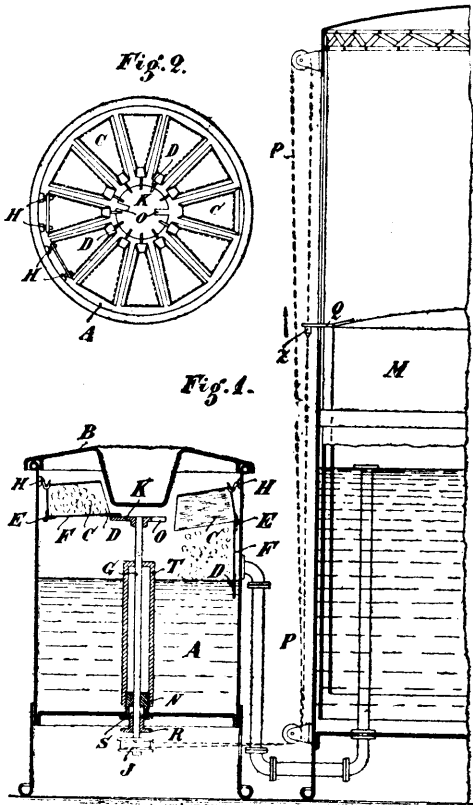
Claim.—1st. In a pasteurizing or like apparatus, the combination of a pair of rotary receptacles, one inclosed within the other and adapted to be closed air tight, a water space surrounding the inner

receptacle, a valved water pipe communicating with said space, and a valved steam pipe also communicating with said space and extend-



ing below the water lever, whereby water may be introduced into the space and heated by the introduction of steam. 2nd. In a pasteurizing or like apparatus the combination of a pair of rotary receptacles, one inclosed within the other and surrounded by a water space, a water pipe communicating with said space and spirally arranged strips secured in the space between the receptacles running longitudinally thereof. 3rd. In a pasteurizing or like apparatus, the combination of a pair of rotary receptacles, one inclosed within the other and surrounded on all sides by a water space, a pipe for the introduction of water into the space between the receptacles, means for introducing and drawing off from the inner receptacle the material to be treated, an agitator in the inner cylinder, and means for insuring a circulation of water in the space between the receptacles. 4th. In a pasteurizing or like apparatus, the combination of a pair of rotary receptacles, one inclosed within the other and surrounded by a water space, a water pipe communicating with said space at one end of the receptacles, a pipe for drawing off water from said space at the other end of the receptacles, a steam pipe extending into the water space, a muffler in said space connected with the steam pipe and extending below the water line. 5th. An apparatus for pasteurizing or sterilizing liquids consisting of suitable standards, a pair of rotary cylinders journaled in bearings in the standards, one of said cylinders inclosed within the other and surrounded by a water space, spiral strips arranged in the water space along the sides of the cylinders, a stirrer or agitator secured within the inner cylinder, means for introducing and drawing off the liquid from the inner cylinder, a cleaning opening in the outer cylinder, a pipe extending through the bearings at one end of the cylinders, separate water and steam pipes connected thereto, a muffler located in the water space and connected to the pipe that passes through the cylinder journal and depending below the water line, a pipe leading from the water space and passing through the journal at the opposite end of the cylinders, and means for rotating the cylinders. 6th. In a pasteurizing or like apparatus, the combination of a pair of rotary cylinders, one inclosed within the other and surrounded by a water space, a water and steam pipe communicating centrally with the space at one end of the cylinders, and a muffler connected to the end of the pipe and consisting of a drum extending diametrically across the cylinder heads and having perforated pipes depending therefrom below the water line. 7th. In an apparatus for pasteurizing liquids, the combination of a pair of cylinders, one arranged within the other with a water space surrounding it, means for rotating the cylinders, air tight closures for the inner cylinder, means for introducing and drawing off liquid from the inner cylinder, a stoppered opening into the water space for cleaning and drawing off the contents, pipes at one end of the cylinders for introducing steam and water into the space between them, and a pipe at the opposite end of the cylinders.

No. 65,586. Acetylene Gas Generator.
(Générateur de gaz acétylène.)



65586

Hans Berger, Berlin, Germany, 29th December, 1899; 6 years.
(Filed 2nd March, 1899.)

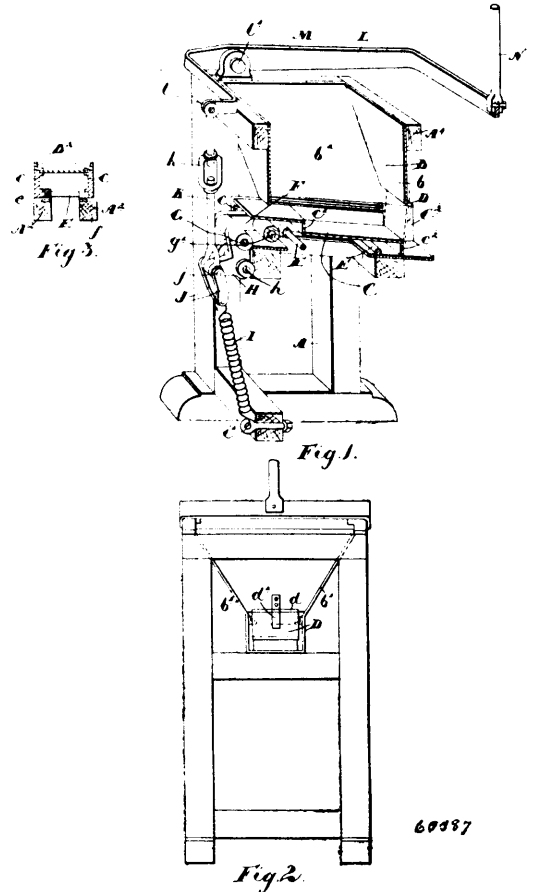
Claim.—1st. In an acetylene gas generator, the combination of a series of carbide chambers suspended at their upper back edge to the interior of the wall of a generator, said chambers having downwardly openings covers, and horizontally projecting pin thereon, a rotary disc having one or more slots therein, said disc being horizontally disposed and adapted to support the pins of the carbide chamber covers, said slots being so located that a pin of a cover may fall through when the said disc is partially turned, and means in connection with the gasometer bell to turn said disc when the gasometer sinks below a certain point, substantially as described. 2nd. In an acetylene gas generator, the combination of a series of carbide chambers suspended around the interior of the generator as specified, said chambers having hinged covers with pins therein and a disc having slots as specified to support the pins of all the covers and retain the chambers closed when charged, a vertical spindle to support said disc, a sleeve mounted within the generator and having stuffing box and gland, through which said spindle passes out of the generator, a pulley mounted on the lower end of said spindle and a cord passing round said spindle, a fork or finger on the gasometer bell and means for guiding said cord in the path of movement of said fork or finger and a stop on said cord adapted to be engaged by said finger or fork in the manner and for the purpose substantially as described.

No. 65,587. Ore Feeder. (Alimentateur de minerai.)

George Herman Nissen, Toronto, Ontario, Canada, 29th December, 1899; 6 years. (Filed 18th August, 1899.)

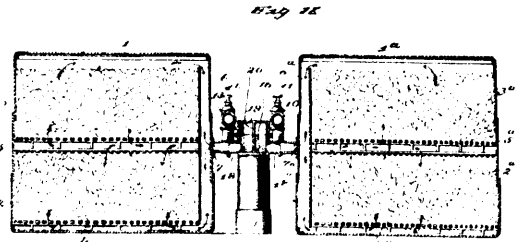
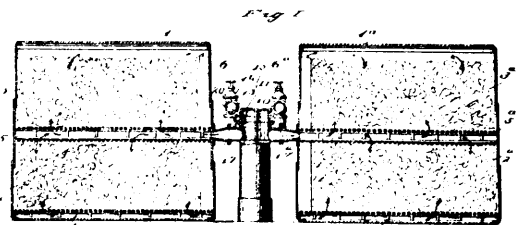
Claim.—1st. The combination of a hopper supported on a suitable frame, of a step-like bottom supported in suitable guideways beneath the hopper and means for reciprocating such bottom, as and for the purposes specified. 2nd. The combination with a hopper supported on a suitable frame of a step-like bottom supported in suitable guideways beneath the hopper, a link pivotally connected to the rear end of the sides of the bottom, the bell crank connected to the link, the spring connected to the bell crank and the open lever connected at one end to the top of the rod and suitably pivoted and operated as and for the purpose specified. 3rd. The combination with a hopper supported on a suitable frame, of a step-like bottom supported in suitable guideways beneath the hopper, the lever suitably pivoted on the frame and operated and means connected to the bottom and to the lever, whereby a reciprocating movement is imparted to such

bottom, as and for the purpose specified. 4th. The combination with a hopper supported on a suitable frame, of a step-like bottom



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No. 65,588. Gas Purifying Method.
(Méthode de purifier le gaz.)

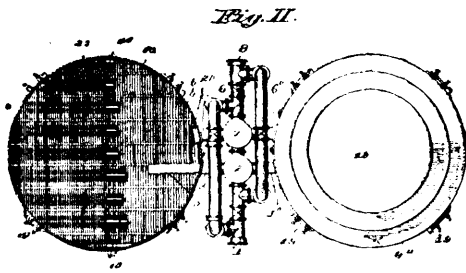
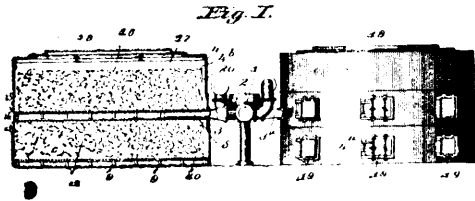


65588

Byron Edgar Chollar, St. Louis, Missouri, U.S.A., 29th December 1899; 6 years. (Filed 2nd September, 1899.)

Claim.—The system of purifying gas consisting in effecting a flow of gas having oxygen mingled therewith, through purifying material in one general direction and then effecting a flow of gas having oxygen mingled therewith through the same material in a general direction to reverse of the preceding flow, substantially as and for the purpose set forth.

No. 65,589. Gas Purifier. (Epurateur de gaz.)



65589

Byron Edgar Chollar, St. Louis, Missouri, U.S.A., 29th December 1899; 6 years. (Filed 2nd September, 1899.)

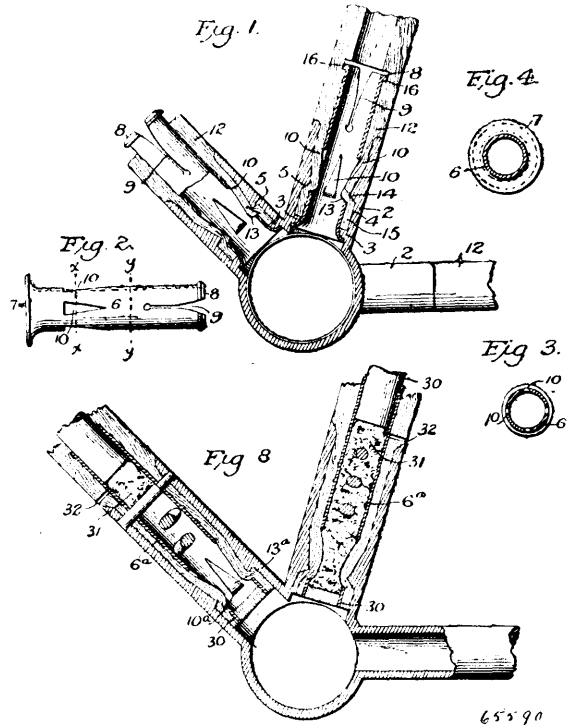
Claim.—1st. In a gas purifier, the combination of a tank, a lower gridwork within said tank supported on the bottom thereof, a lower layer of purifying material on said lower gridwork, a double gridwork on said lower layer of purifying material having a gas passageway extending laterally therethrough, and a superimposed layer of purifying material on said double gridwork wholly supported by the lower layer of purifying material, said tank being provided with an inlet and an outlet, said inlet or outlet being located at said double gridwork to discharge into or receive discharge from the passageway in the gridwork, substantially as described. 2nd. In a gas purifier, the combination of a tank having a lower layer of purifying material laid in the bottom thereof, a gridwork mounted on said purifying material, an upper layer of purifying material laid on said gridwork and supported wholly by said lower layer of purifying material, said gridwork being composed of two layers, and supports arranged between said layers of gridwork for the purpose of forming a gas distributing space between them, substantially as described. 3rd. In a gas purifier, the combination of a tank, a lower gridwork within said tank supported on the bottom thereof, a lower layer of purifying material on said lower gridwork, a double gridwork on said lower layer of purifying material having a gas passageway extending laterally therethrough, and a superimposed layer of purifying material on said double gridwork wholly supported by the lower layer of purifying material, said tank being provided with an inlet and an outlet, said inlet being located at said double gridwork to discharge into the passageway therein, and a tube extending from said inlet into said passageway for the purpose of discharging the flow of gas at a point remote from the inlet, substantially as described.

No. 65,590. Bicycle Frame. (Cadre de bicyclette.)

Ansel French Temple, Muskegon, Michigan, U.S.A., 29th December, 1899; 6 years. (Filed 15th December, 1898.)

Claim.—In a bicycle frame, the combination with the coupling provided with a socket having a number of holes of varying diameters, at different angles, of the hollow wooden bar, the metal tube inserted therein formed with holes coinciding with the holes in

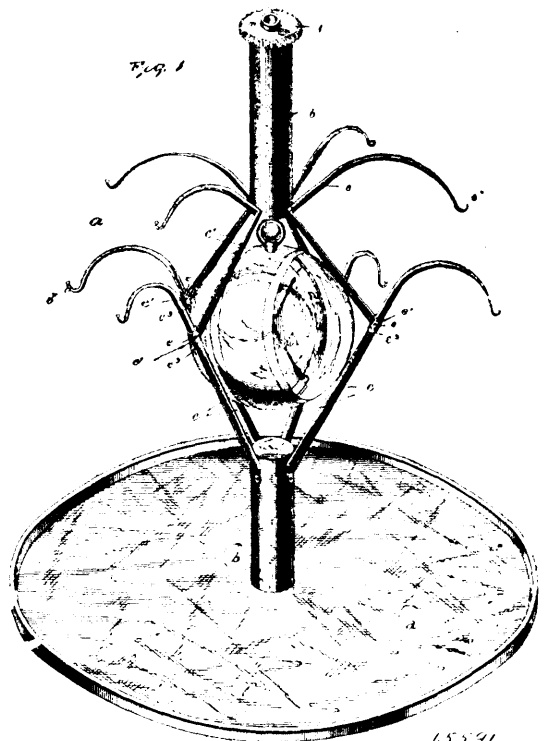
the socket, and the rivets having ends of different diameters, the small ends serving to bind the tube and socket together and the



65590

large ends acting as a binder for the two outer walls of the socket, substantially as described.

No. 65,591. Display Rack. (Ratelier de montre.)



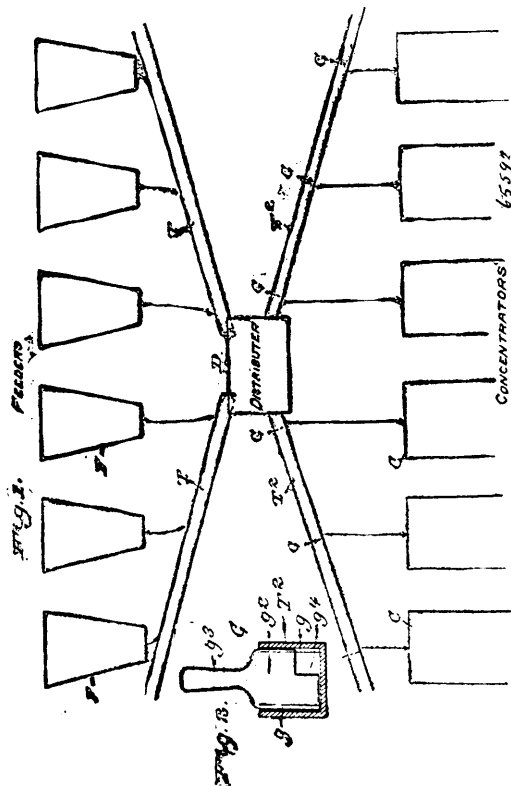
65591

Jonathan T. Xander, Pennsburg, Pennsylvania, U.S.A., 29th December, 1899; 6 years. (Filed 1st April, 1899.)

Claim.—1st. The combination in a display rack having a central hollow shaft made of sections, a central rod within said shaft, said shaft and rod having gear wheels by which they are rotated in

opposite directions, and a motor for operating said gear wheels, substantially as described. 2nd. The combination in a display rack of the sectional tubular shaft provided with upper and lower gearing and resting in a step on its lower end and in a frame on its upper end, with a central rod provided with a centre point and a ball bearing interposed between the said shaft and centre point whereby the upper end of the shaft is held in alignment with the centre point and step, and operating means for said shaft and rod, substantially as described. 3rd. A display rack comprising the hollow drive shaft or stem made in tube sections, arms radiating from said sections forming bows, a series of cog wheel operated by said drive shaft, a central rod within said shaft carrying an ornament, said rod and shaft being oppositely rotated and means for imparting motion to said cog wheels, substantially as described. 4th. A display rack comprising the hollow drive shaft or stem made of tube sections, a series of arms radiating from each section, said arms secured together to form a bow, a tray carried by the lowest tube section adapted to revolve therewith, a central rod within said hollow shaft adapted to suspend an ornament revolving within said bow in an opposite direction thereto and gearing carried by said shaft and rod to produce the opposite rotation, substantially as described. 5th. A display rack comprising the hollow shaft having bows within its length forming arms, a tray carried by said shaft, a ball bearing step in which said shaft revolves, a frame at the top of said shaft carrying cog wheels, a ball bearing carried by said frame, a central rod depending from the upper cone of said bearing, a centre point on said cone, a bearing for said point, the point forming a bearing for the rod, and step forming bottom bearing for the shaft, the said central rod being adapted to carry a clock or ornament and revolved by said central pin in a reverse direction to said bow arms and a motor for operating said gear wheels, substantially as described. 6th. A revolving display rack comprising the hollow shaft or stem, arms radiating therefrom forming a bow, ball bearing in which said stem revolves and rests, and a ball bearing at the top of said shaft or stem in combination with a central rod reversely rotated within said stem and a series of cogs also operating said stem, substantially as described. 7th. A rotary shaft made up of hollow sections, bowed arms connecting the ends of said sections, said arms being rigidly secured to the end of the sections and forming a continuous and intermediate part of said shaft, substantially as described.

No. 65,592. Ore Feeder. (*Alimentateur de minerai.*)



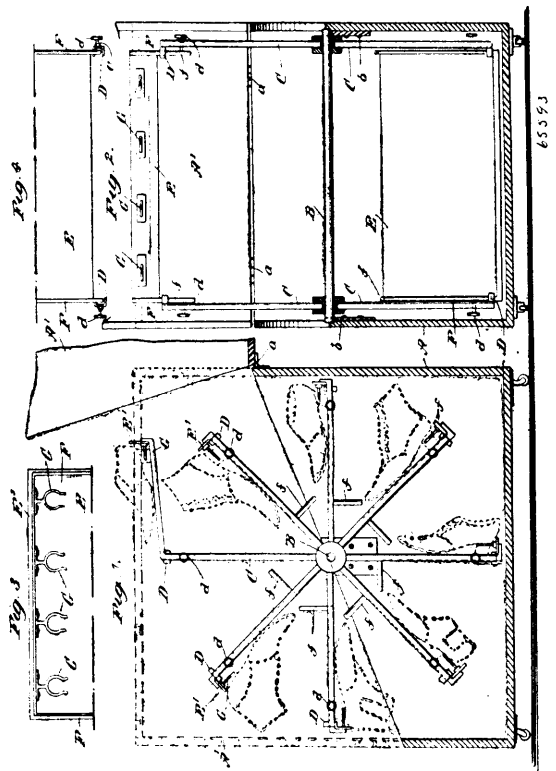
Robert Henry Jeffrey, London, England, 29th December, 1899; 6 years. (Filed 29th June, 1899.)

Claim.—1st. In combination, a hopper provided with a bottom discharge opening, a source of water supply, and a lead therefrom terminating in a nozzle vertically adjustable with relation to said discharge opening, as specified. 2nd. In combination, a hopper provided with a bottom tapered discharge opening, and a water supply

pipe terminating in a conical nozzle vertically adjustable with relation to said discharge opening, as specified. 3rd. In combination, a hopper provided with a lower tapered discharge opening, a water supply pipe terminating in a nozzle vertically adjustable with respect to said discharge opening, and a conical plug adjustable upon the nozzle, as specified. 4th. In combination, a hopper provided with one or more discharge openings, a water supply terminating in a nozzle for each of said discharge openings, means for adjusting the nozzles with respect to the discharge opening, and a conical plug adjustable upon each nozzle, as specified. 5th. In combination with one or more concentrators, of one or more settling tanks, and means for conveying the material from the settling tanks to the concentrators in regulated quantities, as specified. 6th. In combination with one or more concentrators, of one or more settling tanks, a distributor interposed between the settling tank and the concentrators, conveyors from the settling tanks to the distributor, and means for conveying material from the distributor to the concentrators in regulated quantities, as specified.

No. 65,593. Shoe Displaying Device.

(*Appareil d'étalage de chaussures.*)



Donald Stuart Betcone, Indianapolis, Indiana, U.S.A., 29th December, 1899; 6 years. (Filed 10th April, 1899.)

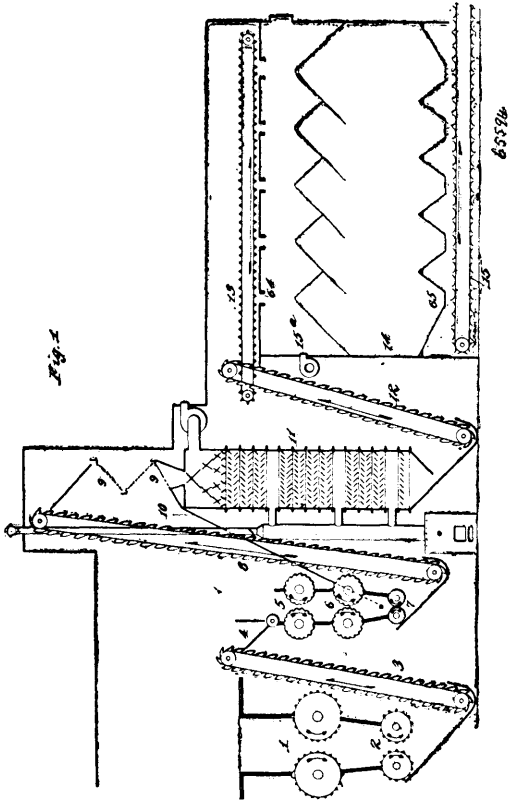
Claim.—1st. In a device for displaying shoes, the combination of a frame consisting of an axle, hubs and spokes, with shelves having means for securing shoes thereto, and means for securing the shelves to the spokes in both tangential and radial positions, substantially as described. 2nd. In a device for shipping and displaying shoes, the combination of a casing or trunk body, with a revolvable frame mounted within said trunk body, shelves to which the shoes may be secured, and means for securing said shelves tangentially to the revolvable frame and also radially thereto and within its outer periphery, substantially as described. 3rd. In a device for displaying shoes, the combination of a revolvable frame consisting of an axle and wheels, said wheels having guides disposed about their periphery, with shelves having means for securing shoes thereto, L shaped bars upon the shelves and fitting the guides, either end of said bars being adapted to engage the guides to support the shelves, either tangentially outside the wheels or radially within the periphery of the wheels, and means for securing the shelves in either position.

No. 65,594. Method of and Apparatus for Reducing Rock, etc. (*Méthode et appareil pour réduire la roche.*)

Thomas Alva Edison, Llewellyn Park, New Jersey, U.S.A., 29th December, 1899; 6 years. (Filed 12th April, 1899.)

Claim.—1st. The method of breaking rock and similar refractory material which consists in driving a pair of massive rolls at a high

velocity and in dumping the rock periodically upon the rolls whereby the speed of the latter will be reduced and the kinetic



energy developed will result in a cracking operation, the charge of rock being forced through the gap between the rolls in a fraction of

the time required to bring the rolls up to their normal speed, substantially as set forth. 2nd. The method of reducing rock which consists in first cracking it by the kinetic energy developed in the momentary stopping of a pair of massive rolls turning at high speed, and in then further reducing the rock by a continuous grinding operation, substantially as set forth. 3rd. The combination with a pair of giant rolls driven by friction connections and arranged to be momentarily stopped by the periodic charges of rock delivered thereto, and a pair of intermediate smaller rolls below the giant rolls also driven by friction and having a corresponding operation, substantially as set forth. 4th. The employment of the breaking knobs upon the giant rolls and larger sledging knobs to give hammer like blows to the material, substantially as set forth. 5th. Improved grinding rolls consisting of the two rolls mounted in sectional side pieces with heavy springs for forcing the sections of the side pieces together whereby the rolls will be permitted to yield in the work, substantially as set forth. 6th. Improved grinding rolls comprising two sectional side frames mounted to move relatively, the rods 30 for guiding the side pieces, the plates 31 and 32, the heavy springs 33 between the said plates and the grinding rolls mounted in sectional side pieces, substantially as set forth. 7th. The improved grinding roll comprising the core, a sleeve shrunk upon the core and removable wearing plates bolted to said sleeve, substantially as set forth. 8th. An improved dryer comprising a vertical drying chamber made in sections bolted together, substantially as set forth. 9th. An improved dryer having a plurality of baffle plates arranged therein so as to cause the material to flow in a series of zigzag streams, a distributor at the top of the dryer for subdividing the material and a furnace arranged to deliver hot air and products of combustion to the interior of the drying chamber, substantially as set forth. 10th. The improved distributor for a dryer comprising a series of crossed plates arranged to give the material a succession of sub divisions, as explained, substantially as set forth. 11th. A dryer having a screen in its upper part for rejecting the particles too large to be effectively dried, substantially as set forth. 12th. The combination with the grinding rolls, of a dryer having a screen at its upper part for rejecting particles too large to be dried, and a chute for conveying such particles back to the grinding device, substantially as set forth. 13th. An improved stock house comprising a pit formed in the ground, a roof for said pit, and a fan for blowing air over the material accumulated in the stock house, substantially as set forth. 14th. A stock house having a series of hoppers at its lower end, and a conveyor working adjacent to all of said hoppers, substantially as set forth. 15th. A stock house having a platform with openings in said platform, and a conveyor for moving the material along the platform whereby it will drop through such openings, and accumulate in a series of piles, substantially as set forth.

TRADE-MARKS

Registered during the month of December, 1899, at the Department of Agriculture—
Copyright and Trade-Mark Branch.

7129. JAMES BEGGS & COMPANY, Borough of Manhattan, New York, N. Y., U.S.A. Steam Boilers, 1st December.
7130. THE EMPIRE MANUFACTURING COMPANY, LIMITED, Montreal, Que. Shirts, Collars and Cuffs, Women's and Children's Blouses and Shirt Waists and Men's and Boys' Coats, Vests and Pants, 1st December, 1899.
7131. JAMES WALKER & COMPANY, Hamilton, Ont. Soap, 2nd December, 1899.
7132. THE FARBENFABRIKEN, vormals FRIEDRICH BAYER & COMPANY, Elberfeld, Prussia, Germany. Pharmaceutical Preparations. 4th December, 1899.
7133. CANADA CYCLE AND MOTOR COMPANY, LIMITED, Toronto, Ont. Bicycles and Bicycle Parts and Sundries, 5th December, 1899.
7134. THE STAR WASHING WATER COMPANY, Montreal, Que. A Washing Compound, 5th December, 1899.
7135. THOMAS ALEXANDER LYTLE and SAMUEL CRANE, trading as T. A. LYTLE & COMPANY, Toronto, Ont. Mixed Pickles, 6th December, 1899.
7136. HENRY C. BOULTER, WILLIAM H. STEWART and W. M. CAMPBELL, trading as BOULTER & STEWART, Toronto, Ont. Ladies' and Children's Clothing, 7th December, 1899.
7137. } NETTLEFOLDS LIMITED, Birmingham and London, England. General
7138. } Trade Marks, 7th December, 1899.
7139. GEORGE McLERIE WEBSTER and THOMAS JESSE PARKS, trading as WEBSTER BROTHERS & PARKES, Montreal, Que. Prisms and Prismatic Glass, 11th December, 1899.
7140. } THE LOCOMOBILE COMPANY OF AMERICA, New York, N. Y., U.S.A.
7141. } Wheeled Vehicles, 11th December, 1899.
7142. THE MALTED CEREALS COMPANY, Montreal, Que. Oatmeal, 11th December, 1899.
7143. THE MALTED CEREALS COMPANY, Montreal, Que. Maltose Granules, 11th December, 1899.
7144. JOHN GARVEY, London, Ont. Cleaned Currents, 11th December, 1899.
7145. THE DUNLOP TIRE COMPANY, LIMITED, Toronto, Ont. Tires, Fellows and Rims and parts thereof for Wheels and Vehicles of all kinds, 11th December, 1899.
7146. } THE ROCK CITY TOBACCO COMPANY, LIMITED, Quebec, Que. Tabac
7147. } coupe et en torquette a fumer et a chiquer, 12 decembre, 1899.
7148. ANTI-FRICTION ALLOYS, LIMITED, London, England. Metals in Ingots and similar form, 12th December, 1899.
7149. ROBERT WILLIAM HUDSON, trading as R. S. HUDSON, Liverpool and West Bromwich, England. Soap, 12th December, 1899.
7150. THE NATIONAL CYCLE AND AUTOMOBILE COMPANY, LIMITED, Toronto, Ont. Vehicles of all kinds, 12th December, 1899.
7151. } THE AMERICAN ARISTOTYPE COMPANY, Jamestown, N. Y., U.S.A.,
7152. } Photographic Papers, Instruments, Specialties and Supplies, 12th December, 1899.
7153. } JONAS BROOK AND BROTHERS, LIMITED, Meltham Mills, near Hud-
7154. } dersfield, England. Sewing and Crochet Cotton, 13th December,
7155. } 1899.
7156. HOLMES SAMUEL CHIPMAN, Sydney, New South Wales, Australia. General Trade Mark, 13th December, 1899.
7157. } THE WINTERBOTTOM BOOK CLOTH COMPANY, LIMITED, 12
7158. } Newton street, Piccadilly, Manchester, England. Tracing Cloth
7159. } 13th December, 1899.

7160. | FREDERICK WILLIAM RUDOLPH ESCHMANN, Yonkers, N.Y.,
7161. | U.S.A. Medical Compounds, particularly Antiseptic and Germi-
cidal preparations, 13th December, 1899.
7162. MADAME L. ALLEN, Montreal, Que. A Toilet Soap, 14th December, 1899.
7163. THE GRAND HOTEL COMPANY OF CALEDONIA SPRINGS,
LIMITED, Caledonia Springs, Ont. Mineral Waters, 14th
December, 1899.
7164. EARL SAWYER SLOAN, Boston, Massachusetts, U.S.A. Medicines, 14th
December, 1899.
7165. THE AMERICAN WRITING MACHINE COMPANY, Hion, N.Y., U.S.A.
Typewriting Machines, 16th December, 1899.
7166. THE GEORGIAN BAY PORTLAND CEMENT COMPANY, LIMITED,
Owen Sound, Ont. Portland Cement, 19th December, 1899.
7167. SUTER HARTMANN & RAHTJENS COMPOSITION COMPANY,
LIMITED, London, England. Paints, Compositions, Anti-cor-
rosives and Anti-foulers, and especially Compositions for Ships'
Bottoms, 19th December, 1899.
7168. | THE CREAM OF WHEAT COMPANY, Minneapolis, Minnesota, U.S.A.
7169. | Breakfast Foods, such as Rolled Wheat, Cracked Wheat, Wheat
Grits, Wheat Farina, &c., 19th December, 1899.
7170. ALFRED ERNEST SUCKLING, Vancouver, B.C. Cigars, 21st December,
1899.
7171. THE CELLULOID COMPANY, New York, N.Y., U.S.A. Fabrics or other
substances covered, coated or impregnated with Pyroxyline Com-
pounds, and the material for such coating, 21st December, 1899.
7172. THE ECONOMIC SMOKELESS POWDER COMPANY, Chicago, Illinois,
U.S.A. Gun Powder, 21st December, 1899.
7173. DAVID B. WOOD, Brantford, Ont. Flour, 23rd December, 1899.
7174. | THE FARBENFABRIKEN, vormals FRIEDRICH BAYER & COMPANY,
7175. | Elberfeld, Prussia, Germany. Pharmaceutical Preparations, 23rd
December, 1899.
7176. ROLPH, SMITH & COMPANY, Toronto, Ont. Cotton, 23rd December, 1899.
7177. THE BRITISH COLUMBIA PRINTING AND ENGRAVING CORPOR-
ATION, LIMITED, Vancouver, B.C. Salmon, 27th December,
1899.
7178. THE PROVINCE PUBLISHING COMPANY, LIMITED LIABILITY,
Vancouver, B.C. Canned Salmon, 27th December, 1899.
7179. JOSEPH HESTOR LEDUC, Three Rivers, Que. Medicine for the Cure of
Coughs, Colds, &c., 27th December, 1899.
7180. WALTER S. BRIGGS, Hamilton, Ont. Remedies for the Cure of Cough
and Cholera, 27th December, 1899.
7181. KING ARNOLDI, Ottawa, Ont. Mineral Water, 28th December, 1899.
7182. JOHN MORGAN and GEORGE CHAMBERS MORGAN, Studley, Eng-
land, trading as ARTHUR GEORGE BAYLIS & SONS.
General Small Wares, such as Needles, Pins, Fish Hooks, and
Hooks and Eyes, 29th December, 1899.
7183. WILLIAM HALL & COMPANY, LIMITED, Studley, England. General
Small Wares, such as Needles, Pins, Fish Hooks, and Hooks and
Eyes, 29th December, 1899.
7184. D. and J. MACDONALD, Glasgow, Scotland. Smoking Tobacco, Chewing
Tobacco, Cigars, Cigarettes and Snuff, 29th December, 1899.
7185. MITCHELL BROTHERS, LIMITED, Glasgow, Scotland. Fermented
Liquors and Spirits, 29th December, 1899.
7186. THE WILLIAMS MANUFACTURING COMPANY, LIMITED, Montreal,
Que. Sewing Machines, and parts thereof, 30th December, 1899.

COPYRIGHTS

Entered during the month of December, 1899, at the Department of Agriculture—
Copyright and Trade-Mark Branch.

10982. A NEW LIGHT; LIFE AND DEATH DEFINED. (Book.) Robert Laet Mulvaney, Brantford, Ont., 1st December, 1899.
10983. NAPOLI. By Ethelbert Nevin, Op. 30. No. 3. (Music.) The John Church Co., Cincinnati, Ohio, U.S.A., 1st December, 1899.
10984. AT HOME. (June Night in Washington.) By Ethelbert Nevin, Op. 30. No. 4. (Music.) The John Church Co., Cincinnati, Ohio, U.S.A., 1st December, 1899.
10985. CHRISTMAS IN FRENCH CANADA. By Louis Frechette. With Illustrations by Frederick Simpson Coburn. George N. Morang & Co. (Ltd.), Toronto, Ont., 1st December, 1899.
10986. THE WIDOW OF OLD WINDSOR HALL. (Military Song with Refrain.) Words and Music by Charles D. Bingham, Toronto, Ont., 2nd December, 1899.
10987. THE LAST MATCH. (Photograph.) Alexander Buntin, Toronto, Ont., 4th December, 1899.
10988. SHAKESPEARE: THE MAN. By Goldwin Smith, Toronto, Ont., 4th December, 1899.
10989. THE ONTARIO REPORTS. Volume XXX. The Law Society of Upper Canada, Toronto, Ont., 4th December, 1899.
10990. IN MEMORIAM. Words selected from the Poem by Lord Tennyson. Music by Liza Lehmann. The John Church Co., Cincinnati, Ohio, U.S.A., 5th December, 1899.
10991. GENERAL SIR REDVERS H. BULLER, V.C., G.C.B., K.C.M.G., COMMANDER BRITISH FORCES IN SOUTH AFRICA. (Picture.) The Globe Printing Co., Toronto, Ont., 5th December, 1899.
10992. LT.-COL. W. D. OTTER, A.D.C. Commanding 2nd Battalion Royal Canadian Regiment of Infantry, now in South Africa. (Picture.) The Globe Printing Co., Toronto, Ont., 5th December, 1899.
10993. THE PUBLIC SCHOOL DRAWING COURSE. By A. C. Casselman, Nos. 1 to 5. The Canada Publishing Co. (Ltd.), Toronto, Ont., 5th December, 1899.
10994. LIFE OF REV. WILLIAM COCHRANE, D.D. By R. N. Grant. William Briggs, Toronto, Ont., 5th December, 1899.
10995. OFFICIAL TELEPHONE DIRECTORY, CITY OF MONTREAL AND SUBURBS, DECEMBER, 1899. The Bell Telephone Co. of Canada (Ltd.), Montreal, Que., 6th December, 1899.
10996. 48TH BATTALION, HIGHLANDERS. (Lithograph.) The Globe Printing Co., Toronto, Ont., 7th December, 1899.
10997. THE OFFICE PAPER. Volume II. No. 9. December, 1899. Robert Goltman, Montreal, Que., 7th December, 1899.
10998. DIAMOND DYE COOK BOOK. No. 3. The Wells & Richardson Co., Montreal, Que., 7th December, 1899.
10999. A SON OF ERIN. By Annie S. Swan. (Book.) William Briggs, Toronto, Ont., 7th December, 1899.
11000. TERENCE. By B. M. Croker. (Book.) W. J. Gage & Co. (Ltd.), Toronto, Ont., 9th December, 1899.
11001. THE VIZIER OF THE TWO-HORNED ALEXANDER. By Frank R. Stockton. Illustrated by Reginald B. Birch. (Book.) W. J. Gage & Co. (Ltd.), Toronto, Ont., 9th December, 1899.
11002. THE CANADIAN ALMANAC AND MISCELLANEOUS DIRECTORY FOR THE YEAR 1900. The Copp, Clark Co. (Ltd.), Toronto, Ont., 9th December, 1899.
11003. THE RED RAT'S DAUGHTER. By Guy Boothby. (Book.) The Copp, Clark Co. (Ltd.), Toronto, Ont., 9th December, 1899.
11004. SACRED SONGS. No. 2. By Ira D. Sankey, James McGranahan and Geo. C. Stebbins. (Book.) The Copp Clark Co. (Ltd.), Toronto, Ont., 9th December, 1899.

11005. WERE BROTHERS. (Song.) Words and Music by J. C. Persall, Toronto, Ont., 9th December, 1899.
11006. AN ENGLISHMAN'S AN ENGLISHMAN WHEREVER HE MAY BE. (Song.) Words and Music by J. C. Persall, Toronto, Ont., 9th December, 1899.
11007. CALENDRIER DU DIOCÈSE DES TROIS-RIVIÈRES POUR 1900. E. S. de Carufel, Trois-Rivières, Qué., 11 décembre 1899.
11008. CALENDRIER DU DIOCÈSE DE NICOLET POUR 1900. E. S. de Carufel, Trois-Rivières, Qué., 11 décembre 1899.
11009. AFTER THE ROMP. (Lithograph.) B. Frank Stewart, Orillia, Ont., 11th December, 1899.
11010. PRIVATE TELEGRAPH CODE OF THE GUTTA PERCHA AND RUBBER MANUFACTURING COMPANY OF TORONTO, LIMITED. The Gutta Percha and Rubber Manufacturing Company of Toronto, (Ltd.), Toronto, Ont., 11th December, 1899.
11011. AMEN. (Lithograph.) The Globe Printing Co., Toronto, Ont., 11th December, 1899.
11012. THE ONTARIO LEGAL CHART, 1900. Henry Cartwright, Toronto, Ont., 11th December, 1899.
11013. BRITAIN, WE STAND BY YOU. Canada's Response. A Song for the Canadian Volunteers to South Africa. Marie Elise Touffe-Lauder, Toronto, Ont., 13th December, 1899.
11014. BELCHER'S FARMER'S ALMANAC FOR THE PROVINCE OF NOVA SCOTIA, FOR THE YEAR 1900. Hezekiah M. McAlpine, Halifax, N.S., 13th December, 1899.
11015. THE CANADIAN MAGAZINE. December, 1899. Christmas Number. Ontario Publishing Co. (Ltd.), Toronto, Ont., 13th December, 1899.
11016. THE FAIRY SCHOOL OF CASTLE FRANK. By Grant Balfour. (Book.) A. Balfour Grant, Toronto, Ont., 13th December, 1899.
11017. THE CANADIAN DOUKHOBOR SETTLEMENTS. A Series of Letters by Lally Bernard. (Book.) Mrs. Clare V. Fitzgibbon, Toronto, Ont., 14th December, 1899.
11018. THE WAY OF LIFE. Words by T. H. Gilbert. Music by Mrs. Thirza Black. Thirza Black, Toronto, Ont., 14th December, 1899.
11019. ARTICLES RELATING TO THE CANADIAN CONTINGENT IN SOUTH AFRICA. Published in *The Montreal Daily Herald*. (Temporary Copyright.) The Herald Publishing Co., Montreal, Que., 14th December, 1899.
11020. LA BELLE MARIE. Poem published in *The Gazette*, Montreal, Que. William Henry Drummond, Montreal, Que., 14th December, 1899.
11021. THE PROGRESSIVE CHARACTER OF REVELATION. By Hugh S. Dougall, M.A., B.D., William Briggs, Toronto, Ont., 15th December, 1899.
11022. EXPANDED METAL. (Book.) Expanded Metal and Fireproofing Co. (Ltd.), Toronto, Ont., 15th December, 1899.
11023. QUEER QUESTIONS QUAINLY ANSWERED; OR CREATIVE MYSTERIES MADE PLAIN TO CHILDREN. By Reta Grey. (Book.) J. L. Nichols & Co., Toronto, Ont., 15th December, 1899.
11024. THEY'VE GOT ME SIZED UP WRONG. Words and Music by Lew Sully. Arranged by Frank Lorenz. Charles O. Brokaw, St. Joseph, Missouri, U.S.A., 16th December, 1899.
11025. I CAN'T SEE WHERE YOU GET ON. Words and Music by Lew Sully. Arranged by Frank Lorenz. Charles O. Brokaw, St. Joseph, Missouri, U.S.A., 16th December, 1899.
11026. BACK AMONG THE HILLS I LOVE SO WELL. Song and Chorus. Words by Nelson Lloyd. Music by Milton Willard. Charles O. Brokaw, St. Joseph, Missouri, U.S.A., 16th December, 1899.
11027. THE MASONIC INSTRUCTOR. (Book.) Robert H. Sargant, Toronto, Ont., 16th December, 1899.
11028. POEMS: OLD AND NEW. By Frederick George Scott. William Briggs, Toronto, Ont., 16th December, 1899.
11029. SORROW. Story by W. A. Fraser. Published in *The Varsity*, Toronto. (Temporary Copyright.) H. H. R. Fairchild, Toronto Ont., 18th December, 1899.
11030. DICTIONNAIRE FRANÇAIS-ANGLAIS ET ANGLAIS-FRANÇAIS DES MOTS EN USAGE DANS L'ASSURANCE SUR LA VIE. Par Nazaire Payette, Montréal, Qué., 18 décembre 1899.

11031. CAPTIVE MEMORIES. A Song Cycle. Text by James T. White. Music by Ethelbert Nevin, Op. 29. The John Church Co., Cincinnati, Ohio, U.S.A., 18th December, 1899.
11032. THE MOTHER OF ST. NICHOLAS (SANTA CLAUS). A Study of Duty and Peril. By Grant Balfour. A. Balfour Grant, Toronto, Ont., 19th December, 1899.
11033. NOELS ANCIENS DE LA NOUVELLE FRANCE. Etude Historique. Par Ernest Myrand. Joseph Dominique Ernest Myrand, Québec, Qué., 19 décembre 1899.
11034. WHAT WE HAVE WELL HOLD. (Lyric.) By Charles D. Bingham. Toronto, Ont., 20th December, 1899.
11035. FLEURS ENFANTINES. (Livre.) Par Hermine Lanctot, Montréal, Qué., 20 décembre 1899.
11036. HER CHEEK IS LIKE THE TINTED ROSE. (Song.) Words by Florence Earle Coates. Music by Homer N. Bartlett, Op. 185, No. 3. The John Church Company, Cincinnati, Ohio, U.S.A., 21st December, 1899.
11037. SLEEP, MY JESU. (Song.) Words by Abbie F. Judd. Music by J. C. Bartlett. The John Church Company, Cincinnati, Ohio, U.S.A., 21st December, 1899.
11038. THE MISTAKES OF MOSES, AND OTHER SERMONS. By Rev. William Patterson. The Globe Printing Company, Toronto, Ont., 21st December, 1899.
11039. DOMINION OF CANADA AND COLONY OF NEWFOUNDLAND GAZETTEER AND CLASSIFIED BUSINESS DIRECTORY. The Night Directory Company of Toronto, Ltd., Toronto, Ont., 21st December, 1899.
11040. ANGLO-AMERICAN FRATERNAL MARCHES. (Music.) By W. G. Workman, Ottawa, Ont., 21st December, 1899.
11041. FRIENDSHIP. (Song and Refrain.) Words and Music by W. G. Workman, Ottawa, Ont., 21st December, 1899.
11042. THE PARACLETE. A Series of Discourses on the Person and Work of the Holy Spirit. By William Clark, M.A., LL.D., D.C.L., F.R.S.C. George N. Morang & Company, Ltd., Toronto, Ont., 22nd December, 1899.
11043. A DIGEST OF MASONIC JURISPRUDENCE. By Henry Robertson, LL.B., Q.C., Collingwood, Ont., 22nd December, 1899.
11044. THE MAN BEHIND THE GUN. (March.) By John Philip Sousa. The John Church Company, Cincinnati, Ohio, U.S.A., 22nd December, 1899.
11045. THE NIGHTINGALE'S SONG. (Canzone dell'Usignuolo.) Words by Alvin Hovey King. Music by Ethelbert Nevin, Op. 28, No. 4. The John Church Company, Cincinnati, Ohio, U.S.A., 22nd December, 1899.
11046. MACKINNON'S DUPLICATING LEDGER SPACE BOOK-KEEPING FORMS. John Reavie Mackinnon, Portage la Prairie, Man., 23rd December, 1899.
11047. OFFICIAL TELEPHONE DIRECTORY, WINNIPEG AND SELKIRK, MANITOBA, DECEMBER, 1899. The Bell Telephone Company of Canada, Ltd., Montreal, Que., 23rd December, 1899.
11048. FANNY, From "Chris and the Wonderful Lamp." Words by Glen Macdonough. Music by John Philip Sousa. The John Church Company, Cincinnati, Ohio, U.S.A., 27th December, 1899.
11049. WICHERT, POST FESTUM, ELZ, ER IST NICHT EIFERSUCHTIG. Edited with Notes by W. H. Van der Smissen, M.A. The Copp, Clark Company, Ltd., Toronto, Ont., 27th December, 1899.
11050. STIRRING BIBLE STUDIES. By Rev. T. S. Linscott, F.R.C.L. The Bradley-Garretson Company, Ltd., Brantford, Ont., 27th December, 1899.
11051. LONDON TIMES NEWS AND VIEWS. (Pamphlet *re* War in South Africa.) The London Times, London, England, 27th December, 1899.
11052. EACH BRITON STANDS FIRM TO HIS GUN. Patriotic Song. Words by Angus Nichol. Music by H. H. Godfrey. Angus Nichol, Stratford, Ont., 27th December, 1899.
- 11052½. RERUM NOVARUM. HOW TO ABOLISH POVERTY—HOW POVERTY WAS ABOLISHED. By Michael Guerin, Montreal, Que., 27th December, 1899.
11053. FAITH. Words by Arthur Macy. Music by G. W. Chadwick. The John Church Company, Cincinnati, Ohio, U.S.A., 28th December, 1899.

11054. IN MAY TIME. Words by W. H. Westcott. Music by Dudley Buck. The John Church Company, Cincinnati, Ohio, U.S.A., 28th December, 1899.
11055. CANADIAN VOLUNTEERS. Waltz. By Miss F. C. Billings, Ottawa, Ont., 29th December, 1899.
11056. MY OLD CANADIAN HOME. Words and Music by Crawl. C. Slack. Arrangement by Ethel Reynolds. Crawl. C. Slack, Athens, Ont., 29th December, 1899.
11057. THE EDUCATIONAL MUSIC COURSE. By Alexander T. Cringan. Book III. The Canada Publishing Company, Ltd., Toronto, Ont., 29th December, 1899.
11058. THE CANADIAN GRAIN AND FLOUR DIRECTORY. By John Seaborn, Toronto, Ont., 29th December, 1899.
11059. A TREATISE ON THE CANADIAN LAW OF CONDITIONAL SALES OF CHATTELS AND OF CHATTEL LIENS. By W. J. Tremear. Robert Reid Cromarty, Toronto, Ont., 30th December, 1899.
11060. BURMAN'S PARISH INDEX RECORD. (Book.) R. D. Richardson & Co., Winnipeg, Man., 30th December, 1899.
11061. UP WITH THE FLAG. Words and Music by Joseph George Parker. Toronto, Ont., 30th December, 1899.
11062. FOSTER'S LONDON CITY AND MIDDLESEX COUNTY DIRECTORY, 1899 1900. J. G. Foster & Co., Toronto, Ont., 30th December, 1899.
11063. DAT MAN'S ALL MINE. (Song.) Words and Music by J. A. LeBarge, Draper Music Publishing Co., Toronto, Ont., 30th December, 1899.
11064. MY DARLIN' DARKEY GAL. (Song.) Words by Chas. Dedrickson. Music by Will F. Tasker, Draper Music Publishing Co., Toronto, Ont., 30th December, 1899.
11065. THE UNION JACK OF OLD ENGLAND. (Song.) Words and Music by Charles Williams. The Canadian American Music Co., Ltd., Toronto, Ont., 30th December, 1899.
11066. AMERICA'S LOOKING ON. (Song.) Words by Albert Hall. Music by J. E. Ridsdale. The Canadian American Music Co., Ltd., Toronto, Ont., 30th December, 1899.
11067. DIAMOND DYE RUG BOOK. The Wells & Richardson Co., Montreal, Que., 30th December, 1899.
11068. FOR CANADA AND EMPIRE; OR, TELL HER THE STORY. (Song.) Words by Norman S. Rankin. Music by J. S. Doolittle. Norman S. Rankin, Montreal, Que., 30th December, 1899.
11069. WHAT WE HAVE WELL HOLD. (Song.) Words and Melody by James Luther. Arranged by A. C. Wurtele. Whaley, Royce & Co., Toronto, Ont., 30th December, 1899.