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# The Canadian Patent Office

## RECORD





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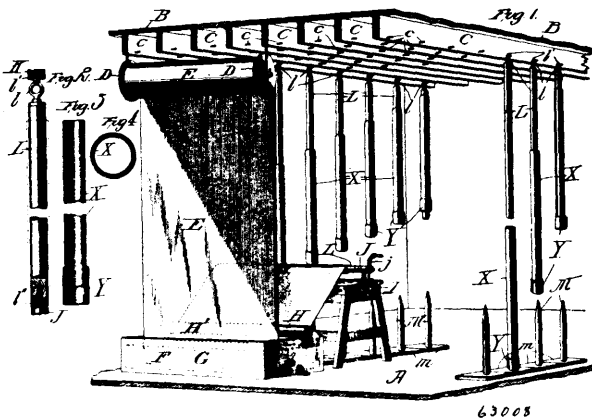
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### INVENTIONS PATENTED.

NOTE.—Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.

**No. 63,008. Method of and Apparatus for Making Electrical Insulation Conduit.** (*Méthode et appareil pour la fabrication de conduits électriques isolés.*)



The Lithosite Manufacturing Co., assignee of Hugo Gallinowsky, all of St. Louis, Missouri, U.S.A., 2nd May, 1899; 6 years. (Filed 15th February, 1898.)

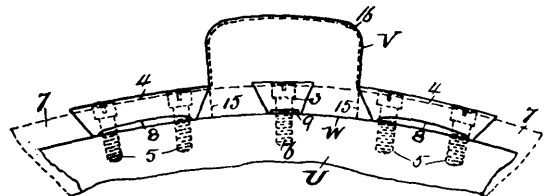
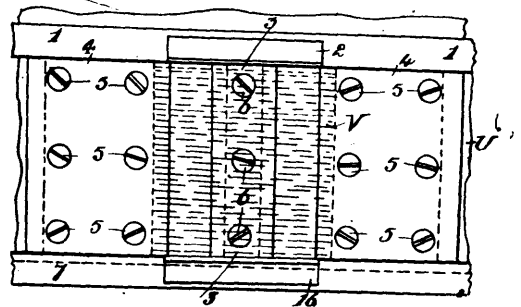
*Claim.*—1st. The herein described method of making insulation conduit, the same consisting in treating a fibrous material by immersing the same in a cementitious substance, winding the fibrous material so treated on a mandrel, and then hanging said mandrel up by one end permitting the fibrous material to slip off by reason of its own gravity, substantially as described. 2nd. The herein described method of making electrical conduits, the same consisting in winding a fibrous material treated with a cementitious substance on a suitable mandrel, placing a hardened collar on one end of said green conduit, then suspending the mandrel, so that the green conduit will slip off of the same by gravity, the hardened collar on the end of the green conduit acting as a base or support, and preventing the end of the green conduit from becoming upset or marred, substantially as described. 3rd. The herein described apparatus for making insulation conduits, the same comprising suitable stocks, and a mandrel having a hook or eye formed on one end with a centering device beyond said hook or eye, and a locking device at the other end of said mandrel, substantially as described.

**No. 63,009. Process of Manufacturing Cement.**  
(*Procédé pour la fabrication du ciment.*)

The Lithosite Manufacturing Co., assignee of Hugo Gallinowsky, all of St. Louis, Missouri, U.S.A., 2nd May, 1899; 6 years. (Filed 15th February, 1898.)

*Claim.*—1st. The herein described process of making cement, the same consisting in reducing mother liquor of sea water by evaporating the water therefrom, adding magnesium oxide, subjecting the mass to heat to drive off water, and then grinding or mixing calcined magnesite with the roasted mass, substantially as described. 2nd. The herein described process of making cement, the same consisting in steaming mother liquor of sea water reducing the same adding magnesium oxide to the steamed mass, heating this mixture to drive off as much water as possible, which produces soft and porous lumps, and then grinding these lumps with calcined magnesite, substantially as described. 3rd. The herein described process of making cement, the same consisting in taking chloride of magnesium, adding oxalic acid or oxalate of ammonia to neutralize any calcium chloride which may be present in the chloride of magnesium, and grinding said chloride of magnesium with magnesium oxide and calcined magnesite, substantially as described. 4th. The herein described process of making cement, the same consisting in heating mother liquor of sea water to reduce the same, adding boric acid which results in a double salt, and grinding the two salts so formed with calcined magnesite, substantially as described. 5th. The herein described process of making cement, the same consisting in grinding sulphate of magnesium and sulphate of aluminium with calcined magnesite, substantially as described.

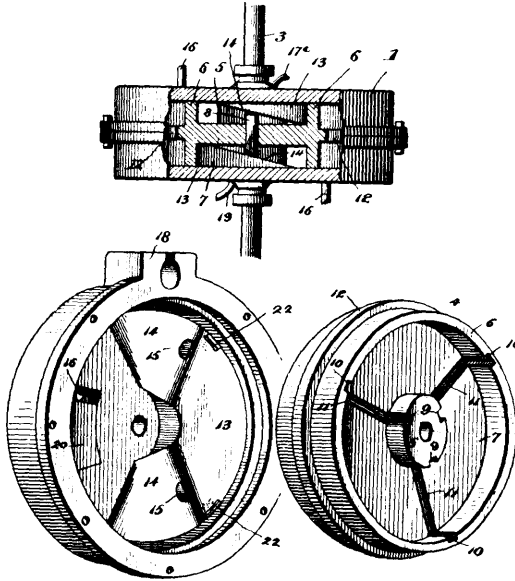
**No. 63,010. Dynamo Electric Machine.**  
(*Machine dynamo électrique.*)



The Stanley Laboratory Co., Pittsfield, Massachusetts, U.S.A., 2nd May, 1899; 6 years. (Filed 25th January, 1898.)

*Claim.*—1st. In a dynamo-electric machine having a rotating inductor, laminated polar projections separately fastened to the inductor core by dovetail fastenings, substantially as described. 2nd. In a dynamo-electric machine having a rotating inductor, polar projections fastened to the inductor core by dovetails, the core and the dovetails having air gaps between them, substantially as described.

**No. 63,011. Rotary Engine.** (*Machine rotatoire.*)



63011

Henry A. Schaper, William W. Boutilier, and Charles B. Ward, all of Britt, Iowa, U.S.A., 2nd May, 1899; 6 years. (Filed 10th December, 1898.)

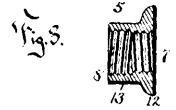
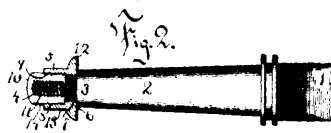
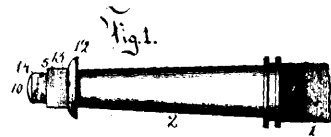
*Claim.*—1st. A rotary engine having a casing comprising oppositely positioned sections or heads having inwardly extending connected flanges forming a cylindrical wall, a rotary piston having a hub and a peripheral rim connected by a web, from the plane of which said hub and rim project in opposite directions, the rim being in contact with the inner surface of the cylindrical wall of the casing, the web being provided with a plurality of radial slots, and the facing surfaces of the hub and rim with guide-grooves registering respectively with said slots at their opposite ends, approximately semi-circular enlargements projecting inwardly from the casing sections or heads between the hub and flange of the piston, and arranged alternately with relation to the path of the piston, and wings fitted to slide in said radial grooves of the piston, with their outer and inner edges in the grooves, respectively, of the rim and hub, and hence in contact with the casing only at their opposite side edges, substantially as specified. 2nd. A rotary engine having a casing comprising oppositely positioned sections or heads provided with inwardly extending connected flanges having registering rabbets to form an annular groove, a rotary piston having a hub, a rim parallel with the hub having contact with the inner surfaces of the flanges of the casing heads, an exterior rib 12 fitting in said annular groove, a web 7 connecting the hub and rim and arranged between the side edges thereof, and in the plane of said rib 12, the web being provided with a plurality of radial slots, and the facing surfaces of the hub and rim with grooves registering with said slots respectively at the inner and outer ends thereof, and wings fitted to slide laterally in said radial slots and arranged at their outer and inner edges in the grooves, respectively, of the rim and hub, approximately semi-circular, terminally cam-faced enlargements, projecting inwardly from the heads of the casing between the facing surface of said rim and hub of the piston, and arranged alternately with relation to the path of the piston-wings, and valve mechanism for controlling the admission and exhaust of motive-agent, substantially as specified.

**No. 63,012. Axle Nut.** (*Noix pour essieux.*)

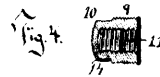
Cortis Collins and Albert N. Meals, both of Dallas, Texas, U.S.A., 2nd May, 1899; 6 years. (Filed 12th November, 1898.)

*Claim.*—1st. The combination of an axle or bar having at its end a portion threaded in one direction and adjacent thereto a portion threaded in the opposite direction, a nut threaded on one of said portions having also a second thread of opposite direction to that engaging the axle, and a washer secured on the oppositely-threaded portion of the axle and also engaging the second thread of the nut, substantially as described. 2nd. The combination of an axle or bar having at one end a portion threaded in one direction and adjacent thereto a portion threaded in the opposite direction, a nut threaded

on one of said portions having also a second female thread of opposite direction to that engaging the axle, and a washer having a

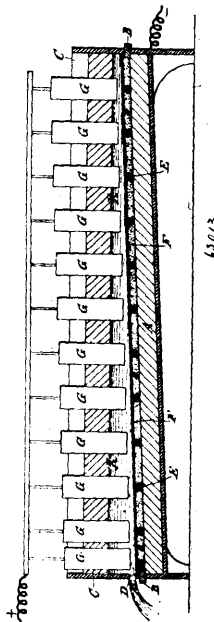


63012



female thread engaging the oppositely-threaded portion of the axle and a male thread engaging the second thread of the washer, substantially as described.

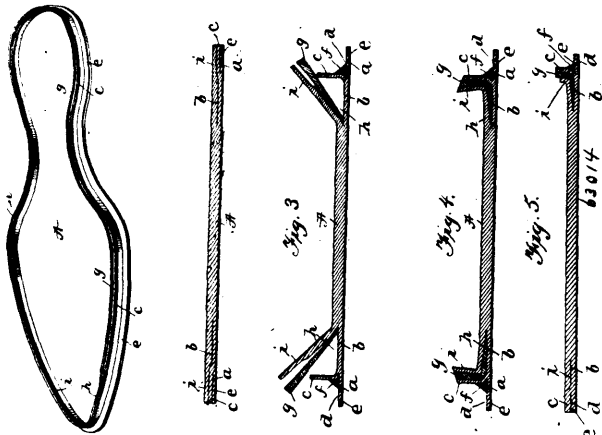
**No. 63,013. Electric Furnace.** (*Fournaise électrique.*)



La Volta Societe Anonyme Suisse de L'Industrie Electro Chimique, assignee of Hugues Bovy, all of Geneva, Switzerland, 2nd May, 1899; 6 years. (Filed 12th April, 1898.)

*Claim.*—An electrical furnace, consisting of a metal trough electrically connected with one of the conductors, a series of carbon blocks connected with the trough and forming the lower electrodes of the furnace, a carbon filling between said blocks, carbon plates resting on said filling and between said blocks, electrodes arranged and supported above said carbon blocks, the lower electrodes being of such size to be rendered incandescent by the passage of the electricity through them, substantially as set forth.

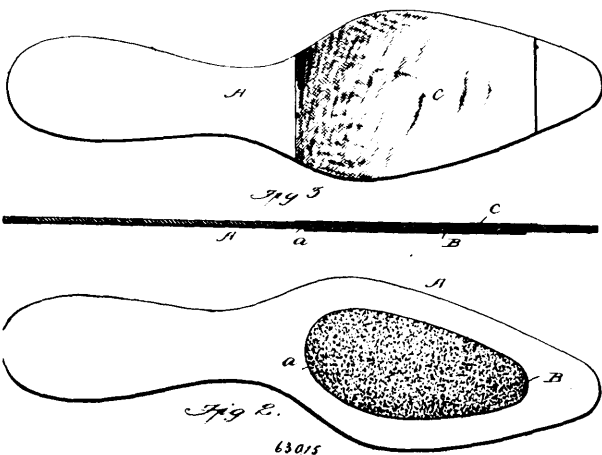
No. 63,014. Insole for Boots and Shoes. (Fausse-semilles pour chaussures.)



Walter Lawes, New Bedford, Massachusetts, U.S.A., 2nd May, 1899; 6 years. (Filed 20th March, 1899.)

Claim.—1st. A sole for shoes having its edge provided with parallel slits one above the other, the upper slit being longer than the lower, whereby the walls of the slits when turned up produce a shallow and a deep channel, one forming the ordinary feather edge and the other adapted to receive a re-inforcing strip, substantially as described. 2nd. A sole for boots and shoes having its edge provided with two slits one above the other, the upper slit being deepest and increasing in depth at a point beyond the inner edge of the lower slit, whereby the walls of the slits when turned upward form upwardly extending flanges between which a re-inforcing strip may be secured, and a re-inforcing strip situated between the flanges and extending inward beyond the inner edge of the lower slit, substantially as described. 3rd. A sole for boots and shoes having its edge provided with a plurality of parallel extending channels formed by parallel slits in the edge of the sole and turning up the walls of the slits to form flanges, and a re-inforcing strip situated and secured between the flanges, substantially as described. 4th. A sole for boots and shoes provided with two inwardly extending slits, one projecting inward beyond the other, the walls of the slits forming when turned upward two parallel extending channels, and a re-inforcing strip situated and secured between the flanges, substantially as described. 5th. An improved sole for boots and shoes provided with two parallel channels at its edge formed by two slits extending in the same direction, whereby their points of connection with the sole are independent and separate, the walls of the slits turned upward and forming together the means of attaching the shoe upper, substantially as described.

No. 63,015. Insole for Boots and Shoes. (Fausse-semelle pour chaussures.)

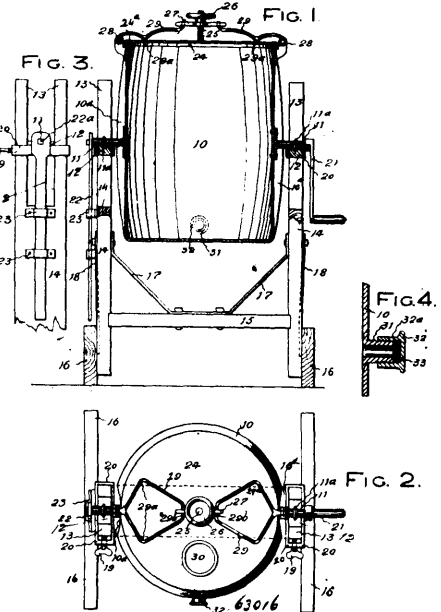


Joseph Amable Coté, St. Hyacinthe, Quebec, Canada, 2nd May, 1899; 6 years. (Filed 5th April, 1899.)

Claim.—1st. An insole for boots and shoes, comprising a body portion having an opening therein, a flexible pad fitted in said opening and means for retaining said pad in said opening substantially as described. 2nd. An insole for boots and shoes, comprising a body portion having an opening therein, a pad of flexible material fitted in said opening and a strip of flexible material secured to the

upper surface of the said body portion and to the said pad, whereby said pad is securely held in said opening, substantially as described. 3rd. An insole for boots and shoes, comprising a body portion having an opening therein, a flexible pad of absorbent material fitted in said opening and projecting below the lower surface of said body portion and a flexible strip secured to the upper surface of the body portion and to said pad, whereby the pad is secured in said opening, substantially as described.

No. 63,016. Churn. (Baratte.)



Bessie Kingsley, South Vancouver, British Columbia, Canada, 2nd May, 1899; 6 years. (Filed 27th February, 1899.)

Claim.—1st. In a churn having a closeable vessel 10 of barrel form, concave flutes as grooves 10a arranged with their planes parallel to each other and parallel to the axis of the vessel but at right angles to its axis of rotation, as and for the purposes specified. 2nd. In a churn having a closeable vessel constructed preferably of granite-ware, and having flutes down each side forming convex ridges on its inner opposite sides, a closure for such vessel having an annular groove therein to receive the open end of the vessel, in combination with looped levers 29 hinged to the fluted sides of the vessel, and a bar loosely fixed on a stud at the centre of the cover, which is susceptible of being pressed down on the ends of the looped levers, which levers fulcrumed at intervals on the cover, substantially as and for the purposes set forth. 3rd. In a churn of the class described having the barrel form, parallel flutes on opposite sides thereof, which form convex swells or ribs on the inner sides, trunnions fixed at the centre of said flutes, conical ridges on said trunnions, bearings arranged in forks having grooves for receiving the conical ridges, means for adjusting the bearings vertically, consisting of straps 20 embracing the bearings and the forks and set-screws taking through the straps and engaging one side of the forks, all substantially as and for the purposes set forth. 4th. In combination with a rigidly braced frame having forked uprights and adjustable bearings arranged therein, a vessel having fluted sides suitably mounted on trunnions which journal in said bearings, a vertical slidable springholder 22 having a square or angled opening at its upper end for receiving the squared or angled end of one of the trunnions for holding the churn at rest at any desired position. 5th. In combination with a vessel having fluted sides for the purposes set forth, and a closed and an open end, a cover for the open end to hermetically seal the same, a nipple 31 near the opposite end of the vessel, a cap 32 threaded on said nipple, a small orifice 32a in the wall of said cap and a piece of cork 33 arranged in the cap to make the joint tight when the cap is screwed down.

No. 63,017. Electric Meter. (Electromètre.)

Jesse Harris, Lynn, Massachusetts, U.S.A., 4th May, 1899; 6 years. (Filed 8th June, 1898.)

Claim.—1st. A speed governor for an electric meter consisting of a rotatable fan connected to a spindle and a source of power, and arranged to turn on the spindle by reason of the force of the air-pressure on the fan blades as the fan and spindle revolve, the spindle having a movable contact-piece arranged to revolve with the spindle, the fan blades being arranged to press against the movable contact-piece and operate the same and to recede therefrom at predetermined speeds in order that the electric circuit may be opened and closed and the speed governed, substantially as described. 2nd. A

speed governor for an electric meter consisting of a rotatable fan connected to a source of power and a movable contact arranged so

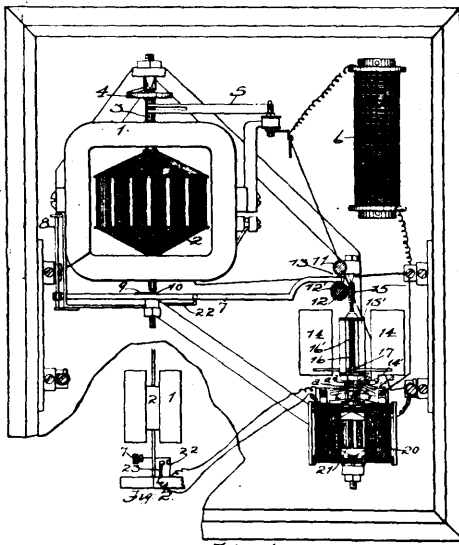


Fig. 1.

63017

that at predetermined speeds the fan will press against the movable contact and operate it and recede therefrom whereby the electric circuit is opened and closed and the speed governed, substantially as described. 3rd. An electric meter, the combination of an integrator and a motor arranged to operate the same and means for stopping and starting the motor together with an electric dynamometer operatively connected with said stopping and starting means and an automatically-operating device arranged to throw the motor into and out of circuit at predetermined speeds, in order that the current may be controlled, the motor governed and the speed kept practically constant, substantially as described. 4th. An electric meter consisting of a system of coils arranged at an angle to each other and being free to move, said movement being limited by a resilient device and having a movable fan-like device connected to a source of power and a movable contact arranged to be operated by the fan-like device that the current may be automatically opened and closed, substantially as described.

**No. 63,018. Shoe for Athletic Purposes.**

(Chaussure pour athlètes.)



63018

Joseph Olivier Napoleon Tétrault, Montreal, Quebec, Canada, 4th May, 1899; 6 years. (Filed 20th April, 1899.)

Claim.—1st. A shoe, comprising an ordinary sole and upper and means secured to the sole within the shoe for supporting the ankle and preventing the longitudinal movement of the foot within the shoe, substantially as described. 2nd. A shoe, comprising an ordinary sole and upper, and an inner upper secured to the sole, substantially as described. 3rd. A shoe, comprising an ordinary sole and upper and an inner upper, separate from and independent of the ordinary upper, said inner upper being secured to the sole, substantially as described. 4th. A shoe, comprising an ordinary sole and upper and an inner upper, separate from and independent of the ordinary upper, said inner upper being secured to the sole and extending from the instep to a point below the top of the outer upper, substantially as described.

**No. 63,019. Shoe. (Chaussure.)**

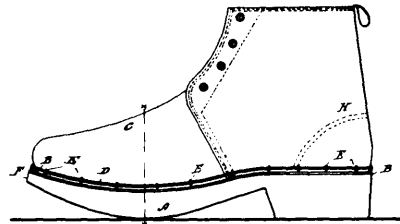
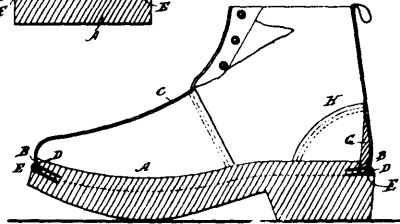
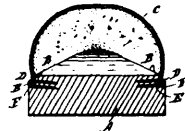


Fig. 2.

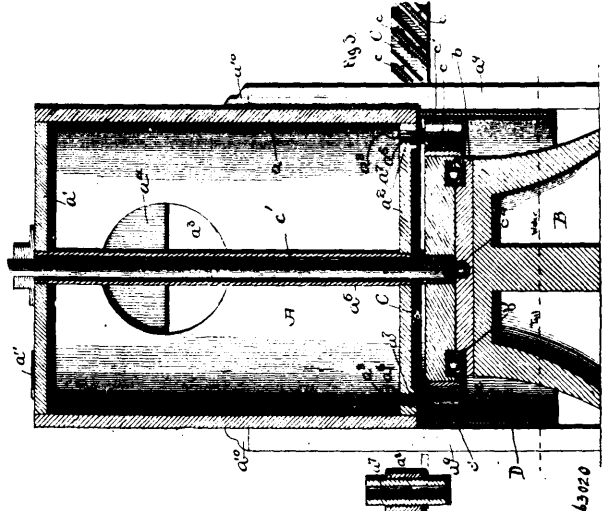


63019

Albert H. Riemer, Milwaukee, Wisconsin, U.S.A., 4th May, 1899; 6 years. (Filed 22nd December, 1898.)

Claim.—In a shoe or other footwear, the device for securing a leather upper to a wooden sole, consisting in the combination of a sole A provided with a V-shaped groove B, upper C, upper-retaining binding wire D, and wire-retaining staples E, said upper being drawn down and firmly held within said groove by said binding wire D, while said binding wire is in turn drawn down against said upper by said retaining staples, which staples straddle or engage around said binding wire and are driven through the upper into the wooden sole, substantially as and for the purpose specified.

**No. 63,020. Water Wheel. (Roue d'eau.)**

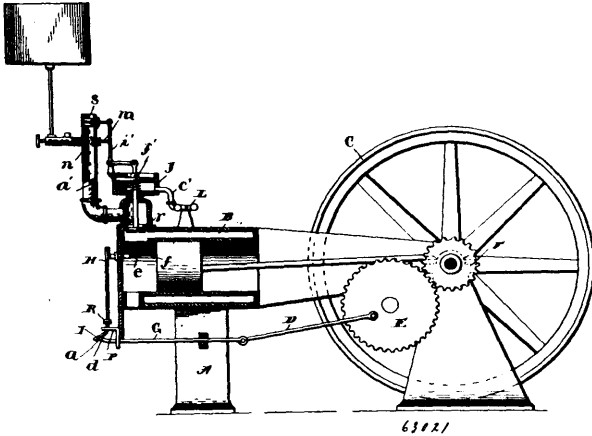


63020

Henry Jones, William George H. Ellison, and William J. Wale, all of Colwood, British Columbia, Canada, 4th May, 1899; 6 years. (Filed 30th May, 1898.)

*Claim.*—1st. The combination with a pen-stock, having a series of vertical ports, controllable independently, of a wheel mounted below said pen-stock, said wheel having a series of vanes removably connected to the periphery thereof, and a band or rim removably connected to said vanes, said vanes being arranged to receive the impact of the water passed from said ports, substantially as described. 2nd. The combination with a pen-stock, having a series of vertical ports, controllable independently of a wheel mounted below said pen-stock, said wheel having a series of vanes removably connected to the periphery thereof, said vanes extending below the lower plane of said wheel, and a band or rim, removably connected to said vane, said vanes being arranged to receive the impact of the water passed from said ports, substantially as described. 3rd. The combination with a pen-stock, having a series of vertical ports, controllable independently, of a support located below said pen-stock, a wheel pivotally mounted on said support, vanes removably connected to the periphery of said wheel, said vanes extending to a point below the top plane of said support, and a band or rim removably connected to said vanes, said vanes being arranged to receive the water passed from said ports, substantially as described. 4th. The combination with a pen-stock, of a turbine water wheel arranged thereunder, a support located below said wheel, and anti-frictional devices located between said wheel and said support, said devices being arranged in juxtaposition to the vanes of the wheel, substantially as described. 5th. In a turbine water wheel the combination with a support, of a wheel rotating on said support, and anti-friction devices, located in a raceway formed in said support and wheel, said raceway being formed contiguous to the vanes of the wheel, whereby the impact of the water on the vanes will be borne by said devices, substantially as described.

**No. 63,021. Explosive Engine. (Machine explosive.)**

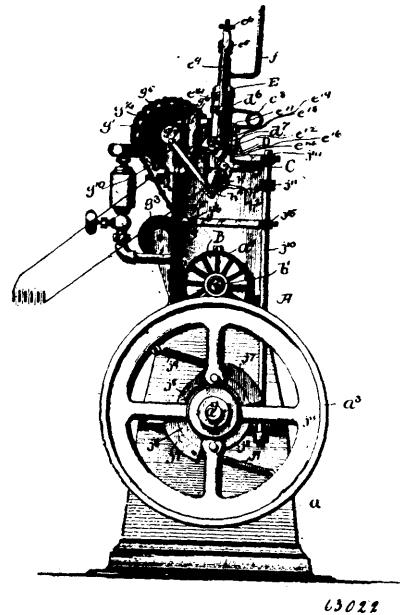


Alexander Winton, Cleveland, Ohio, U.S.A., 4th May, 1899; 6 years. (Filed 16th May, 1898.)

*Claim.*—1st. An electric sparker comprising contact points, a rod as H connected with and adapted to move one of the contacts, the lower end of the rod having its end turned laterally to form an inclined plane and a groove upon its inclined surface and an endwise moving rod adapted to engage said groove, the parts adapted to co-operate as described. 2nd. A governor for explosive engines comprising a fluid-feed, a valve *n* for regulating the same, a diaphragm or piston adapted to control the valve, a pump actuated by the engine and in combination with the said diaphragm or piston, a governor, an escape situated in the communication between the pump and the diaphragm or piston, and a governor operating a valve adapted to close the escape in either direction of movement, substantially as described. 3rd. An electric sparker comprising two contacts one movable in relation to the other, a spring normally holding the contacts out of engagement, an arm rigidly connected to one of the contacts, a rod H having one end pivoted to the said rigid arm, and its opposite end carrying a cam-surface and an endwise moving rod actuated by the engine and engaging the said cam-surface and having a movement beyond the same, whereby the rod H is released, substantially as described. 4th. An electric sparker comprising two contacts, one carried by an oscillating shaft, an arm connected with the projecting end of the shaft, a spring actuated rod H having one end flexibly connected with the said arm and its opposite end moving in a guide limiting its downward and lateral movements, an endwise moving rod actuated by the engine, and a cam-surface co-acting between the endwise moving rod and the spring actuated rod H for moving the latter upward against the tension of the spring and causing the contacts to engage, the cam-surface being constructed to engage the endwise moving rod and thereby separate the contacts, substantially as described. 5th. An electric sparker comprising two contacts one movable in relation to the other, a cam-surface operatively connected with the movable contact, the cam-surface having a groove ending in an incline, and

movable laterally, and an endwise moving rod actuated by the engine and engaging the groove, the movement of the rod being beyond the groove to engage the incline of the surface, thus permitting the incline or cam-surface to move downward and laterally out of engagement with the rod to permit the rod to be again withdrawn, substantially as described. 6th. A governor for explosive engines comprising an explosive inlet port, a valve controlling the same, a pressure actuated member controlling the valve, a pressure-producing device, a communication between the pressure producing device and the pressure actuated member, an escape opening regulating the pressure upon the pressure actuated member, a valve at each side of said escape opening, and a governor controlling said valves, substantially as described. 7th. A governor for explosive engines comprising an explosive inlet port, a valve controlling the same, a pressure actuated member controlling said valve, a pressure producing device, a communication between the pressure producing device and the pressure controlled member, an escape opening controlling the pressure on said pressure actuated member, a governor, a double acting controller for said escape controlled by the governor, whereby the movement in either direction of the governor to its limit will close said escape opening, substantially as described. 8th. An electric sparker comprising two contacts one movable in relation to the other, a spring normally holding the contacts out of engagement, a rod H positively connected at one end with the movable contact and provided at its opposite end with a cam-surface, and an endwise moving rod G engaging said cam-surface for moving the rod H endwise, said rod G being operatively connected with the engine, substantially as described. 9th. An electric sparker comprising two contacts, one movable in relation to the other, a rod positively connected with the movable contact, a rod positively connected with and operated by the engine relatively to the contact rod, one of said rods being provided with a cam-surface engaged by the other rod, said cam surface through the movement of the engine actuated rod causing the contacts to engage, said cam-surface constructed to release the contact rod, and a spring normally holding the contacts separated, substantially as described. 10th. An electric sparker comprising two contacts, one movable in relation to the other, an endwise moving spring actuated rod positively connected at one end with the movable contact, the opposite end of the rod having a lateral movement, a spring actuating the free end of the rod laterally in one direction, an endwise moving rod actuated by the engine, one of the rods having a cam surface, said cam-surface constructed to move its rod endwise and laterally by engagement with the free end of the other rod, substantially as described.

**No. 63,022. Engine. (Machine à vapeur.)**



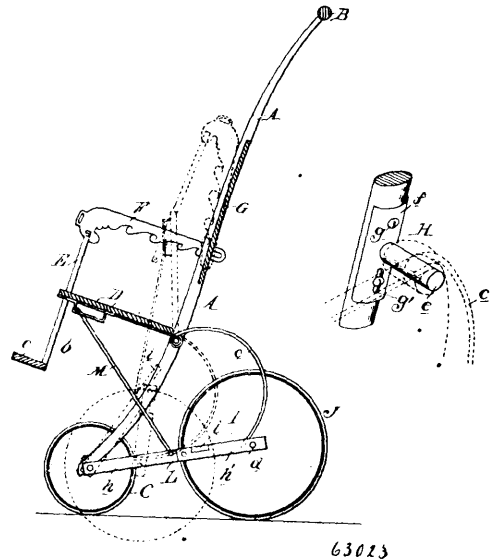
Paul Lair, Lothbiniere, Quebec, Canada, 4th May, 1899; 6 years. (Filed 16th December, 1897.)

*Claim.*—1st. In a vapour engine, the combination with an extension having a vapour forming chamber, of a top having an opening, a plunger in said opening, a valved inlet for the oil, said inlet being regulated by the back pressure developed in said opening, and means for actuating said plunger in a regulated intermittent manner. 2nd. In a vapour engine, the combination with an extension, having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, and means, actuated by the movement of the engine for regulating the length of stroke of said plunger, whereby the oil will be passed from said opening in

regulated quantities. 3rd. In a vapour engine, the combination with an extension having a vapour forming chamber, a top having an opening, a plunger in said opening, an inlet for the oil, and means actuated by the movement of the engine for automatically regulating the length of the stroke of said plunger. 4th. In a vapour engine, the combination with an extension, having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, a rod adapted to move said plunger, and means actuated by the engine for imparting movement to said rod. 5th. In a vapour engine, the combination with an extension having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, a rod adapted to move said plunger intermittently, and means actuated by the engine, for imparting movement to said rod. 6th. In a vapour engine, the combination with an extension having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, a rod adapted to move said plunger intermittently, means for imparting movement to said rod in one direction, and means for returning said rod to its initial position. 7th. In a vapour engine, the combination with an extension having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, a rod adapted to move said plunger intermittently, a fixed collar on said rod, a sliding collar on said rod, means for making a contact between said fixed and said sliding collars at a predetermined period in the movement of said sliding collar, and means for imparting a movement to said sliding collar. 8th. In a vapour engine, the combination with an extension having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, a rod adapted to move said plunger intermittently, a fixed collar on said rod, a sliding collar on said rod below said fixed collar, means for imparting a movement to said sliding collar, and means for making a contact between said fixed and sliding collars at a predetermined period in the movement of said sliding collar. 9th. In a vapour engine, the combination with an extension having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, a rod adapted to move said plunger intermittently, said rod having a fixed and a sliding collar, means for imparting movement to said sliding collar, and means for automatically forming a contact between said fixed and said sliding collars, the point of contact being determined by the movement of the engine. 10th. In a vapour engine, the combination with an extension having a vapour forming chamber, of a top having an opening, a plunger in said opening, an inlet for the oil, a rod adapted to move said plunger intermittently, said rod having a fixed and a sliding collar, a contact roller between said fixed and said sliding collar, an arm connected to said sliding collar and adapted to move the same on said rod, and means for imparting an oscillating movement to said arm. 12th. In a vapour engine, the combination with an extension, having a vapour forming chamber, and mixers located in said chamber, of a top having an opening provided with a contracted lower end, forming a valved seat, a plunger valve located therein and adapted to normally rest on said valve seat, a supplemental chamber formed below said contracted lower end of said opening, means for normally closing said supplemental chamber, and means for lifting said plunger from off its valve seat, whereby oil from said opening will pass into said supplemental chamber. 13th. In a vapour engine, the combination with an extension, having a vapour forming chamber, and mixers located in said chamber, of a top having an opening provided with a contracted lower end, forming a valve seat, a plunger valve located therein and adapted to normally rest on said valve seat, a supplemental chamber formed below said contracted lower end of said opening, the lower end of said chamber having an opening a valve for normally closing upon said valve seat, and means for lifting said plunger from its valve seat, whereby oil from said opening will be passed into said chamber, and be discharged therefrom by the downward movement of said plunger. 14th. In a vapour engine, the combination with an explosion chamber, a piston located therein, said piston being adapted to rotate a balance wheel, horizontal webs formed on the outer side of said chamber, said webs having openings, and a casing surrounding said webbed chamber of a fan adapted to inject cold air into the space around said explosion chamber and within said casing. 15th. A spark former for engines, comprising a shaft mounted to extend into the explosion chamber, a disc, having contact points located at the inner end of said shaft, a ratchet-wheel mounted at the outer end of said shaft, a pawl adapted to actuate said ratchet-wheel, means, actuated by the movement of said engine, for imparting motion to said pawl, a finger extending into said chamber and having its front end within the path of movement of said contact points, and means for establishing an electrical circuit when said contact points and said finger are brought into contact. 16th. A spark former for engines, comprising a shaft mounted to extend into the explosion chamber, a disc having contact points located at the inner end of said shaft, a pawl and ratchet-wheel mounted at the outer end of said shaft, a lever, connected to said shaft and to said pawl, an arm pivotally connected to said

lever and adapted to impart a reciprocatory movement to said lever, means for imparting a movement to said arm, a finger extending into said chamber and having its front end within the path of movement of said contact points, and means for establishing an electrical circuit when said contact points and said finger are brought into contact. 17th. In a vapour engine, the combination with an explosion chamber, a vapour forming chamber, and a valve located between said explosion chamber and said vapour forming chamber, said valve being operated by the movement of the piston in said explosion chamber, of means operated by the movement of the engine, for automatically regulating the amount of resistance to the movement of said valve, whereby the movement of the engine will be automatically controlled, substantially as described. 18th. In a vapour engine, the combination with an explosion chamber, a vapour forming chamber, and a spring retained valve located between said explosion chamber and said vapour forming chamber, said valve being operated by the movement of the piston in said explosion chamber, of means, operated by the movement of the engine, for automatically regulating the tension of said spring, whereby the movement of the engine will be automatically controlled, substantially as described.

#### No. 63,023. Perambulator. (Voiture.)



William H. English, Detroit, Michigan, U.S.A., 4th May, 1899; 6 years. (Filed 10th November, 1898.)

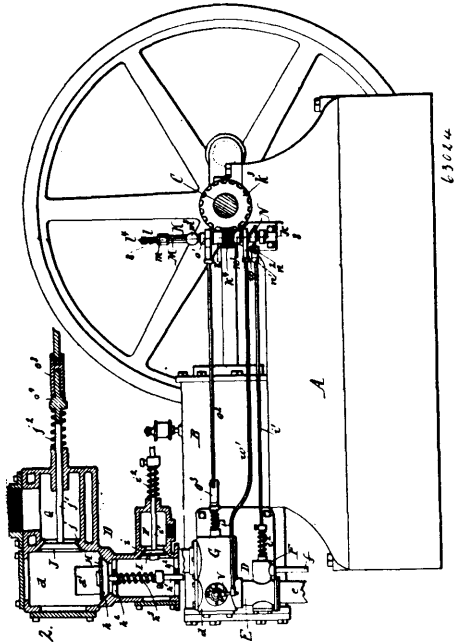
*Claim.*—1st. In a perambulator, the combination of the frame A, having wheels at its lower end, a hinged seat D, the rearwardly extending hinged frame, having wheels at its lower end, the folding link K, connecting the lower end of the arm and the frame, and the connecting rod M from the link to the seat. 2nd. In a perambulator, the combination of the frame A, having small wheels at its lower end, of hinged frame I pivoted to the frame, and having large wheels at the lower end, a folding link P between the axles of the two frames, the frames being adapted to fold into substantial parallel relation to each other, with the large wheels below the small wheels. 3rd. In a perambulator, the combination of the frames A and the frame I hinged thereto, both frames having wheels at their lower end, the folding link L connecting the lower parts of the frame, of an adjustable connection for the frame I on the frame A.

#### No. 63,024. Gas Engine. (Machine à gaz.)

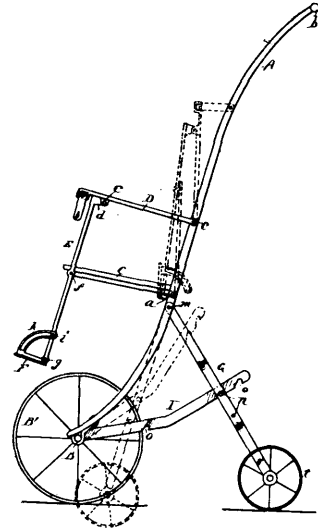
Jessie Burnside Fenner, Buffalo, New York, U.S.A., 4th May, 1899; 6 years. (Filed 13th September, 1898.)

*Claim.*—1st. In a gas engine, the combination with the cylinder, the gas and exhaust valves and the horizontal main shaft, of a vertical countershaft, intermeshing gear-wheels mounted on the main and countershafts, an eccentric mounted on the countershaft and operating the exhaust valve, a spindle arranged in the countershaft and capable of sliding vertically therein but compelled to turn therewith, a governor mounted on the countershaft and engaging with the spindle, a cam arranged on the spindle, and a rock arm connected with the gas valve and adapted to be operated by said cam, substantially as set forth. 2nd. In an electric igniter for gas engines, the combination with the stationary and movable contacts, of a sliding rod carrying the movable contact, and a rotary cam whereby said rod is shifted for engaging the movable contact with the stationary contact and which is journaled concentric with said rod, substantially as set forth. 2nd. In an electric igniter for gas engines, the combination with the stationary and movable contacts, of a

sliding rod carrying the movable contact, a cam disc arranged on said rod and provided with an annular row of cam teeth, and a



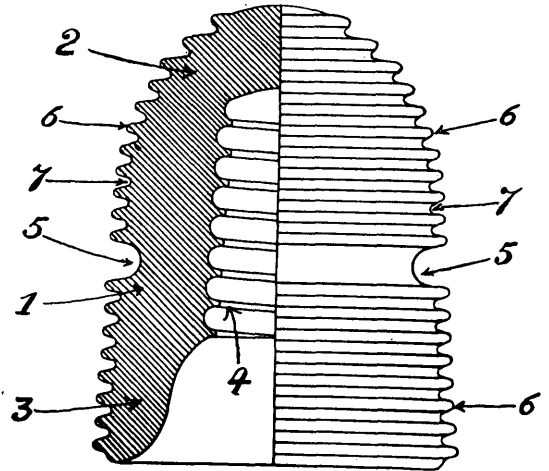
said uprights, the seat and arms pivoted to said uprights, the rods carrying the foot-rest pivoted to said seat and arms, the pivoted



supporting legs carrying the wheels at their lower end, and the notched locking arm adapted to lock said legs in a folded or extended position.

No. 63,026. Electric Insulator. (*Isolateur électrique.*)

rotary cam shaft provided with an annular row of cam teeth engaging with the teeth of said disc, substantially as set forth. 4th. In an electric igniter for gas engines, the combination with the stationary and movable contacts, of a cam shaft provided with an annular row of cam teeth, a rod carrying the movable contact and capable of sliding lengthwise in said shaft, but held against turning therewith, and a cam disc secured to said rod and provided with an annular row of cam teeth which engage the teeth of the cam shaft, substantially as set forth. 5th. In an electric igniter for gas engines, the combination with the stationary and movable contacts, of a cam shaft provided with an annular row of cam teeth, a rod carrying the movable contact and capable of sliding lengthwise in said shaft but held against turning therewith, a cam disc secured to said rod and provided with an annular row of cam teeth, and a spring whereby the teeth of said cam disc are yieldingly held in engagement with the teeth of the cam shaft, substantially as set forth. 6th. In an electric igniter for gas engines, the combination with the stationary and movable contacts, of a cam shaft provided with an annular row of cam teeth, a rod carrying the movable contact and capable of sliding lengthwise in said shaft but held against turning therewith, a cam disc secured to said rod and provided with cam teeth which are yieldingly held in engagement with the teeth of the cam shaft, a ratchet-wheel secured to said shaft, and a rock lever provided with a pawl engaging with said ratchet-wheel, substantially as set forth. 7th. In an electric igniter for gas engines, the combination with the supporting head and the stationary and movable contacts, of a cam shaft journaled in said head and provided at its outer end with an annular row of cam teeth and at its inner end with a shoulder which bears against a shoulder on the supporting head, a rod carrying the movable contact at its inner end and capable of sliding lengthwise in said shaft but held against turning therewith, a cam disc secured to the outer end of the sliding rod and provided with an annular row of cam teeth engaging with the teeth of the cam shaft, and a spring whereby the shoulder of the cam shaft is pressed against the shoulder of the supporting head, substantially as set forth.



No. 63,025. Perambulator. (*Voiture.*)

(George D. Leadbetter, Detroit, Michigan, U.S.A., 4th May, 1899; 6 years. (Filed 21st November, 1898.)

*Claim.*—1st. In a perambulator, the combination of the two parallel uprights forming the supports or frame, the transporting wheels secured directly to the lower ends of said uprights, the seat pivoted to said uprights, the arms also pivoted to said uprights above said seat, the rods E pivoted to said arms and to said seat and extending below the latter, the folding foot-rest on the lower ends of said arms the locking joint between said rod and arms and arranged to permit said parts to fold upward as described. 2nd. In a perambulator the combination of the parallel uprights forming the frame, transporting wheels attached directly to the lower ends of said uprights, the pivoted arms, seat, and foot-rest, mounted directly on said uprights the pivoted supporting leg adapted to swing in the arc of a circle, and means for locking said leg. 3rd. In a perambulator, the combination of the uprights forming the frame and handle, the transporting wheels mounted on the lower ends of

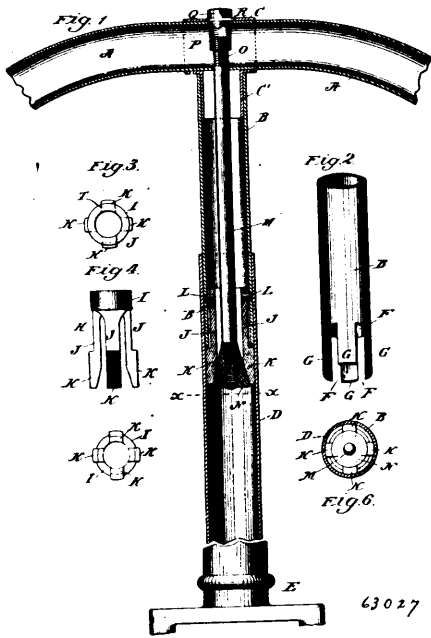
Frederick Henry Withycombe, Montreal, Quebec, Canada, 8th May, 1899; 6 years. (Filed 6th July, 1898.)

*Claim.*—1st. An insulator the entire outer or exposed surface of which is in the form of a protective cushion or guard made up of small projecting portions or ridges or intervening portions between depressions of small cross section so as to be structurally more fragile than the main body or any extension therefrom on which they project in uniform depth and proximity, and having downward leading channels for the flow of moisture, substantially as shown and described. 2nd. An insulator the entire outer or exposed surface of which is in the form of a protective cushion or guard made up of small and easily broken horizontal ridges and having water channels, substantially as shown and described. 3rd. An insulator the entire outer or exposed surface of which is in the form of a protective cushion or guard made up of small and therefore easily broken ridges 8 running in an oblique direction or directions and having grooves serving as water channels, as shown and described. 4th. An insulator the exposed surface of which is composed of small ridges running vertically from top to bottom of the insulator and adapted to form a protective cushion for the purpose set forth. 5th. An insulator the exposed surface of which is composed of a spiral ridge or ridges adapted to form a protective cushion for the purpose set forth. 6th. An insulator the exposed surface of which is composed of small easily broken protuberances adapted to form a pro-



protective cushion for the purpose set forth. 7th. An insulator the exposed surface of which is divided up into small depressions 6 and intervening portions 7 the latter adapted to form a protective cushion for the purpose set forth. 8th. An insulator the surface of which is divided up into small depressions 6 and intervening portions 7 arranged in oblique cross hatch lines and the rib portions adapted to form a protective cushion, for the purpose set forth. 9th. An electric insulator provided with circumferential ridges 8 and intermediate grooves 7, the said ridges and grooves being formed on the exterior surfaces above and below the groove 5, substantially as and for the purpose described. 10th. An insulator the exposed surface of which is composed of easily broken ridges or protuberances of greater height than thickness disposed equal distances apart and in close proximity to one another to afford protection to the entire exposed surface, substantially as set forth. 11th. An electric insulator provided with ridges 6 and intermediate grooves 7, the said ridges and grooves being formed on the exterior surfaces above and below the groove 5, and the ridges being of greater height than thickness and disposed equal distances apart and in close proximity to one another to afford protection to the entire exposed surface, substantially as set forth.

**No. 63,027. Bicycle. (Bicycle.)**

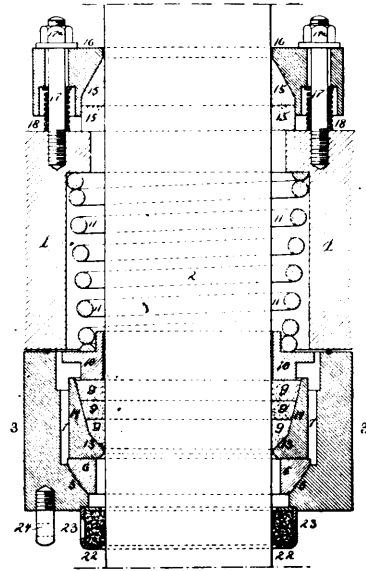


63027

Leonard Budd Gaylor, Erie, Pennsylvania, U.S.A., 8th May, 1899; 6 years. (Filed 29th November, 1898.)

*Claim.*—1st. The combination, in a bicycle, of a handle-bar stem provided with slots, a steering tube, a series of clamping jaws located within and supported by the stem, but separate from it, and which engage through said slots directly against the inner wall of the tube, and an expanding device for the jaws, for the purposes set forth. 2nd. The combination, in a bicycle, of a handle-bar stem provided with slots, a steering tube, a series of elastic clamping jaws located within and supported by the stem, but separate from it, and which engage through said slots directly against the inner wall of the steering tube, and an expanding device for the jaws located within them, for the purposes set forth. 3rd. The combination, in a bicycle, of a handle-bar stem, a steering tube, a series of clamping jaws supported upon a ring which is located and held within the stem, recesses in the stem through which the jaws may move into direct contact with the inner wall of the steering tube, and an expanding device for the jaws, for the purposes set forth. 4th. In a bicycle, a handle-bar and handle-bar stem connected by a sleeve which embraces the handle-bar, separate clamping jaws connected with the stem and supported by it, and which engage directly with the steering tube, said steering tube itself, an expanding device for the jaws mounted upon a threaded rod or bolt and located within the stem, and a cup-shaped or tubular nut, located at the exterior of the handle-bar, which actuates said rod and expander, for the purposes set forth. 5th. In a bicycle, a handle-bar stem, the lower end whereof has a series of recesses, a series of elastic clamping jaws located within and supported by the stem and which work through said recesses against the inner wall of the steering tube, said steering tube itself, and a conical expander likewise located within said jaws and operated from the exterior of the apparatus.

**No. 63,028. Rod Packing for Steam Engines. (Harniture pour pistons de machine à vapeur.)**



63028

Charles Longstreth, Yeadon, Pennsylvania, U.S.A., 8th May, 1899; 6 years. (Filed 23th October, 1898.)

*Claim.*—1st. The combination of a rod, one or more soft metal packing rings surrounding the same, a casing having a recess which receives said ring or rings and has an outer wall presenting different degrees of bevel, the innermost bevel being the more abrupt, and provision for pressing the packing ring or rings into said recess, the inner ring being of considerably greater width than the abruptly inclined portion of the wall of the casing, substantially as specified. 2nd. The combination of a cylinder and piston rod with an outer set of packings for said rod, and an inner packing which is pressed against a forward seat by the impact of water in the forward end of the cylinder, substantially as specified. 3rd. The combination of a cylinder and piston rod, with packing for the latter located within the cylinder and consisting of a ring or rings surrounding the rod, and a spring supported casing surrounding said rings and having a bevelled face for compressing the same when it is moved forwardly against the action of the spring support, substantially as specified. 4th. The combination of a cylinder and piston rod, with an outer set of packing rings for the said rod, and an inner packing bearing against a forward seat and contained in a bevelled recess in a sleeve which is acted upon by the impact of water in the forward end of the cylinder, whereby packing rings are pressed both against the forward seat and against the rod. 5th. The combination of a cylinder head and piston or other rod, with a sleeve surrounding the rod and containing a set of packing rings in a recess at its outer end, and a snug fitting ring in a recess at its inner end, said packing rings being so supported that they will be compressed as the sleeve is driven forward, and said ring at the inner end of the sleeve having a fixed bearing, and provision whereby pressure is admitted to the space between it and the base of the recess in the sleeve, substantially as specified. 6th. The combination of a cylinder head and piston or other rod, with a sleeve surrounding the rod and containing a set of packing rings in a recess at its outer end, and a snug fitting ring in a recess at its inner end, springs for pressing said sleeve outward and the ring inward against a fixed bearing, an outer support for the packing rings, and means for admitting pressure to the space between the base of the recess at the inner end of the sleeve and the ring contained in said recess, substantially as specified. 7th. The combination of a rod and cylinder head or other structure having a recess therein, a series of casings contained within said recess and each containing a series of packing rings, a ring whereby pressure is transmitted from each casing to the packing rings contained in the casing in advance, a spring-actuated follower for pressing upon the inner ring of the inner casing, and a follower for pressing upon the outer casing of the series, substantially as specified.

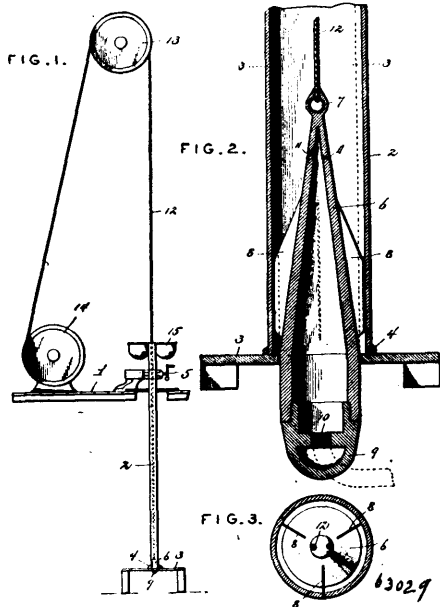
**No. 63,029. Pipe Lining Apparatus.**

(Appareil à doubler les tuyaux.)

Frank Eugene Keys, New York City, New York, U.S.A., 8th May, 1899; 6 years. (Filed 31st January, 1899.)

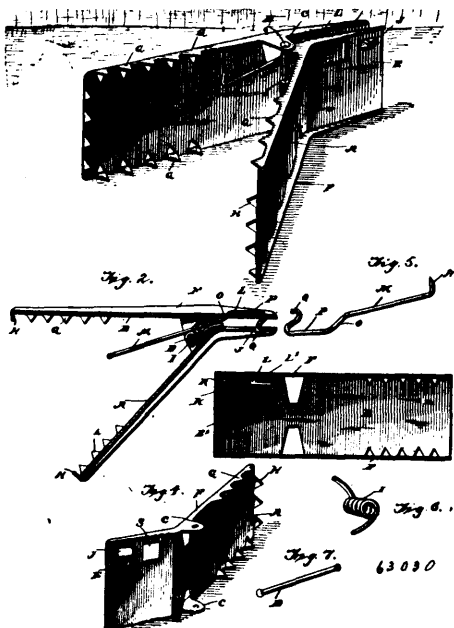
*Claim.*—1st. In an apparatus for lining pipes, a hollow tapering spreader, means for moving and for guiding said spreader through a pipe and means for circulating fluid from end to end of the spreader and permitting the discharge of said fluid into the pipe from the

smaller end of the spreader, substantially as set forth. 2nd. A spreader for distributing material in forming a lining within a pipe,



comprising a hollow body tapered from its larger portion upward, wings projecting from the tapered portion of the body, a loop or yoke at the butt end of said body, and a pipe communicating with the said larger end, the upper or smaller end of the spreader having a series of apertures inclined downward, substantially as shown and for the purpose set forth. 3rd. A device for distributing material in forming a lining for pipes or other conduits, consisting of a hollow spreader tapered substantially as shown and provided with an inlet opening at its larger end and outlet passages at its smaller end, a yoke or cap at the larger end of the spreader, and wings or guides projecting laterally from the tapered portion of the spreader, for the purpose set forth.

**No. 63,030. Animal Trap. (Piège.)**

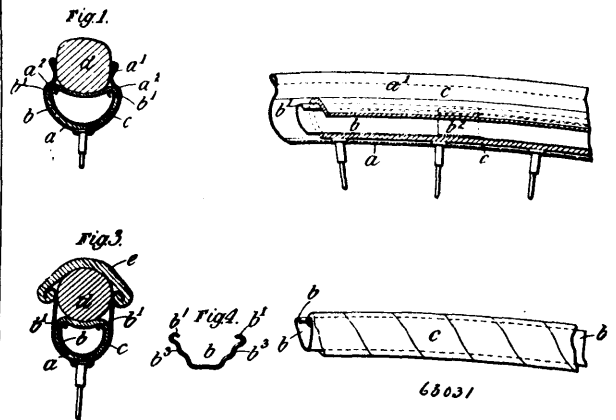


James H. Mackintosh, Asbury Park, New Jersey, U.S.A., 8th May, 1899; 6 years. (Filed 6th June, 1898.)

*Claim.*—1st. An animal trap consisting of two vertical pivoted toothed jaws provided with spring closing mechanism and a trigger and setting bar with bait holder between the jaws, the jaws being constructed and arranged to be placed on edge when set to permit the approach of the animal to the bait without the necessity of passing over any other object than the floor or carpet upon which the trap is set, substantially as described. 2nd. The animal trap herein

described, consisting of a jaw A, having a rear extension at an obtuse angle thereto and the jaw B having a rear extension in line with the body of the jaw, each of said jaws being stamped from sheet metal and provided with teeth and pivot lugs stamped out of the material of the jaw, the jaw A being provided with openings J and S and the jaw B with openings K and L, the pivot pin passing through the pivot lugs, the spring coiled about the pivot pin and bearing outwardly between the extensions D and E<sup>1</sup> and the trigger and set rod M provided with a point N to receive the bait, a bent portion O to pass through the opening L and engage shoulder L<sup>1</sup> when set, and a toe Q to pass through and engage with the edge of the opening J in setting the trap, substantially as described. 3rd. The combination of two jaws pivotally attached to each other and having extensions beyond the pivots, a wire S pivotally secured to the end of one jaw adapted to be passing around the other jaw and through an opening therein, a stop or catch to engage the end of the wire, and a trigger pivotally secured to the jaw and adapted to release the wire, the trigger having pointed ends to receive the bait, substantially as described. 4th. The combination in an animal trap of two vertical jaws pivotally attached to each other and having extensions beyond the pivots, a wire S pivotally secured to the end of one jaw and adapted to be passed around the end of the other jaw and through an opening therein, a trigger and set bar V provided with tangs W W, adapted to be engaged through slots or openings in the last named jaw, with space to permit of vertical movement to trip the wire S, substantially as described. 5th. The combination in an animal trap of two vertical jaws pivotally attached to each other and having extensions beyond the pivots, a wire S<sup>1</sup> pivotally secured to the end of one jaw adapted to be passed around the end of the other jaw and through an opening therein, a stop or catch to engage the end of the wire, and a trigger and set V<sup>1</sup> pivotally secured to the latter jaw at W<sup>1</sup> and adapted to be oscillated on its pivot to trip the wire at S<sup>1</sup>, substantially as described.

**No. 63,031. Tire and Rim. (Bandage et jante.)**



Henry Constable, 267 Ladbroke Grove, London, England, 8th May, 1899; 6 years. (Filed 25th October, 1898.)

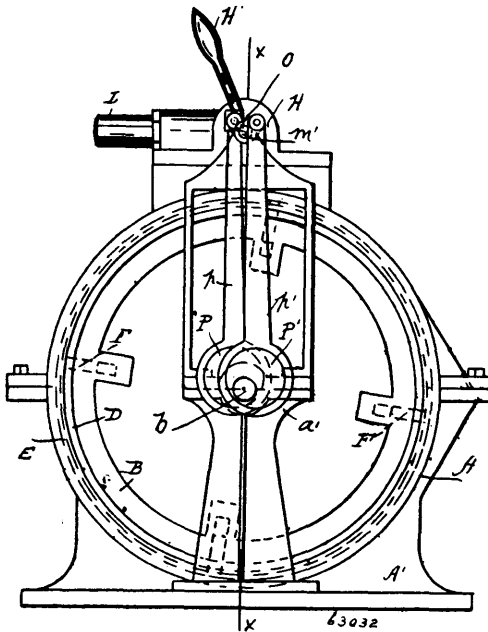
*Claim.*—1st. In a resilient tire for wheels, the combination with the wheel rim, of a detachable inner rim on which is mounted a resilient bed or support for the body of the tire proper, substantially as described. 2nd. In a resilient tire for wheels, the combination of a wheel-rim having flat parallel outer sides or edges, a detachable inner rim having laterally expansible edges, a tube of resilient material inclosing said inner rim and being gripped between the same and the wheel rim, and an endless band or tire resting on said resilient material, substantially as and for the purposes specified. 3rd. In a resilient tire for wheels, the combination of a wheel rim having inwardly pressed flat parallel outer sides or edges forming guide surfaces and internal shoulders, a detachable inner rim having laterally expansible edges tending to house themselves under said shoulders, an adjustable tube of resilient material inclosing said inner rim, and an endless band or tire resting on said resilient material and between said guide surfaces, substantially as and for the purposes specified. 4th. In a resilient tire for wheels, the combination with the wheel rim of a detachable inner rim, a resilient bed or support carried by said inner rim, and an endless band or tire resting on said bed between the edges of the wheel rim and being of approximately square shape so as to be capable of being turned to present any one of its faces as the wearing surfaces, substantially as described.

**No. 63,032. Rotary Engine. (Machine rotatoire.)**

Edward Probst, Terre Haute, Indiana, U.S.A., 8th May, 1899; 6 years. (Filed 5th November, 1898.)

*Claim.*—1st. In a rotary engine, the combination, with a cylinder, of a piston journalled in the cylinder and provided with a series of circumferential grooves, a series of slidable abutment plates arranged in line with each other and carried by the cylinder, said abutment

plates being slidable in the said grooves respectively, a series of piston plates arranged out of line with each other one in each groove



of the piston, and a valve operating to admit steam to the grooves of the piston between each pair of slidable plates one after the other, substantially as set forth. 2nd. In a rotary engine, the combination, with a cylinder provided with a series of pairs of steam and exhaust ports, of a piston journalled in the cylinder and provided with a series of circumferential grooves communicating with the said pairs of ports, a series of slidable abutment plates arranged in line with each other and carried by the cylinder between the said pair of ports, said abutment plates being slidable in the said grooves respectively, a series of piston plates arranged out of line with each other one in each groove of the piston, and a valve operating to admit steam through the said steam ports to the said grooves between each pair of slidable plates one after the other, substantially as set forth. 3rd. In a rotary engine, the combination, with a cylinder, a piston journalled in the cylinder and having a series of circumferential grooves each provided with a slidable piston plate, and slidable abutment plates carried by the cylinder, each said abutment plate being slidable in a separate groove of the said series, of a rotary valve controlling the admission and exhaust of steam to and from said grooves, and driving mechanism operating to move the said valve in one direction continuously, substantially as set forth. 4th. In a rotary engine, the combination, with a cylinder, and a piston journalled therein and provided with circumferential ribs, said ribs and cylinder having meeting semi-circular grooves, of packing rings formed of rifted tubes and operating to keep the said ribs steam-tight, substantially as set forth. 5th. In a rotary engine, the combination, with a cylinder, and a piston journalled therein and provided with circumferential ribs, said ribs and cylinder having meeting semi-circular grooves, of packing rings formed of rifted tubes, and means for admitting steam to the interior of the said packing rings, substantially as set forth. 6th. In a rotary engine, the combination, with a cylinder, and a piston journalled therein, of a rigid flange secured to one of the said parts, and a ring secured to the other said part and provided with a spring flange free to bend laterally and having a lip bearing against the said rigid flange and forming a steam-tight joint, substantially as set forth. 7th. In a rotary engine, the combination, with a cylinder, and a piston journalled therein, said parts having meeting semi-circular circumferential grooves, of a packing-ring formed of a tube of resilient material provided with a circumferential rift or split and arranged in the said grooves, substantially as set forth. 8th. In a rotary engine, the combination, with a cylinder, and a piston journalled in the cylinder and provided with a circumferential groove, of a radially slidable piston plate carried by the said piston, a radially slidable abutment plate carried by the said cylinder, and wedges secured to the said piston and cylinder on each side of each of the said plates and extending one-half the depth of the said groove, substantially as set forth. 9th. In a rotary engine, the combination, with a cylinder, and piston journalled in the cylinder and provided with a circumferential groove, of a plate carried by one of the said parts and slidable crosswise of the said groove, and curved wedges secured one on each side of the said plate and provided with longitudinal grooves in their faces preventing the formation of compression and suction chambers, substantially as set forth. 10th. In a rotary engine, the combination, with a cylinder, of an abutment plate slidable in a socket in the cylinder and provided with recesses 8 at its upper edges, vertical

grooves 7, in its side edges, and cross grooves 16 in the middle parts of its side edges, packing plates 9, slidable in the recesses 8, and provided with grooves 11, and packing strips 14 slidable in the grooves 7 and 11, and provided with projections 15, engaging with the grooves 16, substantially as set forth. 11th. In a rotary engine, the combination, with a cylinder, of abutment plate slidable in a socket in the cylinder and provided with a groove 4, in its lower edge, and vertical grooves 7, and cross grooves 16, in its side edges, a flanged packing strip 2, slidable in the groove 4, and provided with grooves 5 in its ends, and packing strips 14 slidable laterally in the grooves 7 and 5, and provided with projections 15, engaging with the grooves 16, said projections 15 preventing the packing-strips from sliding vertically in their grooves, substantially as set forth. 12th. In a rotary engine, the combination, with a cylinder, and a valve casing provided with a series of pairs of ports  $j, j$ , and two exhaust ports  $k, k$ , arranged crosswise of the cylinder, of an oscillatory reversing valve journalled in the said casing and provided with a series of steam passages  $i$ , arranged in line with each other, and two exhaust cavities  $i'$ , arranged one on each side of the said steam passages, and a rotary steam distributing valve consisting of a hollow cylinder journalled in the reversing valve and provided with a series of steam-ports  $n$ , arranged out of line with each other in its periphery and communicating with the said passages  $i$ , respectively and one after another, substantially as set forth. 13th. In a rotary engine, the combination, with a cylinder, and a valve casing provided with a series of pairs of ports  $j, j$ , two exhaust ports  $k, k$ , and two exhaust passages  $J, J$ , arranged crosswise of the cylinder one on each side of the ports  $j, j$ , and passages  $K$  arranged between the pairs of ports  $j, j$ , and connecting the passages  $J, J$ , of an oscillatory reversing valve journalled in the said casing and provided with a series of steam passages  $i$ , arranged in line with each other, and two exhaust cavities  $i'$ , arranged one on each side of the said steam passages, and a rotary steam distributing valve consisting of a hollow cylinder journalled in the reversing valve and provided with steam-ports  $n$ , arranged out of line with each other in its periphery, substantially as set forth. 14th. In a rotary engine, the combination, with a valve casing provided with steam and exhaust ports, of a reversing valve journalled in the casing and provided with an end portion  $h$ , forming a steam tight seat against the casing, and a stem projecting through the end of the casing, a hollow steam distributing valve journalled in the said reversing valve and provided with an end portion  $m$ , forming a steam-tight seat against the reversing valve, and a stem projecting through the aforesaid stem, and a steam pipe connected to the casing at the other ends of the said valves from their stems and admitting steam to the interior of the said distributing valve, substantially as set forth. 15th. In a rotary engine, the combination with a rotary steam distributing valve, and a double crank secured to the said valve, of two eccentrics driven by the engine shaft, and two eccentric rods operatively connected with the arms of said double crank, whereby the said valve is driven continuously and in the same direction as the said engine shaft, substantially as set forth.

No. 63,033. Bicycle Tire. (*Bandage de bicycles.*)

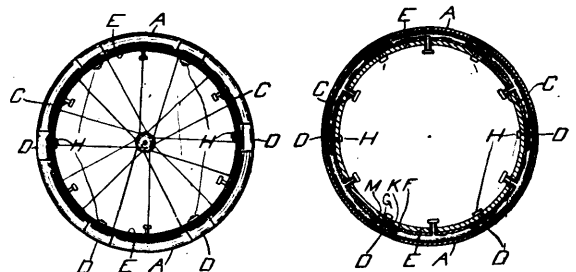
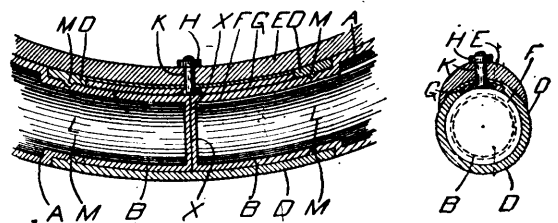


FIG 4



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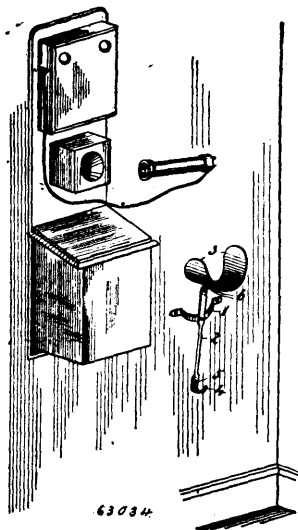
George H. Ricke, Alexander Reid and John H. Woodward, all of Cincinnati, U.S.A., 8th May, 1899; 6 years. (Filed 14th October, 1898.)

Claim.—1st. In a bicycle tire a pneumatic tube made of sections, the ends of the sections being offset and depressed, in combination

with a strap or clamp which holds and encircles said offset ends when the sections are filled with air, as set forth. 2nd. In a bicycle tire, a pneumatic tube made of sections, the ends of the sections being offset and depressed, and thinner than the balance of the tire, in combination with a strap which encircles said offset ends to form a tight joint, as set forth. 3rd. In a bicycle tire, a pneumatic tire, made of sections having offset ends, in combination with a clamp or strap for holding said sections in place, an annular groove on the offset ends fitted by a bend on the clamp or strap to form a tight joint, as set forth. 4th. In a bicycle tire a series of sections A, having offset ends B, in combination with strap D, held to the tire rim E, by plate F, and screw nut connection, as set forth. 5th. In a bicycle tire, a series of sections A, having depressed offset B, strap D, rim E, plate F, head M, fitting annular groove L, all combined as set forth.

**No. 63,034. Telephone Arm Rest.**

(Appui-bras pour téléphones.)

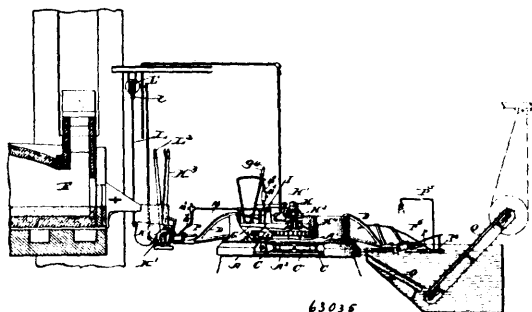


Robert M. Bell, Brockville, and John G. Smith, Glenmore, Ontario, assignee of David D. McDonnell, Montreal, Quebec, all of Canada, 8th May, 1899; 6 years. (Filed 30th August, 1898.)

*Claim.*—A telephone arm-rest, comprising a curved bar 1, having ends bent in alignment and adapted to be secured horizontally to a wall, a bar crossing said bar and riveted thereto at the intersection, the lower end adapted to be secured to a wall, and the upper end bent outwardly and horizontally, and an upwardly curved arm-plate 3, riveted to said bent portion of bar 2, as set forth.

**No. 63,035. Metal Casting Apparatus.**

(Appareil de moulage.)



Arthur L. Walker, Baltimore, Maryland, U.S.A., 9th May, 1899; 6 years. (Filed 7th January, 1899.)

*Claim.*—1st. In a casting apparatus, the combination with a ladle, of a circular track laid upon a fixed foundation, a shaft fixed to said foundation and arranged concentric with said track, a carrier wheel resting on and supported wholly by the track and mounted on said shaft to have a determined or fixed plane of rotation, mould-carrying brackets adjustably hung upon the rim of said carrier-wheel, and a mould mounted in two adjacent brackets, whereby a series of removable moulds of different kinds may be supported upon the rim

of the carrier wheel, substantially as described. 2nd. In casting apparatus, the combination of a shaft, a carrier wheel rotatably mounted thereon, mould-carrying brackets hung upon the rim of said wheel and adjustable thereon relatively to each other, and a mould mounted in two adjacent brackets, whereby a series of removable moulds of different kinds may be supported upon the rim of the carrier wheel, substantially as described. 3rd. In casting apparatus, the combination of a circular track, a shaft arranged concentric therewith, a carrier-wheel consisting of a hub rotatably mounted on said shaft, spokes or arms radiating therefrom and a broad annular rim secured to said arms and provided with a broad base-bearing, anti-friction bearing interposed between said base-bearing and the track, detachable mould-carrying brackets, each provided with a hook engaging the rim of the carrier wheel, and adjustable thereon, and a mould mounted in two adjacent brackets, whereby a series of removable moulds of different kinds may be supported upon the rim of the carrier wheel, substantially as described. 4th. In casting apparatus, a rotatable mould-carrier-wheel, a series of mould supporting brackets adjustably hung on the rim of said wheel, each bracket having an arm projecting beyond said rim and provided with a bearing, and a mould provided with trunnions adapted to be mounted in the bearings of two adjoining bracket-arms, whereby an annular series of removable moulds of different kinds may be supported upon said bracket arms around the outer circumference of the rim of the wheel, substantially as described. 5th. In casting apparatus, a rotatable mould-carrier wheel, a series of mould supporting brackets adjustably connected with the rim of said wheel, each bracket having an arm provided with an angular bearing recess, a mould provided with trunnions mounted in the bearing recess or two adjoining arms, and bushings adapted to be inserted in said bearing recesses to vary the angles of inclination thereof, whereby moulds of different length may be supported, substantially as described. 6th. In casting apparatus, a rotatable mould-carrier-wheel, a series of mould supporting brackets adjustably connected with the rim of said wheel, each bracket having an arm provided with a bearing recess and a cross-bar in rear thereof, and a mould provided with trunnions arranged between the centre of gravity and the front end thereof, and journaled in said recesses, and provided with a bearing flange at its rear adapted to rest upon said cross-bar, substantially as described. 7th. In casting apparatus, a rotatable mould-carrier-wheel, a series of mould supporting brackets adjustably connected with the rim of said wheel, each bracket having an arm provided with a bearing recess and a cross bar in rear thereof, the mould provided with trunnions arranged between the centre of gravity and front end thereof and journaled in said recesses and provided with a bearing flange at its rear adapted to rest upon said cross bar and means for tilting the moulds to dump the castings, substantially as described. 8th. In casting apparatus, the combination with a furnace having a discharge spout, of a mould carrier, a tilting ladle arranged between the spout and mould carrier, a support above said ladle, a lift held by said support, a connection between said lift and the rear end of the ladle, a hanger and a deflector device connected with said hanger and provided with a handle projecting toward said mould carrier, substantially as described. 9th. In casting apparatus, the combination with a furnace, of a rotatable mould carrying wheel provided with mould supporting brackets, a rock shaft, bracket arms rigidly secured to said shaft, a ladle interposed between the furnace and mould carrier and having a mouth provided on opposite sides with trunnions journaled in said bracket arms, and means for supporting and tilting the rear end of the ladle, substantially as described. 10th. In casting apparatus, the combination with a furnace, of a rotatable mould carrier wheel provided with mould supporting brackets, a rock shaft, bracket arms rigidly secured to said shaft, a ladle interposed between the furnace and mould carrier and having a mouth provided on opposite sides with trunnions journaled in said bracket arms, a supporting bracket arm, a connection between the bracket arm and rear end of the ladle for supporting the same, a lever connected with the rock shaft, and a deflector above the mould and provided with a handle projecting over toward the carrier, substantially as described. 11th. In casting apparatus, the combination of a furnace having a discharge spout, a tilting ladle having a pouring mouth and pivoted adjacent to said mouth, a hydraulic lift and the rear end of the ladle, a hanger rod and a deflector device carried by said rod adjacent the mouth of the ladle, substantially as described. 12th. The combination with a furnace, having a discharge spout, of a rotary mould carrier provided with mould supports, a tilting ladle interposed between said spout and carrier and provided with a pouring lip arranged vertically above the path of rotation of the moulds and adapted to discharge the molten metal directly into a mould on said carrier, and a pivoted deflector device comprising a pan or vessel arranged when in operative position to rest within the mouth of a mould, substantially as described. 13th. In an organized casting apparatus, the combination with a furnace having a discharge spout, of a rotary mould carrier adapted to be given an intermittent, step-by-step movement to successively bring each mould carried thereby in line with said spout, a ladle arranged under the spout with its pouring lip located just above the path of the moulds, and pivoted adjacent to said lip so that when tilted slightly it will discharge the metal directly with a minimum fall into the mouth of the mould beneath it, means for tilting said ladle, and a pivoted deflector device comprising a pan or vessel arranged when in opera-

tive position to rest within the mouth of a mould, substantially as described. 14th. In a casting apparatus, the combination with a mould carrier having mould supporting brackets mounted thereon, and means for rotating it in a horizontal plane, of a fixed platform mounted centrally of said carrier and controlling mechanism for governing the movement of the carrier located on said platform, substantially as described. 15th. In a casting apparatus, the combination of the horizontally rotatable mould carrier, a central fixed shaft or support about which said carrier rotates, a fixed platform supported by said shaft and forming a stable base for the operator, substantially as described. 16th. In a casting apparatus, the combination of the mould carrier and means for rotating it in a horizontal plane, a central fixed shaft or support about which said carrier rotates and a fixed platform supported by said shaft with carrier controlling mechanism mounted on said platform, substantially as described. 17th. In a casting apparatus, the combination with the horizontally rotatable carrier having the mould brackets mounted thereon, of a central shaft about which said carrier rotates, projecting up through the carrier, a horizontal platform mounted on the upper end of said shaft and fixed with relation to the carrier, a driving mechanism mounted on said platform, gearing interposed between said driving mechanism and carrier and a controlling handle for said driving mechanism, substantially as described. 18th. In a casting apparatus, the combination with the horizontally rotatable carrier, having mould supporting brackets projecting therefrom and a central shaft about which said carrier rotates projecting up through the carrier, of a platform supported on said shaft above said carrier, a hydraulic cylinder mounted on the platform, a piston working in said cylinder, a shaft rotated by the movement of the piston and gearing interposed between said shaft and carrier, as set forth. 19th. In a casting apparatus, the combination with a horizontally rotatable carrier, of a driving mechanism for rotating said carrier embodying a hydraulic cylinder and piston, a shaft, connections between said piston and shaft whereby the latter is rotated, with a ratchet interposed in said connections for preventing reverse movement of the shaft and gearing interposed between the shaft and carrier, substantially as described. 20th. In a casting machine, the combination with a horizontally rotatable carrier, having mould supporting brackets projecting therefrom, of a driving mechanism for rotating said carrier embodying a hydraulic reciprocating motor, a drum, connections between the motor and drum whereby the latter is rotated in one direction by the motor, a weight connected with the drum for rotating it in the opposite direction, a shaft gearing with the carrier and a pawl and ratchet connection interposed between the drum and shaft, substantially as described. 21st. In a casting machine, the combination with a horizontally rotatable carrier, a series of pivoted dumping moulds mounted on and entirely supported thereby with controlling arms for said moulds, of inclines with which said arms co-operate as the carrier rotates to invert said moulds and discharge the castings, substantially as described. 22nd. In a casting apparatus, the combination with a horizontally rotatable carrier, having a series of mould supporting brackets projecting therefrom, dumping moulds pivoted on horizontal axes, tangential to the carrier, in said supporting brackets and entirely supported thereby and controlling arms for said moulds, of an incline located in the path of travel of said controlling arms, whereby the moulds are inverted to discharge the castings, and a reverse incline also located in the path of travel of said controlling arms for returning the moulds to their initial position, substantially as described. 23rd. In a casting apparatus, the combination with the horizontally rotatable carrier, the mould supporting brackets carried thereby, the moulds journaled in said arms on horizontal axes and controlling arms for said moulds of an incline lying in the path of travel of said controlling arms for inverting the moulds, a second incline with which said arms co-operate, and down which they travel as the moulds become inverted and a reverse incline lying in the path of travel of said arms when the moulds are in their inverted position for returning the moulds to their initial position, substantially as described. 24th. In a casting apparatus, the combination with a horizontally rotatable carrier and moulds journaled thereon on horizontal axes located eccentrically of said moulds whereby when the moulds are inverted they will extend into a lower plane than when in initial position, of a water bosh having its side walls extending above the level of the lower portion of the inverted mould but below the level of the mould when in initial position, whereby said mould may be inverted so as to pass through the water contained in the bosh and be cooled thereby, substantially as described. 25th. In a casting apparatus, the combination with the horizontally rotatable carrier having the mould supporting brackets projecting therefrom and moulds journaled in said brackets on axes arranged eccentrically to the moulds whereby when the moulds are inverted they will extend into a lower plane than when in normal position, of a water bosh having its side walls extending into a plane above the level of the lower portion of the inverted mould and below the level of the plane of the mould when in normal or initial position, of mechanism arranged above said water bosh for automatically inverting and returning the moulds to initial position, substantially as described. 26th. In a casting apparatus, the combination with a horizontally rotatable carrier and a series of moulds supported thereby, of a central stationary platform arranged within said carrier, a pouring ladle for supplying molten metal and a universally movable deflector interposed between said ladle and moulds, with a

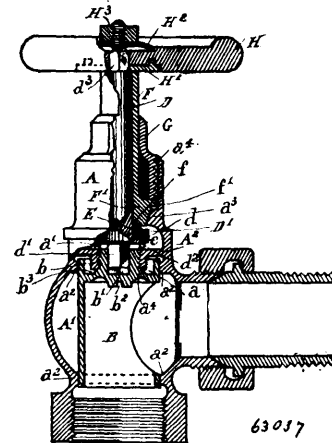
support for said deflector carried by the central fixed platform, substantially as described. 27th. In a casting apparatus, the combination with the horizontally rotatable carrier, a series of moulds supported thereby, a pouring ladle for supplying molten metal to said mould and a fixed support or platform, of a substantially horizontal shaft mounted in bearings on said platform to rotate and move longitudinally, a deflector carried by said shaft and adapted to be interposed between the ladle and mould, and a controlling handle and counterweight also carried by said shaft for manipulating the deflector, substantially as described. 28th. In a casting apparatus, the combination with the horizontally rotatable carrier, the series of moulds supported thereby, a pouring ladle for supplying molten material to the mould and a fixed platform, of a substantially horizontal deflector supporting shaft mounted in bearings on said platform so as to be capable of a rotary and a longitudinal movement, a vertically adjustable deflector arm carried by one end of said shaft with a deflector connected with said arm and adapted to be interposed between the ladle and moulds, and a controlling handle and counterweight carried by the opposite end of said horizontal shaft, substantially as described. 29th. A mould for use in casting apparatus consisting of a frame having a recess therein and an independent insert containing the mould cavity keyed in the recess in the frame, substantially as described. 30th. A mould for use in casting apparatus consisting of an iron frame having a recess therein and a copper insert keyed in said recess and having the mould cavity in its upper surface, substantially as described.

**No. 63,036. Process of Manufacturing Pumpkin Flour and Squash Flour.** (*Procédé pour la fabrication de farine de citrouille etc.*)

Lydia McClatchey, Leamington, Ontario, Canada, 9th May, 1899; 6 years. (Filed 26th September 1898.)

*Claim.*—The process of making pumpkin flour and squash flour by cutting the solid portions of these vegetables into pieces removing the moisture therefrom by evaporation permitting the pieces to sweat and then become dry kiln, drying the pieces until they are free from moisture and grinding the pieces into flour, substantially as described.

**No. 63,037. Valve.** (*Soupepe.*)

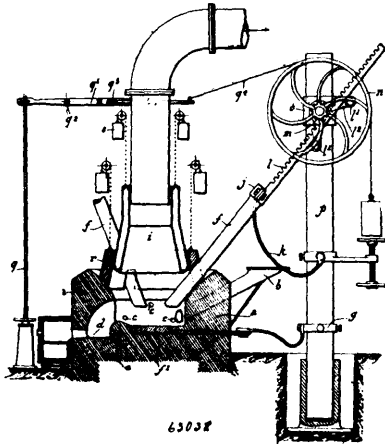


John N. Murphy, Springfield, Illinois, U.S.A., 9th May, 1899; 6 years. (Filed 27th January, 1898.)

*Claim.*—1st. A valve body having a globular part provided with internal annular projections and an integral cylindrical part having an internal annulus, also having a diaphragm being provided with an annulus having an inclined seat at its lower end, in combination with an internal gate having a screw fitting in the annulus on said diaphragm and having at the base of said screw a conical surface seating on the inclined surface of said annulus, also having a socket in said screw, a valve stem provided with a packing ring plate and having a squared end fitting in said socket, a packing ring connected with said packing ring plate, a union sleeve inclosing said valve stem and having in its end a conical cavity on which said packing ring seats, said union sleeve being also adapted to seat on the annulus within the cylindrical part of the valve body, a nut screwing in the valve top and bearing on said union sleeve, and a hand wheel connected with said valve stem, the upper end of said union sleeve abutting against the under side of said hand wheel, as set forth. 2nd. In a valve, a valve-stem provided with a packing ring plate and having its upper and lower ends squared, also having its upper end screw threaded, in combination with a packing ring, a screw ring connecting said packing ring with said packing ring plate, a union sleeve seating on an annulus within the valve body and having in its lower end a conical recess in which said packing seats, a hand wheel, a plate connected with said hand wheel and fitting on the upper squared part of the valve stem, a dished washer

supported on said hand wheel and a nut working on the screw at the upper end of said valve stem and in contact with said washer, as set forth. 3rd. In a valve the combination of a valve body having an upper and a lower part, separated by a diaphragm, said lower part having internal annular projections and said upper part having an internal annulus, also having diametrically opposite channels, said diaphragm having an upwardly projecting lug, a gate screwing into said annulus and seating on the under side thereof, said gate being provided with a socket, a valve stem fitting in said socket and having a packing ring plate provided with a lug, adapted to engage with a lug on the diaphragm, a packing ring, a screw ring connecting said packing ring with the packing ring plate, a union sleeve seating on the annulus in the upper part of the valve body and having a conical recess on said packing ring seats, also having lugs working in channels in the valve body, a hand wheel fitting on the upper end of the valve stem and provided with a plate against which the upper end of the union sleeve abuts, a dish washer on said hand wheel, a nut on the valve stem working against said washer and a nut in the valve body bearing on said union sleeve, as set forth.

**No. 63,038. Electric Furnace.** (*Fournaise électrique.*)



Charles Bertolus, St. Etienne, Loire, France, 9th May, 1899; 6 years. (Filed 3rd September, 1897.)

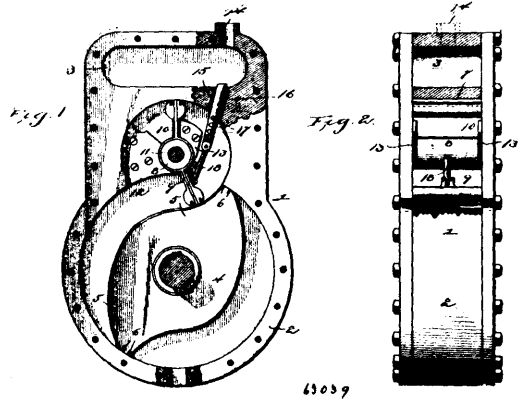
*Claim.*—1st. The hereinbefore described method of utilizing polyphase currents of any number of phases in electric furnaces, for treating, fusing and decomposing materials by the voltaic arc, said method consisting in supplying any number of phase currents to a corresponding number of electrodes and in striking the arcs either directly between each of the electrodes through the material to be treated or between each of the electrodes and the mass to be treated, this latter being then connected to a point of the polyphase system. 2nd. The electric furnace above described, adapted for the application of polyphase currents to processes of fusion and decomposition of materials by the voltaic arc, and at the same time suitable for using alternating monophase currents, and even continuous currents, the said furnace comprising masonry foundation *a*, shoots *b*, hollow (such as *d*) separated from the hearth proper by a bridge (such as *c*), inclined electrodes dipping into the cavity of the furnace at an angle and capable of individual and simultaneous adjustment by means of suitable controlling gear, dampers (such as *r*) and movable chimney (such as *i*), all arranged and operating, substantially as set forth.

**No. 63,039. Rotary Engine.** (*Machine rotatoire.*)

Elton Preston Kendall, Fairlee, Henry M. Durfur, Waterbury, George A. Dickey, Bradford, and Charles F. Smith, West Topsham, all in Vermont, U.S.A., 9th May, 1899; 6 years. (Filed 28th December, 1898.)

*Claim.*—1st. In a rotary engine, the combination of a casing having a cylinder and a communicating abutment seat, a winged piston mounted in the cylinder, an oscillatory balanced abutment mounted in said abutment seat and having a wing arranged in operative relation with the piston, and in the path of the piston wing for displacement thereby, and yielding abutment-operating means for extending the abutment wing after each displacement by a piston wing and controlling cylinder feed ports through which motive agent is admitted to the abutment seat in advance of the operative abutment wing, substantially as specified. 2nd. In a rotary engine, the combination of a cylinder and a communicating abutment seat, a winged piston mounted in the cylinder, an oscillatory abutment having oppositely located operative and balancing wings of approximately equal areas, the operative abutment wing being arranged in the path of the piston wings for displacement thereby, and a reciprocatory abutment operating member exposed to a constant yielding pressure, for extending and maintaining the operative wing in its normal position

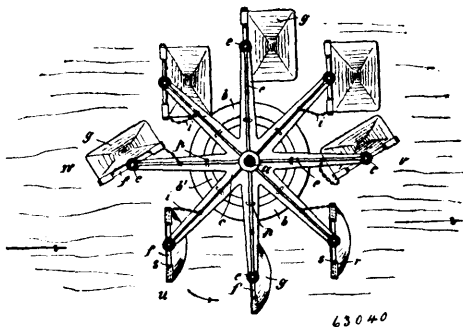
and controlling cylinder feed ports, substantially as specified. 3rd. In a rotary engine, the combination with a cylinder and a



communicating abutment seat, of a winged piston arranged in the cylinder, an oscillatory winged abutment arranged in the abutment seat and having approximately co-extensive operative and balancing wings simultaneously exposed to fluid pressure, the operative abutment wing being arranged in the path of the piston wings for displacement thereby, and a slide valve permanently exposed to fluid pressure, connected with the oscillatory abutment for normally maintaining the same in its operative position, and controlling-cylinder feed ports, substantially as specified. 4th. In a rotary engine, the combination with a cylinder and a communicating abutment-seat, of a winged piston arranged in the cylinder, an oscillatory winged abutment arranged in the abutment-seat and having approximately co-extensive operative and balancing wings simultaneously exposed to fluid pressure, the operative abutment wing being arranged in the path of the piston wings for displacement thereby, and a hollow slide valve connected with the abutment and fitted in an inlet port for the communication of motive agent to the abutment seat, said slide valve having a lateral feed port for closure by the axial movement of the valve, substantially as specified. 5th. In a rotary engine, the combination with a cylinder and a communicating abutment-seat, of a winged piston arranged in the cylinder, an oscillatory winged abutment arranged in the abutment seat and having approximately co-extensive operative and balancing wings simultaneously exposed to fluid pressure, the operative abutment wing being arranged in the path of the piston wings for displacement thereby, and a hollow slide-valve fitted in an inlet-port and connected with the abutment, said valve having a head exposed to the constant pressure of motive agent admitted through the inlet port, and provided with a lateral feed port for closure by the walls of the inlet port when the valve is moved axially, substantially as specified. 6th. In a rotary engine, the combination with a cylinder and a communicating abutment-seat, of a winged piston arranged in the cylinder, an oscillatory winged abutment arranged in the abutment seat and having approximately co-extensive operative and balance wings simultaneously exposed to fluid pressure, the operative abutment wing being arranged in the path of the piston wings for displacement thereby, and a hollow slide valve fitted in an inlet port in communication with said abutment seat and flexibly connected with the abutment, said slide valve having a head permanently exposed to the constant pressure of motive agent admitted through the inlet port and provided with a longitudinal series of feed ports, for successive closure by the walls of the inlet ports as the valve is moved axially, substantially as specified. 7th. In a rotary engine, the combination of a casing having a cylinder, a communicating abutment seat, and an inlet port in communication with the abutment seat, a winged rotary piston mounted in the cylinder, a winged abutment mounted for oscillation in the abutment-seat and having oppositely extending approximately co-extensive wings, of which one is arranged in operative relation with the piston, a hollow slide valve fitted in said inlet port and provided with a plurality of feed ports arranged in longitudinal series, for successive closure and exposure by the opposite reciprocatory movements of the valve, and connections between the abutment and said valve, substantially as specified. 8th. In a rotary engine, the combination with a casing having a cylinder and a communicating abutment-seat, a winged piston mounted in the cylinder, a winged abutment mounted in the abutment seat, and a feed valve operatively connected with the abutment and having a plurality of spaced feed ports arranged parallel with the direction of movement of the valve, said feed ports being adapted for successive closure and exposure during movements of the valve in opposite directions, the piston having a gradual cam face for actuating the abutment to impart movement to the feed valve, substantially as specified. 9th. In a rotary engine, the combination of a casing having a cylinder and a communicating abutment seat, and also having an inlet-port communicating with the abutment seat, a winged piston mounted in the cylinder, an oscillatory abutment mounted in the abutment

seat and having oppositely disposed operative and balancing wings, fixed stops arranged in the path of the balancing wing to limit the oscillatory movement of the abutment, a hollow feed valve fitted for reciprocatory movement in the said inlet-port and provided with a closed inner end or head and lateral feed ports adapted to be enclosed within the inlet port when the valve is retracted, and connections between the abutment and the feed valve, substantially as specified.

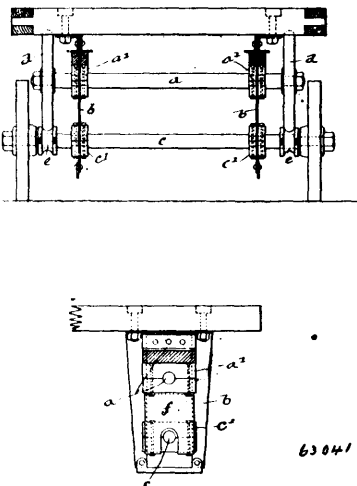
**No. 63,040. Water Wheel. (Roue d'eau.)**



Carl Heinrich Julius Wiese, 601 Neuer Steinweg, Hamburg, Germany, 9th May, 1899; 6 years. (Filed 11th March, 1898.)

*Claim.*—1st. A wheel for utilizing the power of flowing water without the use of natural or artificial dams, comprising moveable blades located at all times entirely beneath and pendent from radial arms, and each rotatable on a vertical axis, the said blades being adapted to intercept the force of the stream on one side, and to yield thereto on the other, as the wheel rotates, constructed and arranged substantially as hereinbefore described. 2nd. A wheel as above described, having the chains *i* leading from the inner top edge of the blades to the arms *c*, for the purpose of preventing the said blades from turning round too far on their vertical pivots *e*, constructed and arranged substantially as hereinbefore described.

**No. 63,041. Auto-Motor Vehicle. (Automobile.)**

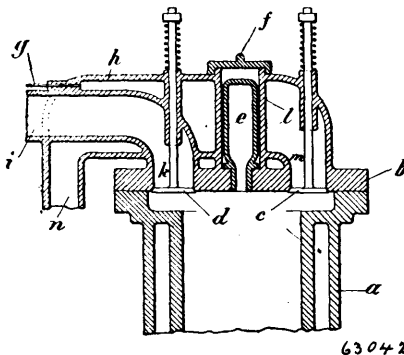


William John Brewer, 15 Denbigh Place, Belgrave Road, Pimlico, London, and John Edward Cooper, of Gladstone Villas, Withensea, York, England, 9th May, 1899; 6 years. (Filed 7th June, 1898.)

*Claim.*—1st. In an auto-motor car, the combination of a car body horn plates directly secured thereto, journal boxes mounted in said horn plates, a main axle having wheels secured thereto mounted in the lower pair of journals and having collars thereon, an anti-friction axle mounted in the upper pair of journals and discs mounted on said anti-friction axle engaging the collars on the main axle, substantially as described. 2nd. In an auto-motor car, the combination of a car body horn plates provided with slots secured thereto, two journal boxes mounted in each of said horn plates and secured together and adapted to slide in said slots, a main axle having wheels secured thereto mounted in the lower pair of journals and having collars thereon, an anti-friction axle mounted in the upper pair of journals, and discs mounted on said anti-friction axle adapted to revolve thereon and engaging the collars on the main axle, substantially as described. 3rd. In auto-motor cars the combination with the main axle, of wheels fixed thereon, collars each composed of two

sections diagonally jointed on the barrel and fastened together by bolts, and a layer of insulating material between each of said collars and said axle, substantially as described. 4th. In auto-motor car, the combination of a car-body, horn plates fixed thereto, journals mounted in said horn plates, a main axle mounted in the lower pair of journals, wheels and cushions attached to said main axle, an anti-friction axle mounted on the upper pair of journals, discs loosely mounted on said anti-friction axle and engaging said collars, an electric motor mounted on said anti-friction axle, and gearing on said axles, substantially as described. 5th. In an auto-motor car, the combination with a car body, main horn plates attached thereto, secondary horn plates also attached thereto, journals mounted in said horn plates, a main axle mounted in the lower pair of said journals, and provided with wheels and collars fastened thereto, a sectional anti-friction axle mounted in the upper sets of journals, and discs loosely mounted on said anti-friction axle and engaging the collars on the main axle, substantially as described. 6th. In an auto-motor car, the combination of a car body, horn plates fixed thereto, journal boxes mounted in said horn plates, a main axle mounted in the lower pair of journals and provided with cushions and wheels fixed thereto, a main anti-friction axle mounted above said main axle in the upper set of journals, discs on the said anti-friction axle engaging with the collars on said main axle, secondary anti-friction axles mounted on a line with the main anti-friction axle and anti-friction wheels mounted on said secondary axle and engaging said main anti-friction axle, substantially as described. 7th. In an auto-motor car, the combination of a wheel provided with an inside portion of less diameter than the main portion of the wheel, means for preventing said wheel from running off a track, consisting of a guard rotatably mounted on the axle of said wheel and means for throwing said guard down into operative position and fastening it there, substantially as described. 8th. In an auto-motor car, the combination of the main axle, wheels supported thereon, each wheel being provided with an interior portion of less diameter than the main portion of the wheel, an arm revolvably mounted in said axle, a wheel mounted on said arm parallel to the main axle, and means for bringing said wheel down to an operative position for preventing said main wheel from running off a track, and means for fastening it in that position, substantially as described. 9th. In an auto-motor car, the combination of a car body and steering mechanism therefor, consisting of a main steering wheel, supports therefor, an anti-friction axle mounted above the axle of the steering wheel, friction discs mounted on said axle and engaging with the axle of the steering wheel, an operating spur gear and pinion meshing therewith, substantially as described.

**No. 63,042. Petroleum Motor. (Moteur à pétrole.)**



Ernest E. F. Fagerström, 22nd Pipersgatan, Stockholm, Sweden, 9th May, 1899; 6 years. (Filed 8th October, 1898.)

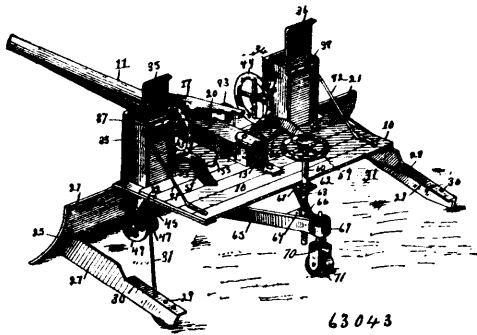
*Claim.*—A petroleum motor wherein the ignition tube is enclosed in a tube or casing located in the vaporizer, for the purpose of maintaining the temperature of the ignition tube constant and at the same time using a portion of its heat for the heating of the vaporizer.

**No. 63,043. Road Grader. (Niveleur de chemin.)**

John V. Maxey, Mount Vernon, Illinois, U.S.A., 9th May, 1899; 6 years. (Filed 14th December, 1898.)

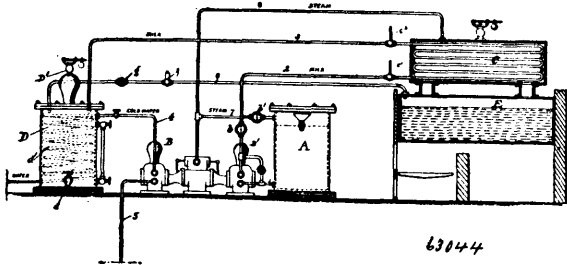
*Claim.*—1st. In a road grading machine, the combination with the curved blade or share, of the tongue, adapted to be adjusted at an inclination to the share, and rear projecting guide plates hinged to the share and provided with means for adjusting them to parallelism with the tongue, substantially as described. 2nd. In a road grading machine, the combination with the frame of the machine and the tongue pivoted thereto, of a curved rack, a spring impelled slide bolt, supported below the tongue in line therewith and having a grooved head to embrace the rear edge of the curved rack, substantially as described. 3rd. In a road grading machine, the combination with the floor of the machine, the tongue pivoted thereto, a curved rack rigidly secured thereto beneath the tongue, having notches in its front edge, a hand lever pivotedly mounted on the tongue, tooth bars secured to the forward end of said lever to engage

in the notches, and a spring under the rear end of the lever to hold them normally in engagement, substantially as described. 4th. In



a road grading machine, the combination with the floor and the housings, of the hand wheels and their shafts mounted in the housings, the treadle bars pivoted to the housings and bearing upon the floor, and the brake shoes connected with the treadle bars and adapted to engage hand wheels, substantially as described. 5th. In a road grading machine, the combination with the frame of the machine and the curved share, of guide plates, pivoted to the rear of the share near its ends and having horizontal perforated flanges, and brace rods, pivoted to the frame of the machine and having hooked ends to engage the perforations in the flanges of the guide plates, substantially as described. 6th. In a road grading machine, the combination with the floor of the machine and the housings, of the converging brackets, pivotally secured at their front ends to the sides of the housings, a caster frame and wheel suspended between outer ends, a block mounted between them near their outer ends, having a screw threaded opening, a bracket projecting to the rear of the floor above the screw threaded block, and a stool mounted upon a standard swiveled in said bracket and screw threaded to engage in the screw threaded opening in the block, substantially as described. 7th. In a road grading machine, the combination with the floor of the machine and the housings, of the shafts mounted in the housings, the hand wheels on the inner ends of said shafts, the treadle bars pivoted to the inner ends of the housings, the brake-shoes secured to the treadle bars, and the stool mounted in position to bring the feet of the driver in the proper position to operate the treadle bars, substantially as described.

**No. 63,044. Liquid Sterilizing Apparatus.**  
(Appareil à stériliser les liquides.)



Frank M. Ashley, Brooklyn, New York, U.S.A., 12th May, 1899; 6 years. (Filed 7th December, 1897.)

*Claim.*—1st. In an apparatus for the sterilization of milk and the like, a receptacle for the milk or other liquid to be sterilized, a source of steam supply, pipes leading from said source of steam supply into said receptacle, a heating chamber through which the liquid passes, and connections between said chamber and the source of steam supply, a second receptacle for the milk or other liquid located at the opposite end of the system from the first receptacle, a conduit extending between the same and the source of steam supply, a conduit for the milk or other liquid extending between the heating chamber and said second receptacle, and means for cooling the liquid in said second receptacle while it is under steam pressure, whereby steam is supplied simultaneously to the receptacles on opposite ends of the system and the pressures practically counterbalanced, substantially as described. 2nd. In an apparatus for the sterilization of milk and the like, a receptacle for the milk or other liquid to be sterilized, a source of steam supply, pipes leading from said source of steam supply into said receptacle, a heating chamber through which the liquid passes and connections between said chamber and the source of steam supply, a second receptacle for the milk or other liquid located at the opposite end of the system from the first receptacle, a conduit extending between the same and the source of steam supply, a conduit for the milk or other liquid extending between the heating chamber and said second receptacle and

means for cooling the liquid in said second receptacle while it is under steam pressure, whereby steam is supplied simultaneously to the receptacles on opposite ends of the system and the pressures practically counterbalanced, said steam pipe between the source of steam supply and the cooling receptacle being provided with a reducing valve, substantially as described. 3rd. In the herein described system for sterilizing and subsequently cooling milk or other liquid, receptacles located at either end of the system, conduit pipes leading from the one to the other and an intermediate heating chamber through which the liquid passes, a source of steam supply and connections between said source of steam supply and the heating chamber and also the liquid receptacles and means for cooling the liquid in one of said receptacles, substantially as described. 4th. The herein described apparatus for sterilizing milk and the like comprising a receptacle for the milk or other liquid to be sterilized, a series of receptacles for said milk as B, D, a heating chamber arranged between said receptacles B, D, and connecting with each of said receptacles, means for forcing the liquid to be sterilized from the first containing receptacle through the two receptacles B, D, and the heating chamber, a source of steam supply and connections between the source of steam supply and the heating-chamber, connections between said source of steam supply and a suitable pump for causing circulation of the liquid to be sterilized, a source of hot air supply also connected to said pump whereby said hot air is forced through suitable conduits, and connections between the source of hot air supply and each of the receptacles B, D. 5th. In an apparatus for sterilizing milk or the like, a source of steam supply, a milk containing receptacle such as B, means for forcing hot air under pressure through said source of steam supply and into said milk containing receptacle B, a heating chamber also connected with the source of steam supply and in connection with the chamber B, whereby the milk or other liquid to be sterilized is heated to the proper temperature, substantially as described. 6th. In an apparatus for sterilizing milk and the like, a source of liquid supply, a liquid-containing receptacle as B, with means for forcing the liquid thereto, means for supplying air under pressure to said receptacle B and means for heating said air to a high temperature before it enters into contact with the milk while under pressure, above the boiling point, substantially as described. 7th. In the herein described apparatus, the chambers B, D, with means for supplying hot air at varying pressures respectively to said receptacles, a heating chamber intermediate the two receptacles and connected with each of them, and means for forcing the liquid to be sterilized from a source of supply through the receptacles B, D, and the heating chamber, substantially as described. 8th. The herein described apparatus for sterilizing milk or other liquids comprising a receptacle into which the liquid is forced, means for supplying pressure to the liquid in said chamber provided with a coil and connections between the coil and the first chamber with means for heating the coil, a third chamber with connections between said chamber and the second chamber, and means for keeping the liquid in said third chamber under pressure with means for cooling it in said chamber while under pressure, substantially as described. 9th. The herein described apparatus for sterilizing milk or other liquids comprising a receptacle as A a source of steam supply, a second receptacle, as B, with a liquid conduit between said receptacles, connections between the source of steam supply and both said receptacles for maintaining pressure upon the liquid therein, a heating-chamber in connection with the second liquid receptacle with means for supplying heat thereto for heating the liquid, and a cooling chamber D in connection with the heating chamber, and connections between said cooling chamber and the source of steam supply whereby the liquid is cooled under steam pressure, substantially as described. 10th. In the herein described apparatus, the receptacles A, B, with connections between the same, a source of steam supply and connections between the same and both said receptacles, a third receptacle C provided with a coil in connection with the receptacle B, the body of said receptacle C being also connected with the source of steam supply whereby the liquid in the coil is heated, a fourth receptacle as D with connections between it and the coil in the third receptacle, with connections between said receptacle D and the source of steam supply, and a cooling coil arranged in said receptacle D, substantially as described.

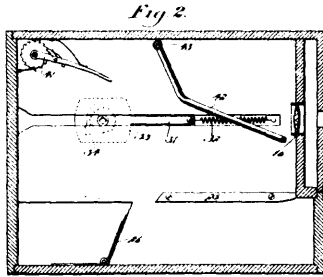
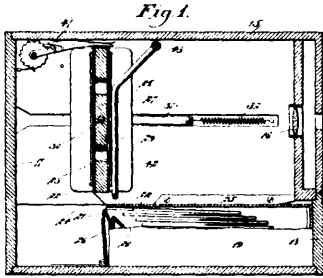
**No. 63,045. Camera.** (Camera.)

Henry Gassner and Benjamin Mark, both of New York City, New York, U.S.A., 12th May, 1899; 6 years. (Filed 18th July, 1898.)

*Claim.*—1st. A camera having a reel mounted to slide so that it may be adjusted into focused position, the reel being adapted to successively receive the photographic plates, and means mounted in the camera by which the reel may be pushed into focused position after each plate is placed thereon. 2nd. The focusing frame mounted in the camera so as to move the plate carrier into focused position as the plates are placed thereon. 3rd. The removable plate-containing box having the door through which the plates may be withdrawn, the box enclosing the plates and permitting them to be successively withdrawn therefrom. 4th. The glass plates connected with each other by an opaque flexible web. 5th. The spring-pressed plate 26 for engaging the door of the plate-containing box to normally close the door. 6th. The spring-actuated sliding plates 31 and 35 for mounting the reel or plate carrier so that the same may



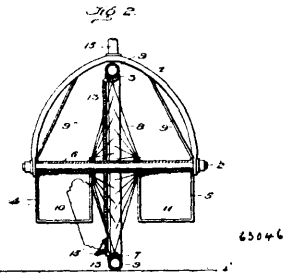
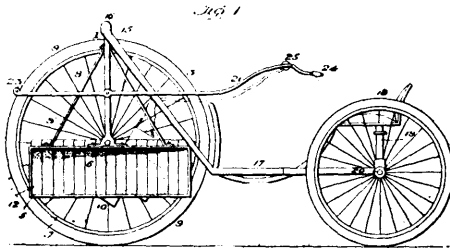
being adjusted. 7th. A camera having a reel or carrier for the plates, on which reel or carrier the plates are successively placed, the reel



63046

being movable to focus the plates, and a swinging focusing frame mounted in the camera to engage and focus the reel, the frame having an arm extending to the exterior of the camera so that the frame may be operated. 8th. The box 19 with the plates and web therein. 9th. The series of photographic plates each enclosed in an envelope 23, and the envelopes being joined to the web 24.

**No. 63,046. Motor Vehicle. (Automobile.)**



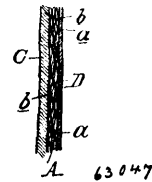
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Charles Henry Burrows, New York City, New York, U.S.A., 12th May, 1899; 6 years. (Filed 25th October, 1898.)

Claim.—1st. In a motor road vehicle, the combination with a yoke, of an axle mounted therein, a traction wheel, and a motor supported directly on said axle and operatively connected by direct positive gearing to said traction wheel independently of the tire thereon, for the purposes described, substantially as set forth. 2nd. In a motor road vehicle, the combination with a steering yoke and means for controlling the same, of an axle mounted in said yoke, a traction wheel, and a motor carried directly on said axle and having its motor shaft connected by direct positive gearing independently of the tire thereon, substantially as and for the purposes described. 3rd. In a motor road vehicle, the combination with a steering yoke, and an axle therein, of a traction wheel, a motor carried directly on said axle, and having its motor shaft connected by positive gearing to said traction wheel, a steering bar or lever independent of said motor and connected with said yoke, and motor controlling devices carried by said steering bar or lever, substantially as and for the purposes described. 4th. The combination

with a steering yoke, an axle, and a traction wheel, of a power equipment independent of the steering devices and arranged to be carried entirely by said axle and embracing a motor, the shaft of which is operatively connected by direct positive gearing with the traction wheel, substantially as and for the purposes described. 5th. The combination with a steering yoke, an axle, and a traction wheel, of a frame or frames supported directly by said axle, a power equipment carried by said frame or frames and embracing a motor the shaft of which is geared positively and directly to the traction wheel, and a steering bar or lever independent of said power equipment and carrying the motor controlling mechanism, substantially as and for the purposes described. 6th. The combination with a yoke or frame, an axle, and a traction wheel, of a gear attached to the traction wheel, a frame supported by said axle, and a motor carried by the frame and having its motor shaft provided with a pinion which meshes with the gear on said traction wheel, as and for the purposes described. 7th. The combination with a yoke or frame, an axle, and a traction wheel, of a frame carried by the axle, an electric motor mounted in said frame and having its shaft geared positively by spur gearing to the traction wheel, and a battery also supported by said frame and arranged to balance the motor. 8th. The combination with a yoke or frame, an axle, and a traction wheel, of a power of equipment frame supported by said axle, an electric motor and a battery therefor carried by said frame to balance each other, and the shaft of said motor geared directly by positive spur gearing to the traction wheel independently of the tire thereon, a steering bar, and motor controlling devices carried by said steering bar, for the purposes described and substantially as set forth. 9th. The combination with a yoke or frame and an axle, of carrying frames supported by said axle, a traction wheel fitted loosely thereon, an electric power equipment having a battery carried by said frames and a motor geared to the traction wheel by positive spur gear, and a steering bar or lever carrying a circuit controller which is included in an electric circuit with said battery and motor of the electrical power equipment, substantially as and for the purposes described. 10th. In a motor road vehicle, the combination with a suitable vehicle or carriage, of a yoke or frame pivotally connected therewith and carrying a non-rotatable axle, a traction wheel fitted on said axle, a power mechanism sustained by said axle and embracing a motor which has its shaft operatively connected by direct spur gearing to said traction wheel, a steering bar or lever independent of the power equipment and connected to said yoke or frame, and motor controlling devices carried by said steering bar or lever, as and for the purposes described.

**No. 63,047. Fabric. (Tissu.)**



63047

Enoch C. Bowling, Detroit, Michigan, U.S.A., 12th May, 1899; 6 years. (Filed 10th January, 1898.)

Claim.—1st. A fabric comprising an inner layer of soft pliant paper fibre composed of a series of layers loosely secured together so as to form intervening air spaces, textile facings on both sides thereof, secured thereof by cement, the outer cement layer being water proof. 2nd. A fabric for clothing or coverings, comprising a layer of soft pliant paper fibre formed of a series of layers and intervening air spaces, of an outer facing secured thereon by a water proof cement, such outer facing being of heavy material suitable to withstand rough usage or wear, and a thin lining cemented to the inner face of the paper.

**No. 63,048. Treatment of Plaster Paris Moulds.**

(Traitement des moules de plâtre.)

Abram Broodsky, Montreal, Quebec, Canada, 12th May, 1899; 6 years. (Filed 3rd March, 1898.)

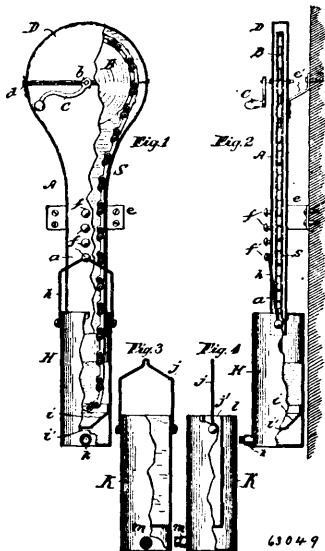
Claim.—As a new article of manufacture, a plate for printing comprising a plaster Paris base, having its top printing face impregnated with bees' wax, whereby pigments, etc., will be prevented from passing into the base and are readily transferred from the plate to the article being printed, substantially as described.

**No. 63,049. Device for Cleaning and Lubricating Bicycle Chains, etc. (Appareil pour nettoyer et huiler les chaines de bicyclettes.)**

William James Baldwin, New York City, New York, U.S.A., 12th May, 1899; 6 years. (Filed 26th October, 1898.)

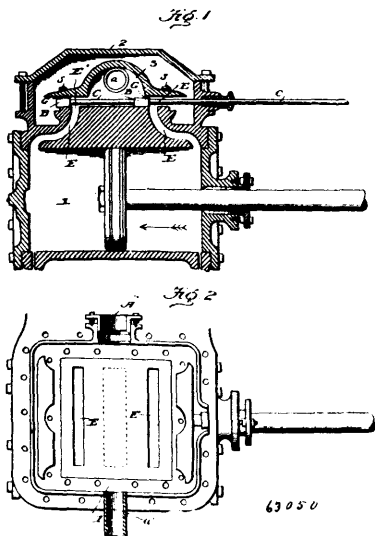
Claim.—1st. A device for cleaning or lubricating vehicle chains, consisting of a receptacle separate from the vehicle for the chain and fluids for cleaning or lubricating the same, and means for moving the chain through the fluids, substantially as described. 2nd. A device for cleaning or lubricating vehicle chains, consisting of a

receptacle for the chain separate from the vehicle, a container for a suitable fluid at the bottom of said receptacle, a settling chamber



connected with said container by a contracted orifice, a cover for the receptacle, and a sprocket wheel in the upper part of said receptacle for moving the chain through the fluid, substantially as described. 3rd. In a device for cleaning or lubricating vehicle chains, a receptacle for the chain separate from the vehicle, a sprocket-wheel in said receptacle for moving the chain, and interchangeable vessels the one containing material for cleaning, and the other material for lubricating the chain, and said vessels being each adapted to be attached to the said receptacle so that the chain shall dip into its respective contents.

**No. 63,050. Valve. (Soupape.)**



Orson Morris, Willard Alonzo Keys and Cyrus Thompson Gamble, all of Red Canon, Wyoming, 12th May, 1899; 6 years. (Filed 17th October, 1898.)

*Claim.*—1st. The combination with the cylinder, a steam chest, and the ports leading from the chest to the cylinder, of a balance plate located within the chest and secured wholly to the valve seats, and provided with a recess, a valve for alternately admitting steam at one end of the cylinder, and exhausting it at the other end into the recess of the balance plate, and the exhaust pipe extending through the sides of the steam chest and communicating with the recess of the plate, substantially as described. 2nd. In a valve, the combination with the body portion thereof, having a transverse recess in its ends, packing strips located in said transverse recesses, and provided with clamping springs for supporting and exerting an upward pressure on said strips, and clamping plates bolted to the ends of the valves to close said recesses, substantially as set forth. 3rd. A valve having a transverse recess in one of its sides, a packing

strip located in said recess, screws mounted in said recess against rotation, a spring supported by said screws and in turn supporting the packing strips, nuts for adjusting the tension of the screws, and a clamping plate secured to the side of the valve to enclose the parts arranged within the recess, substantially as specified.

**No. 63,051. Treatment of Zinc Bearing Ore. (Traitement de minerai de zinc.)**

Cowper Cowles Metals Extraction Syndicate, Hayle, Cornwall, assignee of Sherard Osborn Cowper-Cowles, 39 Victoria Street, London, England, 12th May, 1899; 6 years. (Filed 9th September, 1898.)

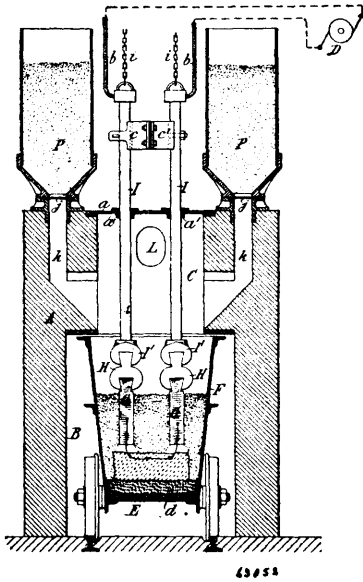
*Claim.*—1st. A process for the treatment of complex zinc ores, such as those known as Broken Hill ore, consisting in placing the ore in leaching vats after it has been roasted, crushed and screened then treating it with a weak solution of sulphuric acid to abstract the zinc and copper, then passing such solution containing zinc sulphate and copper sulphate through a body of zinc and carbon or iron and carbon or both to recover the copper, and then electrolyzing the remaining solution to recover the zinc substantially as described. 2nd. A process for the treatment of complex zinc ores, such as those known as Broken Hill ore, consisting in mixing with the said ore prior to the roasting a quantity of zinc blende, copper sulphide ore, or tin ore or tailings thereof then roasting it to a dead roast, then crushing and screening it, then placing it in vats where it is leached with a weak solution of sulphuric acid to abstract the zinc and copper, then passing such solution containing zinc sulphate and copper sulphate through a body of zinc and carbon or iron and carbon or both to recover the copper and then electrolyzing the remaining solution to recover the zinc, the said leaching solution after its strength has been adjusted being returned to the leaching vats for use over again, substantially as described. 3rd. A process for the treatment of complex zinc ores, such as those known as Broken Hill ore, consisting in first roasting, crushing and screening the ore, then placing it in vats and washing the ore with water, then leaching the ore with a weak solution of sulphuric acid to abstract the zinc and copper, then passing such solution containing zinc sulphate and copper sulphate through a body of zinc and carbon or iron and carbon or both to recover the copper, the electrolyzing the remaining solution to recover the zinc, then again washing the ore with hot water, then treating the ore with a solution of caustic soda to extract the lead in the form of sodium plumbate, and then treating this sodium plumbate solution with carbonic acid gas under pressure to obtain lead carbonate and lead hydrate, substantially as described. 4th. A process for the treatment of complex zinc ores, such as those known as Broken Hill ore, consisting in first roasting, crushing and screening the ore, then placing it in vats and washing the ore with water, then leaching the ore with a weak solution of sulphuric acid to abstract the zinc and copper, then passing such solution containing zinc sulphate and copper sulphate through a body of zinc and carbon or iron and carbon or both to recover the copper, then electrolyzing the remaining solution to recover the zinc, then again washing the ore with water, then treating the ore with a solution of caustic soda to extract the lead in the form of sodium plumbate, and the electrolyzing the solution to recover the metallic lead, substantially as described. 5th. A process for the treatment of complex zinc ores, such as those known as Broken Hill ore, consisting in first roasting, crushing and screening the ore, then placing it in vats and washing the ore with water which is afterwards run into an evaporating pan, then leaching the ore with a weak solution of sulphuric acid to abstract the zinc and copper, then passing such solution containing zinc sulphate and copper sulphate through a body of zinc and carbon or iron and carbon or both to recover the copper, then electrolyzing the remaining solution to recover the zinc, then again washing the ore with water which is afterwards also run into the evaporating pan, then treating the ore with a solution of caustic soda to extract the lead in the form of sodium plumbate, then electrolyzing the solution to recover the metallic lead, and then leaching the remaining ore in the vats with potassium cyanide and subsequently electrolyzing such solution to recover the metallic silver and gold, substantially as described. 6th. In the preparatory treatment of complex ores, the admixture with the ore prior to its roasting of a quantity of zinc blende, copper sulphide ore, or tin ore or tailings thereof substantially in the proportions stated and for the purpose specified. 7th. In a process in which a complex ore containing zinc and copper is leached with a solution of sulphuric acid, the recovery of the copper from said leaching solution by passing it through a body of zinc and carbon or iron and carbon or both, substantially as described.

**No. 63,052. Electric Furnace. (Fournaise électrique.)**

The Willson Carbide Works Company of St. Catherines, Ontario, Canada, assignee of Frank Creelman, New York City, New York, U.S.A., 12th May, 1899; 6 years. (Filed 22nd September, 1898.)

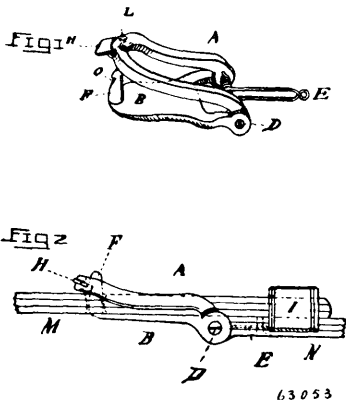
*Claim.*—1st. An electric furnace comprising a crucible or furnace chamber, a pair of carbon pencils movable up and down within said crucible or chamber, an electric generator having its opposite terminals connected to said pencils respectively, and means for raising said pencils as the mass of product accumulates in said crucible or chamber, whereby the current arcs from one carbon

into said product, and from the latter to the other carbon, thereby eliminating increase of resistance as the mass of product increases



in height. 2nd. An electric furnace comprising chambers B and C, crucible F movable into said chamber B and having a carbon bottom *d*, a pair of carbon pencils C, C, upright rods I, I, carrying said pencils and movable up and down, said pencils movable up into chamber C and down into the crucible, and a generator, the opposite terminals of which are connected to said carbon pencils respectively. 3rd. An electric furnace comprising a crucible or furnace chamber, a pair of carbon pencils, holders for said pencils, upright rods I, I, carrying said holders and movable up and down, and an insulating clamp connecting said rods for holding them at a fixed distance apart and ensuring their equal movement.

**No. 63,053. Harness Buckle.** (*Boucle de harnais.*)

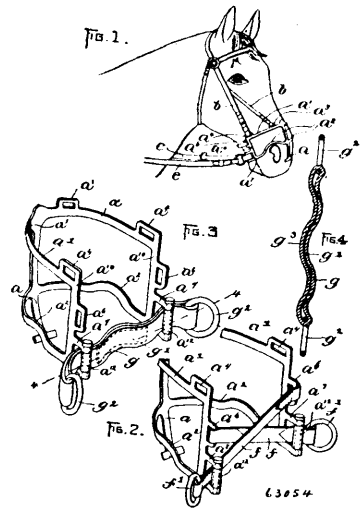


George Shoenberger and George A. Lawrence, both of Long Beach, California, U.S.A., 15th May, 1899; 6 years. (Filed 14th March, 1899.)

*Claim.*—1st. In a buckle, the combination of the following parts, the loop A pivotally attached to the tongue-plate B, the latch H pivotally attached to the free end of the loop A, the spring E housed in the free end of the loop A and adapted to spring-press shut the latch A, the tongue-plate B having mounted on the free end thereof and integral therewith, the tongue F containing notch O, adapted to receive the latch H to keep the buckle closed, the chape D adapted to pivotally attach together the loop A and the tongue-plate B, the spring E, adapted to throw the loop A back from the tongue-plate B, substantially as shown and described herein. 11th. In a buckle, the loop and tongue-plate having a tongue with a notch therein pivotally attached together, the latch H pivotally mounted on the free end of the loop and adapted to engage with the notch O in the tongue F, whereby the loop A is held in contact with the tongue F when the buckle is closed. 3rd. In a buckle, a loop A pivotally attached to the tongue-plate B by a screw D forming the chape, the spring E placed on the chape D, and adapted when in its normal position to hold the free ends of the loop A and the tongue-plate B apart or open, as shown and described herein.

**No. 63,054. Horse Controller.**

(*Appareil à contrôler les chevaux.*)



The Humane Bridle Company, Boston, assignees of Daniel Rupert Porter, Chelsea, both in Massachusetts, U. S. A., 15th May, 1899; 6 years. (Filed 14th March, 1899.)

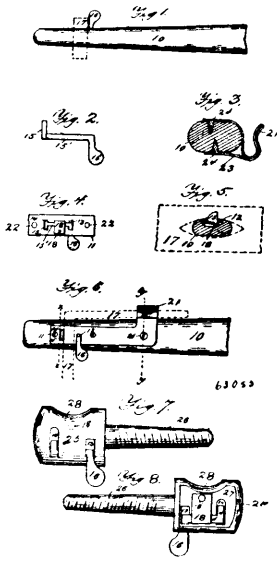
*Claim.*—1st. A horse controlling device comprising a rigid bar formed to extend a long the median line of the lower portion of a horse's head, its lower portion being curved inwardly and formed to bear on the flexible portion of the nose between the nostrils, and side portions extending from the said bar and formed to bear on opposite sides of the head. 2nd. A horse controlling device comprising a rigid bar formed to extend along the median line of the lower portion of the horse's head, its lower portion being curved inwardly and formed to bear on the flexible portion of the nose between the nostrils, and side portions extending from the said bar and formed to bear on opposite sides of the head, said devices having suitable strap and rein engaging devices. 3rd. A horse controlling device comprising a bar formed to extend along the median line of a horse's head, its lower portion being curved inwardly and formed to bear on the flexible portion of the nose between the nostrils, upper transverse arms extending laterally from the upper end of said bar and formed to bear on opposite sides of the nose, lower transverse arms extending from the bar below the upper arms, rigid connections between the rear portions of said upper and lower arms, and eyes or loops formed to engage suitable straps and reins. 4th. A horse controlling device comprising a rigid bar formed to extend vertically along the median line of the lower portion of a horse's head, its lower portion being curved inwardly and formed to bear on the flexible portion of the nose between the nostrils, and side portions extending from said bar and formed to bear on opposite sides of the head, rein engaging eyes on said side portions, and a nose compressing device movable endwise in said eyes and having means for engagement with a pair of reins. 5th. A horse controlling device comprising a rigid bar formed to extend vertically along the median line of the lower portion of a horse's head, its lower portion being curved inwardly and formed to bear on the flexible portion of the nose between the nostrils, and side portions extending from said bar and formed to bear on opposite sides of the head, rein engaging eyes on said side portions, and a strap movable in said eyes and formed to extend across the under jaw, said strap having a central protuberance formed to enter the hollow of the under jaw.

**No. 63,055. Trace Fastener.** (*Attache de traits.*)

Ira Williams and George N. Smith, both of Jamestown, Massachusetts, U.S.A., 15th May, 1899; 6 years. (Filed 21st February, 1899.)

*Claim.*—1st. In a trace-fastener, a spring catch consisting of a metal plate with openings therein, a spring attached to said plate, a catch-bar with square body and a handle and tongue to work in said openings, substantially as shown and described and for the purpose set forth. 2nd. In a trace-fastener, a metal strip attached to the upper side of the singletree and bent to form a spring loop to hold the trace, the outer lip of the loop bent down and around the spring-loop and attached to the underside of the singletree, as shown and described and for the purpose set forth. 3rd. In a trace-fastener, a spring-catch consisting of a metal plate with openings, a catch-bar with tongue and handle to work in said openings, a spring to work on the squared sides of said catch-bar, a spring-loop slack-

holder with the outer lip bent down and attached to the underside of the singletree, substantially as shown and described and for the



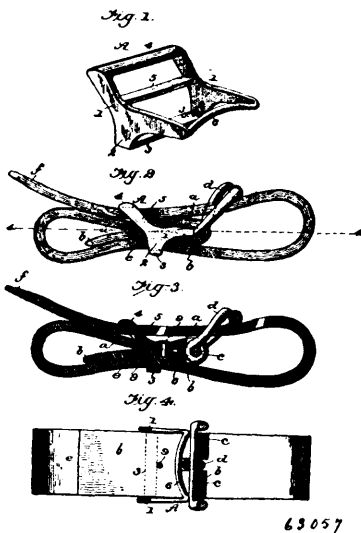
purpose set forth. 4th. In a trace-fastener, metal plate 10<sup>1</sup>, with openings 13, 14, squared catch-bar 15<sup>1</sup>, with tongue 15 and handle 16, spring 18, spring-loop 21 with retaining strap 23, all made to operate in the manner and for the purpose set forth.

**No. 63,056. Roofing Compound.** (*Composé pour toitures.*)

Hector Bernier, Montreal, Quebec, Canada, 15th May, 1899; 6 years. (Filed 8th March, 1898.)

*Claim.*—1st. The herein described composition of matter, consisting of Raw Trinidad Asphalt, coal tar and asbestos, for the purpose specified and in the proportions set forth. 2nd. The herein described composition of matter, consisting of seven parts of Raw Trinidad Asphalt and one part of coal tar and adding to the mixture obtained eleven parts of asbestos to every sixteen parts of the mixture, the whole arranged in the manner and for the purpose described.

**No. 63,057. Harness Loop.** (*Ganse de harnais.*)



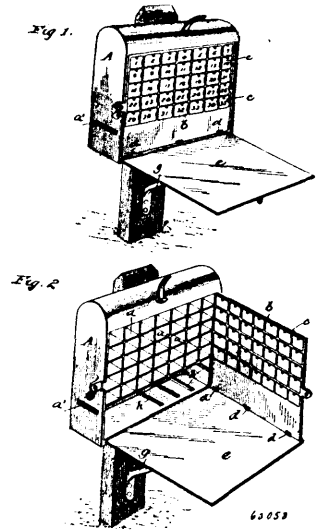
John T. Condon, Lemars, Iowa, U.S.A., 15th May, 1899; 6 years. (Filed 29th March 1899.)

*Claim.*—The combination with a strap and huckle of the metallic loop, comprising obtuse angle side bars, having pendent ears, the four connecting bars, one being curved inward, and the middle of the three rear bars being located in rear of the bottom one, and con-

fining the loop of the strap and the front bar being curved to accommodate the buckle tongue but its ends being in contact with the buckle frame, as shown and described.

**No. 63,058. Post Office Repositories.**

(*Cassier pour lettres.*)

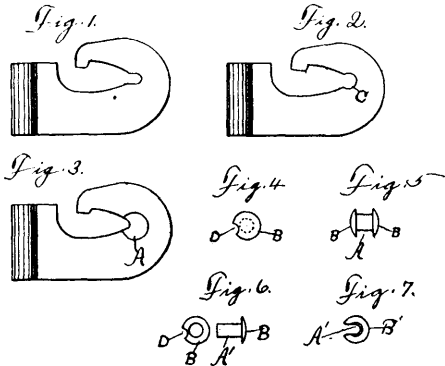


Thomas J. Crowder, Staunton, Virginia, U.S.A., 15th May, 1899; 6 years. (Filed 27th January, 1899.)

*Claim.*—1st. In a repository for mail matter, the combination of a main casing open on its front side and having a series of small boxes formed inside it, the open ends of these boxes being outward, a large door closing said casing, a series of small doors carried by said large door and corresponding with the boxes in the casing, and a platform or table projecting from the casing and serving in conjunction with said large door and the casing to form a compartment protected from wind, etc., in juxtaposition to said small boxes. 2nd. In a repository for mail matter, the main casing, having its front side open and having in it a series of small boxes opening outward, a large inner door hinged at one edge of the casing and adapted to swing outward and provided with a series of small doors registering with the boxes in the casing and a large outer door adapted to close over the inner door and to fold down and serve as a sorting table and in conjunction with the casing and inner door, form a compartment protected from wind, etc. 3rd. In a mail repository, the combination of a main casing having one side open and enclosing the series of private post office boxes, an inner door hinged to one side of the casing and adapted to close the open side of the same and fit close to the outer ends of the private boxes, said inner door being provided with small doors corresponding with said boxes, and an outer door hinged to the lower end of the repository, and means for supporting this door in a horizontal position, said inner and outer doors forming in conjunction with the casing a compartment protected from wind etc. 4th. In a post-office repository, a main casing, open at its front side and having enclosed in it a series of private boxes and a general letter box, these boxes opening outward and the casing being provided with a drop-slot leading to the general box, an outer door hinged at its lower edge to the casing and means for supporting it in an open horizontal position, an inner door hinged at one vertical edge to the casing and adapted to swing out over the outer door, a stop preventing this door moving beyond the edge of the outer door, and means for locking both doors closed one over the other, substantially as described. 5th. In a post-office repository, a main casing enclosing a series of private boxes and a general letter-box, these boxes opening toward the front side of the casing and the casing being provided with a drop slot leading to the general letter-box, an inner door hinged to the casing at one vertical edge and adapted to close all said boxes and swing out against a stop to one side, said inner door being provided with a series of small doors, opening outward and coinciding with the private boxes, an outer door adapted to open downward and close up over the series of small doors, and means for locking each of the doors, substantially as described. 6th. In a repository for mail-matter, the combination of a main casing open on its front side and having a series of small boxes formed inside it, the open ends of these boxes being outward, an independent circuit closer in each of said small boxes, an annunciator electrically connected to each of said circuit closers, a large door closing said casing, a series of small doors carried by said large door and corresponding with the boxes in the casing, and a platform or table

projecting from the casing and serving in conjunction with said large door and the casing to form a compartment protected from the wind, etc., in juxtaposition to said small boxes.

**No. 63,059. Hook and Bushing.** (*Dé protecteur pour crochets de chaînes.*)

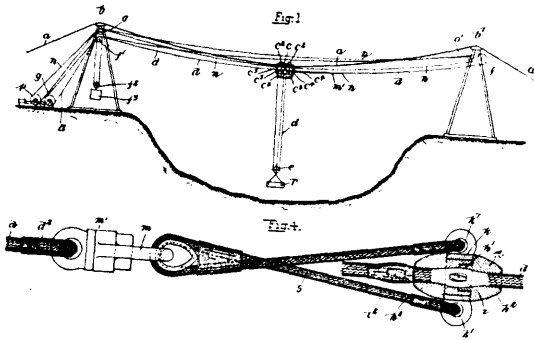


63059

Joshua W. Carder, Fort Worth, Texas, U.S.A., 15th May, 1899; 6 years. (Filed 26th April, 1899.)

*Claim.*—1st. A bushing for hame-hooks consisting of a solid body portion having heads on both ends thereof, said heads having bearings for chain-links, said bushing being adapted to repair hame-hooks partly worn by the friction of chain-links. 2nd. The combination of a hook provided with an eye at the bearing point and the bushing comprising a solid piece of metal which is provided with a head on each end thereof and which is fitted in said eye.

**No. 63,060. Cable Hoisting and Conveying Apparatus.** (*Ascenseur et transport à câble.*)



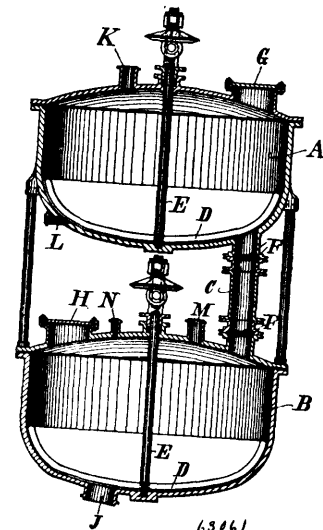
63060

Louis Emile Laurent, and Edward Eugene Cherry, Trenton, New Jersey, U.S.A., 15th May, 1899; 6 years. (Filed 24th October, 1898.)

*Claim.*—1st. In a cable hoisting and conveying apparatus, the combination with a carrying cable, of a carriage supported to operate on said cable, means for moving said carriage back and forth upon the latter, an endless rope for raising or lowering a load, and means for preventing or taking up undue slack said endless rope, substantially as set forth. 2nd. In a cable hoisting and conveying apparatus, the combination with a carrying cable, of a carriage supported to operate on said cable, a hauling rope for moving said carriage upon the latter, an endless rope for raising or lowering a load, running over supporting sheaves and having connection with an operating drum, and a counter-weight loosely connected with said endless rope for taking up undue slack. 3rd. In a cable hoisting and conveying apparatus, the combination, with a carrying cable, of a carriage supported to operate on said cable, means for moving said carriage back and forth upon the latter, supports or towers between which the carriage operates, and a hoisting rope passing over bearings on said supports with one end thereof operating over bearings on the carriage for connection with a load, and its opposite end connected with the rope itself at a point to be movable therewith between the carriage and one of the towers. 4th. In a cable hoisting and conveying apparatus, the combination, with a carrying cable, of a carriage supported to operate on said cable, means for moving said carriage back and forth upon the latter, supports or towers between which the carriage operates, and a single rope passing over bearings on said supports with one end thereof operating over bearings on the carriage for connection with a load, and its opposite end having a swivelled connection with the rope itself at a point to be movable therewith between the carriage and one of the towers. 5th. In a cable hoisting and conveying apparatus, the combination, with a carrying cable, of a carriage

supported to operate on said cable, means for moving said carriage back and forth upon the latter, supports or towers between which the carriage operates, and a hoisting rope passing over bearings on said supports with one end thereof operating over bearings on the carriage for connection with a load, and its opposite end having an adjustable connection with the rope itself at a point to be movable therewith between the carriage and one of the towers. 6th. In a cable hoisting and conveying apparatus, the combination, with a carrying cable, of a carriage supported to operate on said cable, means for moving said carriage back and forth upon the latter, supports or towers between which the carriage operates, and a hoisting rope passing over bearings on said supports with one end thereof operating over bearings on the carriage for connection with a load, and its opposite end having connection with the rope itself at a point to be movable therewith between the carriage and one of the towers, said rope being provided with a button having a yoke loosely supported to turn thereon with which the said opposite end of the rope is connected. 7th. In a cable hoisting and conveying apparatus, the combination, with a carrying cable, of a carriage supported to operate on said cable, means for moving said carriage back and forth upon the latter, supports or towers between which the carriage operates, and a hoisting rope passing over bearings on said supports with one end thereof operating over bearings on the carriage for connection with a load, and its opposite end having connection with the rope itself at a point to be movable therewith between the carriage and one of the towers, said rope being provided with a button having a yoke loosely supported to turn thereon with which the said opposite end of the rope is connected, the said button being formed in two sections and provided with an opening for the rope having a portion of its diameter enlarged at a point between its ends, and a spreader located in the rope at a point within the enlarged portion of the opening in the button. 8th. In a cable hoisting and conveying apparatus, the combination, with a carrying cable, of a carriage supported to operate on said cable, means for moving said carriage back and forth upon the latter, supports or towers between which the carriage operates, and a hoisting rope passing over bearings on said supports with one end thereof operating over bearings on the carriage for connection with a load, and its opposite end being provided with a swivel connected therewith, said rope being provided with a button secured thereon at a point to be movable between the carriage and one of the towers and having a yoke loosely supported to turn thereon, and means connecting said yoke and the swivel at the end of the rope.

**No. 63,061. Apparatus for Drying and Carbonizing Wood, Peat, etc.** (*Appareil pour sécher et carboniser le bois, la tourbe, etc.*)



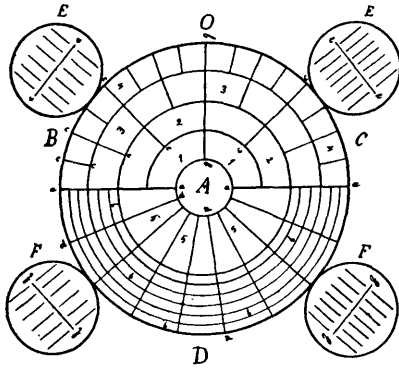
63061

Hermann Fischer, Kaitzerstrasse 60, Dresden-Planer, Germany, 15th May, 1899; 6 years. (Filed 27th December, 1898.)

*Claim.*—1st. An apparatus for continuously drying and carbonizing wood, peat, and the like, consisting of two vessels arranged above each other and connected by means of a pipe and each provided with an agitator, the upper one of the vessels serving for drying the material and the lower one for carbonizing the same. 2nd. An apparatus for continuously drying and carbonizing wood, peat, and the like, consisting of two vessels arranged above each other and connected by means of a pipe and each provided with an agitator, the upper vessel serving for drying the material and provided with a pipe for the purpose of injecting dry steam or hot air thereto during the drying process, and the lower one for carboniz-

ing the material. 3rd. An apparatus for continuously drying and carbonizing wood, peat, and the like, consisting of two vessels arranged above each other and connected by means of a pipe and each provided with an agitator, the upper vessel being provided with a pipe for delivering dry steam thereinto and serving for drying the material, and the lower vessel serving to carbonize the material and provided with a pipe adapted for connection with an air pump to evacuate the carbonizing vessel.

**No. 63,062. Genealogical Chart. (Carte généalogique.)**

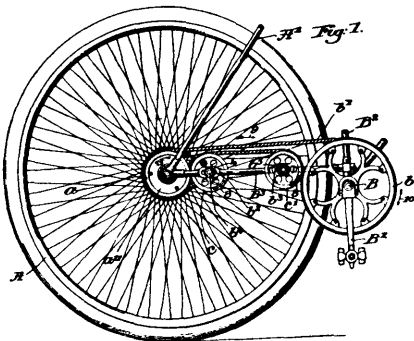


63062

Rev. Stanislas Brault, O.M.I., Ottawa, Ontario, Canada, 13 mai 1899; 6 ans. (Déposé 25 avril 1899.)

*Résumé.*—1° L'application de la forme circulaire O à un tableau généalogique dans lequel les chefs d'une famille s'inscrivent au centre A, leurs ascendants s'inscrivent par ordre de générations dans des espaces formés par des lignes courbes ou équivalentes lesquelles lignes séparent les générations les unes des autres, et par des lignes formant des rayons partiels, lesquelles lignes séparent les couples les uns des autres, leurs descendants s'inscrivent par ordre de générations dans les espaces marqués 5 et 6, les espaces marqués 5 étant chacun réservé à l'inscription d'un enfant et de son époux ou épouse, et les espaces marqués 6 étant chacun réservé à l'inscription d'une famille de petits-enfants, tel que substantiellement décrit, pour les fins mentionnées. 2° Dans un tableau généalogique tel que décrit, l'addition de quatre petites surfaces dont deux sont, désignées par E, E, l'une d'elle étant destinée à l'inscription des oncles des tantes de l'époux tant paternels que maternels et l'autre à l'inscription des oncles et tantes de l'épouse, les deux autres surfaces F, F, sont destinées, l'une à l'inscription des frères et sœurs de l'époux et des épouses ou époux de ces derniers, l'autre à l'inscription des frères et sœurs de l'épouse et des épouses ou époux de ces derniers, le tout tel que substantiellement décrit.

**No. 63,063. Vehicle Propelling Mechanism. (Mécanisme de propulsion pour véhicules.)**



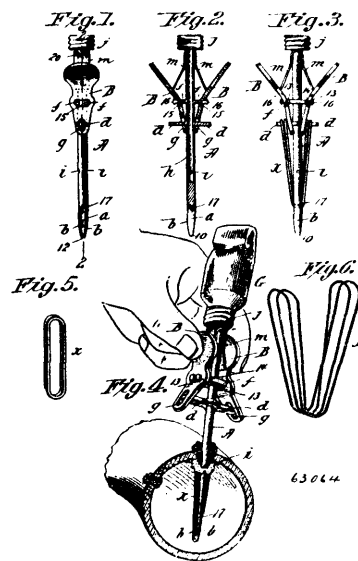
63063

Joseph Albert Little and Hugh P. Simpson, Lawrence, Massachusetts, U.S.A., 17th May, 1899; 6 years. (Filed 9th March, 1899.)

*Claim.*—1st. In a bicycle or the like, a crank-shaft, a driving-wheel, a sheave on each, a belt connecting said sheaves, a clutch intermediate said driving wheel and its sheave whereby rotation of the belt in one direction positively rotates the driving wheel, free rotation of the belt in the reverse direction being permitted, a guide roll for and to be rotated by the belt, a brake on the drive-wheel, and connections between said roll and brake whereby rotation of the belt in the reverse direction and consequent rotation of the roll set the brake, substantially as described. 2nd. In a bicycle or the like, a driving wheel, normally inoperative clutch

mechanism to rotate it in one direction, a crank-shaft, a driving belt between said shaft and clutch mechanism, combined with a handbrake for the driving wheel, and an actuator therefor, mounted independently of the driving wheel, and crank-shaft, connections between said actuator and said belt, to positively operate the former by said belt, and controlled by the direction of movement thereof, retrograde movement of the belt simultaneously releasing the propelling clutch mechanism and throwing into continuous operation the actuator of the handbrake, substantially as described. 3rd. In a bicycle or the like, a driving wheel and a driving shaft, a sheave on each, a slack belt connecting said sheaves, and a guide roll adjacent to and to hold the belt against each sheave, with the slack of the belt between the rolls, combined with a peripherally grooved friction surface rotatable with the driving wheel, a V-shaped flexible band co-operating therewith, and connections between said band and one of the guide-rolls, to tighten the V-shaped band, when the direction of rotation of the roll is reversed, substantially as described. 4th. In a bicycle or the like, a driving wheel, a brake member secured thereto, a clutch-sheave loosely mounted upon the wheel-hub, dogs carried by said sheaves to engage, the hub and rotate the wheel in one direction, a crank-shaft, a sheave fast thereon, and a slack driving belt connecting said sheaves, combined with a compressible brake-member, a guide-roll adjacent to and to hold the belt against the clutch-sheave and forming one member of a normally in-operative clutch, and a second member of said clutch connected to the compressible brake-member, retrograde movement of the driving belt reversing the direction of rotation of said guide-roll and simultaneously releasing the clutch-sheave on the driving wheel and actuating the normally inoperative clutch to set the brake, and maintain it set, substantially as described. 5th. In a bicycle or the like, a driving wheel, normally operative clutch mechanism to rotate it in one direction, a crank-shaft, and connections between said shaft and clutch mechanism, combined with a brake for the driving wheel, and an actuator therefor comprising a normally inoperative clutch controlled by the direction of rotation of the crank-shaft retrograde movement of the crank-shaft, simultaneously releasing the propelling clutch, mechanism, and throwing into operation the brake-actuator clutch, substantially as described. 6th. In a coasting and braking device for cycles, the combination with a driving-belt, a clutch and a brake, of means engaging the driving belt and connected with the brake, for operating the same when the driving movement of the belt is reversed. 7th. In a cycle, a driving wheel and its shaft, an independent pedal shaft, and a connection between said pedal-shaft and the driving wheel, including a clutch and a power-transmitting member, combined with a brake, and means controlled by the pedal shaft to operate the brake. 8th. In a cycle, a driving wheel and its shaft, an independent pedal shaft, and a connection between said pedal-shaft and the driving wheel, including a clutch and an endless flexible power-transmitting member, combined with a brake, and means controlled by the pedal shaft to operate the brake.

**No. 63,064. Pneumatic Tire Puncture Repairing Tool. (Outil à réparer les piqûres dans les bandages pneumatiques.)**



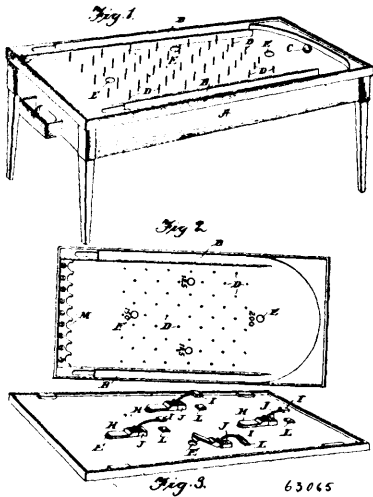
63064

Charles Chase Call and Edward Standish Bradford, Springfield, Mass., U.S.A., 17th May, 1899; 6 years. (Filed 7th November, 1898.)

*Claim.*—1st. A puncture repair tool consisting of a rod or stem having at its forward end the longitudinal slot, and provided back

of said forward end and with the opposite outwardly extending studs *d d*, adapted for the engagement therewith under tension of a rubber band substantially as described, and a device mounted on the rod and movable relative to said studs for forcing the rubber band from its engagement therewith. 2nd. A puncture repair tool consisting of a rod or stem having at its forward end the longitudinal slot and provided back of said forward end with the opposite outwardly extending studs *d d*, combined with lever arms pivotally mounted on the rod having members thereof adapted to swing adjacent said studs, and serving as cast off devices, substantially as and for the purpose set forth. 3rd. In a puncture repair tool, the combination with the rod or stem *A*, having the bifurcated forward end and provided with the studs *d d*, and the studs *f f*, of the levers *B B*, pivotally mounted on the said studs *f f*, and having their lower extremities adapted for swinging movement adjacent the studs *d d*, and springs for normally maintaining the lower members of the levers inwardly disposed, substantially as and for the purpose described. 4th. In a puncture repair tool, the combination with the rod or stem *A* having intermediate of its length the opposite outwardly extended studs *d d*, and provided thereabove with the opposite outwardly extended lugs *f f*, having the necked down and shouldered formations, of the angular levers *B B*, having the perforations *l* at their elbows to set over said necked down portions of the studs *f*, and having their lower extremities apertured to straddle the said studs *d d*, said lugs having their ends headed or upset and the springs applied to said levers, substantially as and for the purpose set forth. 5th. In a puncture repair tool, in combination, the stem *A* having the bifurcated forward end and with an axial passage therewithin leading from its upper end partially to the forward end and having the orifices *i i*, and provided with the studs *d d*, and the lugs *f f*, necked down and shouldered as shown, the angular levers *B B*, having at their elbow portions the perforation *l* fitted for rocking support over said necked down portions of said lugs and having their lower extremities provided with apertures whereby they straddle over the said studs *d d*, the extremities of said lugs being headed the double spring consisting of a single strip of sheet metal intermediately perforated and bent into U-form.

**No. 63,065. Pool Table. (Table de poule.)**

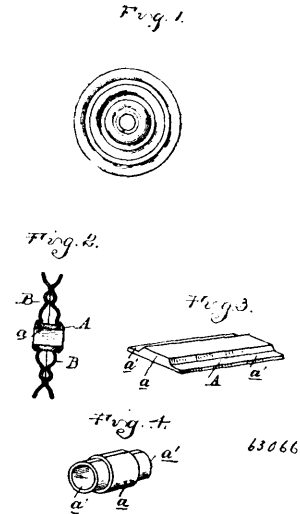


The Manhattan Table Co., assignee of Daniel A. Fletcher, all of Dayton, Ohio, U.S.A., 17th May, 1899; 6 years. (Filed 1st March, 1899.)

*Claim.*—1st. In a table of the character described, the combination with the table *A* having a series of circular openings *E* the diameters of which are less near the upper surface of the table than elsewhere, of a series of trap doors *F* conforming to the shapes of said openings, and of such diameters as to enable them to enter the smallest diameters of said openings and to lie flush with the top of the table, oblong shanks *H* extending from said doors *F*, projections on the lower side of the table to which said shanks are hinged, and whereby said shanks are enabled to lie normally in a plane substantially parallel with the table so that the doors *F* may properly enter the openings, and gravity weights connected to said shanks at their hinged ends to normally maintain said doors in the openings, substantially as and for the purposes specified. 2nd. In a table of the character described, the table *A* having a series of pins projected therefrom and incased in sound-deadening material, a series of circular openings, the said openings being of two diameters, trap doors normally closing said openings, said trap doors each consisting of a circular piece and an oblong piece, a block fixed to the under

side of the table and adjacent to the end of said oblong piece, and a hinged connection between said block and oblong piece, whereby the said door may enter the opening in the table with its upper side flush with the upper side of the table, a gravity weight to maintain said door normally in such position, and means for deadening the sound of the door when it opens and closes, substantially as described.

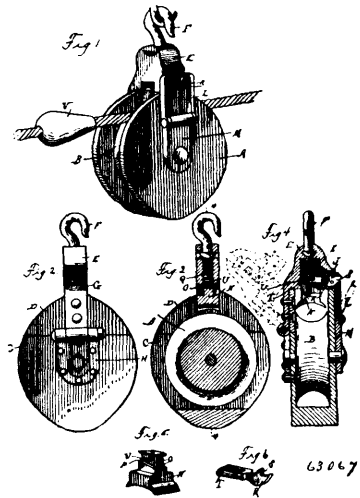
**No. 63,066. Pulley Bushing. (Dé de poulie.)**



William Ross Fox, (Grand Rapids, Michigan, U.S.A., 17th May, 1899; 6 years. (Filed 27th December, 1898.)

*Claim.*—1st. In combination, the pulley sides and the hub or bushing connecting the same, said hub comprising the bent sheet-metal blank having abutting ends and having annular shoulders to receive the sides and annular flanges adapted to clamp the sides against the shoulders, substantially as described. 2nd. In combination, the pulley sides having central openings and flaring or inclined portions adjoining said openings, and the hub rolled from a metal blank and having inclined or bevelled shoulders adapted to abut against the sides and ends headed over to clamp the sides in place, substantially as described.

**No. 63,067. Pulley Block. (Chape de poulie.)**



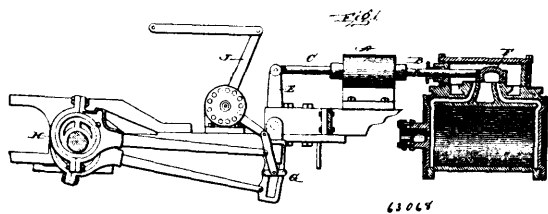
Ira M. Dotson, Shelton, Washington, U.S.A., 17th May, 1899; 6 years. (Filed 27th December, 1898.)

*Claim.*—1st. In a pulley-block, the combination with a block carrying the pulley, of the head hinged to one of the sides of the block, means for uniting the head to the opposite side of the block, and a tripping mechanism carried by the said head for automatically releasing the same from its securing means, substantially as described. 2nd. In a pulley-block, the combination with a block

carrying the pulley, of the head hinged to one of the sides of the said block, a keeper for engaging and uniting the head to the opposite side of the block, a latch carried by the head for engaging said keeper and holding it in engagement with the head, and a tripping mechanism for automatically disengaging said latch from the keeper, substantially as described. 3rd. In a pulley-block, the combination of the head pivoted to one side of the block, a keeper carried by the opposite side of the block, a latch carried by the head for engaging said keeper, a tripping-bar movable within the head and adapted to disengage the latch from the keeper, and means carried by the cable for actuating said tripping-bar, substantially as set forth. 4th. In a pulley-block, the combination of the head pivoted to one of the sides of the block, a keeper carried by the other side, a slotted latch pivoted in the head and adapted to engage said keeper, a tripping-bar movable vertically in the head and having a pin engaging the slot of the latch, and means for effecting the movement of said tripping-bar, substantially as set forth. 5th. In a pulley-block, the combination of the head pivoted to one of the sides of the block and having lugs projecting therefrom, a keeper pivoted to the other side of the block and adapted to engage the lugs of the head, a latch carried by the head for engaging the keeper, a tripping-bar for disengaging said latch from the keeper, and means for automatically actuating said tripping bar, substantially as set forth. 6th. The combination of a pulley-block having one of its sides formed in sections and hinged together, a head carried by the movable section, a keeper carried by the other side of the block, a latch carried by the head and adapted to engage said keeper, a tripping-bar adapted to disengage said latch from the keeper, and means for actuating said tripping-bar, substantially as set forth. 7th. In a pulley-block, the combination of a head pivoted to one of the sides of the block, a keeper carried by the other side of the block, a latch carried by the head adapted to engage the keeper, a tripping-bar adapted to disengage the latch from the keeper, and a tripping-cone carried by the cable adapted to engage and actuate the tripping-bar, substantially as set forth.

**No. 63,068. Valve for Engines.**

(Sompape pour machines à vapeur.)

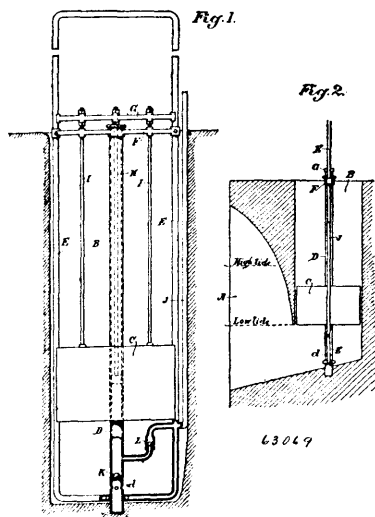


William H. Cutler, Freeport, and Stephen V. Godden, Boston, Massachusetts, U.S.A., 17th May, 1899; 6 years. (Filed 1st December, 1898.)

*Claim.*—1st. An auxiliary gear for the valve motions of reciprocating engines, consisting of a cam tube having cam grooves in its inner and outer surfaces interposed between sections of the rod or means connecting the reciprocating valve with the rocker arm, or other source of motion, whereby a useful irregularity is imparted to the movements of said valve, substantially as specified. 2nd. In combination with the reciprocating valve of an engine, and the rocker arm transmitting motion thereto, a tubular rotary cam interposed between the same, in the connection thereof, said cam having an irregular cam groove or grooves in its outer surface, co-operating with a fixed controlling means, as a guide pin, whereby the rectilinear to-and-fro movements imparted to said tubular cam by the rocker arm rod are converted into irregular combined rotary and forward and backward movements, which in turn are converted into irregular to-and-fro linear movements through a suitable connection, substantially as specified. 3rd. In combination with the reciprocating valve of an engine, and the rocker arm transmitting motion thereto, a tubular rotary cam interposed between the same, in the connection thereof, said cam having an irregular cam groove or grooves in its outer surface, and also an irregular cam or grooves in its inner surface, the former co-operating with a fixed controlling means, as a guide pin, and the latter co-operating with engaging means borne on the head of the valve-rod, whereby the rectilinear to-and-fro movements imparted to the said tubular cam are converted into irregular combined rotary and forward and back movements, which are transmitted to the valve-rod through the medium of the inner cam groove or grooves and its connection with the said valve-rod, and modified into compound irregular to-and-fro linear movements and thence transmitted to the valve, substantially as specified. 4th. As an improvement in auxiliary gear for valve motions the combination of stationary shell A, valve-rod B, rocker arm C, tubular rotary cam D, having cam grooves *d*, *e*, guide pin *a*, swivel connection *c*, and rod head *b* with projections *b*<sup>1</sup> *b*<sup>1</sup>, substantially as specified. 5th. A tubular cam for valve gears, consisting of tube D having exterior cam groove *d* formed on its outer surface, and interior cam groove *e*, formed in its inner surface, in combination with means for reciprocating the said cam and for transmitting the irregular motions occasioned thereby, substantially as specified.

**No. 63,069. Wave Power Pumping Apparatus.**

(Appareil de pompe actionné par les vagues.)

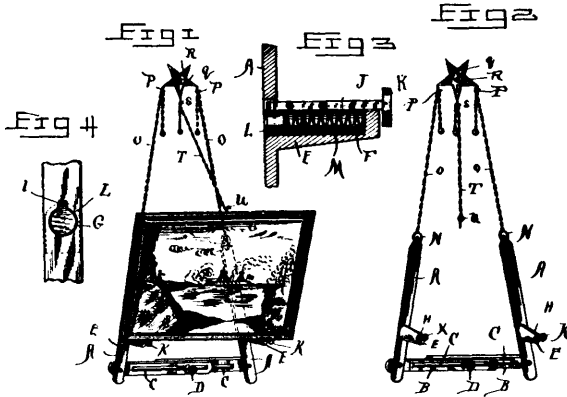


John Edward Armstrong and William Armstrong, both of Santa Cruz, California, U.S.A., 17th May, 1899; 6 years. (Filed 30th September, 1898.)

*Claim.*—1st. A wave power pumping apparatus consisting of a vertical well, having an entrance flaring outwardly therefrom to direct and concentrate the waves into the bottom of the well, a float adapted to rise and fall therein, stationary guides upon opposite sides of the float, a central opening in the float, a centrally disposed pump column upon which the float is loosely movable, a plunger in said pump column, a plunger rod extending through the upper end thereof, a cross-head with which the plunger rod is connected, slidable upon the guides and connecting rods uniting the cross-head with the float. 2nd. A wave power pumping apparatus consisting of guides fixed within a vertical well, a pump column centrally disposed between the guides having a fixed lower end, and yokes or braces by which the upper end is connected with the guides, openings through which water is admitted into the lower end of the pump column, a discharge pipe connecting therewith, an inlet valve in the pump column and an outlet valve in the discharge pipe, a plunger fitting the pump column, a plunger rod extending upwardly through the upper end, a cross-head with which said plunger rod is connected, said cross-head being slidable upon the guides, a float also guided thereon having a central opening by which it fits and loosely slides upon the pump column, connecting rods fixed to the float and to the cross-head respectively whereby the vertical movement of the float is imparted to the cross-head and thence to the plunger. 3rd. In a pumping apparatus of the character described, a rising and falling float having a central opening, a pump column fixed at the bottom extending upwardly through said opening, hollow guides upon opposite sides by which the movement of the float is also steadied, connections to hold the pump column in position with relation to the guides, a cross-head slidable upon the guides and with which the plunger rod of the pump is connected, rods connecting the cross-head with the float whereby reciprocation is imparted to the plunger, inlet passages and a downwardly closing valve in the lower part of the pump column, a discharge pipe connecting with the pump column having an upwardly opening valve therein, connections between the hollow guides and the discharge pipe above its valve whereby the guides act as an air chamber for the pump. 4th. In a pumping apparatus of the character described, a central vertically disposed well, a centrally fixed pump column having inlet and discharge valves and discharge pipe, hollow parallel guides extending upwardly parallel with the pump column, and connections whereby the upper end of said column is supported, said guides having also an open connection with the discharge pipe whereby they serve as an air chamber therefor, a float fitting loosely about the pump column and movable between the guides, a cross-head slidable upon said guides, and rods connecting the cross-head with the float, a plunger within the pump column and a plunger-rod connecting it with the cross-head and a surrounding well or chamber within which the float is movable, said well having an opening at the bottom and a flaring or funnel-shaped chamber opening outwardly therefrom whereby the waves are directed and concentrated into the bottom of the vertical well to act upon the float.



No. 63,070. Picture Hanger. (*Appareil à accrocher les cadres.*)



63070

Thomas J. Bruce, Maybury, Pennsylvania, U.S.A., 18th May, 1899; 6 years. (Filed 1st March, 1899.)

*Claim.*—1st. In a picture-hanger, the combination with a supporting-frame consisting of bars connected at their lower ends by arms pivoted thereto and having a sliding connection with each other, of supporting arms carried by said bars, and a suspending device for said frame, substantially as described. 2nd. In a picture-frame-hanger, the combination with a suspending device, of a frame suspended thereby, supporting arms carried by said frame and formed with chambers, discs movable in said chambers, stems movable upon said arms and to which the discs are secured, and springs positioned in said chambers and holding the stems normally inward, substantially as described.

No. 63,071. Vehicle Spring. (*Ressort de voiture.*)

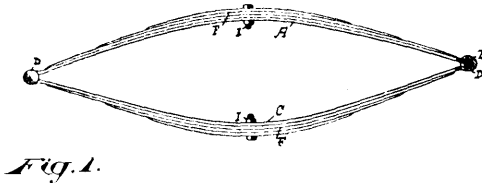


Fig. 1.

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Fig. 2.

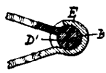


Fig. 3.



Colin Robert Kennedy, machinest, Galt, Ontario, Canada, 17th May, 1899; 6 years. (Filed 11th October, 1898.)

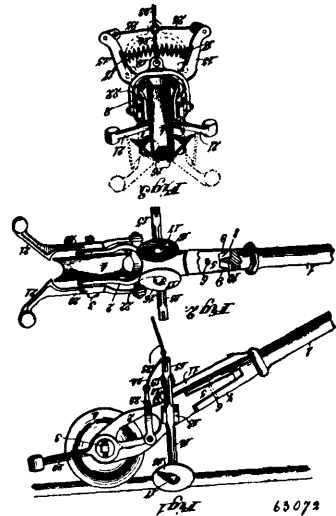
*Claim.*—1st. In a vehicle spring a head formed on the end of the head back with an aperture and a cylindrical concavity adapted to receive and hold in operative position a cylindrical eye formed on the end of the eye back, which forms a roller bearing for the head, substantially as specified. 2nd. In a vehicle spring the head back C, the head D, provided with cylindrical concavity D<sup>1</sup>, and opening E, in combination with the eye back A, and eye or roller bearing B, adapted to fit within the head D, substantially as described and for the purpose specified. 3rd. In an elliptic vehicle spring the combination of the head back C, the heads D, at both ends of the head back A, provided with cylindrical concavities D, and springs E, the eye back and solid eyes or roller bearings B, at both ends of the eye back, adapted to fit within the heads D, and one or more leaves secured to the head back and eye back, by means of bolts I, substantially as described and for the purpose specified.

No. 63,072. Trolley for Electric Car. (*Trolley pour chars électriques.*)

Robert Edward Carroll, Lima, Ohio, U.S.A., 17th May, 1899; 6 years. (Filed 20th April, 1899.)

*Claim.*—1st. The combination with a trolley pole and a trolley wheel support on the upper end thereof, of arms pivotally mounted on the opposite sides of the trolley wheel support below and in advance of the trolley wheel and provided at their upper extremities with angularly arranged concavo conical guide and guard discs arranged in front of the trolley wheel and operating to hold the latter to the line wire, and means for spreading the upper ends of said arms apart to disengage the discs from the line wire, substantially as described. 2nd. The combination with a trolley pole, and a

trolley wheel supported on the upper end thereof, of arms pivotally connected intermediate their ends with the wheel support below



63072

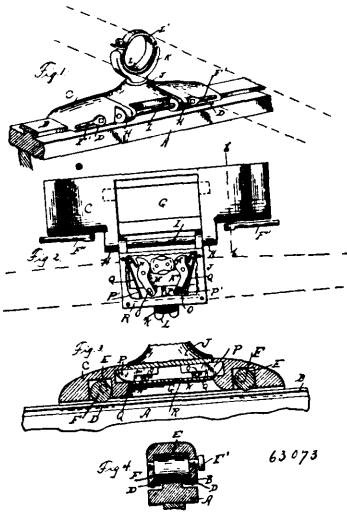
and in advance of the trolley wheel, concavo conical guard and guide discs journaled, respectively, on the upper ends of the arms in proximity to the grooved periphery of the trolley and constructed to project partially over and bear against the sides of the line for guiding the trolley wheel and prevent it from jumping the line, a coiled spring arranged between the lower ends of the arms to press their upper ends, with the guard and guide discs, towards each other, and means for spreading their upper ends apart, substantially as described. 3rd. The combination with a trolley pole, and a trolley wheel supported on the upper end thereof, of arms pivotally connected intermediate their ends with the wheel support guard and guide discs journaled, respectively, on the upper ends of the arms in proximity to the trolley and constructed to project over and to bear against the sides of the line, a coiled spring arranged between the lower ends of the arms to press their upper ends, with the guard and guide discs, towards each other, and a cord connected with the lower ends of the arms for spreading the upper ends thereof apart, substantially as described. 4th. The combination with a trolley pole, and a trolley wheel supported on the upper end thereof, of arms pivotally mounted on the opposite sides of the trolley wheel support and provided at their upper extremities with the angularly arranged guide and guard discs arranged in front of the trolley wheel and operating to hold the latter to the wire, a spring arranged between the lower ends of said arms and operating to press their upper ends, with the guide and guard discs, towards each other, guide arms pivoted intermediate, their ends on the opposite ends of the axis of the wheel, said guide arms diverging at their upper ends, a bail connecting the lower ends of said guide arms, the arrangement being such that the upper ends of the guide arms drop down and back by gravity, and a cord provided with three furcated members, two of which are respectively connected with the lower ends of the arms carrying the guide and guard discs and the third with the bail on the guide arms whereby the guide arms may be elevated and the guide and guard discs simultaneously spread apart by said cord, substantially as described.

No. 63,073. Oar Lock. (*Toilette.*)

Gurley Boak, Bandon, and Emil A. Erickson, Marsfield, both in Oregon, U.S.A., 17th May, 1899; 6 years. (Filed 20th January, 1899.)

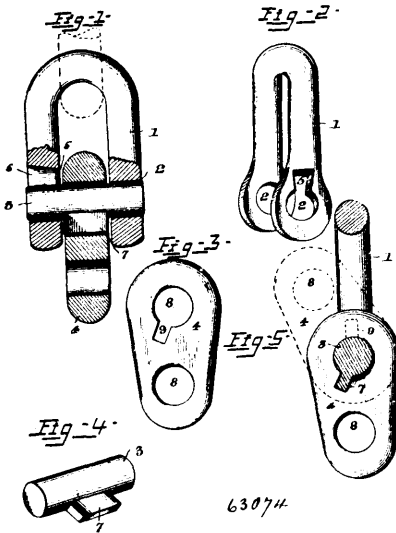
*Claim.*—1st. An improved oar-lock mechanism, comprising a swinging head, an oar-lock mounted therein, and mechanism connected to the oar-lock and operated thereby for securing the head, substantially as described. 2nd. The combination of a gunwale of a boat, a track secured thereto, a lock mechanism adjustable longitudinally but held from displacement vertically on the track, and cams carried by the lock mechanism adapted to be turned to clamp the same to the track, substantially as described. 3rd. An oar-lock mechanism, comprising a support, a head mounted to swing thereon, an oar-lock rotatably mounted in the head, and mechanism for securing the head to the support operated by the rotatable oar-lock, substantially as described. 4th. An oar-lock mechanism, comprising a support, a head mounted to swing thereon, an oar-lock mounted rotatably in the head, latches adapted to extend from the head into engagement with the support, and mechanism connecting the latches with the rotatable oar-lock for operating the former upon the rotation of the lock, substantially as shown and described. 5th.

An oar-lock mechanism, comprising a support, a head mounted to swing thereon, an oar-lock rotatably mounted in the head, double



cam M secured to the lock-stem, latches P and springs for holding them normally extended, and levers N connected at one end to the latches and operated upon the cam for retracting the latches, substantially as shown and described. 6th. An improved oar-lock mechanism, comprising a swinging head, an oar-lock mounted therein, latches for securing the head, and levers operatively connecting the oar-lock and latches, substantially as shown and described.

**No. 63,074. Shackle. (Manille.)**

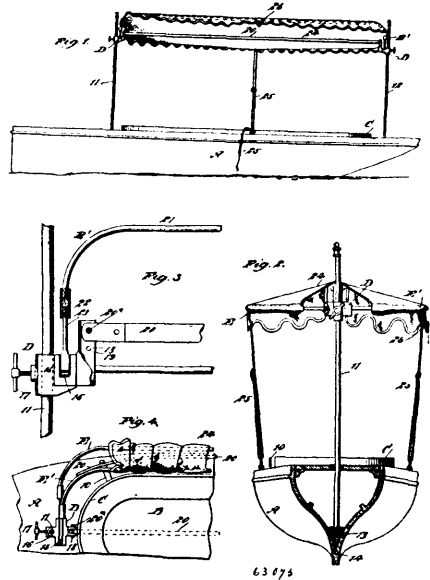


Charles Haase, New York City, New York, U.S.A., 17th May, 1899; 6 years. (Filed 13th February, 1899.)

*Claim.*—1st. In a cable for anchors and the like, a shackle having aligned openings in its shanks, and a notch extending from one of said openings, a link arranged within the shackle, a coupling pin having its extremities fitting in the shackle openings and also having an interlocking connection with the link, whereby the pin and link will move together and cause the ends of the pin to turn freely in the shackle openings, and a wooden key registering in the notch in the shackle shank and forming a non-corrosive temporary closure therefor, substantially as set forth. 2nd. The combination of a shackle having its shanks formed with transversely aligned openings and having one of the openings provided with a notch extending therefrom, a link having an opening correspondingly notched, a coupling pin having a projection adapted to pass through the notch of the shank

and interlock with the notch of the link, and a temporary closure for the notch in the shackle shank, said closure being displaced by the removal of the coupling pin, substantially as set forth. 3rd. In combination, a shackle having its shackle formed with transversely aligned openings, and having one of the openings provided with a notch extending therefrom, a link having an opening correspondingly notched, a coupling pin having a projection to pass through the notch of the shank and interlock with the notch of the link, and a key of wood or like material fitted into the notch of the shank, substantially as set forth. 4th. In combination, a shackle having its shanks formed with transversely aligned openings, one of the openings having a notch extending therefrom tapering throughout its length and of dove-tail shape, a link having an opening provided with a notch near one side of the opening, a coupling pin having a projection midway of its ends to pass through the notch of the link, and a tapering key of wedge form secured in the notch of the shank, substantially as and for the purpose set forth.

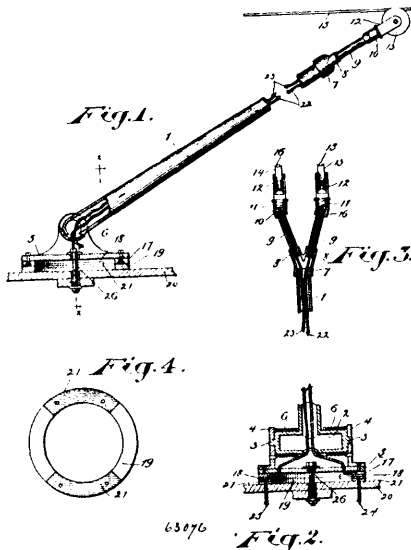
**No. 63,075. Canopy for Boats. (Baldaquin pour bateaux.)**



John Canfield Harlow, Janeville, Wisconsin, U.S.A., 17th May, 1899; 6 years. (Filed 16th January, 1899.)

*Claim.*—1st. A canopy comprising a cover, of a flexible material and a frame for the cover, the frame consisting of end blocks, each end block being provided with a sleeve carrying a set screw, and with an extension beyond the upper edge, side irons pivotally attached to the end blocks, and a ridge pole attached to the extensions of the end blocks, for the purpose set forth. 2nd. A canopy consisting of a cover of a flexible material and a frame for the said cover, the frame consisting of end blocks, each block being provided with a sleeve carrying a set screw, a channelled extension section projecting beyond the upper edge of a block at the side opposite that carrying the sleeve, each end block being further provided with a slot in its upper surface between the sleeve and extension, side irons pivoted in the slotted portion of the end blocks, and a ridge pole adjustably and removably attached to the channelled extensions of the said end blocks, for the purpose set forth. 3rd. In a canopy for boats, the combination, stanchions, of end blocks provide with sleeves carrying set screws, the sleeves being adapted to receive the stanchions, each end block being provided with a channelled extension upon its inner face, the channelled extensions projecting beyond the upper surfaces of the said end blocks, each end block being further provided with a slot in its upper surface between the sleeve and the extension of the block, side irons pivoted in the slotted portions of the end blocks a ridge pole adjustably and removably attached to the extensions of the end blocks, and a cover secured to the side irons and extending over the ridge pole, for the purpose specified. 4th. A canopy having stanchions, an end block adjustably mounted on each stanchion, a ridge pole removably held by an extending between the end blocks, and two bowed side bars the ends of which are respectively pivoted to the end blocks, such side bars being capable of swinging, the one over into close proximity with the other to permit folding the canopy frame. 5th. A canopy having two stanchions, an end block mounted on each stanchion, each end block having an extension and a transverse slot, a ridge pole removable held by and extending between the extensions, and bowed side bars the ends of which are respectively pivoted in the slots of the blocks, the side bars being capable of swinging, the one over into immediate proximity with the other to permit folding the canopy.

**No. 63,076. Trolley Pole. (Perche de trolleye.)**



Silas Vernoy, Toronto, Ontario, Canada, 17th May, 1899; 6 years. (Filed 17th January, 1899.)

*Claim.*—1st. A trolley pole and attachment, comprising a tubular pole, divergent arms in the upper end thereof, trolleys carried by the arms but insulated therefrom, a rotating base to which the pole has spring yielding connection, segmental contact plates carried by said base, electric connections between said contact plates and the trolleys, and segmental contact plates adapted for engagement with the first named contact plates and also adapted for electrical connection with a car motor, substantially as described. 2nd. In a trolley pole and connections, comprising a tubular pole, divergent tubular arms on the upper end thereof, trolleys carried by said arms but insulated therefrom, a rotating base with which the pole has spring yielding connection, a ring of insulating material secured to the underside of said base, segmental contact plates seated in said ring, wires leading from said contact plates to the trolleys, a ring of insulating material adapted to be secured to the top of a car, and segmental contact plates seated in said last named ring and adapted for engagement with the first named contact plates and also with the motor of a car, substantially as specified. 3rd. A trolley pole and connections for a double wire over-head electric car line system, comprising a tubular pole, a coupling on the upper end of said pole and having divergent tubular members, tubes connected in said members, couplings engaging the upper ends of said tubes, trolley blocks supported in said last named couplings but insulated therefrom, and trolleys mounted in the blocks, substantially as specified. 4th. A trolley pole and connections comprising a pole two trolleys suitably supported by the said pole, a rotating base to which the pole is suitably connected, segmental contact plates carried by said base, electric connections between said contact plates and the trolleys, and segmental contact plates adapted for engagement with the first named contact plates and also adapted for electrical connection with a car motor, substantially as described. 5th. A trolley pole and connections comprising a tubular pole, divergent arms at the upper end thereof, trolleys carried by the arms but insulated therefrom, and insulated wires leading through the pole to each trolley, substantially as and for the purpose specified.

**No. 63,077. Gun Powder. (Poudre à fusil.)**

Edward Dickson, Winnipeg, Manitoba, Canada, 18th May, 1899; 6 years. (Filed 7th March, 1899.)

*Claim.*—1st. A gun powder consisting of picric acid treated with ammonia, picric acid treated with potash, barium nitrate, flour wheat, flour preferred, ferro cyanide of potassium and lamp black and coated with refined petroleum which has been subjected to the action of nitric acid, sulphuric acid and ammonia. 2nd. The method of preparing a coating which consists of refined petroleum, subjected to the action of nitric acid, then to sulphuric acid and after the viscous precipitate has been removed to the action of ammonia and coating the powder therewith, substantially as specified.

**No. 63,078. Stiffening Fabric. (Tissu à raidir.)**

Edward Kirk Warren, Three Oaks, Michigan, U.S.A., 18th May 1899; 6 years. (Filed 9th December, 1897.)

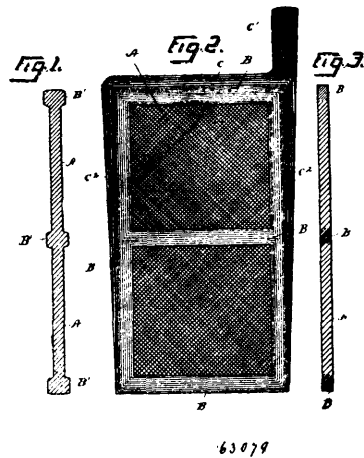
*Claim.*—1st. A stiffening fabric composed of warp and weft threads, one at least, of which shall contain resilient strands formed

of a continuous longitudinal flexible thread with splints or fibre of the quill portion of feathers distributed along the same and having



overlapping meeting ends and a wrapping thread, binding said splints or fibres to the longitudinal thread, as specified. 2nd. A resilient strand, consisting of a continuous longitudinal flexible thread, splints or fibres of the quill portion of feathers distributed along the same and having overlapping meeting ends, and a wrapping thread binding said splints or fibres to the longitudinal thread, as specified. 3rd. A resilient strand, consisting of a continuous longitudinal flexible thread, splints or fibres of still resilient material distributed along the same and having overlapping meeting ends and a wrapping thread binding said splints or fibres to the longitudinal thread, as specified.

**No. 63,079. Electric Battery. (Batterie électrique.)**



William Wallace Hanscom and Arthur Hough, both of San Francisco, California, U.S.A., 18th May, 1899; 6 years. (Filed 10th November, 1898.)

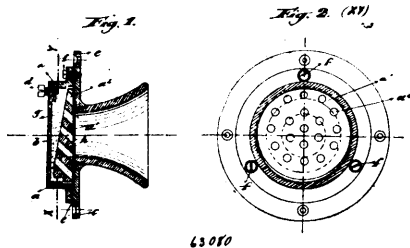
*Claim.*—1st. The method of constructing elements for storage batteries consisting in mixing litharge and sugar, setting the same by adding sulfate of ammonia, dissolving out part of the sugar and electrolytically reducing to spongy lead, substantially as described. 2nd. The method of constructing elements for storage batteries consisting of mixing litharge and sugar, then moistening the mixture with sulfate of ammonia to form the same into a paste, then moulding the paste into a desired form, then reducing the same to spongy lead by electrolytically charging, and discharging it until formed substantially as described. 3rd. The method of constructing elements for a storage battery, consisting in mixing litharge and sugar, then moistening the mixture with sulfate of ammonia to form the same to a paste, then moulding the paste to form slabs having ridges B<sup>1</sup>, of greater thickness than the body A, of the said slabs, then reducing the same to spongy lead by electrolytically charging and discharging it in a suitable electrolyte, then compressing the said ridges to a dense mass B, to form supports for the said elements, substantially as described. 4th. The method of constructing elements for a storage battery consisting in mixing litharge and sugar, then moistening the mixture with sulfate of ammonia to form the same into a paste, then moulding the paste into a slab having ridges B<sup>1</sup>, of greater thickness than the body A, of the slab, then reducing the same to spongy lead by electrolytically charging and discharging the same in a suitable electrolyte, then compressing the said ridges to the flush surface of the said slabs to form them into a denser mass B, to form supports for the said elements, substantially as described. 5th. The method of constructing elements for storage batteries consisting in electrolytically producing slabs of spongy lead, then compressing the same about the edge to a dense mass B, and welding metallic lead upon said compressed edge to form a frame C, substantially as described.

**No. 63,080. Microphone. (Microphone.)**

Julius O. Zwarg, Freidberg, Saxony, 18th May, 1899; 6 years. (Filed 23rd December, 1897.)

*Claim.*—A microphone, comprising a removable metallic box having an enlarged chamber and a series of inclined perforations communicating with the diaphragm, granulated carbon disposed

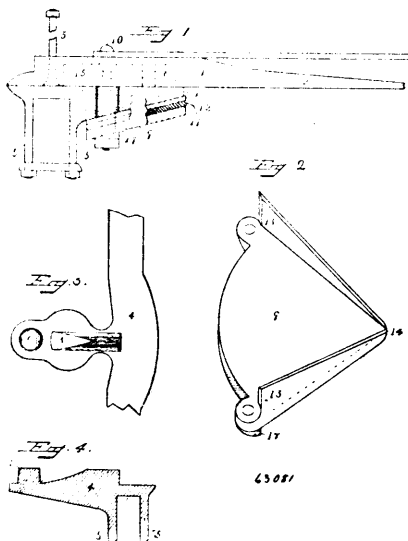
within said chamber and said perforations, whereby an increased contact surface is obtained, a filling opening formed in the upper



65070

portion of said box, and a conductible screw adapted to close said opening, substantially as described.

**No. 63,081. Vehicle Turn Plate.**  
(*Plaque tournante pour vehicules.*)



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William H. Emond, Boston, Massachusetts, U.S.A., 18th May, 1899; 6 years. (Filed 5th December, 1898.)

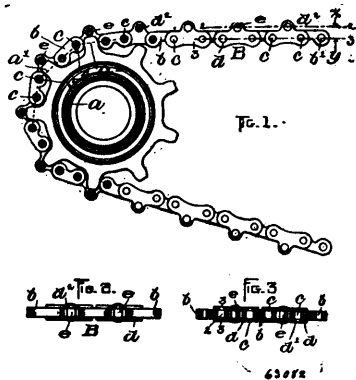
*Claim.*—1st. The turn plate joined to the axle having stud 6 and ridge 8 in combination with recessed upper plate 1, the safety plate 9, provided with flanges 13 bolted to said upper plate beneath said turnplate, substantially as specified. 2nd. The combination of the turnplate with means for attachment to the axle having stud 6 and ridge 8 with recessed upper plate having reaches 2, stud socket 7, the flanged safety plate bolts for securing the same, steel covered plate 12, [and elastic cushion 11, substantially as specified. 3rd. A turn plate joined to the axle, having stud 6 and ridge 8 bevelled underneath to afford greatest strength at the point nearest the axle, in combination with the triangular safety plate, provided with flanges, sloping to the apex and a recessed upper plate 6 which said safety plate is attached by bolts, substantially as specified.

**No. 63,082. Drive Chain.** (*Chaîne de commande.*)

Rollin Abell, Boston, Massachusetts, U.S.A., 18th May, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. The combination with a sprocket wheel having its teeth of the usual form, of a certain parts or members whereof are centrally provided with rivet pins which when the chain is in operative action, rest on the tops or crests of said teeth, substantially as shown and described. 2nd. In combination with a sprocket wheel of usual form, of a chain parts whereof are centrally provided with rivet pins, which when the chain is in action rest on the crests or tops of the teeth of said wheel, and blocks of the chain hanging between said teeth, all substantially as shown and described. 3rd. A drive chain comprising apertured blocks, apertured side links, bearing pins occupying the apertures in the blocks, and side links, and rivet pins central of the blocks and connecting the side links blocks, the blocks lodging or hanging in the spaces between the teeth of a wheel, substantially as shown and described. 4th. A drive chain comprising apertured blocks, apertured links, bearing pins occupying the apertures in the blocks, and side links and rivet pins central of the blocks and connecting the side links between the blocks and adapted

to rest on the tops of sprocket teeth, and equidistant from the next adjacent teeth. 5th. In combination with a sprocket wheel, a drive



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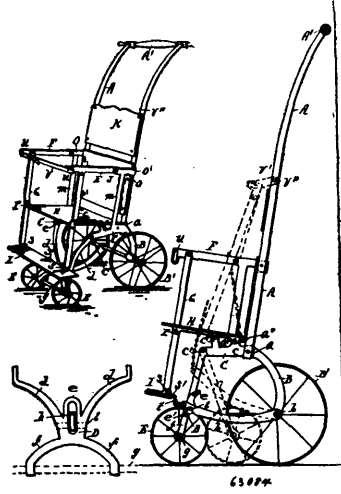
chain comprising apertured blocks apertured side links, bearing pins occupying the apertures in the blocks and side links, and rivet pins connecting the side links between the blocks, and resting on the tops of the sprocket teeth, and equidistant from the next adjacent teeth. 6th. The combination with an ordinary sprocket wheel and with the teeth or sprockets thereof, of a chain composed of blocks or parts which are lodged between the teeth and have an endwise driving bearing on the sides of the teeth, and of other parts which have a transverse supporting bearing directly on the tops or crests of the teeth. 7th. A separable drive chain comprising apertured blocks, apertured and slotted side links, bearing pins occupying the apertures in the blocks and side links, and annularly grooved locking pins occupying the slots in the side links and connecting said side links at points between the blocks. 8th. A separable drive chain, comprising apertured blocks, apertured and slotted side links, headless bearing pins occupying the apertures in the blocks and side links, and removable grooved locking pins occupying the slots in the side links and connecting said side links at points between the blocks.

**No. 63,083. Manufacture of Precipitated Sulphate of Calcium and Chlorine.** (*Fabrication de précipité de sulfate de calcium et chlore.*)

Ernest A. Le Sueur, Ottawa, Ontario, Canada, 18th May, 1899; 6 years. (Filed 5th January, 1899.)

*Claim.*—1st. The process of producing calcium sulphate and chlorine from solutions containing calcium chloride, which consists in first removing most of the calcium therefrom by treatment with sulphuric acid and filtration, then freeing the filtrate from free or combined sulphuric acid and then electrolysing said filtrate, substantially as herein set forth. 2nd. The process of producing precipitated calcium sulphate from the mother liquors obtained in the manufacture of chlorate of potash, which consists in treating such liquors with solution of a sulphite or a mixture of sulphites to reduce the residual chlorate and then treating the same with sulphuric acid to precipitate calcium sulphate, substantially as herein set forth. 3rd. The process of producing precipitated calcium sulphate from the mother liquors obtained in the manufacture of chlorate of potash which consists in treating such liquors with solution of calcium sulphite in sulphurous acid, thus occasioning an initial precipitation of calcium sulphate, and then treating the same with sulphuric acid to complete the desired precipitation, substantially as herein set forth. 4th. The process of treating the waste mother liquors of chlorate of potash which consists in adding to such liquors solution of a sulphite, of a mixture of sulphites, then treating the same with sulphuric acid, then removing the precipitated calcium sulphate, then removing the free or combined sulphuric acid from the residual solution, and then subjecting the said solution to electrolysis, substantially as set forth. 5th. The improved process of producing chlorine from impure solution of hydrochloric acid containing a sulphate or sulphates, which consists in replacing the sulphate or sulphates by the corresponding chloride or chlorides, and then subjecting the solution to electrolysis, substantially as set forth. 6th. The improved process of producing chlorine, which consists in preparing a dissolved mixture of the chlorides of hydrogen and some metal or metals electropositive to that element and then subjecting such mixture to electrolysis, whereby, while the hydric chloride suffers preferential decomposition and gradually disappears from the solution, the conductivity of the bath is assisted by the metallic chloride or chlorides, substantially as described. 7th. The improved method of preparing chlorine, which consists in subjecting a dissolved mixture of hydrochloric acid with the chlorides of calcium, potassium and sodium to electrolysis, whereby, while the acid suffers preferential decomposition and gradually disappears from the solution, the conductivity of the bath is assisted by the other materials, substantially as set forth.

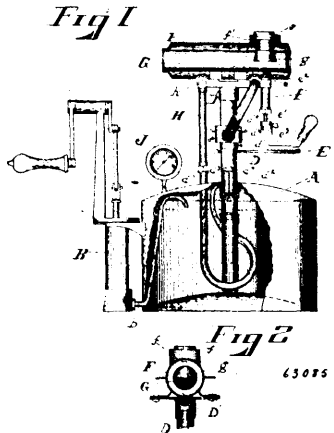
No. 63,084. Perambulator. (Voiture.)



George D. Leadbetter, Detroit, Michigan, U.S.A., 18th May, 1899; 6 years. (Filed 14th January, 1899.)

*Claim.*—1st. In a perambulator, the combination of the uprights, the large wheels journaled at the lower ends of said uprights, the small wheels pivoted in front of said large wheels, the pivoted seat and pivoted arms, the pivoted bar adapted to lock the forward wheels when extended, and means connecting said pivoted seat with the free end of said locking bar. 2nd. In a perambulator, the combination of the uprights, the large wheels journaled at the lower ends of said uprights, the forwardly extending arms mounted on said uprights, the forward wheels journaled in a frame pivoted to the forward end of said arms, the seat pivoted to fold upwardly, the studs on said arms adapted to support said seat when extended, and means for locking the frame carrying the forward wheels to maintain said wheels in an extended position. 3rd. The combination of the uprights, the large wheels journaled to the lower ends of said uprights, forwardly extending arms mounted on said uprights, a spider frame pivoted to the outer ends of said arms, the forward wheels journaled in said frame, a pivoted locking bar lying in a loop in said spider frame and having a notch adapted to engage a pin in said loop, a pivoted seat and pivoted arms, studs engaging the under face of said seat to maintain it in an extended position, bars pivotally connecting said pivoted arms and said pivoted seat, a foot-rest on the lower ends of said bars, and means connecting said foot-rest with the forward end of said locking bar.

No. 63,085. Carburetor. (Carburateur.)



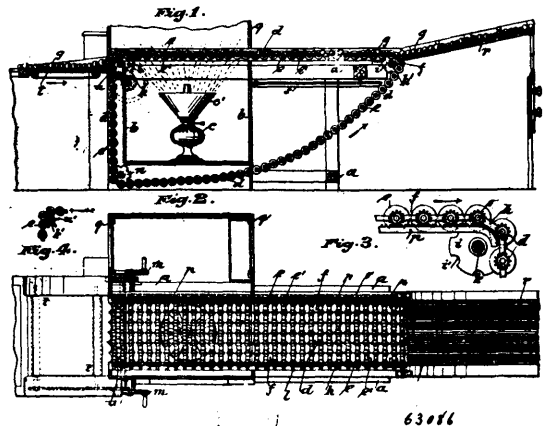
Henry Harrison Hardy, Covington, Kentucky, U.S.A., 18th May, 1899; 6 years. (Filed 11th January, 1899.)

*Claim.*—1st. In a gas machine such as described the combination of the tank, the air pump connected thereto and having its discharge near the top thereof, the standpipe having its receiving end near the bottom of the tank and its upper end terminating in a vaporizing chamber, the hot air chamber secured upon the vaporizing chamber and having branches to connect to the main supply pipe and pass the gas to said pipe, the commingling tube or chamber within said

air chamber, the tube or funnel to receive air and gas, commingle them and pass them to the supply pipe, the initial burner below the vaporizing chamber, and suitable valves such as shown to control the flow of gas to the initial burner, and from the vaporizing chamber. 2nd. In a gas machine the combination of the gasoline tank, the standpipe centrally secured therein, having its receiving end near the bottom of the tank, its upper end terminating in a vaporizing chamber, said vaporizing chamber, a float controlled valve within said standpipe, the initial and subflame box sleeved over said standpipe below the vaporizing chamber, the filler tube passing through the top of the tank near the side wall thereof and extending down into the tank, the air pump connected to the side of the tank and having its discharge near the top thereof, the supply valve for the initial burner connected to the filler tube and having at the forward end of its case a slotted tube communicating with the initial burner, the air inlet sleeved over the slotted end of said gas supply tube slotted to register with the slots in the tube and connected to the stem of the needle valve to admit air simultaneously with the opening of said valve to the initial burner, a similar valve, air inlet and tube between the subflame box and vaporizing chamber, a hot air chamber secured upon said chamber and having upwardly projecting branches to connect with supply pipes for the building and convey the commingled gases from the air supply tube and vaporizing chamber to said pipes, the air supply tube within said chamber, leaving a jacketed space between it and the walls of the hot air chamber, and a valve to control the supply of gases from the vaporizing chamber to the commingling tube, substantially as shown and described. 3rd. In a gas machine, the combination of the tank, the standpipe secured therein having its supply end near the bottom of the tank, a vaporizing chamber on the upper end of said standpipe, a float controlled valve within the standpipe, a subflame box and initial burner above it having their tops perforated, said box and burner being sleeved over the standpipe below the vaporizing chamber, the hot air tube and commingling tube secured upon the vapourizer, the branches for connecting the commingling tube and hot air tube with the gas supply pipes for the building, a needle valve and case communicating with the filler tube and the initial burner, a similar tube having a controlling valve communicating with the vapourizer and subflame burner, an air pump connected to the tank and having its discharge above the lower end of the filler tube to force the gasoline over to the initial burner or the vapourizer, a pipe from the vapourizer passing down into the tank coiled around the standpipe and communicating with it above the float controlled valve, a needle valve to control the supply of gas from the vapourizer to the commingling chamber, said valve stem having an angle arm for opening or closing the valve, and an indicator below the angle arm of the valve stem to determine the amount of gas supply from the vapourizing chamber to the commingling chamber, substantially as shown and described.

No. 63,086. Egg Testing Apparatus.

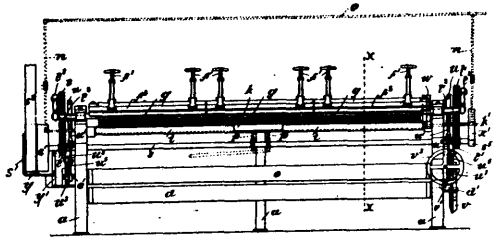
(Appareil à faire l'épreuve des œufs.)



James Lyons, Alfred Lyons, and George Lyons, of Manchester, Lancashire, Great Britain, 1899; 6 years. (Filed 31st January, 1899.)

*Claim.*—1st. In and connected with apparatus for testing eggs, an illuminated chamber *b* in combination with an endless travelling apron *d* composed of rollers *c* having annular grooves opposite each other, forming openings or bottomless receptacles *f*, adapted to receive and carry the eggs to be tested over the said illuminated chamber, all substantially as and for the purpose set forth. 2nd. In and connected with apparatus for testing eggs, the apron *d* composed of rollers *c* in combination with means for rotating the said rollers whilst the apron is travelling, all substantially as and for the purpose set forth.

**No. 63,087. Fabric Cleaning Machinery.**  
(*Machine à nettoyer les tissus.*)



63087

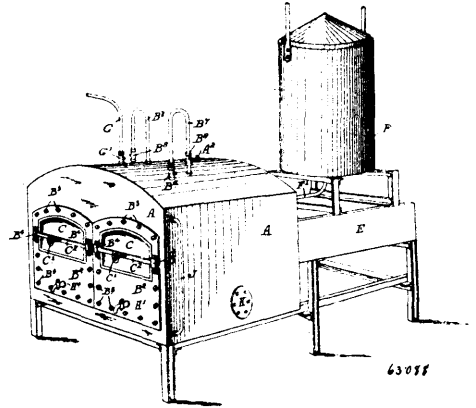
William Bowie and John Bowie, 221 Strathclyde Street, Bridgeton, Glasgow, Scotland, 18th May, 1899; 6 years. (Filed 21st January, 1899.)

*Claim.*—1st. In a machine for cleaning and renovating textile fabrics, the combination of a frame, brushes carried by the frame, mechanical means for reciprocating the brushes and means for traversing the fabric under the brushes, substantially as described. 2nd. In a machine for cleaning and renovating textile fabrics the combination of a frame, brushes carried by the frame, mechanical means for reciprocating the brushes, means for traversing the fabric under the brushes and means for supplying a fluid detergent to the brushes, substantially as described. 3rd. In a machine for cleaning and renovating textile fabrics the combination of a frame, brushes carried by the frame, mechanical means for reciprocating the brushes, means for traversing the fabric under the brushes, troughs supplied with a fluid detergent carried by the frame, rollers revolving within the troughs and means for revolving the rollers, substantially as described. 4th. In a machine for cleaning and renovating textile fabrics the combination of a frame, brushes carried by the frame, means for adjusting the brushes vertically, mechanical means for reciprocating the brushes, means for traversing the fabric under the brushes and means for supplying a fluid detergent to the brushes, substantially as described. 5th. In a machine for cleaning and renovating textile fabrics the combination of a frame, brushes carried by the frame, mechanical means for reciprocating the brushes, means for traversing the fabric under the brushes, means for supplying a fluid detergent to the brushes and means whereby steam can be blown through the fabric during its passage under the brushes, substantially as described. 6th. In a machine for cleaning and renovating textile fabrics the combination of a frame, slides working on the frame, brushes carried by the slides, mechanical means for reciprocating the slides, means for vertically adjusting the brushes, a table arranged below the brushes, means for traversing the fabric over the table and below the brushes and means for supplying a fluid detergent to the brushes, substantially as described. 7th. In a machine for cleaning and renovating textile fabrics, the combination of a frame, slides working on the frame, brushes made in sections carried by the slides, mechanical means for reciprocating the slides, means for vertically adjusting the brushes, a table arranged below the brushes, a central longitudinal opening made in the table, a perforated plate covering the opening, a perforated steam pipe arranged below the said plate, means for traversing the fabric over the table and below the brushes and means for supplying a fluid detergent to the brushes, substantially as described.

**No. 63,088. Acetylene Generator.** (*Générateur à acétylène.*)  
Stephen Henry Heal, 2 Windsor Terrace, Casham, Hants, England, and James Barnes Heal, Wentworth, Cumberland, Nova Scotia, Canada, 18th May, 1899; 6 years. (Filed 18th October, 1898.)

*Claim.*—1st. In an acetylene gas machine, a closed tank and an equalizing tank connected therewith by a pipe provided with a suitable stop cock, in combination with two or more generating chambers open at the bottom and located within the closed tank, a suitable door in each chamber providing communication with the outer air, a pipe connecting the upper part of each chamber with the upper part of the tank, and provided with a suitable stop cock, substantially as and for the purpose specified. 2nd. In an acetylene gas machine, a closed tank and an equalizing tank connected therewith by a pipe provided with a suitable stop cock, in combination with two or more generating chambers open at the bottom and located within the closed tank, a suitable door in each chamber providing communication with the outer air, a pipe connecting the upper part of each chamber with the upper part of the tank, and provided with a suitable stop cock, a vent pipe and cock connecting the crown of each chamber with the outer air, substantially as and for the purpose specified. 3rd. In an acetylene gas machine, a closed tank and an equalizing tank connected therewith by a pipe provided with a suitable stop cock, in combination with two or more generating chambers open at the bottom and located within the closed tank, a suitable door in each chamber providing communication with the outer air, a pipe connecting the upper part of each

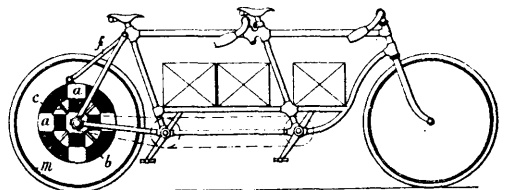
chamber with the upper part of the tank, and provided with a suitable stop cock, a vent pipe and cock connecting the crown of



63088

each chamber with the outer air, and a drip pipe and cock extending to the outer air from a point within each chamber at or below the level of the bottom of the door opening, substantially as and for the purpose specified. 4th. In an acetylene gas machine, a closed tank and an equalizing tank connected therewith by a pipe provided with a suitable stop cock, in combination with two or more generating chambers open at the bottom and located within the closed tank, a suitable door in each chamber providing communication with the outer air, a pipe connecting the upper part of each chamber with the upper part of the tank, and provided with a suitable stop cock, and a gas holder communicating by a suitable pipe with the upper portion of the closed tank, the dome of the holder being weighted to give a higher pressure than the head of water in the equalizing tank, substantially as and for the purpose specified. 5th. In an acetylene gas machine, a closed tank and an equalizing tank connected therewith by a pipe provided with a suitable stop cock, in combination with two or more generating chambers open at the bottom and located within the closed tank, a suitable door in each chamber providing communication with the outer air, a pipe connecting the upper part of each chamber with the upper part of the tank, and provided with a suitable stop cock, a vent pipe and cock connecting the crown of each chamber with the outer air, and a drip pipe and cock extending to the outer air from a point within each chamber at or below the level of the bottom of the door opening, and a gas holder communicating by a suitable pipe with the upper portion of the closed tank, the dome of the holder being weighted to give a higher pressure than the head of water in the equalizing tank, substantially as and for the purpose specified. 6th. In an acetylene gas machine, a closed tank and an equalizing tank connected therewith by a pipe provided with a suitable stop cock, in combination with a generating chamber open at the bottom and located within the closed tank, a suitable door in the chamber providing communication with the outer air, a pipe connecting the upper part of the chamber with the upper part of the tank, and provided with a suitable stop cock, and a gas holder communicating by a suitable pipe with the upper portion of the closed tank, the dome of the holder being weighted to give a higher pressure than the head of water in the equalizing tank, substantially as and for the purpose specified.

**No. 63,089. Electric Propulsion.** (*Propulsion électrique.*)



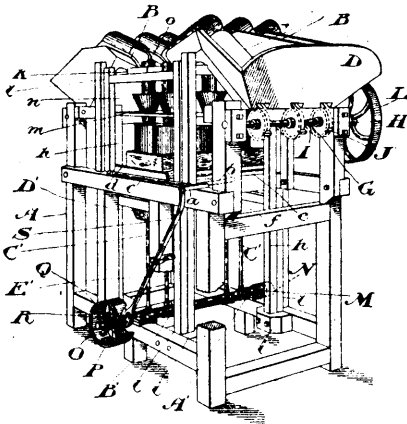
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The British Motor Syndicate, 40 Holborn Viaduct, London, assignee of Clovis Pierre Francis Clerc, and Adolphe Georges Pingault, Paris, France, 18th May, 1899; 6 years. (Filed 27th February, 1897.)

*Claim.*—1st. A type of electro-motor either bi-polar or multi-polar having a single or double armature such armature as well as the commutator or commutators being capable of being mounted directly upon the hub of the driving wheel or wheels of a velocipede or auto-car, the field-magnets being rigidly fixed upon or around the axle of the said wheel or wheels. 2nd. An electro-motor either bi-polar or multi-polar having its armature mounted upon the hub between the two

sets of spokes of a driving wheel of a velocipede or autocar and in which the field magnets are rigidly fixed upon or around the axle of this wheel outside the spokes. 3rd. An electro-motor having a double armature the two parts of which together with their commutators are mounted respectively upon one side or upon each side of the driving wheel or wheels of a velocipede or autocar and in which the field-magnets are rigidly fixed upon or around the axle of the said wheel or wheels. 4th. The combination of the positive plate and the folded insulating sheet containing the same, so as to insure insulation of the positive plate from the adjacent negative plate, substantially as specified. 5th. The combination of the positive plates and the folded insulating sheets containing the same, the insulating sheets being suitably perforated so as to prevent pastelles or particles of the active mass which may become detached from the positive electrodes from coming in contact with the negative plates, and the distance pieces separating the insulating sheets from the negative plates, substantially as specified. 6th. The combination of a containing box, and battery plates of the same height as the interior of the box, and so cut at their upper part that plates of the same pole may be connected in the interior of the box, an internal connecting bar, substantially as specified. 7th. The combination of a containing box, and a close fitting casing therefor, a sheet of rubber of the same dimension as the interior of the casing and overlying the box, the screwed rods and tightening nuts causing the cover and the rubber sheet to be pressed against the edges of the boxes, substantially as specified. 8th. The casing *m*, fixed to the tube *q* by means of the flat metal bars or clips *r* and *t*, and connecting bolts *s*, the plate *r* being secured to the tube *q*, in combination with the guide brackets *u*, for the bolts *s*, to prevent sliding of the accumulator along the tube, substantially as specified. 9th. The charging of the accumulator by using negative plates of lead, drawing-off the liquid of each element, and substituting zinc plates for the negative plates of lead, then refilling the boxes with acidulated liquid so as to discharge the battery, substantially as specified.

**No. 63,090. Machine for Filling Cans with Fruit.**  
(*Machine à mettre les fruits en boîtes.*)



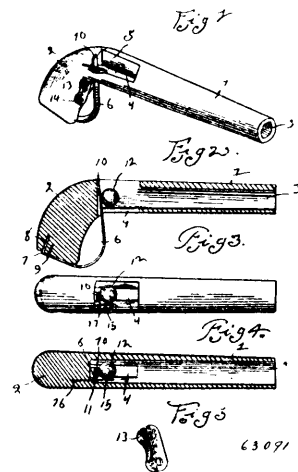
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James Thomas Kearns and The Delhi Fruit and Vegetable Canning Company, all of Delhi, Ontario, Canada, 18th May, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. In a machine for filling cans with fruit, a feeding trough or hopper having its bottom shaped to form an upward slope from the reservoir end, and a downward slope to the discharge end, in combination with a suitably driven chain conveyor adapted to run in the bottom of the trough, substantially as and for the purpose specified. 2nd. In a machine for filling cans with fruit, a feeding trough or hopper having its bottom shaped to form an upward slope from the reservoir end, and a downward slope to the discharge end, in combination with a suitably driven chain conveyor adapted to run in the bottom of the trough, a platform for cans adapted to slide vertically in the frame of the machine, and means for vibrating the said platform, substantially as and for the purpose specified. 3rd. In a machine for filling cans with fruit, a feeding trough or hopper having its bottom shaped to form an upward slope from the reservoir end, and a downward slope to the discharge end, in combination with a suitably driven chain conveyor adapted to run in the bottom of the trough, a platform for cans adapted to slide vertically in the frame of the machine, means for vibrating the said platform, and a funnel supported below the discharge end or the trough, substantially as specified. 4th. In a machine for filling cans with fruit, a feeding trough or hopper having its bottom shaped to form an upward slope from the reservoir end, and a downward slope to the discharge end, in combination with a suitably driven chain conveyor adapted to run in the bottom of the trough, a platform for cans adapted to slide vertically in the frame of the machine, means for vibrating the said platform, and a funnel located below the dis-

charge end of the trough, and so supported as to move with the platform, substantially as and for the purpose specified. 5th. In a machine for filling cans with fruit, a feeding trough or hopper having its bottom shaped to form an upward slope from the reservoir end, and a downward slope to the discharge end, in combination with a suitably driven chain conveyor adapted to run in the bottom of the trough, a platform for cans adapted to slide vertically in the frame of the machine, means for vibrating the said platform, a funnel located below the discharge end of the trough and so supported as to move with the platform, a frame adapted to slide vertically in the frame of the machine, guide secured to the said frame and extending down through the funnel, and means for vibrating the said frame to cause the guide to reciprocate vertically within the funnel, substantially as and for the purpose specified. 6th. In a machine for filling cans with fruit, a V-shaped feeding trough or hopper closed at the reservoir end and having its bottom shaped to form an upward slope from the reservoir end and a downward slope to the discharge end, in combination with a suitably driven chain conveyor adapted to run in the bottom of the trough and passing through an opening in the closed end, and a flap hinged upon the inside of the end and extending down over the opening so that it will be moved by the conveyors upon the chain, substantially as and for the purpose specified. 7th. In a machine for filling cans with fruit, a feeding trough or hopper arranged to hold fruit and discharge it from its discharge end, in a combination with a platform for cans adapted to slide vertically in the frame of the machine, and means for vibrating the said platform, substantially as and for the purpose specified. 8th. In a machine for filling cans with fruit, a feeding trough or hopper arranged to hold fruit and discharge it from its discharge end, in combination with a platform for cans adapted to slide vertically in the frame of the machine, means for vibrating the said platform, and a funnel located below the discharge end of the trough and so supported as to move with the platform, substantially as and for the purpose specified. 9th. In a machine for filling cans with fruit, a feeding trough or hopper arranged to hold fruit and discharge it from its discharge end, in combination with a platform for cans adapted to slide vertically in the frame of the machine, means for vibrating the said platform, a funnel located below the discharge end of the trough and so supported as to move with the platform, a frame adapted to slide vertically in the frame of the machine, a guide secured to the said frame and extending down through the funnel, and means for vibrating the said frame to cause the guide to reciprocate vertically within the funnel, substantially as and for the purpose specified. 10th. In a machine for filling cans with fruit, a platform for cans, in combination with a flap hinged upon the frame of the machine in front of one edge of the platform, a driving shaft, a pulley loose upon the shaft, clutch mechanism for making a driving connection between the shaft and the pulley, and and clutch shifting mechanism connecting the clutch mechanism and the aforesaid flap so that when the flap is raised the machine is in clutch, and when the flap is dropped the machine is out of clutch, substantially as and for the purpose specified.

**No. 63,091. Toy Gun. (Fusil jouet.)**

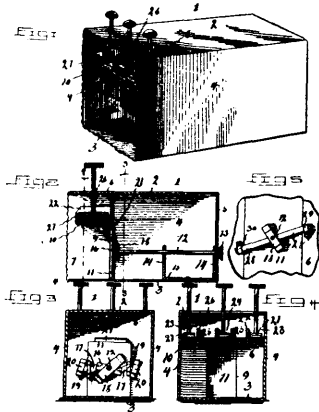


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William H. Holloway, Brazil, Indiana, U.S.A., 19th May, 1899; 6 years. (Filed 22nd April, 1899.)

*Claim.*—A toy gun comprising the integral barrel 1, and stock 2, formed with the orifice 5, guide-slot 4, and notch 11, and the retaining-spring 15, fixed in said stock and having its free end projecting into the breech-chamber, in combination with the spring 6, fixed to the butt of said stock, and having its free end extending through said guide-slot, and the trigger 13 pivoted to said stock and having its free end projecting across the path of the free end of the spring 6, substantially as shown and described.

No. 63,092. Toy Bank. (Banque jouet.)

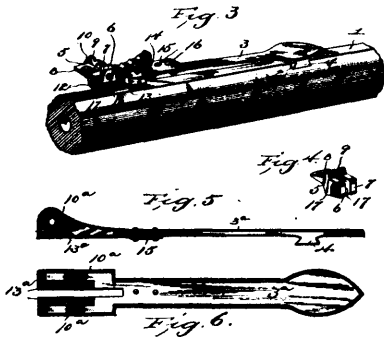


63092

Harmann R. Wilken, Sterling, Illinois, U.S.A., 19th May, 1899; 6 years. (Filed 22nd March, 1899.)

*Claim.*—1st. A device of the class described, comprising a casing provided at its front with a door-opening, an interiorly-arranged door covering the door-opening and adapted to move inward or backward away from the front of the casing to open it, locking mechanism for securing the door in its closed position, and an operating-rod extending through the back of the casing and carrying both the door and the locking mechanism, said rod being capable of longitudinal reciprocation to carry the door backward and forward to open and close it, and being also capable of operating the locking mechanism to fasten and unfasten the door, substantially as described. 2nd. A device of the class described, the combination of a casing having a transverse partition located at one end of the casing and dividing the same into a closed compartment, and an open end compartment, a horizontal partition arranged within the open end compartment, a series of vertical partitions mounted on the horizontal partition and dividing the same into a series of separate compartments, the latter being adapted to receive ink-pads and blocks of paper, and stamps having stems extending through the top of the casing and provided with heads or handles, substantially as described. 3rd. A device of the class described, comprising a casing having a transverse partition located near one end of the casing and dividing the same into a closed compartment and an open end compartment, said casing being provided at its top with a transverse slot, a horizontal partition arranged within the open end compartment, a series of vertical partitions mounted on the horizontal partition, dividing the space above the same into separate compartments and terminating short of the top of the casing, and stamps having stems arranged in said slots and adapted to be operated from the exterior and to be moved over the upper edges of the vertical partitions, substantially as described.

No. 63,093. Sight for Fire-Arms. (Mire de fusil.)



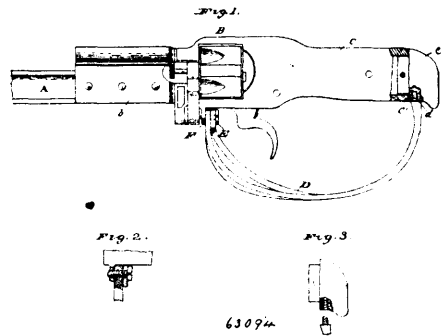
63093

Charles John Stenman, Mararoneck, New York, U.S.A., 19th May, 1899; 6 years. (Filed 10th March, 1899.)

*Claim.*—1st. A sight for fire-arms having a yielding blade, provided with means for attachment to a gun barrel, a tumbler, pivotally mounted upon said blade, and having angularly-disposed ears provided with sights, means carried by the blade for engaging the tumbler, and an adjustable notched wedge for varying the elevation or the tumbler-carrying extremity of the blade, substantially as specified. 2nd. A sight for fire-arms having a yielding blade pro-

vided with means for attachment to a gun barrel, a tumbler pivotally mounted upon said blade and having angularly-disposed ears provided with open and peep sights, spring tongues carried by the blade for engaging stop-shoulders on the tumbler, and an adjustable notched wedge for varying the elevation of the tumbler-carrying extremity of the blade, substantially as specified. 3rd. A sight for fire-arms having a blade provided with means for attachment to a gun barrel, a plate carried by said blade and having spaced ears, a tumbler pivotally mounted between said ears and having angularly disposed extensions provided with open and peep sights, and also provided with a plurality of stop-shoulders, the blade being extended to form spring tongues arranged in operative relation with said stop-shoulders, to maintain the tumbler, in either of its adjusted positions, and means for adjusting the tumbler-carrying end of the blade, substantially as specified. 5th. A sight for fire-arms having a blade provided with means for attachment to a gun barrel, a bifurcated tumbler carried by the blade at its free end and having a transversely-disposed pivot-pin, said tumbler having ears provided respectively with open and peep sights, means for maintaining the tumbler in either of its adjusted positions, and a notched wedge arranged in the plane of the bifurcation of the tumbler with its seats in operative relation with said transverse pin, substantially as specified.

No. 63,094. Pistol Sword. (Sabre-pistolet.)

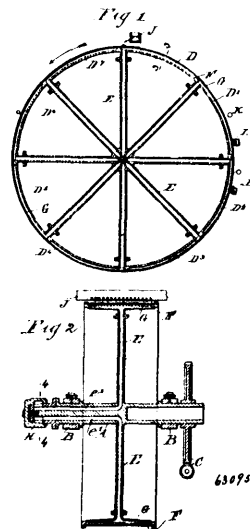


63094

Bernardo Reyes, Monterey, Nuevo Leon, Mexico, 19th May, 1899; 6 years. (Filed 11th March, 1899.)

*Claim.*—1st. In combination with a pistol and its operating mechanism, a sword blade secured to the barrel of said pistol, a hilt for said sword blade forming the pistol grip, said operating mechanism within said hilt and a removable guard attached to said hilt, substantially as described. 2nd. In combination with a pistol and its operating mechanism, a sword blade secured to said pistol, a hilt for said sword blade forming the grip of the pistol, said operating mechanism within said hilt, a guard removably attached at its upper end to the upper end of said hilt and extending beyond and inclosing said operating mechanism, and a bolt removably securing the lower end of said guard to said hilt, substantially as described.

No. 63,095. Ore Separating Filter. (Filtre pour séparer l'or.)



63095

Askin Morrison Nicholas, Bulong, Western Australia, 19th May 1899; 6 years. (Filed 15th November, 1898.)



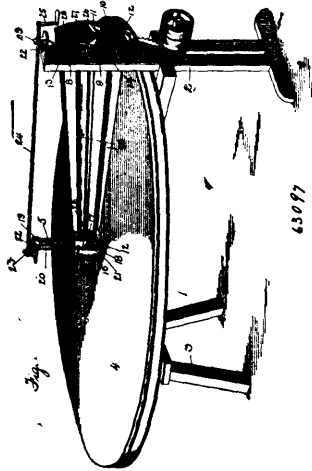
*Claim.*—1st. A rotating filtering apparatus consisting of a revolving wheel drum, disc, or table, having chambers or compartments covered with a filtering material (such as cloth supported upon a metal screen or perforated plate) and adapted to be automatically and alternately placed in and out of communication with a suction pump, substantially as and for the purpose set forth. 2nd. In a rotating filtering apparatus, a revolving wheel drum, disc, or table having compartments covered with filtering material (such as cloth supported upon a metal screen or perforated plate) each such compartment communicating with a passage or port (such as *e*<sup>1</sup>) in the shaft of said wheel drum disc or table in combination with a valve (such as *H*) whereby one or more of said compartments may be placed in communication with a suction pump as and for the purpose specified.

**No. 63,096. Artificial Fuel.** (*Combustible artificiel.*)

John D. Oigny, St. Henri, and Edouard Vermette, St. Ephrem de Tring, both of Quebec, Canada, 19th May, 1899; 6 years; (Filed 18th October, 1898.)

*Claim.*—1st. An artificial fuel, comprising sawdust impregnated with a composition of black oil (residuum of petroleum) paraffine wax, slackened lime, and salt, substantially as herein set forth. 2nd. An artificial fuel, comprising sawdust impregnated with a composition of the following proportions, 15 gallons of black oil (residuum of petroleum, 35 pounds of paraffine wax, 15 pounds of slackened lime and 10 pounds of salt, said composition being proportioned to co-act with 1,800 pounds of the sawdust, said fuel being formed in the manner herein shown and described.

**No. 63,097. Butter Press.** (*Presse à beurre.*)



Joseph Arthur Vaillancourt, Montreal, Quebec, Canada, 19th May, 1899; 6 years. (Filed 23rd February, 1899.)

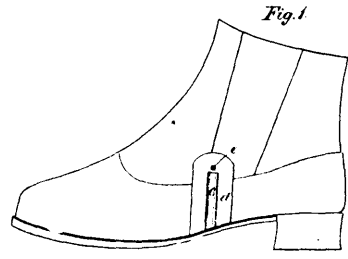
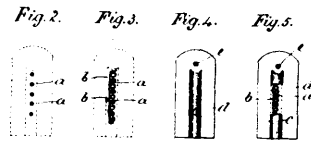
*Claim.*—1st. A butter press, comprising a funnel-shaped table rotatively mounted on a framework, a series of rolls mounted side by side in said framework above said table, said series having a rotary movement imparted by the driving power, and also having an independent movement rotatively for each of said series of rolls, and means for imparting a rotary movement to said series, substantially as described. 2nd. A butter press, comprising a framework, a funnel-shaped table rotatively mounted thereon, means for imparting a rotary movement to said table, a series of independently movable rolls mounted side by side in said framework, said series having a fixed rotary movement, means for adjusting the position of said rolls relative to said table, and means for imparting a fixed rotary movement to said rolls, substantially as described. 3rd. A butter press, comprising a framework, a funnel-shaped table pivotally mounted thereon means for imparting a pivotal movement to said table, a series of independently movable rolls mounted side by side in said framework, said series of rolls having a fixed rotary movement, means for imparting a rotary movement to said series of rolls, and means for adjusting the position of said series of rolls relative to the table, said adjustment being simultaneous at both ends of said rolls, substantially as described.

**No. 63,098. Ventilation of Boots, Shoes, or Rubbers.** (*Ventilation de chaussures, etc.*)

Charles Aubert Carrée, Toronto, Ontario, Canada, 19th May, 1899; 6 years. (Filed 5th June, 1897.)

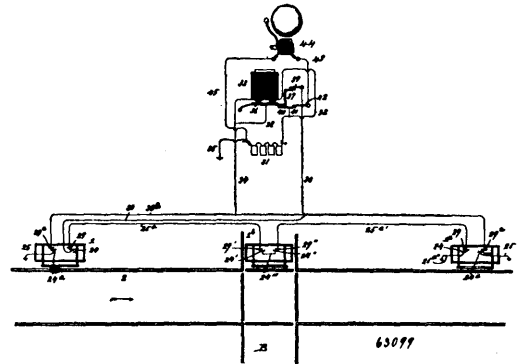
*Claim.*—1st. A ventilating tube for the purpose of ventilating boots comprising a coiled wire spring and cover with vent hole in connection with a perforated boot upper, for the purpose specified.

2nd. A flute-shaped tube comprising a coiled wire spring with cover and vent hole, in connection with a perforated boot upper, for the



purpose of boot ventilation, as hereinbefore specified. 3rd. A flexible tube consisting of a coiled wire spring and cover having a vent hole in connection with a perforated boot upper, for the purpose of boot ventilation as specified.

**No. 63,099. Electric Signal.** (*Signal électrique.*)

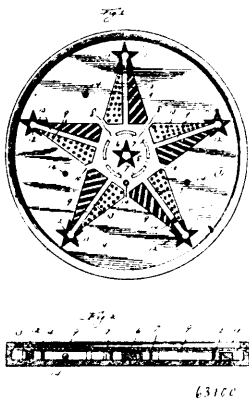


Freeman Ellis Nipps, William Esta Brubaker, and Lynn Green Beal, of Topeka, assignees of Carlos Charles French, Silver Lake, all of Kansas, U.S.A., 22nd May, 1899; 6 years. (Filed 28th July, 1898.)

*Claim.*—1st. In an electric signal system, a depressible lever or bar having a double-incline tread-surface arranged adjacent to the tread of the track-rail, rock shafts suitably journaled and provided with crank arms pivotally connected to the depressible bar, and means to hold said bar normally elevated with both tread surfaces intersecting the tread surface of the rail, substantially as described. 2nd. In an electric signal system, a depressible lever or bar having a double-incline tread-surface arranged adjacent to the tread of a track rail, rock shafts suitably journaled and provided with crank arms pivotally connected to the depressible bar, a pair of air pumps or cylinders, contacts mounted upon their piston stems, a second pair of contacts, circuit wires connected to said contacts, arms upon said shafts for moving one piston or the other, according to the direction of movement of the train, so as to make or break connection between certain of said contacts, and means to retard the return movement of said piston, substantially as described. 3rd. An electric signal system, comprising a rock shaft provided with an upwardly and inwardly projecting crank arm, a depressible bar parallel with the track rail and pivoted to said crank arm, an air pump or cylinder provided with a pet-cock, and a valved piston having its piston-rod provided with a contact, a second contact, circuit wires connected to said contacts, an arm rotatably mounted upon the rock shaft and moved outwardly therewith by the depression of the depressible bar, said arm being pivotally connected to the piston-rod, means to re-elevate the depressible bar and to return the rock shaft to its original position without affecting the position of the rotatable arm thereon, and means to slowly return the piston and said rotatable arm to their initial position, substantially as described. An electric signal system, comprising a rock shaft, provided with an upwardly and inwardly projecting crank-arm, a depressible bar

parallel with a track-rail and pivoted to said crank arm, an air pump or cylinder provided with a pet-cock, and a valved piston having its piston-rod provided with a contact, a second contact, circuit wires connected to said contacts, an arm rotatably mounted upon the rock shaft and moved outwardly therewith by the depression of the depressible bar said arm being pivotally connected to the piston-rod, means to re-elevate the depressible bar and to return the rock shaft to its original position without affecting the position of the rotatable arm thereof, and a spring to slowly return the piston and said rotatable arm to their original positions, substantially as described. 5th. An electric signal mechanism, comprising a suitable box or casing, secured to a track rail, a pair of rock shafts journaled therein and provided with crank arms projecting normally inward and upward, a depressible lever or bar having a double incline tread surface arranged adjacent to the tread of the rail and pivotally linking said crank-arms, a pair of pumps or cylinders in said box or casing and provided at their inner ends with pet-cocks, valved pistons in said pumps, and having contacts upon their piston rods, a second pair of contacts in said box, circuit wires connected electrically to said contacts, arms rotatably mounted upon said rock-shafts, and provided with slots and pivotally connected to the piston rods, pins projecting from said shafts through and at the inner ends of said slots to compel one or the other of said arms to move outwardly, accordingly as one rock-shaft or the other is operated by the depression of the depressible bar, means to return said shaft and the depressible bar to their original positions, a spring to return its respective piston and slotted arm to their initial positions after the shaft upon which said arm is mounted is returned to its initial position, substantially as described. 6th. In an electric signal mechanism, the combination of a triple set of circuit-making and breaking mechanisms, one located at the railway crossing and the other at each side thereof, said mechanisms each comprising a depressible lever or bar having a double-incline tread-surface adjacent to the track-rail, rock-shafts suitably journaled and provided with crank-arms pivotally connected to the depressible bar, a slotted arm rotatably mounted on each rock-shaft, and pins projecting from the shafts through said slots, a pair of air-pumps having their piston-rods connected to said rotatable arms, a spring to re-elevate the depressible bar, springs to return the pistons and rotatable arms to their original positions, contacts 24<sup>1</sup>, 24<sup>11</sup> on the piston-stems of the middle circuit-making and breaking mechanisms, a wire 24<sup>111</sup> connecting said contacts, contacts 24, 24<sup>a</sup> on the piston-stems of the other side of the circuit-making and breaking mechanisms, wires 25, grounding contacts 24<sup>a</sup>, a wire-grounding contact 24 of one of the side-mechanisms, stationary contacts 29<sup>1</sup>, 29<sup>11</sup> of the middle mechanism, stationary contacts 29, 29<sup>a</sup> of the slide mechanisms, a wire 30<sup>a</sup> connecting the contacts 29<sup>a</sup> together, wires 25<sup>a</sup>, 25<sup>a1</sup>, connecting the contacts 29<sup>1</sup> and 29<sup>11</sup> to the contacts 29 and 29<sup>a</sup>, respectively, of the side-mechanisms, a wire 30 in circuit with the contacts 24, a contact 39 connected to wire 30, a grounded battery, contacts 40 and 42, the former electrically connected to the battery, an electro-magnet electrically connected to wire 30<sup>a</sup> and to the battery, a branch-wire 34 in circuit with said wire 30<sup>a</sup> and with the magnet, source of electric supply and the ground, the armature electrically connected to the magnet and wire 30<sup>a</sup> and carrying contact 40, and an electro-magnetic bell connected to the ground wire of the battery and to the contact 42, substantially as described.

**No. 63,100. Puzzle. (Jeu de patience.)**



James Lafayette Horton, Malvern, Arkansas, U.S.A., 22nd May, 1899; 6 years. (Filed 9th February, 1899.)

*Claim.*—1st. A game or puzzle, comprising a suitable casing, a transparent cover for said casing, a star located upon the surface of and at the centre of said casing, segmental ribs or flanges directly opposite the points of said star, triangular blocks located directly in front of said segmental ribs or flanges and constructed with passageways extending their entire length, blocks in the form of stars located at the points of said triangular blocks and constructed with

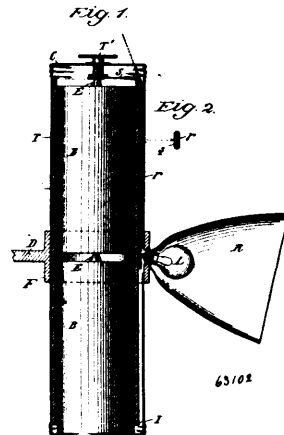
recesses in their centres communicating with the longitudinal passageways and a series of spherical bodies adapted to traverse the passageways and be located in the recesses, substantially as specified. 2nd. In a game or puzzle, blocks in the form of a five-pointed star so located as that a space is formed between said blocks, a star located within said space and surrounded by a series of segmental flanges or ribs, a series of blocks in the form of stars located at the points of the first-mentioned blocks and constructed with recesses in their centres that communicate with passageways formed in the first-mentioned blocks, and a series of spherical bodies adapted to pass through the spaces, traverse the longitudinal passageways and be located in the recesses, substantially as specified. 3rd. A game or puzzle, comprising a suitable casing, a transparent cover for said casing, a star located upon the surface of and in the centre of said casing, a series of segmental flanges or ribs surrounding said centre star, a series of blocks constructed with longitudinal passageways extending outwardly from the ribs or flanges in the form of a five-pointed star, blocks in the form of five-pointed stars located on the ends of said first-mentioned blocks and provided with recesses in their centres that communicate with the longitudinal passageways, said last-mentioned blocks being differently coloured or indicated, and a series of differentially-coloured spherical bodies that are adapted to be located in the recesses in said differentially-coloured blocks, substantially as specified.

**No. 63,101. Cellulose Esters. (Ether de cellulose composée.)**

Isidor Frankenburg, assignee of Carl Otto Weber and Charles Frederick Cross, the former of Greengate, Salford, Lancaster, and the latter of 4 New Court, Lincoln Inn, London, England, 22nd May, 1899; 6 years. (Filed 29th November, 1898.)

*Claim.*—1st. The herein described manufacture of cellulose esters by mixing structureless cellulose with the zinc or magnesium salt of any of the higher fatty acids or aromatically substituted fatty acids and treating this mixture with the acyl chlorides and anhydrides of any of these acids. 2nd. Cellulose esters compounded of structureless cellulose and zinc or magnesium salt of any of the higher fatty acids or aromatically substituted fatty acids as set forth.

**No. 63,102. Electric Lamp. (Lampe électrique.)**

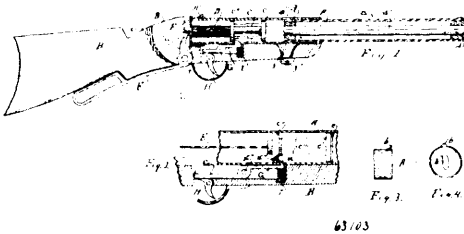


Owen Thomas Bugg and David Henry Darling, both of New York City, New York, U.S.A., 22nd May, 1899; 6 years. (Filed 9th August, 1898.)

*Claim.*—1st. A portable electric lamp having a single tubular conducting casing and an insulating lining therefor, in combination with one or more battery cells electrically connected with the casing at its lower end and one terminal of an electric lamp carried also by the casing, together with an electrical conductor connecting the upper pole of the battery with the remaining terminal of the lamp, substantially as described. 2nd. A portable electric lamp, consisting of a single tubular conducting casing provided with removable conducting caps at its opposite ends, said conducting casing having an insulating lining, one or more battery cells, one electrode of which makes electrical contact with the lower or bottom removable conducting-cap, while the other electrode thereof is connected with a conductor insulated from the exterior casing and the upper conducting-cap, in combination with an electric lamp, one terminal of which is connected directly to said conductor and the other to the conducting casing, substantially as described. 3rd. A portable electric lamp, consisting of a conducting or metal casing provided with removable conducting-caps at its opposite ends, a tubular insulating lining and one or more inclosed battery-cells, one electrode of which is connected to the lower removable conducting-cap, in combination with an insulated conductor located between the casing and the interior lining, together with an electric lamp one terminal of which is connected directly to the casing and the other adapted to be connected with said conductor and a switch for connecting the

before-mentioned conductor to the remaining electrode of the battery, substantially as described. 4th. A portable electric lamp, consisting of a single conducting casing carrying an electric lamp, one terminal of interior non-conducting lining and one or more battery-cells, one electrode of which is connected to the conducting casing, together with an insulated conductor adapted to be connected to the remaining terminal of the lamp, and a thumb-knob or switch adapted to cause the free end of said conductor to bear against the remaining terminal of the lamp, substantially as described. 5th. A portable electric lamp, consisting of a tubular conducting casing T, provided at its opposite ends with removable caps C, C, an insulating tubular lining I enclosing one or more battery-coils, one electrode of which is in electrical contact with the casing, an electric lamp secured to and in electrical contact with the conducting casing, an insulated conductor located between the casing and the insulating lining and adapted to connect with the remaining terminal of the lamp, the free end of said conductor being bent over the insulating lining and held in contact with the remaining electrode of the battery by a thumb-screw T' carried by the upper removable cap C, substantially as described.

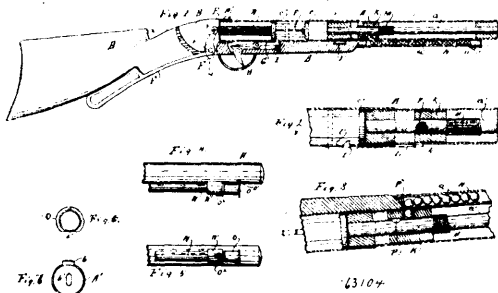
**No. 63,103. Toy Gun. (Fusil jouet.)**



William Henry Calkins, Charles August Lindberg, and William M. Butts and Austin K. Wheeler, all of Grand Rapids, Michigan, U.S.A., 22nd May, 1899; 6 years. (Filed 1st May, 1899.)

*Claim.*—1st. In a spring actuated air gun, a stock, barrel piston, and lever, an actuating rod slidably attached to the piston and flexibly attached to the lever, a single screw and stud for assembling the parts, an actuating spring arranged to give a longitudinal and a slightly rotary motion to the piston, a cap upon the breech of the barrel having a slot for the passage of the piston-rod, and a strip cut and turned from one side of the cap for a sight, substantially as and for the purpose set forth. 2nd. The combination, with a barrel, stock, and actuating mechanism of a spring air gun, of a detachable cap having a slot for the passage of the actuating rod, and a slight cut and formed from the top of the cap, substantially as and for the purpose set forth.

**No. 63,104. Toy Gun. (Fusil jouet.)**

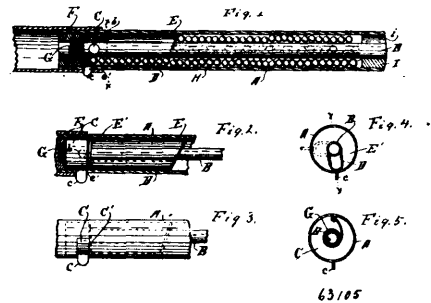


William Henry Calkins, and Charles Augustus Lindberg, and of William M. Butts and Austin K. Wheeler, all of Grand Rapids, Michigan, U.S.A., 22nd May, 1899; 6 years. (Filed 1st May, 1899.)

*Claim.*—1st. The combination with a stock, barrel and actuating mechanism of a spring actuated air gun, of a piston having two heads, connected by bars, a rod slidably secured in the back head and connecting it with the actuating lever, a magazine secured beneath the barrel and having an aperture through one side in position to register with a corresponding aperture in the outer tube of the barrel, the inner tube of the barrel provided with a like aperture for the passage of the projectile, a transfer block slidably secured around the inner tube, within the outer tube and covering the aperture in the inner tube and having a port to register with the aperture in the outer tube when in its normal position, an arm projecting therefrom, and a spring catch projecting back from said arm to engage the head of the piston to draw the block back so that its port will register with the

aperture in the inner tube and close the aperture in the outer tube, substantially as and for the purpose set forth. 2nd. The combination with the barrel, stock and actuating mechanism of a spring actuated air gun, of a magazine beneath the barrel and having an aperture to register with a corresponding aperture in the outer tube of the barrel, a sliding block within the outer tube having a port to register, when in its normal position, with the aperture through the outer tube, a spring to hold said block to its normal position, an inner tube having an aperture that is covered by said block when in normal position, and is open to the port when the block is thrown back to proper position therefor, a spring catch to engage the piston to actuate the block, substantially as stated. 3rd. The combination in a spring actuated air gun, of the barrel, stock and actuating mechanism, a detachable magazine beneath the barrel, a cap on the end of said magazine, a projecting rim on said cap with one side cut away, said rim adapted to engage a notch in the barrel to hold the magazine in place, said magazine having an aperture to register with a port in the sliding transfer block, said block arranged to have its port register alternately with the aperture in the magazine and an aperture in the inner tube of the barrel, a spring for holding said block to normal position, and a catch to engage the position to draw the block to position to cause its port to register with an opening in the inner tube of the barrel, substantially as and for the purpose set forth.

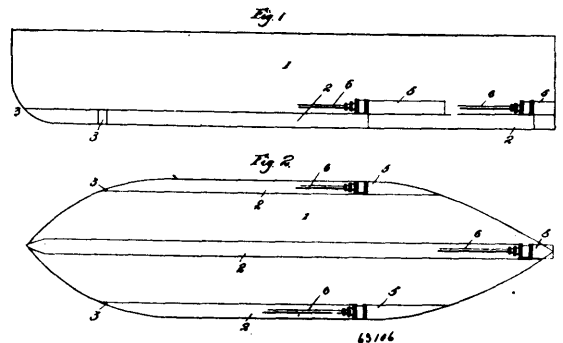
**No. 63,105. Toy Gun. (Fusil jouet.)**



William Henry Calkins, Charles August Lindberg, William M. Butts and Austin K. Wheeler, all of Grand Rapids, Michigan, U.S.A., 22nd May, 1899; 6 years. (Filed 1st May, 1899.)

*Claim.*—1st. In combination with the outer and inner tubes of a toy gun, a plug in the muzzle having an aperture for the introduction of shot, a guiding wall to conduct the shot to a conductor tube, a conductor tube, a revoluble transfer block around the inner tube to convey the shot from the conductor tube to the inner tube, a spring for actuating said transfer block, and the inner tube provided with a port for the reception of shot from the transfer block, as set forth. 2nd. In combination with the outer and inner tubes of a toy gun, the outer tube provided with an aperture for the introduction of shot, a conducting wall at the back end of the inner tube, a transfer block having a port opening into the space between the outer and inner tubes, said block revoluble around the inner tube, a thumb piece on said block arranged to work in a slot in the outer tube to carry the block around until the port registers with a corresponding opening in the inner tube, and a spring to carry said block back to its normal position, substantially as and for the purpose set forth.

**No. 63,106. Boat Propelling Mechanism. (Propulsion de vaisseaux.)**

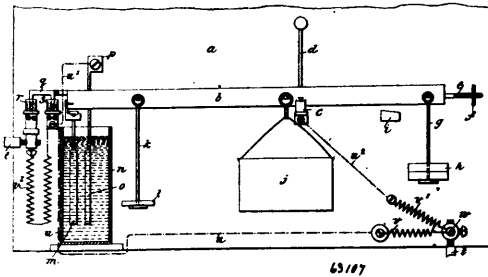


Paul Robins Trethewey, Muskoka Falls, Ontario, Canada, 22nd May, 1899; 6 years. (Filed 30th January, 1899.)

*Claim.*—The combination with a boat having a channel extending from the front to the rear thereof, a portion of said channel being

of smaller diameter than the remainder, a vertical offset connecting the smaller and the larger portions of said channel, of a propeller operatively mounted in the smaller portion of said channel adjacent to the said vertical offset, and means for rotating said propeller, whereby the water is forced rearwardly through said channel for propelling the boat, substantially as described.

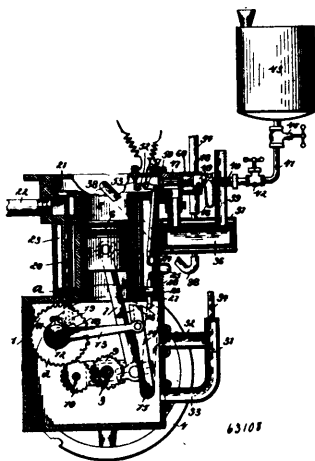
**No. 63,107. Electric Meter. (Mètre électrique.)**



Francis M. Long and Ernest Schatter, both of Norwich, England, 22nd May, 1899; 6 years. (Filed 24th January, 1899.)

*Claim.*—1st. In a prepayment electric meter and in combination, a lever, a circuit, a contact making device in the same operated by the lever, means controlled by a coin for moving the lever and making the contact, a voltmeter, the passage of the current through which will raise the lever and break the contact, and means connecting the voltmeter and the lever, substantially as described. 2nd. In a prepayment electric meter and in combination, a pivoted weighted lever, a circuit, a contact making device in the same operated by the lever, means controlled by a coin for moving the lever and making the contact, a voltmeter, and an electrode of the same carried by the lever and which electrode the passage of the current will alter the weight of, and so allow the lever to be raised and break the circuit, substantially as described. 3rd. In a prepayment electric meter and in combination, a balanced lever, a voltmeter, an electrode of same carried by said lever, a circuit, a contact maker in the same carried by the lever, a receptacle for coins on the lever, and a compensating device also on the lever to balance the coins removed, substantially as described. 4th. In a prepayment electric meter and in combination, a pivoted lever, means for controlling the balance of same on one side of the pivot point, a coin receptacle on the other side, a compensating device for the coins removed, on the same side as the coin receptacle, a voltmeter, an electrode of same suspended to the lever, the weight of which is altered by the passage of the current so that the balance of the lever is disturbed and an insulated contact maker carried by the lever, substantially as described.

**No. 63,108. Explosive Engine. (Machine explosive.)**



Alexander Winton, Cleveland, Ohio, U.S.A., 22nd May, 1899; 6 years. (Filed 11th March, 1898.)

*Claim.*—1st. An explosive engine having an oil-tight box, actuating mechanism situated therein, and an escape for the gases comprising a plurality of communications with said chamber, one practically above and the other practically below the oil level of the chamber, the upper communication opening to the atmosphere, substantially as described. 2nd. An explosive engine having an oil tight chamber containing oil, actuating mechanism situated within

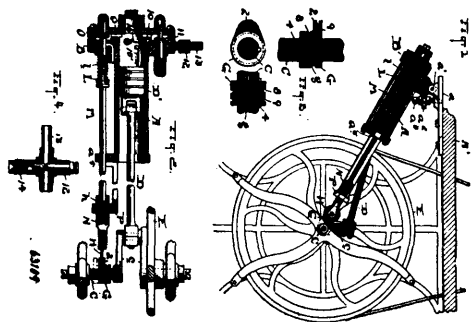
said chamber, and an escape for said chamber comprising an essentially U-shaped piped having one end in communication with the chamber practically above and the other below the oil level of said chamber, and an escape for said communication above the oil level, substantially as described. 3rd. An explosive engine comprising an oil tight chamber, a driving mechanism situated therein, an igniter, an elongated opening in the wall of said chamber, an igniter actuating member passing through said opening and having an up-and-down horizontal reciprocating movement in said opening, a plate covering said opening and through which said actuating member reciprocates vertically, and means for holding the plate against vertical movement but permitting a horizontal movement thereof, substantially as described. 4th. A sparker comprising the electrodes one movable in relation to the other, an endwise moving rod connected with said sparker and having an intermediate spring portion, an actuating member for moving the rod longitudinally in one direction and a spring for moving the rod in the opposite direction the parts combined, for the purpose described. 5th. A sparker comprising relatively movable electrodes, an actuating member movable at one end in two directions, and an operating member therefor having vertical and horizontal cam surfaces which move the actuating member in its two directions, substantially as described. 6th. A sparker having an actuating member movable in two directions, and an operating-lever therefor moving across the actuating member, the lever having a curved end for moving the member in one direction, and an inclined edge for moving the member in the other direction, substantially as described. 7th. A sparker having an actuating member movable longitudinally and transversely at its free end, a reciprocating lever reciprocating transverse the free end of the member, the lever having its end formed into a cam for moving the member longitudinally, and its edge inclined for engaging and moving the free ends of the member transversely, substantially as described. 8th. A sparker having an actuating member movable transversely and longitudinally, and an operating lever therefor situated at and reciprocating transverse the ends of the member, said lever having its end provided with a grooved cam for receiving the end of the member and moving it longitudinally and its edge inclined for moving it transversely, substantially as described. 9th. In an explosive engine, the combination of a sparker, an operating lever for said member pivoted at one end and having its free end engaging the said member, a drive-shaft, and a connection having one end operatively connected with the drive-shaft and its opposite end connected with the first-mentioned lever intermediate its ends, substantially as described. 10th. In an explosive engine, the combination of a drive-shaft, a sparker and exhaust-valve, a rotating member driven by the drive-shaft, a valve cam and a sparker cam carried by and arranged in operative position upon said rotating member, for the purpose described. 11th. In an explosive engine, the combination of a drive-shaft, a sparker, an exhaust-valve, a gear operatively connected with the drive-shaft, a lever pivoted at one end and having its free end operating the said sparker, a pitman having one end driven by the said gear and its opposite end connected with the lever, and a cam or arm operated by said gear for actuating the exhaust-valve, substantially as described. 12th. A gasoline engine comprising an explosive chamber, a gasoline inlet port, a valve therefor, an actuating member for said valve having a movement greater than the movement of the valve, and a yielding connection between the actuating member and the valve, for the purpose described. 13th. A gasoline engine comprising an explosive chamber, a gasoline or vapour exit, a valve therefor, an explosive inlet-port, a valve therefor, a yielding connection between said valves positively opening and closing the gasoline valve by the movement of the explosive inlet-port valve, substantially as described. 14th. A gasoline engine comprising an explosion-chamber, having an inlet-port valve for controlling said port, a gasoline exit opening in the same direction as the said inlet-port, and a controller for said exit carried by the valve, whereby the opening and closing of the valve opens and closes the gasoline exit, substantially as described. 15th. A gasoline engine comprising an explosion-chamber having an inlet-port, a valve controlling the same and having a projecting stem, a gasoline exit, a controller for said exit, and a U-shaped spring connection between the stem and exit controller, substantially as described. 16th. A gasoline engine comprising an explosive chamber having an inlet-port, a valve controlling said port, a carburetor situated adjacent said port and having at one end an outlet communication with said port at a point outside said valve, and the opposite end an inlet in communication with the atmosphere and extending across the line of travel of said valve, a gasoline exit within said inlet communication, a controller for said exit, and a connection between the controller and the valve, the parts operating as described.

**No. 63,109. Gas Engine. (Machine à gaz.)**

Edmund E. Allyn and Ralph G. Anderson, both of Cleveland, Ohio, U.S.A., 22nd May, 1899; 6 years. (Filed 4th November, 1898.)

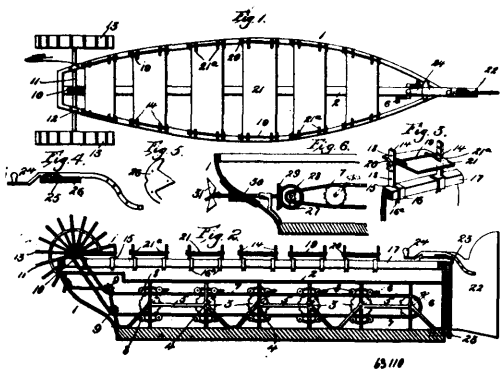
*Claim.*—1st. The shaft and the reciprocally sliding cam sleeve thereon having a cam at one side and two tracks around the sleeve intersecting at one point, and one of which passes over said cam, in combination with a rod actuated by said cam sleeve, bearings confining the rod to linear and rotary axial movements, and a disc journaled on said rod and running in the tracks of said cam sleeve,

whereby the said sleeve is reciprocated on its shaft by said rod and disc, and the rod is reciprocated axially, substantially as described.



2nd. The shaft and the cam sleeve thereon having a cam at one side and two tracks around the sleeve, one of which passes over said cam and said tracks crossing each other off the cam, in combination with an axially rotatable and axially reciprocating rod and a revolving disc journaled thereon and travelling in said tracks, and supports for said rod in which the rod is confined to axial movements, whereby the said sleeve causes the said rod to reciprocate axially in its supports, and the rod and disc cause the sleeve to reciprocate to and fro on its shaft, substantially as described. 3rd. The valve rod comprising the sections M and N, having a socket and a spring connection, and bearings for said rod constructed to prevent vibratory movements of the rod, in combination with the actuated shaft, a sliding cam sleeve on said shaft having two tracks about the same crossing each other at one point and a cam thereon traversed by one of said tracks, and a rolling disc on the valve rod running in the tracks on said cam sleeve, substantially as described. 4th. The valve rod consisting of a middle section M and end sections L and N, loosely connected, a valve seating spring on the inner sections, L, to seat the valve, and a torsional spring *h*, to rotate the head section N, and fixed bearings in which said rod is limited to axial movements, in combination with a shaft and a doubled tracked cam slidably supported thereon, and a revolving disc on the said valve rod running in the tracks of said cam and causing the cam to slide to and fro, substantially as described.

No. 63,110. Boat. (Vaisseau.)



Delphis Desorcy, St. Malo, Quebec, Canada, 22nd May, 1899; 6 years. (Filed 20th December, 1898.)

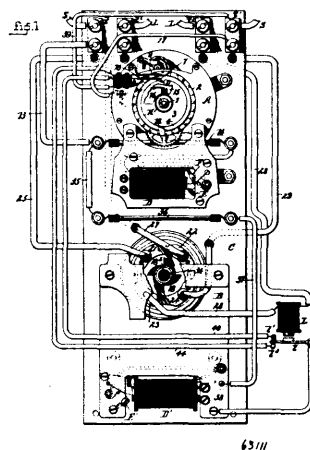
Claim.—1st. A propelling mechanism for boats, comprising a series of rotatable sprocket wheels, propelling mechanism secured to said boat, a drive chain connecting said sprockets and said propelling mechanism, and friction rolls, adapted to hold said chain in contact with said sprocket wheels, substantially as described. 2nd. The combination with a boat, of standards removably secured on opposite sides thereof, said standards being arranged in pairs, and seats removably and adjustably secured in said standards, substantially as described. 3rd. The combination with a boat having a ruder, of a notched plate secured to said boat, and a handle, secured to and adapted to operate said rudder, said handle having a spring-actuated plunger adapted to rest in said notch, substantially as described.

No. 63,111. Electric Clock. (Horloge électrique.)

The Self-Winding Clock Co., assignee of F. M. Schmidt, J. H. Gerry and W. S. Barstow, all of Brooklyn, New York, U.S.A., 22nd May, 1899; 6 years. (Filed 10th March, 1898.)

Claim.—1st. In a system of electrical distribution, the combination with a electric supply circuit and an electric consumption cir-

cuit, of a switch controlling the supply of current to the latter circuit and an electric self-winding clock energized from said supply



circuit, and controlling the operation of said switch to open and close the same. 2nd. In a system of electrical distribution, the combination with an electric supply circuit and a circuit supplied therefrom, of a switch controlling the supply of current to the latter circuit, an electric self-winding clock energized from the supply circuit, and an electrically operated secondary device also energized from the supply circuit and acting under the control of the clock to open and to close the switch. 3rd. The combination with an electric supply circuit and an electric consumption circuit supplied therefrom, of a switch controlling the supply of current to the latter circuit, an electro-magnetic device controlling the operation of said switch and a clock comprising relatively adjustable contact operating devices controlling said electro-magnetic device, to effect the opening and closing of said switch at predetermined times. 4th. The combination with an electric supply circuit and a consumption circuit supplied therefrom, a switch controlling the supply of current to the latter circuit and an electro magnetic device controlling said switch, a clock and two sets of contacts controlled thereby, and contacts controlled by the operation of said switch and connecting said electro-magnetic device alternately to the two sets of contacts controlled by the clock, according to the position of the switch. 5th. The combination with an electric circuit, and a switch controlling same, of an electro-magnetic device controlling said switch, a clock and two sets of contacts controlled thereby, and an electro magnetic device responsive to the current in the aforesaid controlled circuit and connections controlled thereby connecting one or other of the sets of contacts controlled by the clock, with the switch controlling electro-magnetic device, according to whether the controlled circuit is open or closed. 6th. The combination with a switch, of an electro magnetic device controlling the operation thereof, two circuits connected to and controlling said electro magnetic device, an electric clock with contacts controlling one of said circuits to start the operation of the switch and contacts controlled by the operation of the switch, and controlling the other circuit after such operation has been started, to maintain the operation of such electro-magnetic device. 7th. The combination of a clock, a secondary device, an electro magnetic controlling the operation of such secondary device, two sets of contacts controlled by the clock, contacts controlled by the operation of the secondary device and connections controlled by operation of the secondary device, and operating, when the said device has been set in operation, by the connection with one of the clock contacts, to remove the electro-magnetic device from the control of the said clock contact and put it in control of an auxiliary operating circuit, and on the stoppage of the secondary device under the control of the auxiliary circuit, to put the electro magnetic controlling device under the control of the other set of clock contacts.

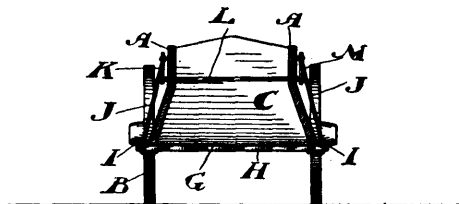
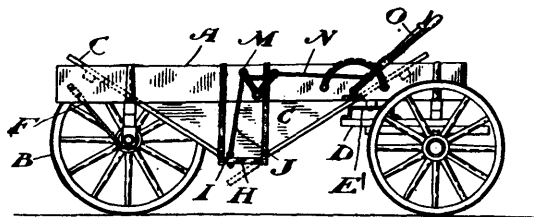
No. 63,112. Road Making Wagon.

(Wagon pour la construction des routes.)

John A Carruthers, Glenwall, Ontario, Canada, 25th May, 1899; 6 years. (Filed 16th February, 1899.)

Claim.—1st. In a wagon, a hopper extending below the bottom of the side boards and provided with a transverse opening, in combination with a hinged board adapted to close the opening, a vertical rod pivoted to the said board, a bell crank lever suitably pivoted, to one arm of which the other end of the vertical rod is pivoted, to one arm of which the other end of the vertical rod is pivoted, a hand lever and notched quadrant suitably supported, and a rod connecting the other arm of the said bell crank lever and the hand lever, substantially as and for the purpose specified. 2nd. In a wagon, a hopper extending below the bottom of the side boards, and provided

with a transverse opening in combination with a hinged board adapted to close the opening, a vertical rod pivoted to the said board

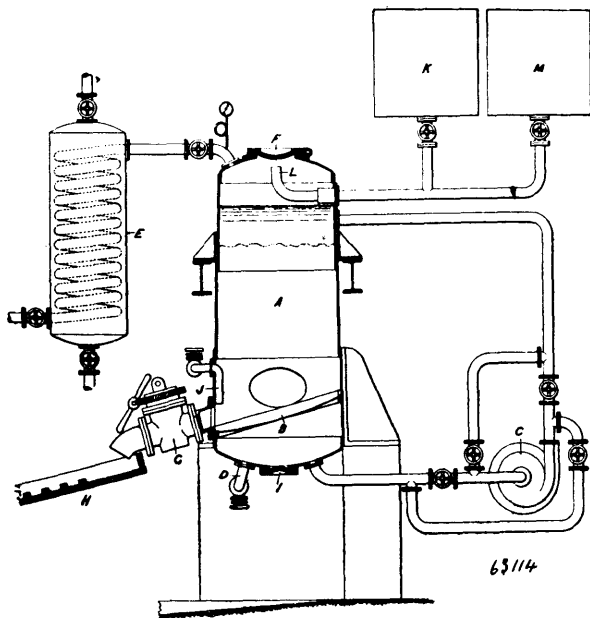


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at each end, a transverse shaft journalled on the waggon, a bell crank lever and an arm secured to opposite ends of the shaft, the vertical rods being pivoted to the said arm and to one of the arms of the bell crank lever, a hand lever and notched quadrant suitably supported, and a rod connected the other arm of the said bell crank lever and the hand lever, substantially as and for the purpose specified. 3rd. In a waggon, a hopper extending below the bottom of the side boards and provided with a transverse discharge opening, the hopper at the opening being wider than the waggon body, in combination with a hinged board adapted to close the said opening, and means for adjustably swinging the said board, substantially as and for the purpose specified. 4th. In a waggon, side boards and a hopper suitably connected thereto, in combination with running gear on which the said side boards are supported in the usual manner, a brace connecting the rear axle with each side board, and one or more braces connecting a cross bar secured to the sides, with the reach which is cut off in front of the hopper, substantially as and for the purpose specified.

**No. 63,113. Process of Treating Gold Ores.**

(Procédé pour le traitement de minerai d'or.)



63114

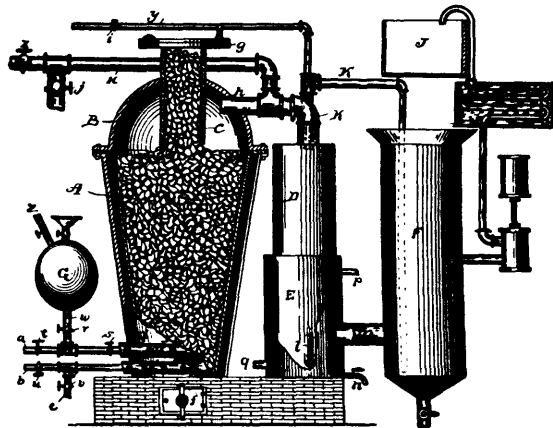
Charles Wetherwax, Best, New York, U.S.A., 25th May, 1899; 6 years. (Filed 17th June, 1898.)

Claim.—1st. In the treatment of gold ores for liberating the gold from its combination or association with other elements or com-

pounds, the process which consists in digesting the ore under steam pressure in a solution containing water-glass (sodium or potassium silicate) as specified. 2nd. The process of treating gold ores which consists in digesting the ore under steam pressure in a solution containing water-glass (sodium or potassium silicate) and caustic soda or caustic potash, substantially as specified. 3rd. The herein described process of treating gold ores which consists in subjecting the ore in a closed vessel, to the conjoint action of steam heat and pressure, and of a solution containing sodium or potassium silicate and caustic soda or caustic potash caused to circulate through the ore, substantially as specified.

**No. 63,114. Ore Roasting Process and Apparatus.**

(Procédé et appareil pour le grillage du minerai.)



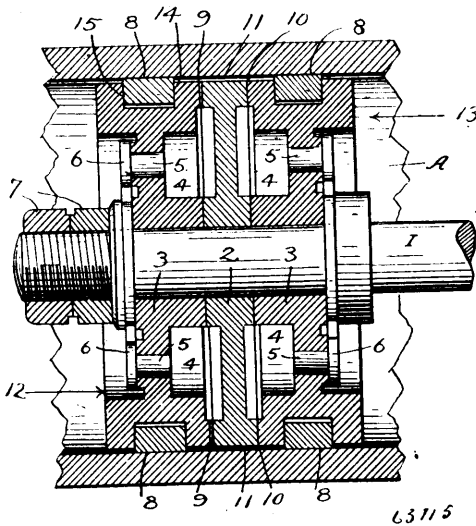
63114

Charles Wade Stickney, Ketchum, Idahs, 25th May, 1899; 6 years. (Filed 9th July, 1898.)

Claim.—1st. The process of recovering sulphur in solid form from ore, by forcing currents of steam, and air under pressure and gaseous fuel composed largely of hydrogen under pressure, simultaneously into contact with the red hot ore, and regulating the quantities of steam, air and fuel in such proportions that the ore is maintained or above a red heat while there is approximately no excess of either free sulphureted hydrogen or free sulphurous acid in the final resulting gases, and cooling the vapours below the vapourizing point of sulphur, substantially as described. 2nd. The process of recovering sulphur in solid form from ore, by forcing currents of steam and air under pressure and gaseous fuel composed largely of hydrogen under pressure simultaneously into contact with the red hot ore and regulating the quantities of steam, air and fuel in such proportions that the ore is maintained at or above a red heat, while there is approximately no excess of either free sulphureted hydrogen or free sulphurous acid in the resulting gases, and cooling the vapours below the vapourizing point of sulphur and bringing the final vapours into immediate contact with the solution of a mineral salt, substantially as described. 3rd. The process of recovering sulphur in solid form from ore, by forcing currents of steam and air under pressure and gaseous fuel composed largely of hydrogen under pressure simultaneously into contact with the red hot ore and regulating the quantities of steam, air and fuel in such proportions that the ore is maintained at or above a red heat while there is approximately no excess of either free sulphureted hydrogen or free sulphurous acid in the resulting gases, and cooling the vapours below the vapourizing point of sulphur and simultaneously agitating the ore by mechanical means, substantially as described. 4th. The process of recovering sulphur in solid form from ore by forcing currents of air under pressure and a gaseous fuel composed largely of hydrogen under pressure simultaneously into contact with the red hot ore, and regulating the quantities of steam formed from the fuel and air and the remainder of the air injected in such proportions that there is approximately no excess of either free sulphureted hydrogen or free sulphurous acid in the final resulting gases and cooling the vapours below the vapourizing point of sulphur, substantially as described. 5th. The process of recovering sulphur in a solid form from ore by forcing currents of air under pressure and a gaseous fuel composed largely of hydrogen under pressure simultaneously into contact with the red hot ore, mixed with a solid fuel and regulating the quantities of steam formed from the fuel and air, and the remainder of the air injected, in such proportions that there is approximately no excess of either free sulphureted hydrogen or free sulphurous acid in the final resulting gases and cooling the vapours below the vapourizing point of sulphur, substantially as described. 6th. In apparatus for roasting ore, a closed ore receptacle provided with means for feeding it with ore and for excluding casual and redundant air, and with tuers connected by conduits with sources of air under pressure greater than atmospheric pressure, and gaseous fuel under pressure and having a gas exit conduit leading into a

cooling chamber, substantially as described. 7th. In an apparatus for roasting ore, a closed ore receptacle provided with means for feeding it with ore and excluding casual and redundant air, and tuyers connected by conduits with sources of air under pressure greater than atmospheric pressure and gaseous fuel under pressure and steam, and having a gas exit conduit leading into a cooling chamber, substantially as described. 8th. In an apparatus for roasting ore, a closed ore receptacle provided with means for feeding it with ore and excluding casual and redundant air, and with tuyers connected by conduits with sources of air under pressure and gaseous fuel under pressure and having a gas exit conduit leading into a cooling chamber, with means for keeping said chamber at a temperature below the vapourizing point of sulphur, and for keeping the walls of said chamber above the melting point of sulphur, substantially as specified. 9th. In an apparatus for resting ore, a closed ore receptacle provided with means for feeding it with ore and for excluding casual and redundant air, and with tuyers connected by conduits with source of steam and of air under pressure greater than that of atmospheric pressure and having a gas exit conduit connected with the conduit from the source of an air blast and leading into a cooling chamber, substantially as described. 10th. In an apparatus for roasting ore, a closed ore receptacle provided with means for feeding it with ore and for excluding casual and redundant air, and with tuyers connected by conduits with sources of steam, of air under pressure greater than atmospheric pressure and gaseous fuel and having a gas exit conduit connected with the conduit from the source of an air blast and leading into a cooling chamber, substantially as described. 11th. In apparatus for roasting ore, a closed ore receptacle provided with means for feeding it with ore and for excluding casual and redundant air, and with tuyers connected by conduits with sources of air under pressure greater than atmospheric pressure and gaseous fuel and having a gas exit conduit connected with a conduit from a source of sulphurous acid gas and leading into a cooling chamber, substantially as specified. 12th. In an apparatus for roasting ore, a closed ore receptacle provided with means for feeding it with ore and for excluding casual and redundant air and with tuyers connected by conduits with sources of steam, air under pressure greater than atmospheric pressure and gaseous fuel, and having a gas exit conduit connected with a conduit from a source of sulphurous acid gas and leading into a cooling chamber, substantially as described.

**No. 63,115. Piston Head.** (*Tête de piston.*)



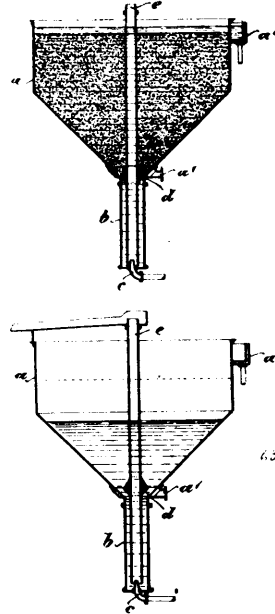
Joseph Imler, Kandanville, Indiana, U.S.A., 25th May, 1899; 6 years. (Filed 31st October, 1898.)

*Claim.*—1st. In a piston, two grooved heads, packing rings placed in said grooves, the piston rod to which the heads are secured, and a diaphragm which is located between the two heads which are recessed upon their inner sides so as to form steam chambers, combined with a valve which is secured to the piston rod, and which valve has a slightly turning movement so as to adjust the amount of steam admitted to the chambers, there being suitable openings or passages for the outward passage of steam between the heads and the central diaphragm so as to permit the space or chamber formed between the cylinder and diaphragm and the heads to be filled with steam, substantially as shown. 2nd. In a piston, two grooved internally chambered heads of less diameter than the cylinder, suitable packing rings placed in the grooves and the diaphragm placed between the two heads and also of less diameter than the cylinder there being suitable openings between

the heads and the diaphragm to permit of the outward passage of steam from the chamber that is formed between the heads and the diaphragm and the cylinder combined with suitable valves for controlling the openings leading into chambers formed inside the head, substantially as set forth. 3rd. The combination with the heads having annular grooves for packing rings, of covers 6, of the passages 5, the chambers 4, the passage 9, the space 11, the central diaphragm 2, the rod 1, and means for holding all of said parts fixedly together in proper position, substantially as specified.

**No. 63,116. Grain Steeping Trough.**

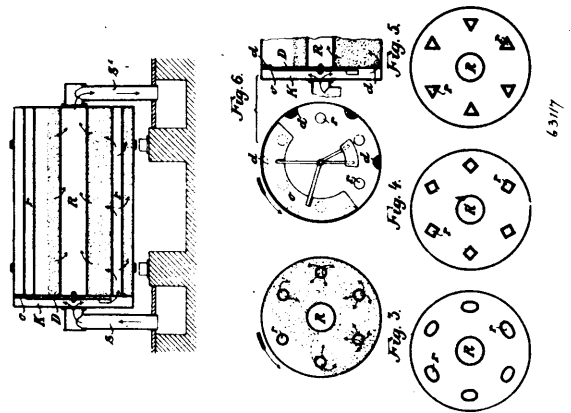
(*Auge à tremper le grain.*)



Friedrich Knüttel, Charlottenberg, near Berlin, Prussia, 25th May, 1899; 6 years. (Filed 25th January, 1899.)

*Claim.*—1st. In a grain steeping trough or cistern, the combination of the trough with a siphon pipe within the trough and an extension at the lower end of the trough within which the siphon pipe extends, essentially as described. 2nd. In a grain steeping trough or cistern, the combination of the trough with a siphon pipe, an extension at the lower end of the trough and a valve which closes the extension against the trough, essentially as described.

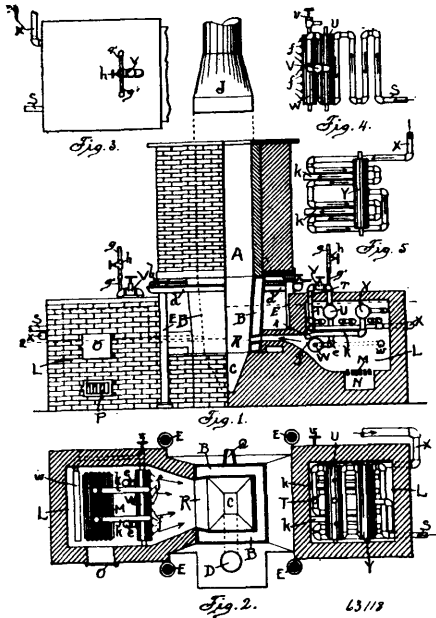
**No. 63,117. Malt Drum.** (*Tambour à drêche.*)



Friedrich Knüttel, Charlottenburg near Berlin, Prussia, 25th May, 1899; 6 years. (Filed 25th January, 1899.)

*Claim.*—A germinating and malting drum capable of receiving say 200 cwt. or upwards (of grain) the main feature of such drum being that for ventilating (or aerating) purposes, only one central tube and one set of intermediate pipes are provided, it being necessary moreover so to proportion the distance between the intermediate pipes and central tube that the said intermediate pipes shall emerge from the germinated malt, so that they may not interfere with the process of turning over such malt, while the distance from the intermediate pipe to the drum casing should be about one-fourth of the distance between the intermediate tube and the casing.

No. 63,118. Smelting Furnace. (*Fourneau de fusion.*)



Charles A. House, and Frederick A. Dupea, Tacoma, Washington, U.S.A., 25th May, 1899; 6 years. (Filed 4th October, 1898.)

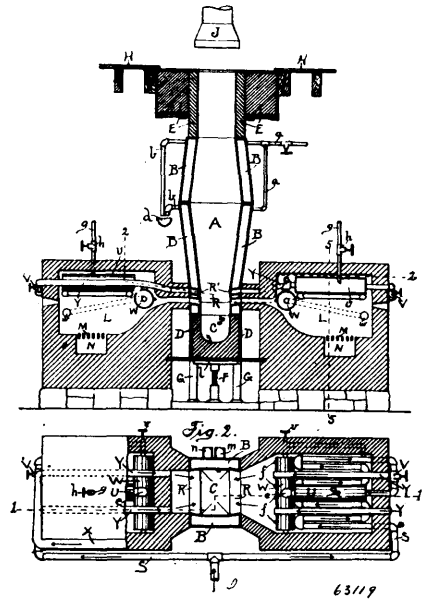
*Claim.*—1st. A smelting furnace comprising a stack furnace with furnaces on the sides thereof for generating gaseous fuel from liquid hydro-carbons, said generating furnaces designed for wood or coal fuel, and each constructed with superheating steam and air coils located in the upper parts thereof, the steam coils having suitable valve attachments for regulating the supply of steam and oil, and suitable chambers for mixing and discharging the same, the air pipe coils provided with a discharging chamber and pipes to deliver the superheated air near the discharge outlets of the gaseous hydro-carbons, said gas and air discharges being into the flue passage connected with and leading into the stack furnace, substantially as described and set forth. 2nd. A smelting furnace comprising a set of hydro-carbon gas generating and combustion furnaces connected with and located on the sides of a stack furnace, each of said generating and combustion furnaces having each a superheating steam pipet coil, and a superheating air pipe coil fixed in the upper part thereof, said steam coil having a valve for regulating the steam supplied therethrough, connections for supplying oil to said coil, a suitable chamber for receiving and mixing the oil and the superheated steam simultaneously, pipes leading therefrom into a discharging chamber and said air coil having a discharging chamber with discharge outlets near those of the outlets of the hydro-carbon discharging chamber, said discharge outlets opening into a flue passage leading from the generating and combustion furnace into the stack furnace, all to be used in combination therewith and to furnish the heat thereto, as described and shown. 3rd. A stack smelting furnace, having a smelting chamber with a water jacket base, said base resting on a lead well of suitable masonry, and having a siphon dip well at the side thereof, a slag hole opposite the dip well, a flue leading from the side of said smelting chamber into and through a condenser, said condenser being an enlarged horizontal chamber having a zig-zag passage to the smoke stack, and said smelting furnace provided with generating and combustion furnaces at its sides, to produce and supply gaseous fuel in combustion from liquid hydro-carbons, said generator and combustion furnace being provided with superheating steam and air coils and chambers for mixing and discharging the supply of steam and oil, substantially as described and shown. 4th. A smelting furnace comprising a set of hydro-carbon gas generating and combustion furnaces connected with and located at the sides of a stack furnace, each of said generating and combustion furnaces having superheated steam, and air coils, an oil supply, a chamber for mixing the oil and superheated steam, discharge chamber, in communication with the mixing chamber, means for discharging the super-heated air near the outlets of said discharge chamber, the discharge of the air and gas being into the stack furnace, and means for discharging a portion of the gas and air into the combustion chamber for maintaining combustion therein, substantially as and for the purposes described.

No. 63,119. Matting Furnace. (*Fourneau à matte.*)

Charles A. House, and Frederick A. Dupea, Tacoma, Washington, U.S.A., 25th May, 1899; 6 years. (Filed 4th October, 1898.)

*Claim.*—1st. A matting furnace comprising a stack furnace whose reducing chamber is within a water jacket, and whose matting well

is within an enclosure having a drop door opening in the bottom thereof, and having tap and slag holes leading from the side thereof,



said furnace provided with furnaces on opposite sides thereof for generating gaseous fuel from liquid hydro-carbons and means for producing and discharging said fuel through ports in the sides thereof, as described and shown. 2nd. A matting furnace comprising a stack furnace with hydro-carbon gas generating furnaces on opposite sides thereof, each generating furnace enclosing a steam coil in which steam is superheated, said coil connected with suitable drums for mixing, decomposing and discharging the steam and oil in gaseous form through ports connecting said generating furnaces with the fusing chamber of said stack furnace, and means for forcing heated air into the stack furnace near said connecting ports, as described and set forth. 3rd. A matting furnace comprising a set of hydrocarbon gas generating and combustion furnaces connected with and located at the sides of a stack furnace, each of said generating and combustion furnaces having superheating steam and air coils, and oil supply, a chamber for mixing the oil and superheated steam, a discharge chamber in communication with the mixing chamber, means for discharging the superheated air near the outlets of said discharge chamber, the discharge of the air and gas being into the stack furnace, and means for discharging a portion of the gas into the combustion chamber for maintaining combustion therein, substantially as and for the purposes described.

No. 63,120. Process for Separating Fats or Oils into Fatty Acids and Glycerine. (*Procédé pour la séparation des graisses ou huiles en acides huileux et glycérine.*)

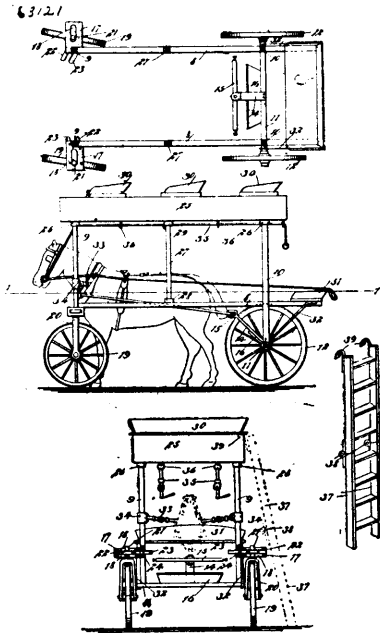
Ernst Twitchell, Cincinnati, Ohio, U.S.A., 25th May, 1899; 6 years. (Filed 23rd January, 1899.)

*Claim.*—1st. The process of separating fats or oils into glycerine and fatty acids, which consists in mixing a re-agent of the sulpho-fatty acid series, with fat and water, then subjecting the charge to the action of the heat, substantially as described. 2nd. The process of separating fats or oils into glycerine and fatty acids which consists in mixing a re-agent of the sulpho-fatty aromatic acid series, with fat and water, then subjecting the charge to the action of the heat, substantially as described. 3rd. The process of separating fats or oils into glycerine and fatty acids, which consists in mixing neutral fats or oil with a re-agent of the sulpho-fatty acid series and water, then subjecting the charge to the action of heat until the substances are separated, then drawing off the glycerine water and reclaiming the glycerine, substantially as described. 4th. The process of separating fats or oils into glycerine and fatty acids, which consists in mixing neutral fats or oils with a re-agent of the sulpho-fatty aromatic series, then subjecting the charges to water and heating the mixture until the substances are separated, drawing off the glycerine water and reclaiming the glycerine, substantially as described. 5th. A sulpho-fatty aromatic acid consisting of a combination of the sulphonic radical with the stearic radical and an aromatic radical, the said acid being a viscous, non-volatile oil, soluble in water and amorphous, which is stable in character and a dibasic acid forming water soluble salts with the alkali metals and insoluble salts with the other metals, substantially as described. 6th. A sulpho-fatty aromatic acid, consisting of a combination of the sulphonic radical with the stearic radical and one of the aromatic radicals, having the general formula  $a(HSO^a)$ ,  $C^{18}H^{36}O^2$ , in which  $a$  represents the particular aro-



matic radical, the said acid being a viscous, non-volatile oil, soluble in water and non-crystalline, which is stable in character and a dibasic acid forming water soluble salts with the alkali metals and insoluble salts with the other metals, substantially as described.

**No. 63,121. Vehicles. (Vehicules.)**



Thomas J. Cox, Mobile, Alabama, U.S.A., 25th May, 1899; 6 years. (Filed 2nd December, 1898.)

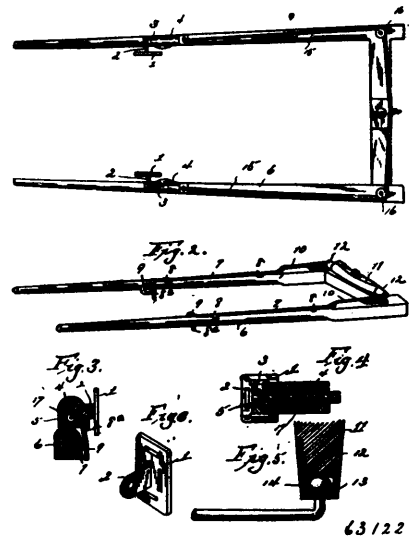
*Claim.*—1st. In a vehicle, the combination of a frame comprising side bars disposed one on each side of the horse, and perpendicular bars rigidly attached to the side bars, an axle held by the rear perpendicular bars, rear wheels carried on said axle, forks mounted to turn at the front perpendicular bars, means in connection with said forks, for turning them as pressure is applied laterally from the frame, front wheels carried by the forks, and a seat on the frame. 2nd. In a vehicle, the combination of a frame having horizontal side bars, a front standard mounted at the forward end of each side bar, and a rear standard mounted at the rear portion of each side bar, the rear standards being projected below the side bars, a rear axle held rigidly by the lower extremities of the rear standards, wheels mounted on the rear axle, forks mounted to turn at the lower portion of the front standards, means in connection with said forks for turning the forks as a pressure is applied laterally from the frame, and the front wheels carried by the forks. 3rd. A vehicle having a frame, comprising two longitudinal side bars joined rigidly to each other, and adapted to receive the horse between them, rear wheels for supporting the rear portion of the frame, a seat mounted adjacent to the rear wheels to carry the driver of the vehicle, two forks mounted at the front of the frame, and front wheels respectively mounted in the forks, the forks being adapted to turn so as to slow the wheels with the turning of the vehicle. 4th. A vehicle having a frame adapted to enclose the horse, rear wheels for the frame, front wheels for the frame, and means for attaching the front wheels to the frame so that the wheels will be slewed as the horse presses against the one side or the other of the frame, in the act of turning the vehicle. 5th. A vehicle having a frame formed of longitudinal side bars, standards rising from the side bars, a body supported on the standards and serving rigidly to connect the same and the side bars, wheels supporting the rear of the frame, front wheels for the frame, and means for joining the front wheels to the frame so that the front wheels will be slewed as the frame is pressed to one side or the other in the act of turning the vehicle.

**No. 63,122. Horse Detacher. (Dételage instantané.)**

Rudolph Lawrence Gauntner, Ashville, Pennsylvania, U.S.A., 25th May, 1899; 6 years. (Filed 24th December, 1898.)

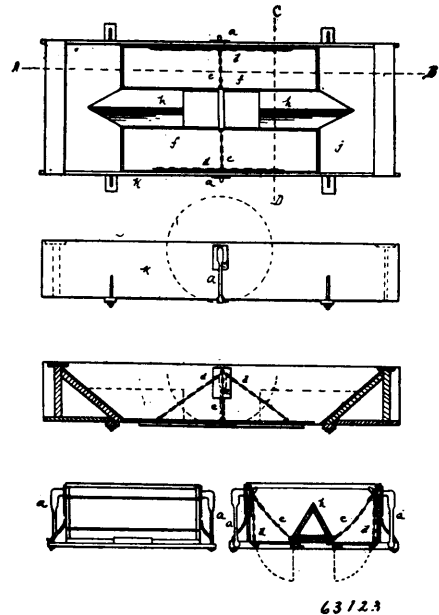
*Claim.*—1st. In a device of the class described, the combination with a pair of shafts, of a whiffletree provided at its ends with sockets, and the rods extending along the shafts and having their rear ends projecting inward and provided with balls fitting in the sockets of the whiffletree, said rods being designed to be connected at their front ends with a harness, substantially as described. 2nd. In a device of the class described, the combination with a pair of shafts provided with guides, a whiffletree, and the reciprocating rods arranged in the guides and having their rear ends connected with the whiffletree, said rods being provided at their front ends

with arms disposed in substantially a vertical plane at right angles to the rods and provided with spring-coils and having means for



connecting them to a harness, substantially as described. 3rd. In a device of the class described, the combination of a pair of shafts, a whiffletree, rods extending along the shafts and connected to the whiffletree, vertical arms arranged at the front ends of the rods and provided with spring-coils, catches mounted on the ends of the arms, plates designed to be mounted on a harness and adapted to be engaged by the catches, and means for operating the catches to release the plates, substantially as described.

**No. 63,123. Waggon Bed. (Lit de wagon.)**



John Gunn, Memphis, Tennessee, U.S.A., 25th May, 1899: 6 years. (Filed 24th December, 1898.)

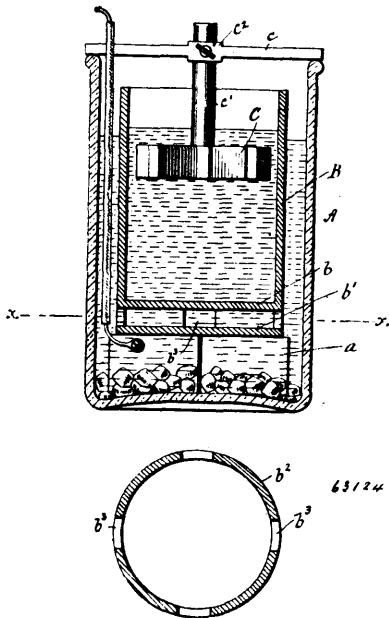
*Claim.*—In a wagon-bed of the character described, the combination with a trip-lever *a*, journaled in the side of said bed and having an upturned point of a hinged trap-door with chains *d*, attached thereto, and adapted to hook over the lever-point, in the manner described.

**No. 63,124. Galvanic Battery. (Batterie galvanique.)**

Frank Morton Archer, New York City, New York, U.S.A., 25th May, 1899; 6 years. (Filed 25th January, 1899.)

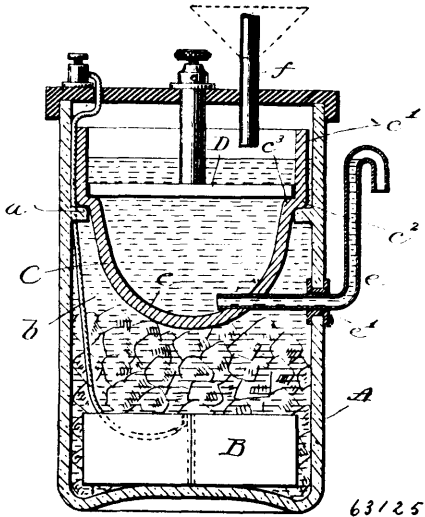
*Claim.*—In a galvanic battery, the combination of an outer cell containing an electrode and an electrolyte, a porous cup located

above the electrode and provided with two integral imperforate bottoms supported a short distance from each other and also pro-



vided with lateral openings permitting the circulation of the electrolyte in the outer cell between the two bottoms, and an electrode inside of the porous cup, substantially as described.

**No. 63,125. Galvanic Battery.** (*Batterie galvanique.*)

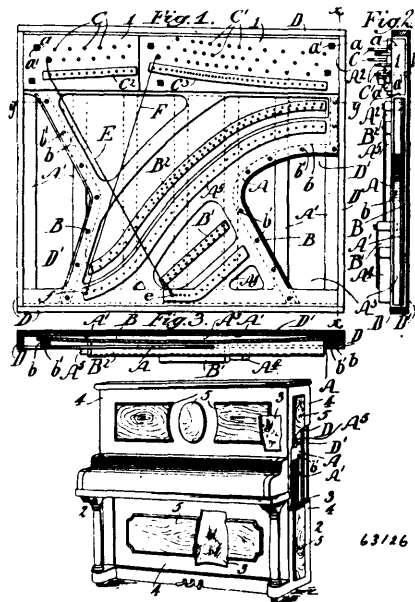


Frank Morton Archer, New York City, New York, U.S.A., 25th May, 1899; 6 years. (Filed 25th January, 1899.)

*Claim.*—1st. In a galvanic battery, a porous cup having external and internal shoulders formed by offsetting the walls of the cup, in combination with an outer cell provided with an annular interior flange upon which the exterior shoulder of the cup rests an electrode inside of the cup resting upon the interior shoulders thereof and an electrode in the outer cell, substantially as described. 2nd. In a galvanic battery, the combination of the outer cell, a porous cup therein, an electrode horizontally supported in the upper part of the porous cup and an outlet tube for the liquid in the porous cup extending from the lower portion thereof through the walls of the porous cup and the outer cell and upward to a point above the electrode in the cup, substantially as described.

**No. 63,126. Piano Plate and Back.**

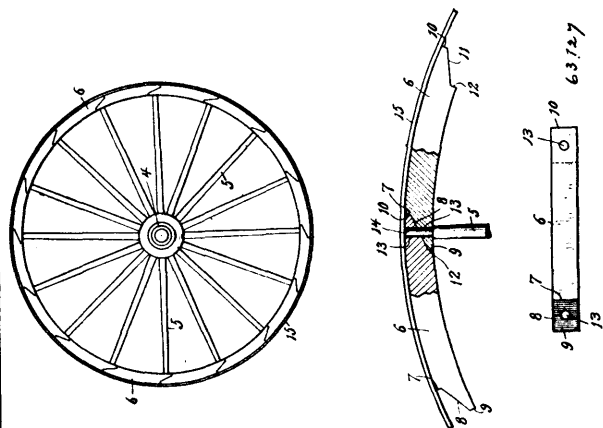
(*Plaque et dos de pianos.*)



Frank Victor Neville, New York City, New York, U.S.A., 25th May, 1899; 6 years. (Filed 1st December, 1898.)

*Claim.*—1st. A combined piano plate and back, comprising a hollow metallic structure having a longitudinal recess in the upper portion thereof, and a rest-plank engaging said recess substantially as shown and described. 2nd. In a combined piano plate and back, the combination of an open work plate having tail bridges thereon, an open-work back formed integrally therewith, and a recess for receiving the rest-plank, and a backing and frame enclosing the said structure, substantially as shown and described. 3rd. In a combined piano back and plate, the combination of a plate and rear uprights formed integrally with each other, and an integrally formed recess and a rest-plank secured therein, and a sounding board connected to the rear of this said plate, the said plate being supplied with tail-bridges, and the sounding board having intermediate bridges projected from the face thereof, the rest-plank being supplied with upper bridges, substantially as shown and described. 4th. In a piano, the combination of a box embodying a rough framework having an exterior coating of compressed fibre thereon, and a combined back and plate comprising a hollow metallic structure encased in a wooden backing and frame, substantially as shown and described. 5th. A piano box composed of rough wood, the exterior surface thereof being coated with compressed fibre having panels or other ornamentation formed integrally therewith, substantially as shown and described.

**No. 63,127. Vehicle Wheel.** (*Roue de véhicule.*)



John J. McCully, Clifton Hill, Missouri, U.S.A., 25th May 1899; 6 years. (Filed 19th November, 1898.)

*Claim.*—1st. The combination, of a hub and spokes radiating therefrom, a series of felloes, provided at each end with an upper

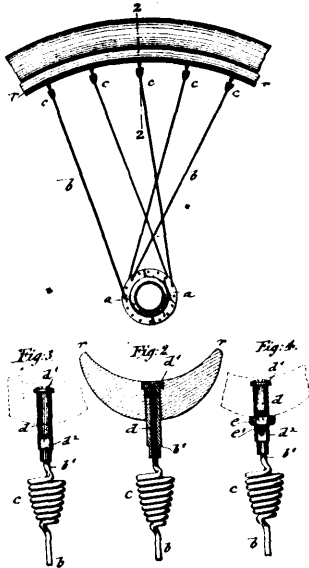
shoulder, a sloping surface and a lower shoulder, the shoulders and sloping surfaces of contiguous ends of the section adapted to be fitted together, and said ends provided with registering openings to receive the ends of the spokes, and a tire fitted around the felloe sections. 2nd. The combination of a hub and spokes radiating therefrom, a series of felloes, each felloe having the upper surface of one end provided with an upper shoulder, a sloping surface and a lower shoulder, and the under surface of the opposite end provided with an upper shoulder, a sloping surface, and a lower shoulder, the end shoulders and sloping surfaces of contiguous ends of sections adapted to be fitted together, and said contiguous ends provided with registering openings therethrough to receive the ends of the spokes, and a tire fitting around the felloe sections. 3rd. A felloe for a vehicle wheel having each end formed with an upper shoulder, a sloping surface, and a lower shoulder. 4th. A felloe for a vehicle wheel having the upper surface at one end formed with an upper shoulder, a sloping surface, and a lower shoulder, and the under surface at the opposite end formed with an upper shoulder, a sloping surface, and a lower shoulder.

**No. 63,128. Glue. (Colle.)**

Victorien Médéric Bouthillier, Montréal, Québec, Canada, 25 mai 1899; 6 ans. (Déposé 8 février 1899.)

*Résumé.*—Un mélange de la gomme Adragante avec la dextrine Blanche ou dextrine jaune (British gum) ou gomme arabique de façon à former une colle sèche à badigeonner, laquelle peut être liquifiée en ajoutant de l'eau et conservée liquide en ajoutant de l'acide salicylique, le tout dans les proportions et pour les fins décrites.

**No. 63,129. Vehicle Wheel. (Roue de véhicule.)**



63129

The Cycle Spring-Spoke Co., assignee of Charles Albert Hussey, New York City, New York, U.S.A., 26th May, 1899; 6 years. (Filed 7th April, 1899.)

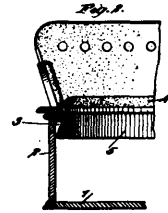
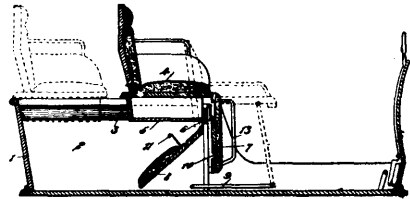
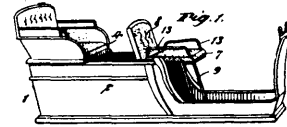
*Claims.*—1st. A wheel, consisting of a hub, a rim, a series of spokes connecting the hub with the rim, said spokes being provided with springs intermediately between the hub and rim, and means connecting the rim and spokes for drawing out and holding said springs under tension, substantially as set forth. 2nd. A wheel, consisting of a hub, a rim, a series of spokes connecting the hub with the rim, said spokes being provided with helical springs between the hub and rim, screw-nipples passing through the rim and engaging the ends of the spokes, and a nut on each nipple adapted to bear against the rim for holding the nipples in position in the rim, substantially as set forth. 3rd. A spring-spoke for vehicle-wheels, composed of a straight main-portion, a helical spring made integral therewith near the outer end, and a screw-threaded end-section beyond said spring, substantially as set forth.

**No. 63,130. Vehicle Body. (Boite de véhicule.)**

Frederick Menzer, Clark Campbell Hyatt, William Wildanger, and Harry William Watson, all of Flint, Michigan, U.S.A., 26th May, 1899; 6 years. (Filed 4th April, 1899.)

*Claims.*—1st. A vehicle body, a main seat movable longitudinally thereof, an auxiliary seat having swinging connection with the body, a back for the auxiliary seat also having swinging connection with the body, and means for detachably connecting the back to the auxiliary seat, substantially as specified. 2. A vehicle body, a

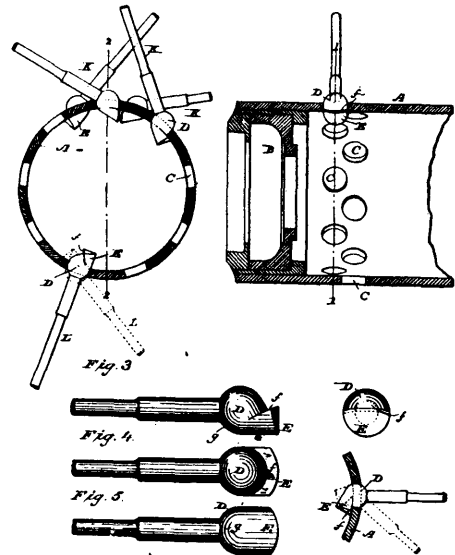
main seat movable longitudinally thereof, an auxiliary seat having swinging connection with the body, a back for said auxiliary seat,



63130

also having swinging connection with the body, means for detachably connecting the back to the auxiliary seat, and a support or brace for the auxiliary seat, substantially as specified. 3rd. A vehicle body, a main seat movable longitudinally thereof, an auxiliary seat having hinged connection with a cross bar in the body, a back for the auxiliary seat, mounted to swing relatively to said cross bar, a hook on said back, a keeper on the auxiliary seat for engagement with said hook, and a brace having swinging connection with the body and adapted to engage in a channel formed on the under side of the auxiliary seat, substantially as specified. 4th. A vehicle body, a main seat mounted to slide in said body, an auxiliary seat having swinging connection with the body and adapted to form a drop for the main seat, and a back for said auxiliary seat, and mounted to swing into the body beneath the main seat independently of the auxiliary seat, when said main seat is in its forward position, substantially as specified.

**No. 63,131. Vehicle Wheel. (Roue de véhicule.)**



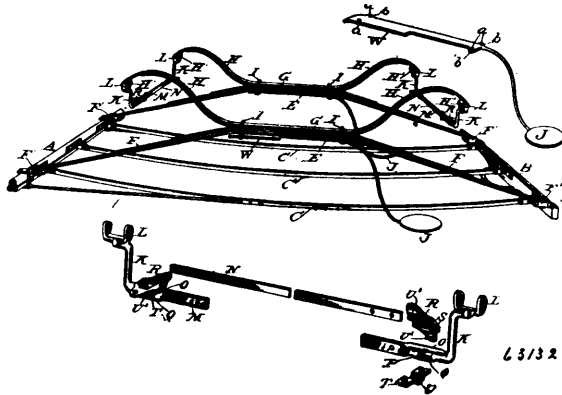
63131

George A. Burwell, Toledo, Ohio, U.S.A., 26th May, 1899; 6 years. (Filed 17th March, 1899.)

*Claim.*—1st. A combination of the cylindrical hub with apertures through its sides, the spokes with heads adapted to pass through and fit in said apertures, and provided on their sides opposite the spokes with projecting lugs or ledges adapted to engage the inside of the

hub cylinder when the spoke is in working position. 2nd. A combination of the plain cylindrical hub with round apertures through its sides, the spokes with spherical heads adapted to pass through said apertures, closing them completely, and provided on their sides opposite the spokes with projecting lugs or ledges adapted to engage the inside of the hub cylinder when the spoke is in working position. 3rd. A combination of the plain cylindrical hub with apertures through its sides, the spokes with heads adapted to pass through and completely lose said apertures, and provided on their sides opposite the spokes with projecting lugs or ledges each of said lugs adapted to bear against the inside of the hub of the cylinder when its spoke is in working position but so located relatively to the axial line of the spoke that the spoke must be in position other than its working position when its head is being inserted in an aperture, after which insertion it is swung to its working position bringing the locking ledge into contact with the inside of the cylinder.

**No. 63,132. Vehicle Gear.** (*Engrenage de véhicule.*)

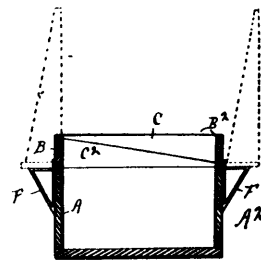
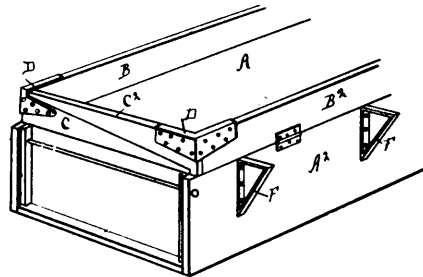


Henry A. Muckle, St. Paul, Minnesota, U.S.A., 26th May, 1899; 6 years. (Filed 11th March, 1899.)

*Claim.*—1st. In a vehicle-gear, the combination of bowed longitudinal side springs, *cyma recta* springs H secured thereon and in line therewith and having eyes formed in their outer ends, L-shaped castings pivoted pendent to said eyes, a bar N connecting the horizontal members of said castings, plates pivotally secured upon the castings, and a body secured upon the plates. 2nd. In a vehicle-gear, the combination of longitudinal side springs rising from each end toward the centre, suspension springs with drooping ends secured upon the central portion and extending out over and in line with the side springs, body-supports pivoted to and extending across from the opposite ends of said suspension springs, and a body pivotally mounted upon said supports. 3rd. In a vehicle-gear, the combination of longitudinal side springs rising from each end toward the centre, *cyma recta* suspension springs secured upon the central portion and extending out over said side springs, depending body supports pivoted to and extending across from the opposite ends of said suspension springs, and a body pivotally supported upon said supports. 4th. In a vehicle-gear, the combination of longitudinal side springs each spring comprising a central flat section and straight downwardly inclined ends, suspension springs mounted on said central section and having *cyma recta* arms extending out over said inclined ends, depending body supports pivoted to and extending across from opposite ends of said suspension springs, and a body pivotally secured upon said supports, said body being of a length longer than the suspension springs, substantially as described. 5th. In a vehicle gear, the combination of longitudinal side springs each comprising a flat central section E, with downwardly inclined straight end sections F, formed integral therewith, suspension springs mounted upon and secured to said central section, said suspension springs having *cyma recta* ends H, depending body supports pivoted to and extending across from the opposite ends of said *cyma recta* sections, and a body pivotally secured upon said supports between said suspension springs, substantially as described. 6th. In a running-gear for vehicles, the combination of longitudinal side springs each comprising a flat central section E, with downwardly inclined straight end sections F, equalizers connecting the ends of said springs up short with the axle and bolster of the gear, suspension springs mounted upon said central section E, and having *cyma recta* arms H, depending body supports pivoted to and extending across from the opposite ends of said *cyma recta* sections, and a body pivotally secured upon said supports, substantially as described. 7th. In a running-gear for vehicles, the combination of a longitudinal spring having a flat central section, a suspension spring secured upon the upper face of said section, and a combined step and scraper iron secured to the under side of said flat section, substantially as described. 8th. In a running-gear for vehicles, the combination of a longitudinal spring having a flat central section, a suspension spring reversed in position mounted thereon, a combined step and scraper iron resting against the under side of said flat central section

and means for binding said parts together. 9th. In a running-gear for vehicles, the combination of a longitudinal spring having a flat central section, a suspension spring reversed in a position mounted thereon having eyes formed in its outer ends a combined step and scraper iron resting against the under side of said flat central section, said iron having ears *a* and openings *b*, formed in said ears and clips I passing around the springs and extending down through the openings *b*, substantially as described. 10th. In a vehicle-gear, the combination of longitudinal side springs, *cyma recta* springs H, secured thereto and having eyes formed in their outer ends, L-shaped castings pivoted to said ends, a bar N, connecting the horizontal members of said castings, plates pivotally secured upon the castings, and a body secured to the upper faces of said plates, substantially as and for the purpose described. 11th. In a vehicle-gear the combination of longitudinal side springs, *cyma-recta* springs H secured thereto and having eyes formed in their outer ends, L-shaped castings K, having yokes L, designed to embrace the eyes, bolts pivotally securing said eyes and yokes together, rounded bearing faces O, formed upon the horizontal members of said castings, openings P formed in the castings below said faces O, plates R seated upon the faces O, straps T extending through said openings and bolted to plates R, rods N connecting the castings in pairs, and a body mounted and secured upon said plates R. 12th. In combination with the running-gear of a vehicle, an I-shaped casting K provided with a yoke L designed to be secured to the free end of a suspension-spring, a rounded bearing O, an opening P formed below said bearing, and having lower converging walls Q, Q, a recess M formed in the side face of the horizontal arm of said casting, a plate R provided with a curved seat designed to fit on the rounded face O, and a strap T passing through openings P and secured to plate R, substantially as described. 13th. In a vehicle-gear, the combination of a pair of bowed longitudinal side springs, a pair of reversely-bowed suspension-springs mounted thereon and in line therewith, said suspension-springs being relatively shorter and having eyes formed in their outer ends, dependent L-shaped members pivoted to said eyes, bars connecting the horizontal arms of said members in pairs, and a body pivotally mounted on said members. 14th. In a vehicle-gear, the combination of bowed longitudinal side springs, *cyma-recta* springs H secured thereon and in line therewith and having eyes formed in their outer ends, L-shaped castings pivoted pendent to said ends, a bar N connecting in pairs opposite ends of the horizontal members of said castings, plates pivotally secured upon the castings, and a body secured upon the plates. 15th. In a vehicle-gear, the combination of longitudinal side springs rising from each end toward the centre, reversely-arranged suspension-springs with drooping ends, secured upon the central portion and extending out in a line with the side springs, body-supports pivoted to and extending across from the opposite ends of said suspension-springs, and a body pivotally mounted upon said supports.

**No. 63,133. Transformable Waggon Box.**  
(*Boîte de wagon transformative.*)



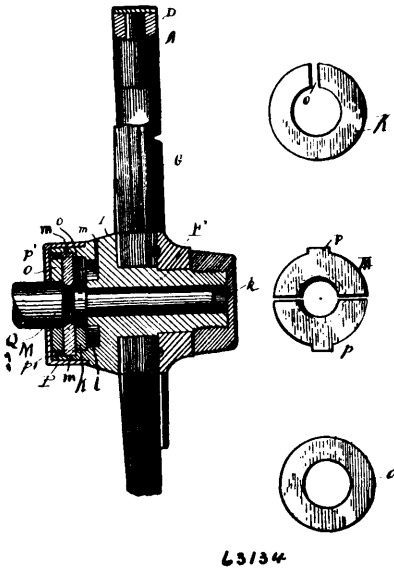
63133

Thomas J. Fielder, Webster City, Iowa, U.S.A., 26th May, 1899; 6 years. (Filed 16th March, 1899.)

*Claim.*—1st. In a waggon-box, auxiliary side-boards hinged to the top edges of the main side-boards and end pieces, straight on one side and tapering at the other, fixed to the ends of the said hinged boards, for the purposes stated. 2nd. A transformable

waggon-box comprising parallel side-boards and end-boards fitted thereto, brackets fixed to the outside faces of the said boards, auxiliary side-boards hinged to the tops of the main side-boards and end pieces straight at one edge and tapering at the other fixed to the ends of the hinged boards, arranged and combined to operate in the manner set forth and for the purposes stated.

**No. 63,134. Vehicle Wheel. (Roue de véhicule.)**

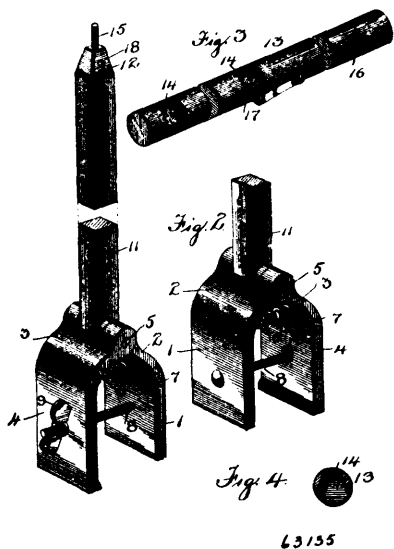


63134

Thomas M. ShROUT, Hillsborough, Kentucky, U.S.A., 26th May, 1899; 6 years. (Filed 11th March, 1899.)

*Claim.*—1st. In a vehicle-wheel, a hub having an oil reservoir therein, a washer forming a covering therefor and having an opening to allow the escape of oil to the axle, substantially as described. 2nd. In a vehicle-wheel, in combination with the hub, having a chamber or reservoir for oil or other lubricant, a washer fitting over said chamber or reservoir, a grooved axle, and a washer having an opening whose edge fits within the groove of said axle, substantially as described. 3rd. In a vehicle-wheel, in combination with the hub having a chamber or reservoir for oil or other lubricant, a washer or closing cap for said reservoir having an opening to permit escape of the oil to the axle, a two-part washer embracing the axle, said axle being grooved to receive the edge of the washer, and means for adjusting the parts of the washer to take up wear, substantially as described.

**No. 63,135. Wrench. (Clé à écrou.)**

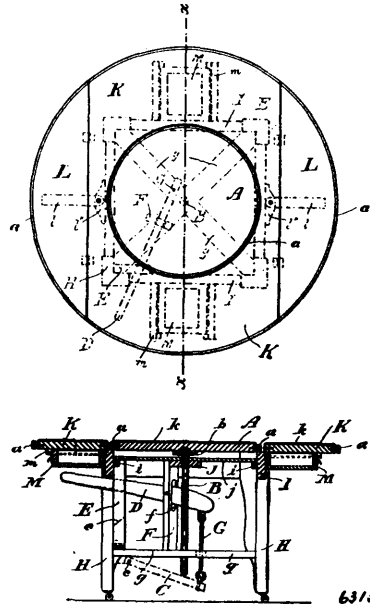


63135

Robert John Stroud, Milford Bay, Ontario, Canada, 26th May, 1899; 6 years. (Filed 2nd March, 1899.)

*Claim.*—The combination with a wrench, provided with a rigid handle terminating in a bevelled end, having a perforation extending transversely through said bevelled end, a pin projecting vertically from said bevelled end, of an auxiliary handle provided with a series of bevelled sockets for the reception of said bevelled handle end, and a spring lug secured to said auxiliary handle and adapted to pass through a perforation in one of said bevelled sockets and engage the perforation in said bevelled handle end, said auxiliary handle being also provided with perforations for the reception of said pin, substantially as described.

**No. 63,136. Dining Table. (Table à dinner.)**

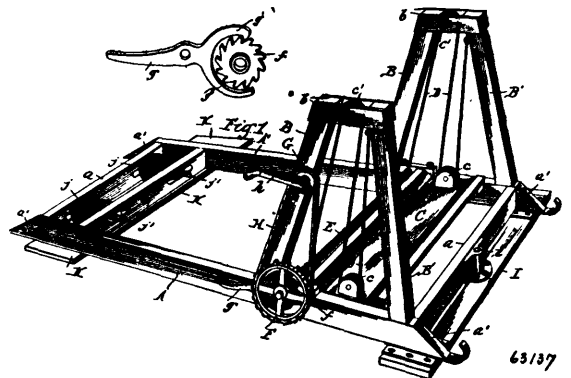


63136

Carl Yank, Inlet, Ouebec, Canada, 26th May, 1899; 6 years. (Filed 13th February, 1899.)

*Claim.*—In a dining table, the combination of a handle D, upright F, rod or chain G, hinged lap C, guide strip E, and notch c, all substantially as set forth and described.

**No. 63,137. Waggon Dump. (Wagon à bascule.)**



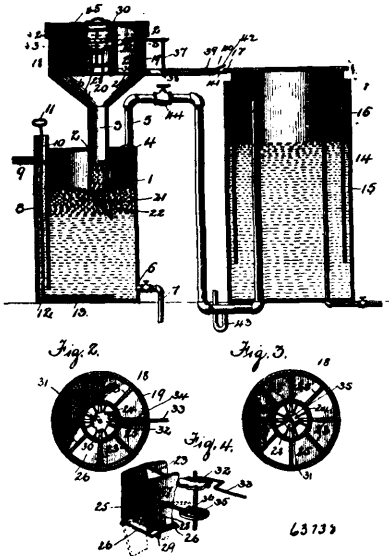
63137

Frank Gahm, Ransom, Illinois, U.S.A., 26th May, 1899; 6 years. (Filed 6th February, 1899.)

*Claim.*—1st. In a waggon-dump, the combination with a platform pivoted at one end, of rollers at the opposite end, whereby the device as a whole can be swung horizontally on its end pivot, a vertically movable section on said platform adapted to receive the forward wheels of a wagon, and means for raising and lowering said section, whereby after the platform has been swung into the desired position the contents of the wagon may be dumped, substantially as described. 2nd. In a waggon-dump, the combination with a platform adapted to receive a wagon, of a vertically movable section adapted to receive the forward wheels of a wagon, a hoisting shaft and cables for raising and lowering the movable section, a ratchet wheel on said shaft, and a pivoted pawl adapted to be thrown into and out of engagement with the ratchet wheel and provided with an opposed brake arm arranged to bear against the ends of the ratchet teeth when the pawl is thrown out of engagement therewith, substantially as described and for the purposes specified. 3rd. In a waggon-dump,

the combination with a platform pivoted at one end and adapted to receive a wagon, of a vertically movable section adapted to receive the forward wheels of a wagon, a hoisting shaft and cables for raising and lowering the movable section, a ratchet wheel on said shaft, and a pivoted pawl adapted to be thrown into and out of engagement with the ratchet wheel, substantially as described.

**No. 63,138. Acetylene Generator.**  
(Générateur à acétylène.)



Louis Magloire Destroismaisons, Ste. Anne de la Pocatière, Quebec. 26th May, 1899; 6 years. (Filed 17th December, 1898.)

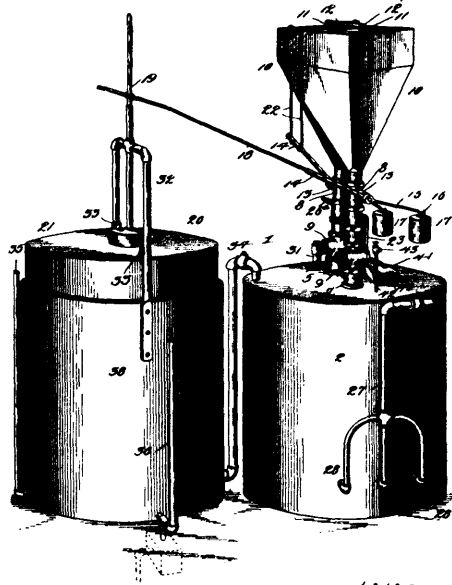
*Claim.*—1st. An acetylene gas generator, comprising a generating chamber, a delivery tube leading thereto, a series of carbide chambers fixedly connected to said delivery tube, said chambers being operatively connected with said tube, doors located below said chambers, said doors being operated independently, and adapted to close said chambers, pivotally mounted hooks adapted to normally hold said doors in their closed position, and rotatable means, substantially as described, operated by the movement of the gasometer, for automatically releasing said hooks successively, substantially as described. 2nd. An acetylene gas generator, comprising a generating chamber, a delivery tube leading thereto, a series of carbide chambers fixedly connected to said delivery tube, said chambers being operatively connected with said tube, doors located below said chambers, said doors being operated independently, and adapted to close said chambers, pivotally mounted hooks adapted to normally hold said doors in their closed position, a disc movable pivotally in juxtaposition to said hooks, said disc having a lug adapted to release one of said hooks, said disc having a lug adapted to release one of said hooks when contacting therewith, and means, substantially as described for imparting movement to said disc intermittently, substantially as described. 3rd. An acetylene gas generator, comprising a generating chamber, a delivery tube leading thereto, a series of carbide chambers fixedly connected to said delivery tube, said chambers being operatively connected with said tube, doors located below said chambers, said doors being operated independently, and adapted to close said chambers, pivotally mounted hooks adapted to normally hold said doors in their closed position, rotatable means, substantially as described, operated by the movement of the gasometer, for automatically releasing said hooks, means, substantially as described, for agitating the residue, and means substantially as described, for removing the residue during the agitation, substantially as and for the purpose herein set forth.

**No. 63,139. Acetylene Gas Generator.**  
(Générateur à gaz acétylène.)

Adilon Archambault, St. Hyacinthe, Quebec, Canada, 26th May, 1899; 6 years. (Filed 27th October, 1898.)

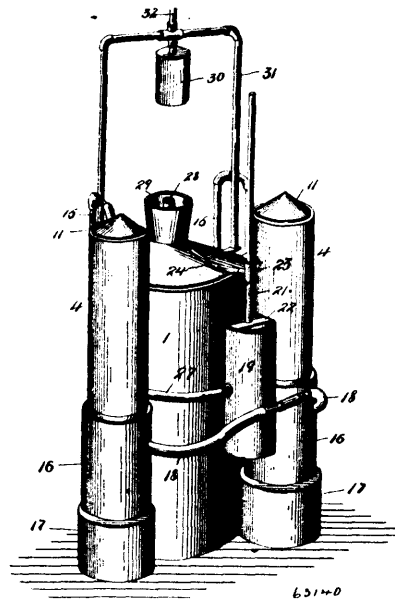
*Claim.*—1st. The combination with an acetylene gas generator, of a plurality of carbide receptacles operatively connected therewith, said receptacles being adapted to be operated alternately, and a series of valves located in the connections between the receptacle and the carbide chamber, the lower valve in each connection being connected to a common actuating means, the remaining valves having independent movement, substantially as described. 2nd. An acetylene gas generator, comprising a generating chamber, a supplementary bottom formed therein, said bottom being provided with inclined channels, adapted to receive the residue, means for forcing a stream of water through each of said channels, means for

delivering carbide to said chamber at pre-determined periods, and connections between the generating chamber and the surface pipes,



substantially as described. 3rd. An acetylene gas generating apparatus, comprising a generating chamber having an inclined corrugated bottom, a series of carbide receptacles operatively connected thereto, said receptacles being brought into operation alternately, a gasometer, connections between the generating chamber and the gasometer for the passage of the generated gas, connections between the gasometer and the carbide receptacle for regulating the passage of the carbide into the generating chamber, a gas outlet formed in the gasometer, a surplus gas escape pipe located in said gasometer, and a series of pipes connected to the water supply, adapted to force water along said corrugated bottom, whereby the residue will be carried off, substantially as described

**No. 63,140. Acetylene Gas Generator.**  
(Générateur à gaz acétylène.)



Joseph Alfred Plante, Quebec City, Quebec, Canada, 26th May, 1899; 6 years. (Filed 15th September, 1898.)

*Claim.*—1st. An acetylene gas generating apparatus, comprising a gas holder, a generator, pipes connecting said gas-holder and said generator, a water supply connected to said generator, and a piston or plunger operated by the movement of said gas-holder, for bringing the water alternately into and out of contact with the carbide in said generator, substantially as described. 2nd. An acetylene

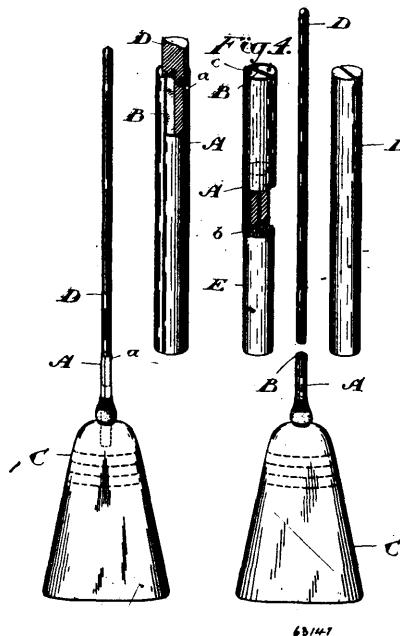
gas generating apparatus, comprising a gas holder, a plurality of generators, pipes connecting said gas-holder and said generators, a water supply common to all of said generators and connected therewith, and a piston or plunger operated by the movement of said gas-holder for bringing the water alternately into and out of contact with the carbide in each of said generators, substantially as described. 3rd. An acetylene gas generator, comprising a carbide receptacle, a water supply connected therewith, said supply being normally out of contact with said receptacle, and a piston or plunger for bringing said water alternately into and out of contact with the carbide in said receptacle, substantially as described. 4th. An acetylene gas generator, comprising a carbide receptacle open at its lower end, a water supply connected to said generator, and a piston or plunger for automatically bringing said water alternately into and out of contact with the carbide in said receptacle, substantially as described. 5th. An acetylene gas generator, comprising a carbide receptacle having a cone-shaped formation, the lower end being open, whereby the carbide will be automatically fed to the bottom of said receptacle, a water supply connected to the generator, and a piston or plunger for alternately bringing the water into and out of contact with the exposed surface of the carbide, substantially as described. 6th. An acetylene gas generator, comprising a carbide receptacle having a cone-shaped formation, and having its lower end open, a removable top for said receptacle, a water supply connected to said generator, and a piston or plunger for alternately bringing the water into and out of contact with the exposed surface of said carbide, substantially as described. 7th. An acetylene gas generator, comprising a carbide receptacle, a perforated diaphragm located therein near the bottom, a water supply connected to the generator, and a piston or plunger for alternately passing said water into and out of the interstices formed in said diaphragm, whereby an intermittent contact will be formed between the exposed surface of said carbide and the water, substantially as described. 8th. An acetylene gas generator, comprising a carbide receptacle having a cone-shaped formation, whereby the carbide will be automatically fed toward bottom of said receptacle, a perforated diaphragm located therein near the bottom, a water supply connected to the generator, and a piston or plunger for alternately passing said water into and out of the interstices formed in said diaphragm, whereby an intermittent contact will be formed between the exposed surface of said carbide and the water, substantially as described. 9th. An acetylene gas generator, comprising a carbide receptacle, a removable receptacle located below said carbide receptacle, said latter receptacle being adapted to contain water, a water supply connected to said latter receptacle, and a piston or plunger for alternately raising and lowering the level of the water within said receptacle into and out of contact with the carbide in said receptacle, substantially as described. 10th. An acetylene gas generating apparatus, comprising a gas-holder, a generator operatively connected to said holder, said generator comprising a carbide receptacle and a water receptacle removably located thereunder, a cylinder operatively connected to said water receptacle, said cylinder being adapted to contain water, and a piston operatively connected to said gas-holder and receiving its movement therefrom, for alternately passing water from said cylinder to said receptacle, whereby an intermittent contact will be formed between the carbide and the water, substantially as described. 11th. The combination with a telescopic gas-holder, having a pipe connected to the movable section thereof, and extending normally downward into the liquid contained therein, said pipe extending upward above the top of said movable section, and a water chamber located without said exposed portion of said pipe, of a cylindrical portion, located on the frame of said holder, said portion having an operative outlet away from the gas-holder, said cylindrical portion being adapted to pass into said water chamber during the upward movement of said movable section, whereby an automatically sealed outlet will be provided for a surplus formation of gas, substantially as described.

**No. 63,141. Broom. (Balai.)**

Charles Beckh, Toronto, Ont., Canada, 26th May, 1899; 6 years. (Filed 29th December, 1898.)

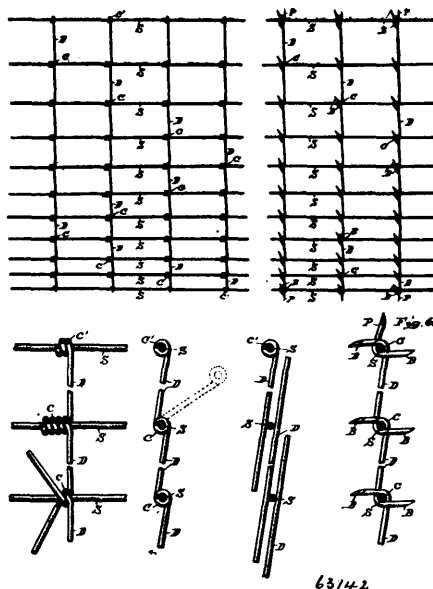
*Claim.*—1st. In a broom, a metallic ferrule provided with an internal cross piece, in combination with a broom secured to the ferrule, and a handle slotted to fit within the ferrule, substantially as and for the purpose specified. 2nd. In a broom, a metallic ferrule provided with an internal cross piece formed by bending inward the edges of the sheet from which the ferrule is formed, in combination with a broom secured to the ferrule, and a handle slotted to fit within the ferrule, substantially as and for the purpose specified. 3rd. In a broom a metallic ferrule provided with an internal cross piece, in combination with a wooden plug secured within one end of the said ferrule, a broom secured to the said plug, and a handle slotted to fit within the ferrule, substantially as and for the purpose specified. 4th. In a broom, a metallic ferrule provided with an internal cross piece, in combination with a broom secured to the ferrule, a handle slotted to fit within the ferrule, and a nail or pin passing through the ferrule, the cross piece, and the handle, substantially as and for the purpose specified. 5th. A ferrule for a detachable handled broom, comprising a sheet of metal bent to form a tube, and having its edges turned inward to form an internal cross piece, integral with the ferrule, substantially as and for the purpose specified. 6th. In a broom, a metallic ferrule A, provided with an

internal cross piece B, having flanges c to form a lock for the broom handle, substantially as and for the purpose specified. 7th. In a



broom, the combination of a metallic ferrule A, provided with an internal cross piece B, having flanges c the broom C, secured to the ferrule, a handle D, slotted to fit within the ferrule, and a nail or pin passing through the ferrule the cross piece and the handle, substantially as and for the purpose specified.

**No. 63,142. Wire Fencing. (Clôture en fil de fer.)**

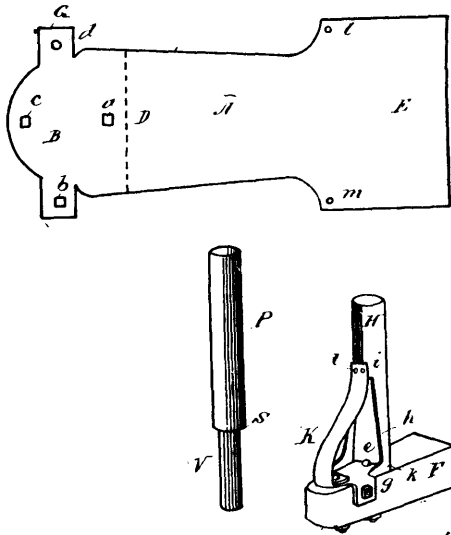


Albert James Bates, Joliet, Illinois, U.S.A., 26th May, 1899; 6 years. (Filed 5th May, 1897.)

*Claim.*—1st. The herein described woven wire fencing comprising the several plain parallel strand wires S and the plurality of single plain stay wires D connecting said strand wires together by being coiled, at their end portions, about said strand wires and intercoiled at their meeting ends, substantially as set forth. 2nd. The herein described woven wire fencing, comprising the several plain parallel strand wires, and the plurality of single plain stay-wires connecting said strand wires together, by being coiled, at their end portions, about said strand wires, intercoiled at their meeting ends, and terminating with extending prods, substantially as set forth. 3rd. The herein described woven wire fencing, comprising the series of parallel strand wires, arranged in graduated order, and the plurality of single graduated stay wires connecting said strand wires together

by being coiled at their end portions about said strand wires, and intercoiled at their meeting ends, the fencing having graduated meshes, substantially as set forth.

**No. 63,143. Vehicle Bolster Stake.**  
(Support d'épée de véhicule.)



63143

Targe G. Mandt, Stroughton, Wisconsin, U.S.A., 26th May, 1899; 6 years. (Filed 21st March, 1899.)

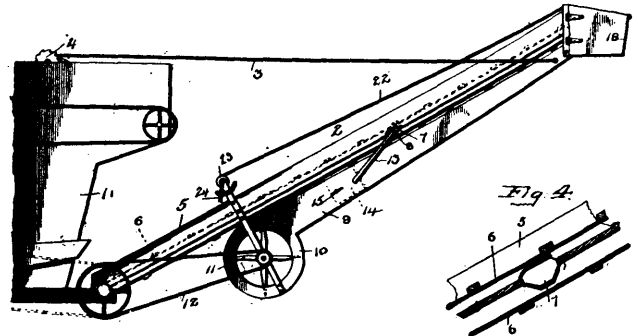
*Claim.*—1st. As a new article of manufacture, a bolster-stake consisting of a base and upright formed of one piece, the base provided with lips extending on both sides of the bolster and securely fastened to the bolster, the upright bent at right angles to the base and in the form of a channel-bar for a short distance and terminating in a tube at the top and a brace secured at one end to the tube, and at the other end to the base and bolster, as and for the purposes shown. 2nd. As a new article of manufacture, a bolster-stake consisting of a base and upright formed of one piece, the base provided with lips G, the upright formed into a channel-bar for a short distance and terminating in a tube at the top, a brace k and a brace K secured at its lower end to the base and bolster and at its upper end to the upright in such a manner as so hold the upper part of the upright in the form of a tube, all combined to operate, substantially as described, and for the purposes shown. 3rd. As a new article of manufacture, a bolster-stake consisting of a base and upright formed from a single blank, the base provided with lips G and secured to the top of the bolster, the upright set at right angles to the base and formed into a channel-bar for a short distance and terminating in a tube H, a brace k, a brace K secured at its lower end to the base and bolster and at its upper end to the upright, and holding the two edges of the upright in the form of a tube, and a removable stake P, all combined to operate, as and for the purposes shown.

**No. 63,144. Straw Stacker.**  
(Machine à mettre la paille en meule)

Elias Jones, Winnipeg, Manitoba, Canada, 26th May, 1899; 6 years. (Filed 15th March, 1899.)

*Claim.*—1st. A straw stacker, comprising a conveyor, means substantially as described for imparting movement to said conveyor, an air blast connected to said stacker, said blast having an outlet in juxtaposition to the delivery end of said conveyor, and means substantially as described located at one end of said conveyor, for varying the direction of the movement of the air blast, substantially as described. 2nd. A straw stacker, comprising a frame pivotally connected to the rear of the threshing, means substantially as described for adjusting the position of the rear end of said stacker, a conveyor mounted to have movement within the frame-work, an air duct formed below said frame-work, having its rear end open at the end of said conveyor, and means substantially as described for forcing a blast of air through said air duct, and means substantially as described for adjustably regulating the lateral course of said air blast at the end of said conveyor, substantially as described. 3rd. A straw stacker, comprising a framework pivotally connected to the rear end of the threshing, a conveyor mounted to have movement on said framework, an air duct mounted on said framework below said framework, said air duct having its outlet at the outer end of said conveyor, means substantially as described for forcing a blast of air through said air duct, pivotally mounted wings secured to the rear end of said framework, and means substantially as

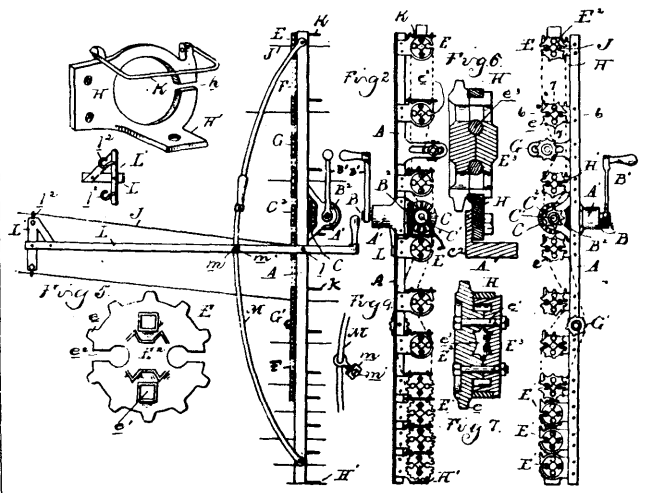
described for independently varying the position of said wings, whereby the blast of air may have its lateral direction of movement



63144

changed, substantially as described. 4th. A straw stacker, comprising a framework having a lateral depression formed therein, a conveyor adapted to have movement over said framework and said depression, an air duct mounted below said framework, and means substantially as described for forming a blast of air in said air duct, said means being adapted to force the air through said air duct and also through said depression, substantially as described. 5th. A straw stacker, comprising a framework, having a lateral depression located therein, a conveyor mounted to have movement over said depression, an air duct located below said framework, a pipe connecting said air duct and said depression, and means substantially as described for forming a blast of air in said air duct, a portion of said blast passing through said pipe and said depression, substantially as described. 6th. In a straw stacker, the combination with a conveyor, of an air duct formed below said conveyor, said duct having a transverse and a longitudinal outlet, means substantially as described for forcing a blast of air through said air duct, and means substantially as described for regulating the passage of said air blast through said air duct and its outlets, substantially as described. 7th. In a straw stacker, the combination with a conveyor, of an air duct formed below said conveyor, said air duct having a transverse and longitudinal outlet, means substantially as described for forcing a blast of air through said air duct, and means substantially as described for regulating the passage of said air blast through said air duct and its outlets, said means being located within said air duct. 8th. In a straw stacker, the combination with a conveyor, of an air duct formed below said conveyor, means substantially as described for forcing a blast of air through said air duct, and a door hingedly mounted in said air duct, for regulating the passage of the air therethrough.

**No. 63,145. Wire and Picket Fence Making Machine.**  
(Machine à faire les clôtures en fil de fer.)



63145

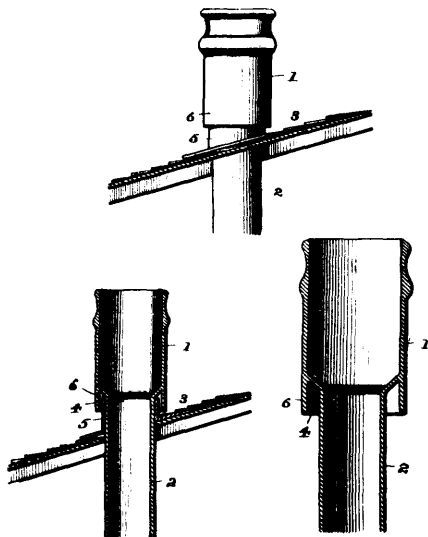
James R. Jones, Waterford, Michigan, U.S.A., 26th May, 1899; 6 years. (Filed 4th April, 1899.)

*Claim.*—In a fence-making machine, the combination of a frame, bearings connected with the frame, and a series of twisting wheels to engage longitudinal fence strands, each of said twisting wheels constructed with a toothed sprocket-wheel E<sup>2</sup>, and with a hollow



rear wheel E<sup>3</sup>, secured to the sprocket-wheel, the sprocket-wheel constructed with lateral grooves or recesses to receive the longitudinal strands of the fence, the rear wheel serving as a hub for the sprocket-wheel and revoluble within the corresponding bearing, and housed within said wheels, for the purpose described.

**No. 63,146. Soil Pipe. (Tuyau d'égout.)**

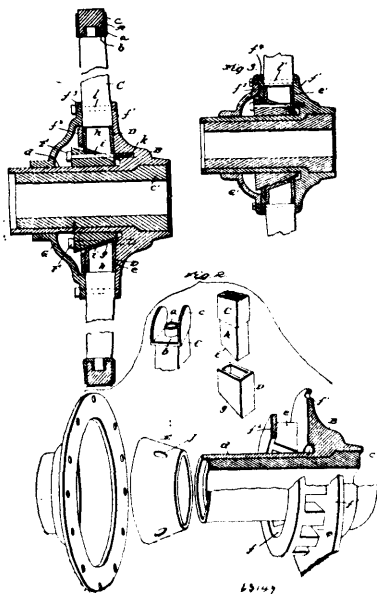


63/46

James W. Brown, Brockton, Massachusetts, U.S.A., 26th May, 1899; 6 years. (Filed 10th April, 1890.)

*Claim.*—1st. A soil pipe having separate upper and lower concentric sections, respectively, of different diameters, and the lower section provided at its upper end with an upwardly inclined and outwardly deflected web jointed to the larger upper pipe section near the lower end of the latter and forming an intervening space between the contiguous ends of the two sections, said lower pipe section being adapted to snugly register within a roof flange, and the intervening space between said sections permitting the roof flange to extend to a point with its upper end resting against said deflected web, substantially as described. 2nd. In a soil pipe, stack or flue, a length comprising upper and lower parts integrally formed and of different diameters, the upper part being the larger and having its lower portion surrounding the upper portion of the lower part and forming a space to receive the upper end of a roof flange, substantially as set forth.

**No. 63,147. Wheel. (Roue.)**



63/47

George W. Shaw, Helena, and Martin Gratz, Butte, both of Montana, U.S.A., 26th May, 1899; 6 years. (Filed 12th April, 1899.)

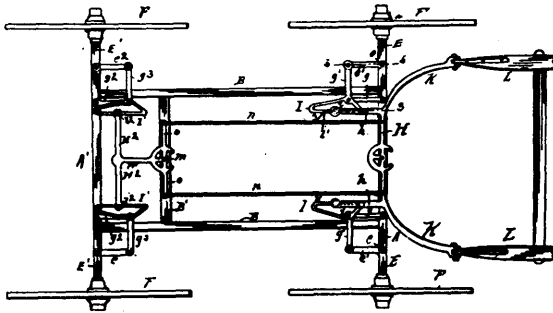
*Claim.*—1st. In a wheel, the combination of a felloe, a hub body having an outwardly directed sleeve and also having radial spoke sockets open at their inner ends and an annular recess communicating with the inner ends of the said sockets, spokes interposed between the felloe and the hub body and having their inner ends bevelled and arranged in the sockets of the latter, the correspondingly bevelled ferrules arranged on the inner ends of the spokes, the taper sleeve arranged in the annular recess of the body and adjustably connected to said body, and the outer shell surrounding the sleeve of the body and connected to said body, substantially as specified. 2nd. A wheel comprising a felloe, a hub body having a sleeve, spoke sockets, and an annular recess communicating with the inner ends of the sockets and also having a peripheral flange forming a continuation of one wall of the spoke sockets, spokes interposed between the felloe and the hub body and having their inner ends bevelled and arranged in the sockets of the latter, the taper sleeve arranged in the annular recess of the body and adjustably connected to said body, a shell arranged on the sleeve of the body and surrounding the taper sleeve, and having a peripheral flange surrounding one wall of the spoke sockets and bearing directly against the spokes, and detachable transverse connections between the flanges of the shell and hub body and adapted to clamp the same against the spokes, substantially as specified. 3rd. A wheel comprising a felloe, a hub body having an outwardly directed sleeve and spoke sockets and also having a peripheral flange forming a continuation of the inner wall of the spoke sockets, spokes interposed between the felloe and hub body and arranged in the sockets of the latter, an outer shell arranged on the sleeve of the body and having a peripheral flange surrounding the outer wall of the spoke sockets and bearing against the spokes, and bolts arranged between the spokes and connecting the flanges of the shell and hub body so as to clamp the same against the spokes, substantially as specified. 4th. A wheel comprising a felloe, a hub having spoke receiving sockets open at their inner ends and also having a peripheral flange forming a continuation of the inner side wall of the sockets, spokes interposed between the felloe and hub and arranged in the sockets, a spoke spreader and tightener arranged in the hub in engagement with the inner ends of the spokes, an outer shell having a flange surrounding the outer wall of the spoke sockets and bearing directly against the spokes, and screws taking through the flange of said shell and the flange of the hub body between the spokes and serving to connect the shell to the body and clamp the flanges on the spokes, substantially as specified. 5th. In a wheel, the combination of a felloe, a hub body having an outwardly directed sleeve, radial spoke sockets open at their inner ends, an annular recess communicating with the inner ends of said sockets, and a peripheral flange forming a continuation of the inner wall of the sockets, spokes interposed between the felloe and hub and arranged in the sockets and having their inner ends bevelled, correspondingly bevelled ferrules arranged on the inner ends of the spokes, the taper sleeve arranged in the annular recess of the hub body and adjustably connected to said body, the outer shell surrounding the outer wall of the spoke sockets and bearing directly against the spokes, and screws taking through said flange of the shell and the flange of the hub body between the spokes and serving to connect the shell to the body and clamp the flanges on the spokes, substantially as specified. 6th. A wheel comprising a hub body having an outwardly directed sleeve and also having radial spoke sockets open at their inner ends and an annular recess communicating with the inner ends of the said sockets, spokes interposed between the felloe and the hub body and having their inner ends bevelled, the taper sleeve arranged in the annular recess of the body, connecting bolts extending through the taper sleeve from the outer end thereof and having threaded inner portions let into screw tapped sockets in the body, and the outer shell surrounding the outer end of the taper sleeve and the sleeve of the body and detachably connected to said body, substantially as specified.

**No. 63,148. Vehicle Gear. (Engrenage de vehicules.)**

Frank V. Gifford, Niagara Falls, New York, U.S.A., 26th May, 1899; 6 years. (Filed 22nd March, 1899.)

*Claim.*—1st. The combination with an axle, of wheel-spindles with the ends thereof by vertical pivots and each having a shifting arm arranged substantially at right angles thereto, a steering-head pivoted in the longitudinal centre line of the vehicle and provided on opposite sides of said line with laterally extending arms, guides or frames arranged substantially at right angles to the axle and connected with said spindle arms, respectively, and sliding connections which transmit the movement of the steering head to said guides or frames, substantially as set forth. 2nd. The combination with an axle, of wheel-spindles connected with the ends thereof by vertical pivots and each having a shifting arm arranged substantially at right angles thereto, longitudinal arms or links pivoted to the axle on the inner side of the shifting arms of the wheel-spindles and arranged on the same side of the axle as said arms, transverse links, guides or frames rigidly connected with said transverse links and arranged substantially at right angles to the axle, a steering head pivoted in the longitudinal centre line of the vehicle and provided on opposite sides of said line with laterally extending arms, and sliding connections which transmit the movement of said steering arms to said guides or frames, substantially

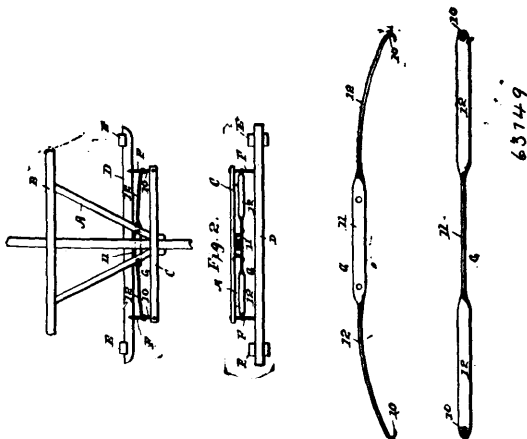
as set forth. 3rd. The combination with the front axle and the wheel spindles connected with the ends thereof by vertical pivots



63/48

and having rearwardly projecting arms, of longitudinal guide bars or frames arranged on the rear side of the axle and connected with the arms of said spindles, so as to move laterally therewith, and a steering head pivoted to the middle of the axle and provided on opposite sides of its pivot with arms having a sliding and swivelling connection with said longitudinal guide bars or frames, substantially as set forth. 4th. The combination with the front axle and the wheel spindles connected with the ends thereof by vertical pivots and having rearwardly projecting arms, longitudinal arms or links extending rearwardly from the axle and arranged on the inner side of said spindle arms, transverse links connecting said spindle arms with said longitudinal links, guides or frames rigidly connected with said transverse links and arranged substantially at right angles to the axle, a steering head pivoted to the middle of the axle and provided on opposite sides of its pivot with rearwardly extending arms and sliding connections between said arms and said guides or frames, substantially as set forth. 5th. The combination with the rear axle and the wheel spindles connected with the ends thereof by vertical pivots and having forwardly projecting arms, of guides or frames connected with the arms of said spindles and arranged substantially at right angles to the axle, a steering head pivoted in the longitudinal centre line of the vehicle and provided at its rear end with a cross-head, and sliding connections between the ends of said cross-head and said guides or frames, substantially as set forth. 6th. The combination with the front axle and the wheel spindles connected with the ends thereof by vertical pivots and having rearwardly projecting arms, of longitudinal guide bars or frames arranged on the rear side of the axle and connected with the arms of said spindles, a front steering head pivoted to the middle of the front axle and provided on opposite sides of its pivot with arms having a sliding connection with said guide bars or frames, a rear axle provided at its ends with horizontally swinging spindles having forwardly projecting arms, longitudinal guide bars or frames connected with the last-named spindle arms, a rear steering head pivoted at its rear end in the centre line of the vehicle and provided at its rear end with a cross head, sliding connections between said rear guides or frames and the ends of said cross head, and connections whereby the movement of the front steering head is transmitted to the rear steering head, substantially as set forth.

No. 63,149. Waggon Brake. (Frein de waggon.)



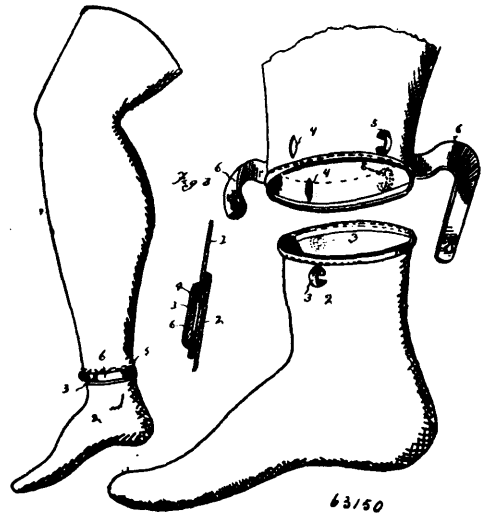
63149

Joseph Allen Gilkey, Springfield, Oregon, U.S.A., 26th May, 1899; 6 years. (Filed 4th April, 1899.)

Claim.—1st. In a brake, a controlling-spring for the brake-bar, the said spring being longitudinally curved, concaved at its forward

face and provided with hooks at its ends, adapted to receive the link connections between a brake beam and its support, the said spring normally holding the brake beam away from the wheels and also serving to prevent end movement of the brake beam. 2nd. In a brake, a controlling spring for the brake beam, the said spring being longitudinally curved, its forward face being concaved and its ends terminating in hooks which extend at the front, the material of the spring being likewise bent upon itself to form upright side sections and a horizontal central section, for the purpose specified. 3rd. The combination with the hounds of a vehicle, the brake beam, the supporting bar for the said brake beam, and a connection between the brake-beam and supporting bar, of a spring adapted to control the movement of the brake beam and normally hold the said beam away from the wheels, the said spring being attached to the hounds, and longitudinally curved, its concave surface facing the front, the spring being further provided with hooks at its ends, facing the front, which hook engages with the connections between the brake-bar or beam and its support, as specified. 4th. In a vehicle, the combination with the running-gear, the brake beam, the supporting-beam, and links connecting the brake beam with the supporting beam, of a spring adapted to control the movement of the brake beam in a manner to hold it normally from engagement with the wheels of the vehicle, the said spring being longitudinally curved, its forward face being concave, the said material of the spring being bent upon itself to form a central horizontal surface and vertical side surfaces, and end hooks facing the front, the hooks being adapted to engage with the connecting medium between the brake-beam and its support, the horizontal surface of the spring being arranged for attachment to the running gear at a point between the brake beam and the support for the same. 5th. In a brake, a controlling spring for the brake beam, the spring being longitudinally curved and its forward face being concaved, the material of the spring being bent upon itself to form upright side sections and a horizontal central section, the ends of the spring being constructed to engage the connections between the brake beam and its support, as and for the purpose specified.

No. 63,150. Stocking. (Bas.)

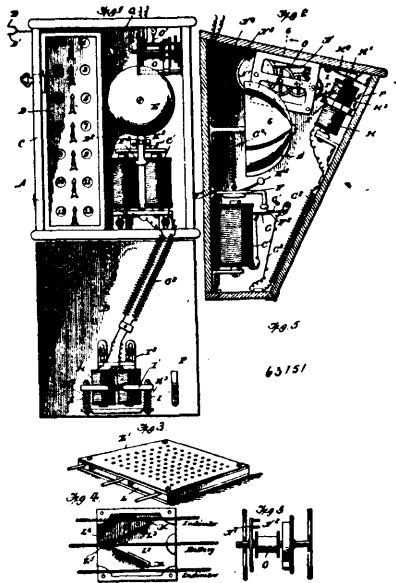


63150

Nicholas Hayden, and Charles F. C. Wurst, St. Paul, Minnesota, U.S.A., 27th May, 1899; 6 years. (Filed 3rd May, 1899.)

Claim.—1st. A stocking comprising a legging and a foot portion having their meeting end portions overlapped, loops applied to one of the parts and passing through corresponding slots or openings in the other part, and a strap or tape encircling and confining the overlapping portions of the stocking and passing through the said loops to prevent their withdrawal through the said slots or openings substantially as and for the purpose set forth. 2nd. In a stocking, the combination of a foot portion having loops projecting outwardly from its sides, a legging having its lower end portion overlapping the upper end portion of the foot part and formed with openings or slots for the passage therethrough of the loops of the foot portion, and an elastic strap or tape having slidable connection with the lower end portion of the legging and adapted to pass through the side loops of the foot portion and prevent their withdrawal through sides of the legging, said strap encircling and confining the overlapping portions of the stocking and provided with means for adjustably connecting their ends, substantially as described.

**No. 63,151. Fire Alarm.** (*Avertisseur d'incendie.*)



Robert J. Baker, Joseph Maish and Charles B. Jones, all of Baltimore, Maryland, U.S.A., 27th May, 1899; 6 years. (Filed 17th October, 1898.)

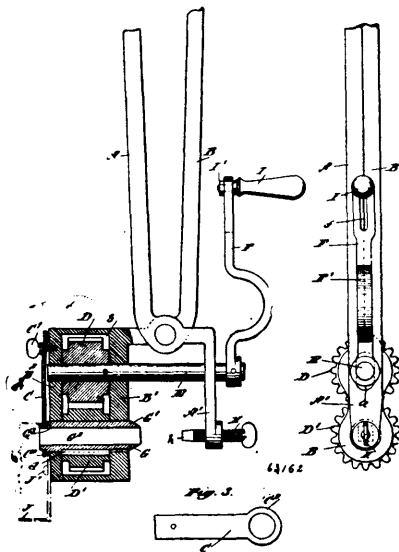
*Claim.*—1st. The combination with the door and the casing provided with the catch, of an angular bracket having slotted arms in contact with the door, screws through the slots for adjustably securing the bracket to the door, magnet coils mounted on the upright arms of the bracket, a bracket I, secured to the door, provided with openings through which the coils pass and smaller side openings, the armature, pins projecting back therefrom through the side openings of bracket I, and springs around the pins, bearing against the armature and the bracket I, to hold the armature normally in engagement with the catch, substantially as described. 2nd. In an automatic fire alarm, the combination of a box or casing adapted to be secured to a wall, an alarm bell mounted on a standard secured to the back of the box or casing, a pair of magnets mounted on a bracket secured to the back of the casing below the bell, the armature, F, of said magnets, having the downwardly bent end F<sup>2</sup>, hinged in lugs F<sup>1</sup>, secured to the back of the casing and carrying a bell clapper, a spring connecting the armature with the standards of the alarm bell, two contact plates, G and G<sup>1</sup>, in the alarm circuit, secured to the side of the casing, the former under the latter and in the path of movement of the end F<sup>2</sup>, of the armature, substantially as described. 3rd. A thermostat, comprising an insulated iron bow in contact with the battery wire and having outwardly projecting arms extending toward the indicator wires, parallel with the battery wires, bars of different expansibility lying against and rigidly secured to the inside of said arms and provided with angular toes or contact points adjacent to the indicator wires, and a set screw for adjusting the spread of the bow, substantially as described. 4th. A thermostat, comprising an iron bow in contact with the battery wire but otherwise insulated and having its arms extending toward the indicator wires, a set screw through the bow regulating the amount of spread of the arms, and copper bars rigidly secured to the inside of the arms and provided with angular toes or contact points, substantially as described. 5th. The thermostat herein described, consisting of the non-conducting back plate, the edge blocks provided with grooves to receive indicator wires, the iron bow having spreading arms, secured to the back plate in contact with the battery wire, the copper bars rigidly secured to the inside of the iron arms and having contact toes or points, and the set screw for regulating the spread of the bow, substantially as described.

**No. 63,152. Wrench.** (*Clé à écrou.*)

Wilfrid Larson, and Oskar John Davidson, both of Kinsburg, California, U.S.A., 27th May, 1899; 6 years. (Filed 6th March, 1899.)

*Claim.*—1st. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, a socket tube mounted to turn and slide in one jaw, means for turning the socket tube, a flat spring secured to the outer side of the jaw and engaging the end of the socket tube to hold it upon the nut, and an adjusting bolt passing through the spring by which its tension may be adjusted. 2nd. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, a socket tube mounted to turn and slide in one jaw, a spring engaging aid tube to hold it in engagement with the nut, a tension adjusting

screw for the spring, means for turning the socket tube, an adjustable device carried by the other jaw of the tongs and engaging the



bolt head to hold it against rotation, and a cup or receptacle having its upper end placed to receive the nut from the rear end of the tube. 3rd. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, a socket tube mounted to turn and freely slide in one jaw, a pinion having rotative connection with the socket tube, an intermeshing pinion having a crank connected therewith, a flat spring secured lengthwise the outer side of the jaw engaging the socket tube to hold in upon the nut, and a bolt passing through the spring and into the jaw, whereby the tension of the spring may be readily adjusted. 4th. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, one jaw having a pinion receiving recess, two intermeshing pinions within said recess, a crank and shaft connected with one pinion, a socket tube forming the shaft of the other pinion and connected to rotate with the pinion and to slide in the jaw and pinion, a spring engaging the rear end of the socket tube, and a thumb nut for adjusting the tension of said spring. 5th. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, the jaw end of one lever having gears journaled therein, and one of the gears carrying a socket wrench, the other gear having a shaft extending through the opposite jaw, a crank upon this shaft outside of the last jaw, said jaw having a slot, or hole loosely accommodating the shaft and also having a bolt head engaging member, substantially as described. 6th. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, the jaw end of one lever having gears journaled therein and one of the gears carrying a socket wrench, the other gear having a shaft extending through the opposite jaw, a crank upon this shaft outside of the last jaw, said jaw having a slot or hole loosely accommodating the shaft and also having a threaded bolt passing through its end and adapted to engage the bolt head, substantially as described. 7th. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, the jaw end of one lever having gears journaled therein, and one of the gears having a hollow shaft keyed to turn with the gear and slidable lengthwise therein, said shaft forming a nut engaging socket, and the other gear having a shaft extending through the opposite jaw, a crank upon this shaft outside of the last jaw, said last jaw having a slot or hole loosely accommodating the shaft, and also having a bolt head engaging member, substantially as described. 8th. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, the jaw end of one lever having gears journaled therein, and one of the gears having a hollow shaft keyed to turn with the gear and slidable lengthwise therein, said shaft forming a nut engaging socket, a spring engaging the socket shaft to yieldingly hold it inward, the other gear having a shaft extending through the opposite jaw, a crank upon this shaft outside of the last jaw, said last jaw having a slot or hole loosely accommodating the shaft and also having a bolt head engaging member, substantially as shown and described. 9th. A tire bolt wrench, comprising two pivoted levers forming a pair of tongs, two pinions journaled in one jaw of the tongs, means for turning the pinions, one pinion having a hollow shaft forming a nut engaging socket and provided with a key and feather connection with this pinion, the key receiving slot in the shaft stopping short of its outer end and thus forming a stop to prevent the shaft from passing through the pinion in one direction, and a spring engaging the outer end of the shaft to hold it inward, substantially as described.

**No. 63,153. White Lead.** (*Blanc de plomb.*)

Thomas Crisp Sanderson, Brooklyn, Humber Road, Westcombe Park, London, England, 27th May, 1899; 18 years. (Filed 10th September, 1897.)

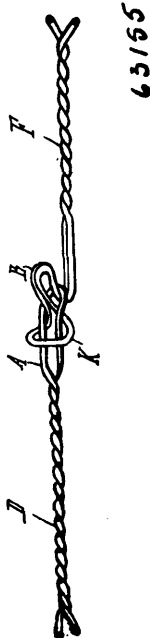
*Claim.*—1st. The process of producing white lead of high density, which consists in passing carbonic acid gas through a solution of a basic salt of lead, withdrawing the resulting supernatant solution of a normal salt of lead, introducing a fresh quantity of solution of the basic salt, intermixing the precipitate therewith and passing carbonic acid gas through the mixture, substantially as and for the purpose specified. 2nd. The process of producing white lead of high density, which consists in passing carbonic acid gas through a solution of a basic acetate of lead, withdrawing the resulting supernatant solution of a normal acetate of lead, introducing a fresh quantity of solution of the basic salt, intermixing the precipitate therewith, and passing carbonic acid gas through the mixture, substantially as and for the purpose specified. 3rd. The process of producing white lead of high density, which consists in passing carbonic acid gas through a solution of basic salt of lead, introducing a fresh quantity of solution of the basic salt intermixing the precipitate therewith, and passing carbonic acid gas through the mixture, substantially as and for the purpose specified. 4th. As a new article of manufacture, a commercial precipitated white lead of high density produced by precipitation from the successful quantities of a solution of a basic lead salt by means of carbonic acid in the presence of the prior precipitates, after separation of the previously treated quantities of solution.

**No. 63,154. Compound for the Treatment of Lung Disease.** (*Composé pour le traitement des maladies des poumons.*)

Jules Grenon Lussier, Salaberry of Valleyfield, Quebec, Canada, 27th May, 1899; 6 years. (Filed 16th December, 1898.)

*Claim.*—The herein described composition of matter, consisting of syrup, wine of specuana, tincture of squill, morphine, and tincture of amygdalis, substantially as described and for the purpose specified and combined in the proportions hereinabove set forth.

**No. 63,155. Wire Fastener.** (*Attache de fil de fer.*)



David Remillard, Montreal, Quebec, Canada, 27th May, 1899; 6 years. (Filed 1st February, 1899.)

*Claim.*—In a wire fastener for bales, fences, etc., an eye K and a hook B, at one end of the wire, and an eye A, at the other end, thereof, the latter being used to pass through the inside of the eye K, and then over and in the hook B, as above described for the purpose above stated.

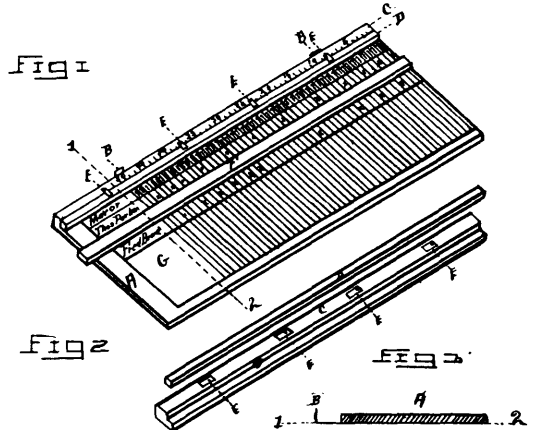
**No. 63,156. Ballot Counting Apparatus.**

(*Appareil à compter les bulletins.*)

Frank E. Holt, Lynn, Massachusetts, U.S.A., 27th May, 1899; 6 years. (Filed 4th April, 1899.)

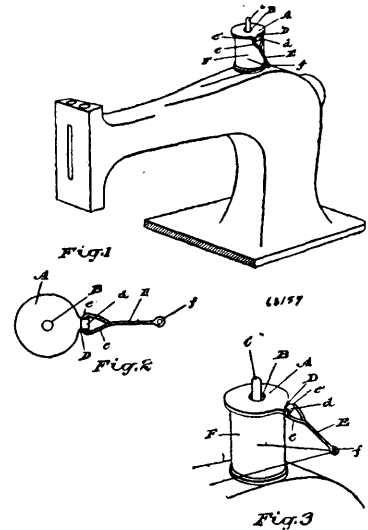
*Claim.*—The combination in an apparatus for counting ballots of the straight edge F, the board A, having upon one side springs B B,

the clamp C, held in position by said springs, said clamp C, having upon its upper surface marks placed at regular distances from each



other to show the proper place for each ballot, and also buttons E, E, E, E, and the follower D, for the purpose specified, all substantially as described.

**No. 63,157. Sewing Machine.** (*Machine à coudre.*)



Abina Nolan, Toronto, Canada, 27th May, 1899; 6 years. (Filed 5th April, 1899.)

*Claim.*—1st. An attachment for a sewing machine, embracing in its construction a disc fitted with a bore through which the spool holder is adapted to pass, and a swinging arm horizontally pivoted to the disc at one extremity, at the other fitted with an eye for the thread to pass through, substantially as specified. 2nd. An attachment for a sewing machine, embracing in its construction a disc fitted with a bore through which the spool holder is adapted to pass, and having a radial lug fitted with a sleeve, an arm having at one end an eye through which the thread is adapted to pass, and at the other a loop, one side of which is arranged to be pivotally held by the sleeve, substantially as specified.

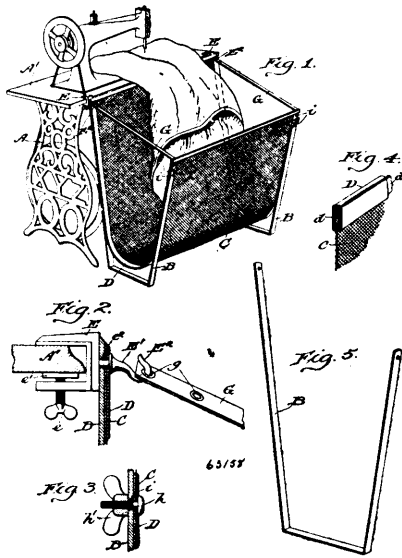
**No. 63,158. Sewing Machine Work Holder.**

(*Réceptacle d'ouvrage pour machines à coudre.*)

Ellen Marie Case, Chicago, Illinois, U.S.A., 27th May, 1899; 6 years. (Filed 14th February, 1899.)

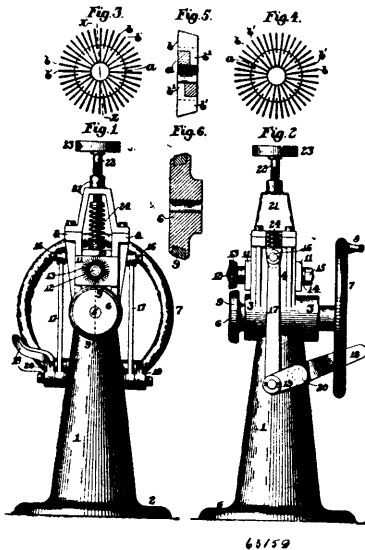
*Claim.*—1st. The combination with a flexible body, of a supporting piece located near each end thereof, said supporting piece having two upwardly extending prongs, a clamp secured to the upper end of the front prong of each of the supporting pieces to engage the table of the machine, and straps secured at one of their ends to the rear upper portion of the body and having means to secure them at their other ends to the front portion of the supporting pieces, substantially

as described. 2nd. The combination with a flexible body having openings in its rear upper portion and provided with stiffening rods



along its upper edges, of a supporting piece located near each end of the body and having two upwardly extending prongs, a clamp secured to the upper end of the front prong of each of the supporting pieces to engage the table of the machine, and straps secured at one of their ends to the rear upper portion of the body and having means to secure them at their other ends to the front portion of the supporting pieces, substantially as described.

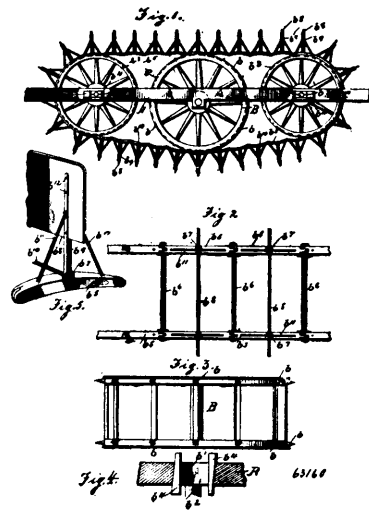
**No. 63,159. Stitch Separating and Pricking-up Machine.** (*Machine à déoudre.*)



said feed wheel and having a series of thin spring steel radiating blades, each constructed and adapted to independently spring between its contacting end and the hub in which it is set, to accommodate itself to the varying length of the stitches, arranged at uniform distances apart and having their outer ends inclined in the direction of their widths, and rounded in the direction of their thicknesses. 3rd. The stitch separating wheel 13 composed of the cylindrical hub *a* provided with longitudinal and radial grooves as set forth, a series of pairs of thin spring steel radiating blades *b b'* each provided with a shank *b''* and shaped as set forth and firmly secured in the grooves of said hub, substantially as described. 4th. In a stitch separating and pricking up machine, the combination of a feed shaft mounted in fixed bearings, a feed wheel secured on said shaft, means for revolving said shaft and feed wheel, a second shaft mounted in a movable bearing with its axis parallel to the axis of said feed shaft, means for moving said shaft bodily towards and from said feed shaft, means for maintaining its parallelism with said feed shaft during said movements, and a stitch separating wheel composed of a single hub and a series of thin steel blades set in fixed positions in said hub, and projecting radially therefrom, with their outer ends at uniform distances apart, which distances correspond to the standard length of the stitch to be operated upon, and each of said blades being constructed and adapted to spring independently between its operating end and said hub.

**No. 63,160. Boat Propulsion Mechanism.**

(*Mécanisme de propulsion pour vaisseaux.*)



David Tait, Deseronto, Ontario, Canada, 29th May, 1899 ; 6 years. (Filed 11th August, 1898.)

*Claim.*—The combination with a boat, of a central drive wheel connected to the drive shaft of the boat, an auxiliary wheel mounted on each side of said drive wheel and adjustable horizontally, the axes of said auxiliary wheels being on a plane above the axis of the drive wheel, means for regulating the horizontal adjustment of said auxiliary wheels and a sectional propelling bucket chain mounted on said wheels, said chain being operated by said drive wheel, substantially as described.

**No. 63,161. Vehicle Fender.** (*Defense de véhicule.*)

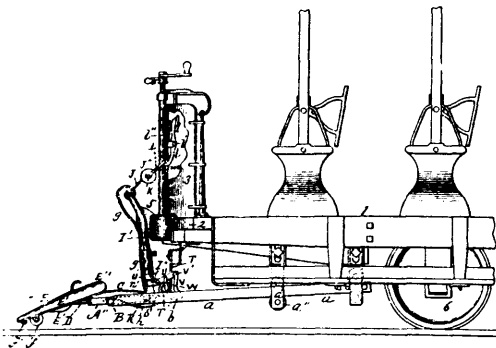
George Hipwood, Boston, Massachusetts, U.S.A., 29th May, 1899 ; 6 years. (Filed 30th December, 1898.)

*Claim.*—1st. In a fender, a fender frame, supports extending substantially horizontally forward from the said frame, shoes, as *E*, pivotally sustained near their rear ends by said supports, and springs extending from the horizontal rods upon which said shoes are pivoted rearward toward said frame, said springs working independently of the shoes and substantially bridging the space between the rear ends of the shoes and the front edge of the fender frame, substantially as described. 2nd. In a fender, the fender frame, supports extending substantially horizontally forward from said frame, a series of horizontal rods set at right angles to and sustained by said supports, the shoes *E* pivotally secured near their rear ends to said rods, the springs *F*, *F'*, extending forward from said rods, coiled around the same and with their ends bearing against the rear portions of the underside of the shoes, and the springs *H*, *H'*, *H''*, coiled around the said rods, formed with the loops *H* which extend forward under and bear against the underside of the portion *F* of the springs *F*, *F'*, and with the loops *H''*

The Bay State International Shoe Machinery Co., Portland, Maine, assignees of Joseph Eli Bertrand, Boston, Massachusetts, all in U.S.A., 29th May, 1899 ; 6 years. (Filed 16th February, 1899.)

*Claim.*—1st. In a stitch separating and pricking up machine, the combination of a revoluble feed wheel, and a stitch separating wheel composed of a central hub and a series of thin spring steel blades set firmly in said hub at uniform distances apart and radiating therefrom, each blade being constructed and adapted to spring, independently, between its outer end and the hub in which it is set, to accommodate itself to the varying length of the stitches, as set forth. 2nd. In a stitch separating and pricking up machine, the combination of a revoluble feed wheel having a frusto-conical peripheral frictional surface to receive the tread surface of the boot or shoe sole, and a stitch separating and pricking up wheel arranged to co-operate with

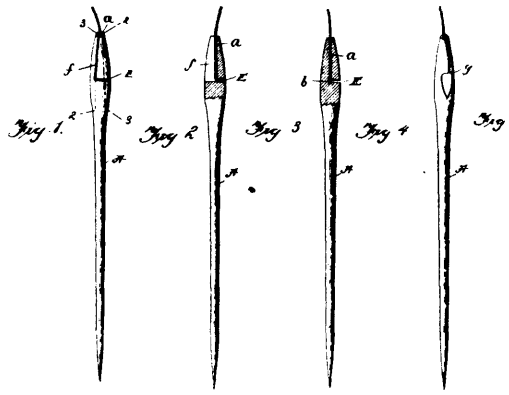
extending rearward and upward and curved to substantially bridge the space between the rear ends of the shoes and the front edge of



63/161

the fender frame, substantially as set forth. 3rd. In a fender, the substantially horizontal fender frame, shoes extending forward therefrom, the horizontal supports a pivotally connected at their forward ends with said frame and supported at their rear ends by the car body, a horizontal rod connecting said supports at the rear of the fender frame, the tubes or sleeves P loose on said rod, means for adjusting and setting said tubes rotatively on said rod, and springs extending from said tubes to and under the rear portion of the fender frame, substantially as described. 4th. In a fender, the substantially horizontal fender frame, shoes extending forward therefrom, the horizontal supports a pivotally connected at their forward ends with said fender frame and supported at their rear ends by the car body, a horizontal rod connecting said supports at the rear of the fender frame, the tubes or sleeve P loose on said rod and provided with the tubular extensions P<sup>1</sup>, means for adjusting and setting said tubes rotatively on said rod, and the springs N extending partially around the rear side of the said tubular extensions, thence disposed around the tubes and extending under the rear portion of the fender frame, substantially as set forth. 5th. In a fender, the substantially horizontal fender frame provided with the rearward horizontal extensions A<sup>111</sup>, the bunter guard hinged to the fender frame and adapted to swing vertically with relation thereto, a substantially horizontal supporting frame adapted to slide under the car and being pivotally connected at its forward ends with the fender frame, jointed levers connecting the bunter guard with the sliding frame, and cams extending forward from said jointed levers toward said extensions A<sup>111</sup>, whereby swinging down the bunter guard brings said cams into engagement with the extensions A<sup>111</sup>, and tilts up the front end of the fender so that it may be slid under the car, substantially as described. 6th. In a fender, the substantially horizontal fender frame provided with the rearward horizontal extensions A<sup>111</sup>, the bunter guard hinged to the fender frame and adapted to swing vertically with relation thereto, the supporting bars a, sliding under the car and pivotally sustaining the fender frame at their forward ends, the cross rod b, the jointed levers U, V, pivotally secured at their opposite ends to said cross rod and the end bars of the bunter guard, and the curved horns or cams W, integral with the portions V, of the jointed levers and extending forward and upward therefrom, whereby swinging down the bunter guard brings said cams into engagement with the extensions A<sup>111</sup>, and tilts up the front end of the fender, substantially as set forth. 7th. In a fender, comprising a substantially horizontal frame and a substantially vertical bunter guard hinged to and extending up from said fender frame, the combination of said bunter guard, the car body provided with a dashboard having the opening m therein, the trip lever l, pivotally secured to the inner surface of the dashboard and with its lower end formed into hook shape and extending through said opening, the stirrup L adapted to catch upon the hooked end of said lever, a drum supported by said stirrup and adapted by means of a clutch to be rotated or held in stationary position, and a chain secured at its opposite ends to said drum and the bunter guard, substantially as described. 8th. In a fender, in combination, the supporting bars a sliding under the car, the tilting fender A, A<sup>1</sup>, A<sup>11</sup>, provided with the tubular sockets B<sup>1</sup>, extending horizontally from its end bars, and pin B, extending inwardly from the forward ends of the bars A into said tubular sockets whereby said bars A may be moved laterally with relation to the fender frame, substantially as set forth. 9th. In a fender, substantially horizontal fender frame A, A<sup>1</sup>, A<sup>11</sup>, substantially vertical bunter guard comprising the bar I formed with the end bar I<sup>1</sup>, the feet R extending forward and downward from and integral with the lower ends of the bars I<sup>1</sup>, pivotal connections between said feet and the horizontal fender frame, and the springs S secured at one end to the fender frame, extending under, and bearing against said feet, and with their opposite ends overlapping and bearing upon rigid connections with the fender frame, substantially as described.

No. 63,162. Needle. (Aiguille.)

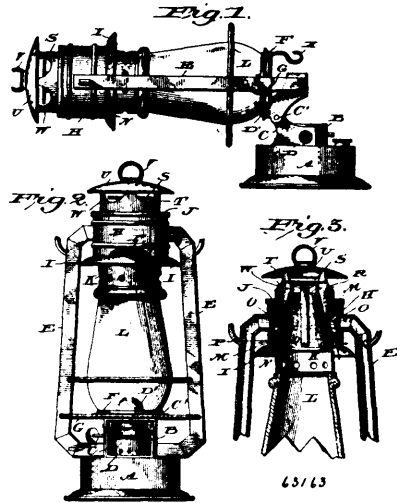


63/162

Stephen Samuel Roszell, Lexington, Kentucky, U.S.A., 29th May, 1899; 6 years. (Filed 24th January, 1899.)

Claim.—1st. An improved needle comprising a body having a pointed end and a head provided with a cylindrical tubular thread socket, the said tubular socket having a contracted thread opening in its upper end and an enlarged and opening outward through the side of the needle, the wall of the said tubular socket having a contracted longitudinal slot connecting the upper contracted and the lower enlarged opening in the end of said socket, substantially as and for the purpose described. 2nd. A needle having the head provided with a longitudinal opening, a transverse opening at the inner end of and intersecting the longitudinal opening, a transverse slot connecting the ends of the transverse opening, and a contracted longitudinal slot connecting one end of the transverse opening and the outer end of the longitudinal opening, the parts adapted to operate as and for the purpose described.

No. 63,163. Lantern. (Lanterne.)



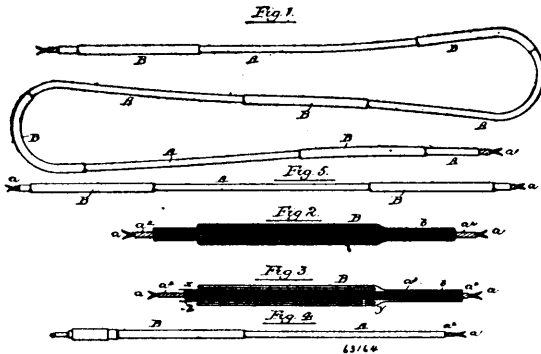
63/163

James H. Hill, Belleville, Ontario, Canada, 29th May, 1899; 6 years. (Filed 18th January, 1898.)

Claim.—1st. In a tubular lantern, the combination of the oil cup, the ears, as C, attached thereto and connected together by the cross plate to form the second member of the hinge and hinged to the other member, and the air tubes connected to said second member of the hinge, substantially as described. 2nd. In a tubular lantern, the combination of the oil cup, the burner collar, the ears, as C, attached to the oil cup and connected together by the cross plate to form one member of a hinge and having openings communicating with the interior of the burner collar, the ears, as C<sup>1</sup>, connected together by a cross plate to form the second member of the hinge and hinged to the other member, and the air tubes connected to said second member of the hinge and having their lower ends located to register with the openings leading into the burner collar, substantially as described. 3rd. In a tubular lantern, the combination with the oil cup and air tubes, of the collar attached to the upper end of

the air tubes, the globe holder fitting inside the collar and forming in connection therewith a chamber at the upper portion of the lantern, said chamber having openings for the entrance and exit of air, and a conical collar inside of the globe holder extending inwardly and upwardly from a point below the opening into the before mentioned chamber to form an air chamber to receive air at its upper end and direct it into the outside chamber and thus prevent it from passing down inside the globe holder to the burner, substantially as described. 4th. In a tubular lantern, the combination with the oil cup and air tubes, of the globe holder at the upper portion of the tubes and having openings at its upper end, the cap or cover secured thereto, the conical collar inside of the upper portion of the globe holder extending inwardly from its lower to its upper end to form an upwardly tapering interior to the holder at its upper portion, and the deflector plate above said conical collar, substantially as described.

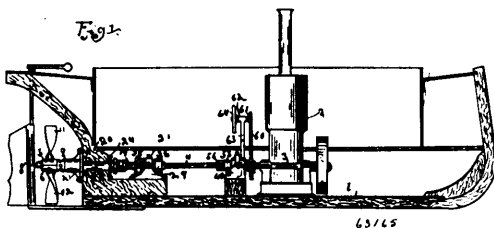
**No. 63,164. Electrical Conductor. (Conducteur électrique.)**



John W. Gottschalk, Philadelphia, Pennsylvania, U.S.A., 29th May, 1899; 6 years. (Filed 8th April, 1899.)

**Claim.**—1st. A braided conducting cord made in continuous lengths, having enlargements at intervals formed by increasing the thickness of the covering, substantially as described. 2nd. A braided conducting cord made in continuous lengths, having heavily braided portions alternating with light braided portions, substantially as described. 3rd. A continuous conducting cord, adapted to be cut in lengths, said cord having singly ply braiding alternating with three ply braiding, substantially as described. 4th. A conducting cord having a continuous braided covering, commencing at one end braided on the cord a given distance, and then braided in the reverse direction over the former braiding, and reversed again so as to make three plies, and continuing to braid over the balance of the cord in single ply, substantially as described.

**No. 63,165. Blade Propeller. (Lancé de propulseur.)**



Charles William Foster, New Haven, Connecticut, U.S.A., 29th May, 1899; 6 years. (Filed 22nd April, 1899.)

**Claim.**—1st. In a reversible-blade propeller mechanism, a wheel-hub divided longitudinally into a plurality of sections, a blade pivotally supported in each of said sections, a screw-cap engaging the threaded outer end of said hub, and a spanner-nut, engaging the inner end thereof, substantially as and for the purpose described. 2nd. In a reversible blade propeller mechanism, a wheel hub divided longitudinally into a plurality of sections each of which sections is provided with a blade-opening and with a boss surrounding said opening at the outer side thereof, combined with a plurality of blades each of which is provided with a shank which enters one of the openings in said hub and with a flange which bears against the boss adjacent to said opening, substantially as described. 3rd. In a reversible-blade propeller mechanism, the combination with a wheel hub and a plurality of blades revolvably seated in said hub, of a propeller shaft entering said hub, and having a crank connection with each of said blades, a sleeve surrounding said shaft, means for locking said wheel hub to said sleeve at its rear end, a thrust bearing engaging said sleeve at its front end, and means for revolving said shaft and for imparting a longitudinal movement thereto to actuate said blades about their axes as a centre substantially as described. 4th. The combination with a propeller-wheel having reversible blades and a propeller shaft, of an intermediate connec-

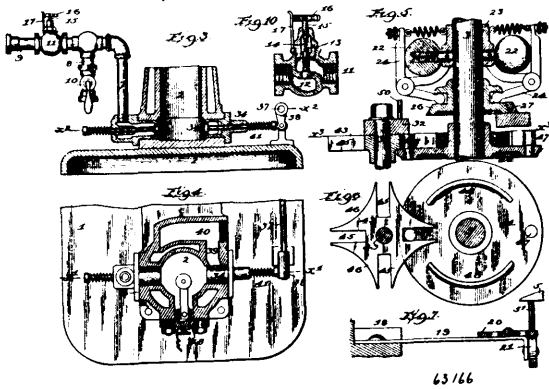
tion between said shaft and the blades of said wheel whereby longitudinal movement of the former will impart a rotary movement to the latter about their axes, an internally threaded ring supported adjacent to the front end of said shaft, an exteriorly threaded sleeve engaging the thread of said ring and having a portion thereof projecting between two stops on said shaft, and means for imparting a revolving movement to said sleeve, whereby a longitudinal movement will be imparted to said sleeve and the shaft to reverse the position of the propeller blades, substantially as described. 5th. The combination with a reversible blade propeller and a longitudinally movable propeller shaft operatively connected to the blades of said wheel, of an internally threaded ring located adjacent to the front end of said shaft, an exteriorly threaded sleeve engaging the thread of said ring, said sleeve carrying at one end a sprocket wheel and having at its opposite end an internally projecting portion which enters between two collars secured to said shaft, a shaft carrying a hand wheel and a second sprocket wheel, and a chain connecting said sprocket wheels, arranged and operating substantially as described. 6th. The combination with a reversible-blade propeller, a propeller-shaft and intermediate connections between said shaft and the blades of said wheel whereby longitudinal movement of the former will impart a reversing movement to the latter, of a motor the crank shaft of which carries a sleeve coupling the end of which embraces and has a spline and groove connection with the front end of said propeller shaft, an exteriorly threaded sleeve loosely embracing said sleeve coupling and having a portion thereof swivelly connected to said shaft, an internally threaded ring hung to a fixed support and engaging said threaded sleeve, and means for imparting a revolving movement to said sleeve, arranged and operating substantially as described. 7th. The combination with a reversible blade propeller and a propeller shaft operatively connected with the blades of said propeller for reversing the movement thereof, of universally supported bearings supporting said shaft adjacent to each of its ends, and means substantially as described for imparting a revolving longitudinal movement to said shaft. 8th. The combination with the wheel hub composed of the longitudinal sections 5, 6, having blade openings surrounded by the bosses 10, of the blades 11, 12 having shanks 13 and flanges 14, crank-discs 15 secured to said shanks within the hub, shaft 4 having the studs or pins 18 engaging notches or recesses in said discs and means for revolving said shaft and for imparting longitudinal movement thereto, substantially as described. 9th. The combination with the hub composed of the section 5, 6, having the blades 11, 12 revolvably seated therein, of the longitudinally movable shafts 4 entering said hub and engaging said blades through an intermediate crank mechanism, sleeve 19 surrounding said shaft, screw-cap 8 inclosing the outer end of said hub, and spanner nut 9 embracing the inner end of the hub and locking it to said sleeve, substantially as described. 10th. The combination with the shaft 4, of the ring 44 hung upon horizontally disposed pivots, interiorly threaded ring 46 supported by vertical pivots within said ring 44, exteriorly threaded sleeve 53 engaging the thread of said ring 46 and provided with the internal flange 54, collars 55 and 56 located on said shaft upon opposite sides of said flange, and means for revolving said sleeve, substantially as described. 11th. The combination with the motor shaft 3 having the sleeve 48 secured thereto, of shaft 4 entering said sleeve and having a spline and groove connection therewith, exteriorly threaded sleeve 53 embracing the sleeve 48 and having sprocket wheel 59 secured thereto at its front end and having the internal flange 54 at its rear end, internally threaded ring 46 hung upon a universal joint and engaging with the sleeve 53, collars 55, 56 on the shaft 4 at the opposite sides of the flange 54, and shaft 61 carrying the hand wheel 64 and a sprocket wheel which has chain connection with said wheel 59, arranged and operating, substantially as described.

**No. 63,166. Explosive Engine. (Machine explosive.)**

Gustavus A Tuerk, Chicago, Illinois, U.S.A., 29th May, 1899; 6 years. (Filed 29th March, 1899.)

**Claim.**—1st. In an explosive engine, the combination with the single acting power cylinder and piston, of an outlet valve adapted to open inwardly, a revolving cam and connections for automatically opening said valve, the cylinder being formed with an exhaust passage near its upper end that is adapted to act in conjunction with the outlet valve, to relieve the cylinder of pressure after each explosion, substantially as set forth. 2nd. The combination of an explosive engine, of a power cylinder and piston, a main inlet valve, an air inlet valve, and a gas inlet check valve, said gas inlet valve being provided with an adjustable stop to regulate the lift of the valve proper, or to positively close the same, substantially as set forth. 3rd. The combination in an explosive engine, of a power cylinder or piston, a main inlet valve, an air inlet valve, and a gas inlet check valve, said gas inlet valve being provided with means to regulate the lift of the valve proper, the same comprising a screw-threaded adjustable stem in the path of the valve stem, a peripherally notched operating wheel, and a spring detent engaging such notched wheel, substantially as set forth. 4th. The combination with the cylinder and piston of an explosive engine, of a contact pin carried by the piston, a spring finger carried by the cylinder in an insulated manner, and a rotatable contact disc on said finger, the contact disc and contact pin being relatively arranged so that the pin will contact with the disc near the margin thereof, substantially

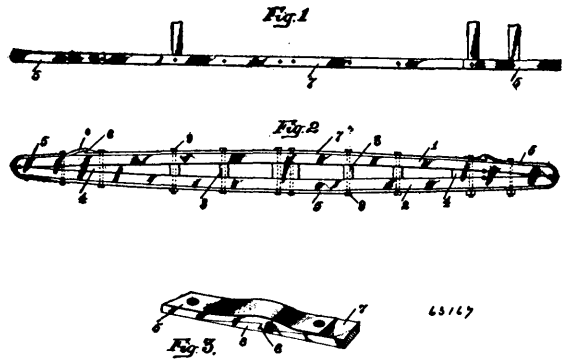
as set forth. 5th. The combination with the cylinder and piston of an explosive engine, of a contact pin carried by the piston, a spring



finger carried by the cylinder in an insulated manner, and a rotatable contact disc on said finger, the contact disc and contact pin being relatively arranged so that the pin will contact with the disc near the margin thereof and at a point to one side of a longitudinal line through the axis of such disc, substantially as set forth. 6th. The combination with the cylinder and piston of an explosive engine, of a contact pin carried by the piston, a spring finger carried by the cylinder in an insulated manner, and a rotatable contact disc of a perforate formation arranged at the free end of said finger, the contact disc and contact point being relatively arranged so that the pin will contact with the disc near the margin thereof, substantially as set forth. 7th. The combination with the cylinder and piston of an explosive engine, of a contact pin carried by the piston, a spring finger carried by the cylinder in an insulated manner, a rotatable contact disc on said finger, and a bearing roller secured to the finger and adapted to support the projecting edge of the contact disc, substantially as set forth. 8th. The combination with the outlet valve of an explosive engine, the lever for operating said valve, of a governor provided with a coned extension on its movable sleeve, and a detent lever on the engine frame, one end of which engages such coned extension and the other end of which is adapted to engage the upper end of the valve operating lever to hold the same in dormant position, substantially as set forth. 9th. The combination with the cylinder and piston of an explosive engine, of an outlet valve mechanism, a rotary cam receiving motion from the engine shaft, a lever pivoted to the main frame with one arm engaging said cam, a rock shaft having arm and link connection with the lower end of said lever, an inwardly opening outlet valve the stem of which projects outwardly and is provided with a closing spring, and an arm on the rock shaft adapted to engage said valve stem to impart an opening movement to the valve, substantially as set forth. 10th. The combination with the cylinder and piston of an explosive engine, of an outlet valve mechanism comprising a rotary cam receiving motion from the engine shaft, a lever pivoted to the main frame with one arm engaging said cam, a rock shaft having arm and link connection with the lower end of said lever, a coiled spring extending from said rock shaft arm to the lower end of the lever, an inwardly opening outlet valve the stem of which projects outwardly, and an arm on the rock shaft adapted to engage said valve stem to impart an opening movement to the valve, substantially as set forth. 11th. The combination with the cylinder and piston of an explosive engine, of an outlet valve mechanism comprising a rotary cam receiving motion from the engine shaft, a lever pivoted to the main frame with an arm engaging said cam, a rock shaft having arm and link connection with the lower end of said lever, an inwardly opening outlet valve the stem of which projects outwardly and is provided with a closing spring, an arm on the rock shaft adapted to engage said valve stem to impart an opening movement to the valve, a governor provided with a coned extension on its movable sleeve, and a detent lever on the engine frame, one end of which engages such coned extension and the other end of which is adapted to engage the upper end of the valve lever to hold the same in a dormant position, substantially as set forth. 12th. The combination with the cylinder and piston of an explosive engine, of an outlet valve mechanism comprising a rotary cam receiving motion from the engine shaft, a lever pivoted to the main frame with one arm engaging said cam, a rock shaft having arm and link connection with the lower end of said lever, a coiled spring extending from said rock shaft arm to the lower end of the lever, an inwardly opening outlet valve the stem of which projects outwardly, an arm on the rock shaft adapted to engage said valve stem to impart an opening movement to the valve, a governor provided with a coned extension on its movable sleeve, and a detent lever on the engine frame one end of which engages such coned extension and the other end of which is adapted to engage the upper end of the valve lever to hold the same in a dormant position, substantially as set forth. 13th. The combination with the outlet valve of an

explosive engine and the lever for operating said valve, of an intermittent gear or driver on the main shaft, a pinion on a countershaft and an operating cam moving with said pinion, said intermittent gears being so formed that the driver on the main shaft will make two or more revolutions to one of the pinion, and said pinion will travel faster than the driver, during the active movements of said pinion, substantially as set forth. 14th. The combination with the outlet valve of an explosive engine and the lever for operating said valve, of an intermittent gear or driver on the main shaft, a pinion on a countershaft, and an operating cam moving with said pinion, the said intermittent gear comprising a driver carrying diametrically opposite pins or studs and intermediate concentric rim sections, and a pinion formed with a series of radial recesses and marginal concave depressions, substantially as set forth. 15th. The combination with the outlet valve of an explosive engine and the lever for operating said valve, of a spring contact finger secured to said lever in an insulated manner, and the rotary operating cam for said valve lever provided with a contact pin adapted to contact with said spring finger, substantially as set forth. 16th. The combination with the outlet valve of an explosive engine and the lever for operating said valve, of a spring contact finger secured to said lever in an insulated manner, the rotary operating cam for said valve lever provided with a contact pin adapted to contact with said spring finger, a governor provided with a coned extension on its movable sleeve, and a detent lever on the engine frame, one end of which engages said coned extension and the other end of which is adapted to engage the upper end of the valve operating lever to hold the same in a dormant position, substantially as set forth.

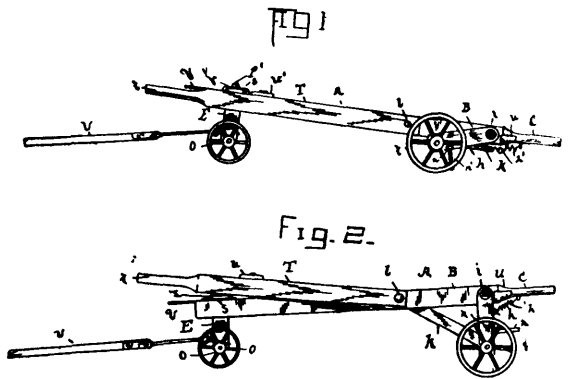
No. 63,167. Truck Side Frame. (Cadre de camion.)



Frederic Scott Seagrave, Columbus, Ohio, U.S.A., 29th May 1899; 6 years. (Filed 1st February, 1899.)

Claim.—1st. In a truck side frame, the combination with the upper and lower frame sections 1 and 2 having adjoining ends, of a metallic binding strip formed of one or more sections and secured about said frame, the ends of said section or sections having a barbed hook engagement one with the other, substantially as specified. 2nd. In a truck frame, the combination with the upper and lower frame sections 1 and 2 having adjoining ends and intervening struts, of a metallic binder passing about said upper and lower frame sections and consisting of one or more metallic binding strip sections, the ends of said section or sections being united by a hook engagement, and bolts joining the upper and lower frame sections and said metallic strips, substantially as specified.

No. 63,168. Truck. (Camion.)



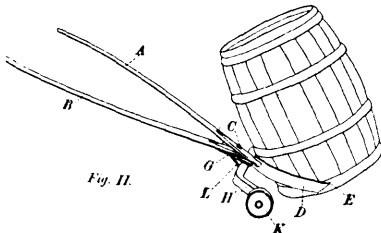
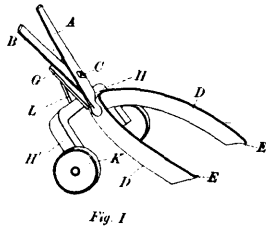
Albert G. Wolcott, Lenox, Ohio, U.S.A., 29th May, 1899; 6 years (Filed 2nd November, 1898.)

Claim.—1st. In a wheeled truck, the combination with a frame having a rear axle adapted to be adjusted to raise and lower the rear



end thereof, of pivoted lever arms adapted to be raised to support the load and serve as levers in unloading, substantially as described. 2nd. In a wheeled truck, the combination with a frame having a rear axle adapted to be adjusted to raise and lower the rear end thereof, of pivoted lever arms adapted to be raised to support the load and serve as levers in unloading, and bolts adapted to hold the lever arms locked parallel with the frame and serve as supports for said lever arms when the latter are raised, substantially as described. 3rd. In a wheeled truck, the combination with a frame, of a rear axle carrying wheels, swinging arms pivoted to the frame and carrying said axle, braces for supporting the arms in vertical position, and pivoted lever arms adapted to be raised to support the load and to serve as levers in unloading, substantially as described. 4th. In a wheeled truck, the combination with a frame, of a rear axle carrying wheels, swinging arms pivoted to the frame and carrying said axle, braces for supporting the arms in vertical position, lever arms pivoted to the said bars of the frame and adapted to be turned down parallel with said frame and to be raised above the same, bolts on the front of the frame adapted to hold the levers when turned down, and support the same when raised, and a pivoted lever for operating said bolts, substantially as described.

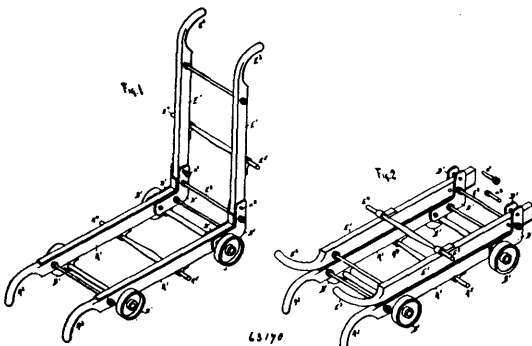
**No. 63,169. Barrel Truck. (Camion pour barrils.)**



Henry S. Parker, Fulton, Illinois, U.S.A., 29th May, 1899; 6 years. (Filed 25th January, 1899.)

*Claim.*—1st. In a barrel truck, the combination of the levers A and B, the arms D, points E formed at the extremities thereof respectively, plate G on which said levers are fulcrumed, U-shaped axle H<sup>1</sup> on which said plate G is formed, and carrying wheels K thereon, substantially as shown and for the purpose specified. 2nd. In a barrel truck, angular axle H<sup>1</sup>, plate G on which are fulcrumed levers A and B, and carrying wheels K, on the ends of axle H<sup>1</sup>, substantially as shown and for the purpose specified. 3rd. In a barrel truck, the combination of the axle H<sup>1</sup> provided with plate G and wheels K, and the levers A and B provided with arms D having points E, intermediately pivoted to each other and to the plate G, substantially as shown and for the purpose described.

**No. 63,170. Truck and Carrier. (Camion et transport.)**

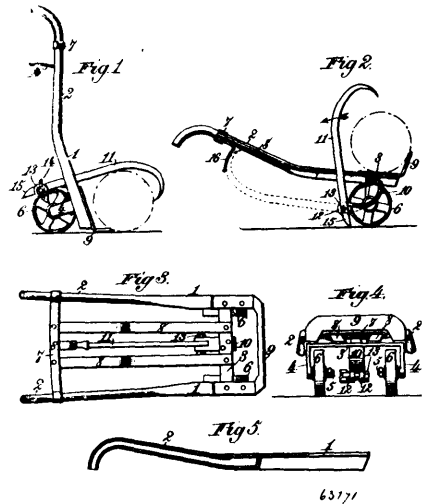


Ebenezer A. Barnes, St. Paul, Minnesota, U.S.A., 29th May, 1899; 6 years. (Filed 1st April, 1899.)

*Claim.*—1st. In a combined truck and carrier, a base frame having lifting handles and with a supporting frame at substantially right angles thereto, and likewise provided with lifting handles and

arranged and operating, as hereinbefore set forth. 2nd. In a combined truck and carrier, a base frame mounted upon carrier wheels, a frame supported at substantially right angles thereto, and provided with lifting handles, substantially as set forth. 3rd. In a combined truck and carrier, a base frame having lifting handles, a supporting frame adjustably connected at substantially right angles thereto, and capable of being folded together with the base frame, and means for locking said adjustable frame in its open position, as hereinbefore set forth. 4th. In a combined truck and carrier, a base frame having downwardly curving handles at the outer ends and with side handles, a supporting frame connected to the inner end of the base frame at substantially right angles thereto, and with outwardly curving handles at the outer end, and with side handles, as hereinbefore set forth.

**No. 63,171. Truck. (Camion.)**



Joel Herbert Brown and John Burns, both of Jerome Junction, Arizona, U.S.A., 29th May, 1899; 6 years. (Filed 23rd December, 1898.)

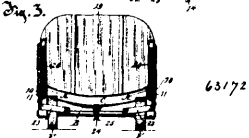
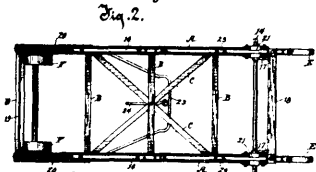
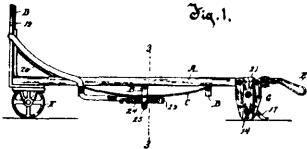
*Claim.*—1st. In a hand truck, the combination with the side bars and handles, of the axle support or front cross-bar having at its ends the downwardly bent arms provided with inward projecting stub axles, the truck-wheels, a downward and rearwardly curved bar secured to the said front cross-bar and having its rear end bifurcated, and a hook fulcrumed in the bifurcation of said curved bar and provided with a downward projecting heel portion to come in contact with the ground or floor so as to trip the forwardly swung hook and cause it to drop backward when the truck is tilted to the rear, substantially as described. 2nd. In a hand truck, the combination with the wheeled truck frame having a front cross-bar, of a downward and rearwardly curved bar secured to the said front cross-bar and having its rear end bifurcated or provided with jaws, a forwardly and rearwardly swinging hook fulcrumed in the said jaws and provided with a downward projecting heel portion to come in contact with the ground or floor so as to trip the forwardly swung hook and cause it to drop backward when the truck is tilted to the rear, a pivot bolt on which said hook is fulcrumed, and a thumb nut on said bolt, substantially as described. 3rd. In a hand truck, the combination with the wheeled truck frame having a front cross-bar and a rear cross-bar, of a downward and rearwardly curved bar secured to the said front cross-bar and having its rear end bifurcated, a forwardly and rearwardly swinging hook fulcrumed in the bifurcated rear end of said curved bar and provided with a downward-projecting heel portion to come in contact with the ground or floor so as to trip the forwardly swung hook and cause it to drop backward when the truck is tilted to the rear, and a spring catch on the rear cross-bar to retain the said hook in rearward position, substantially as described. 4th. In a hand truck, the combination of the truck side pieces composed of angle bars and tubular handles welded together, an axle support or front cross-bar riveted to the side angle-bars and having downward bent arms provided with inward-projecting stub axles, the truck-wheels, a downward and rearwardly curved bar secured to the said front cross-bar, a forwardly and rearwardly swinging hook fulcrumed to the rear end of said curved bar and provided with a downward projecting heel portion, a rear cross-bar connecting the truck handles, and a steel nosed piece riveted to the forward ends of the side angle bars, substantially as described.

**No. 63,172. Truck. (Camion.)**

Frank Toepfer, Milwaukee, Wisconsin, U.S.A., 29th May, 1899; 6 years. (Filed 3rd January, 1899.)

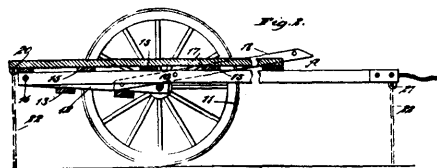
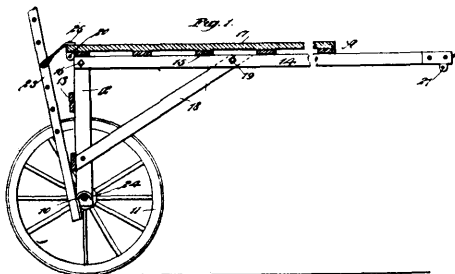
*Claim.*—1st. In a hand truck, the combination with a main frame of considerable length provided at its rear end with a fixed laterally

projecting foot member and supporting wheels and near its front end with laterally projecting legs but without handles for manipu-



lating the truck, of an auxiliary frame substantially as long as the main frame, and mounted slidably endwise on the main frame, a footboard on the auxiliary frame at the rear extremity thereof, handles on the auxiliary frame at the front extremity thereof, a laterally projecting platform secured detachably to the auxiliary frame at a distance from the foot board, toothed racks on the auxiliary frame longitudinally thereof, toothed wheels mounted in the legs on the main frame and meshing with the racks on the auxiliary frame, means for rotating the toothed wheels, a pawl on the main frame releasably engaging one of said racks on the auxiliary frame, and a swinging leg hinged on the main frame adapted to bear on the floor on the opposite side to said footboard when the truck is in upright position. 2nd. In a hand truck, the combination of a main frame the side rails of which are formed of channeled metal bars, an auxiliary frame having side rails also formed of channeled metal bars of smaller size in cross section fitted and movable in the channels of the larger channeled bars of the main frame, the free edges of the rails of the auxiliary frame being substantially parallel and flush with the free edges of the rails of the main frame, a rack on the rear of the rail of the auxiliary frame and means on the main frame for moving the auxiliary frame endwise. 3rd. In a truck, the combination of a main frame, an auxiliary frame movable endwise on the main frame, means for extending and retrieving the auxiliary frame, means for supporting the main frame in an upright position endwise, and a platform supported removably on the auxiliary frame at or near its front or upper extremity. 4th. In a hand truck, the combination of a main frame having channeled side rails, an auxiliary frame the side rails of which fit and are slidable endwise in the channelled rails of the main frame, bearing wheels on the rails of the auxiliary frame travelling on the bottom of the channel of the rails of the main frame, and guards on the main frame extending over the channels of the rails securing the rails of the auxiliary frame movably in the channels of the rails of the main frame.

**No. 63,173. Truck. (Camion.)**



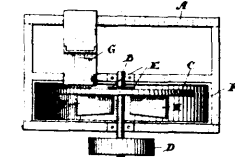
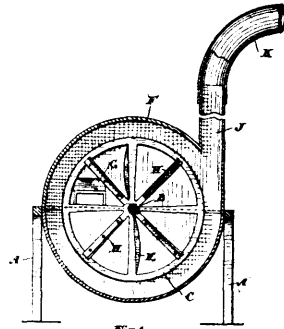
George Knox Davis, Lewiston, Maine, U.S.A., 29th May, 1899; 6 years. (Filed 30th January, 1899.)

*Claim.*—1st. In a platform truck, the combination of an axle, arms mounted loosely on the axle, a frame pivoted to the arms,

removable braces extending between the frame and arms, a platform mounted on the frame, a ladder, hooks at the lower portion of the ladder for engaging the axle, and a brace having a hook at its upper end to engage the ladder, the lower end of the brace being adapted to engage the platform, whereby to support the ladder. 2nd. In a platform truck, the combination of a wheeled frame, a platform secured thereto, a ladder, hooks at the lower portion of the ladder to engage a portion of the truck, whereby to support the truck, and a brace, the upper end of which is adapted to engage the ladder and the lower end of which is capable of engagement with the platform, whereby to support the ladder.

**No. 63,174. Rotary Feed Cutter.**

(Coupe-nourriture rotatoire.)



63174

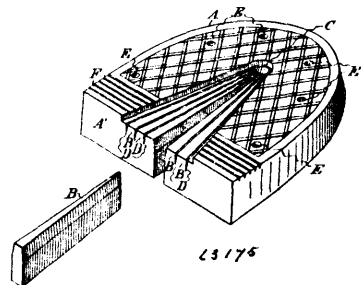
David M. Thom, Watford, assignee of Reuben Morningstar, Arkona, both in Ontario, Canada, 29th May, 1899; 6 years. (Filed 15th December, 1898.)

N.B.—Patent No. 63,174 is a re-issue of Patent No. 47,092, dated 26th September, 1894.

*Claim.*—1st. The combination with the feed cutter having a wheel provided with knives, of a wind elevator comprising fans connected to said wheel, a fan case enclosing said wheel and a discharge tube extending tangentially and upwardly from said fan case, as and for the purpose specified. 2nd. In a combined rotary feed cutter and wind elevator, in combination a fan case enclosing the wheel carrying the knives and fans, a discharge tube leading tangentially from the case, and a connecting tube leading from such discharge tube to the place of deposit, as and for the purpose specified.

**No. 63,175. Heel for Boots and Shoes.**

(Talon de chaussures.)



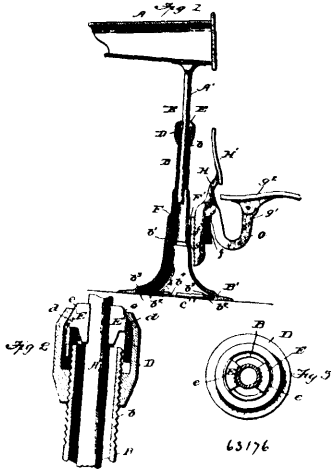
63175

Charles McClusky Berry, Henry Summers, and Cassius Brainard Sloan, all of San Francisco, California, U.S.A., 31st May, 1899; 6 years. (Filed 20th April, 1899.)

*Claim.*—1st. An elastic heel for boots and shoes having a series of ribs divergent from a common centre toward the front of the heel

with intermediate channels of cleavage between the ribs, as and for the purpose set forth. 2nd. An elastic heel for boots and shoes having divergent ribs with intermediate channels of cleavage formed upon the bottom of the heel and similarly separated transverse ribs extending across the front portion of the heel, as and for the purpose set forth.

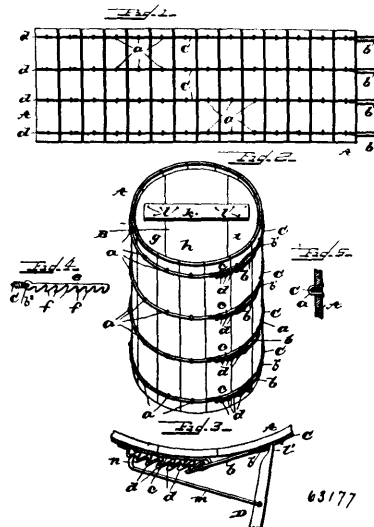
**No. 63,176. Desk and Seat. (Pupitre et siége.)**



Victor Berford, George Dunn, and Thomas Wilson, all of Tara, Ontario, Canada, 31st May, 1899: 6 years. (Filed 19th April, 1899.)

*Claim.*—1st. A combined adjustable desk and seat, comprising a tubular supporting standard, a desk provided with a supporting rod adapted to be adjustably sleeved within said tubular standard, means for locking said rod in its adjusted position, means for detachably securing said tubular standard in position, a seat support rotatably secured upon said tubular standard, and a seat supporting bracket adjustably secured in said seat support, substantially as described. 2nd. A combined adjustable desk and seat, comprising a tubular standard provided with screw threads upon its upper surface, a desk provided with a supporting rod adapted to be adjustably sleeved within said tubular standard, a binding nut adapted to engage the threaded end of said tubular standard, and provided with an interior recess having inclined upper surface, clamping dogs arranged within said recess and provided with inclined outer surfaces, adapted to co-operate with the inclined surfaces of the binding nut to engage with said rod and lock the same in its adjusted position, substantially as described. 3rd. A combined adjustable desk and seat, comprising a tubular standard, a desk provided with a supporting rod adapted to be adjustably sleeved within said tubular standard, means for locking said rod in its adjusted position, a shoulder formed on said tubular standard, a bearing arranged above said shoulder, a seat support loosely sleeved about said bearing, a seat bracket adjustably mounted in said seat support, and means for locking said seat bracket in its adjusted position, substantially as described. 4th. A combined adjustable desk and seat, comprising a tubular supporting standard, a desk provided with a supporting rod adapted to be adjustably sleeved within said tubular standard, means for locking said rod in its adjusted position, a seat support loosely sleeved upon said tubular standard, a seat bracket adjustably mounted in said seat support, means for locking said seat bracket in its adjusted position, and means for detachably securing the tubular standard in position, substantially as described. 5th. A combined adjustable desk and seat, comprising a tubular standard, a desk provided with a supporting rod adapted to be adjustably sleeved within said tubular standard, means for locking said rod in its adjusted position, a shoulder formed on said tubular standard, a bearing arranged about said shoulder, a seat support loosely sleeved above said bearing, a recessed lug integral with said seat support, and having upwardly inclined serrations upon its inner face, a seat bracket having at its inner end a depending arm, and provided with downwardly inclined serrations adapted to engage with the serrations of said lug, and a seat portion pivoted to the outer end of said seat bracket, substantially as described. 6th. A combined adjustable desk and seat, comprising a tubular supporting standard, a desk provided with a supporting rod, adapted to be adjustably sleeved within said tubular standard, means for locking said rod in its adjusted position, a seat support rotatably secured upon said tubular standard, a seat bracket adjustably mounted in said seat support, means for locking said seat bracket in its adjusted position, a series of inwardly projecting lugs arranged upon the interior of the base of said tubular standard, a base plate provided with an annular flange intersected by radial slots, which are adapted to receive and release said lugs upon the rotation of said standard, substantially as described.

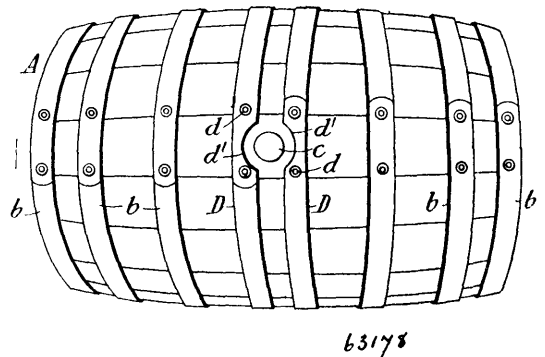
**No. 63,177. Barrel. (Baril.)**



Oliver Hazard Perry Cornell, New York City, New York, U.S.A., 31st May, 1899; 18 years. (Filed 5th December, 1898.)

*Claim.*—1st. An improved article of manufacture, a barrel composed of staves and a plurality of hoops with interlocking ends, one of said ends having an elongated loop and a collar adjacent to the loop formed by twisting the wire around the hoop, said loop and collar being integral with the hoop and the opposite end of the hoop provided with a serrated hook, and loops connecting the loops to the staves to slide thereon. 2nd. An improved article of manufacture, a knock down barrel composed of staves and a plurality of hoops, each having a loop at one end integral therewith and a collar adjacent thereto and a serrated hook attached to the opposite end of the hoop by a loop, the loops connected to the staves to slide thereon by loops on the staves and the hooks in contact with the surface of the barrel.

**No. 63,178. Barrel. (Baril.)**



Randall James Wymond and Joseph Smithfield Wymond, both of Aurora, Indiana, U.S.A., 31st May, 1899; 6 years. (Filed 7th March, 1899.)

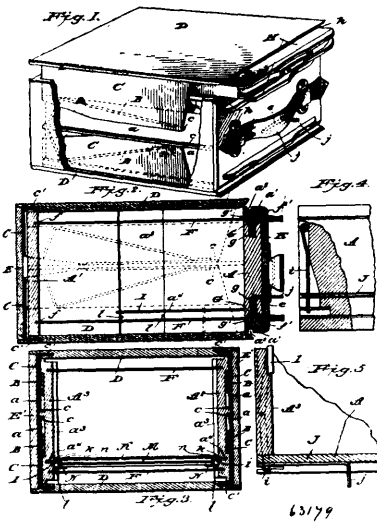
*Claim.*—1st. A barrel having at its bilge portion two hoops normally separated from each other and each provided at its inner side opposite the bung with a recess, whereby in re-coopering said hoops may be driven together without interfering with removal of the bung, substantially as described. 2nd. A hoop for the bilge portion of barrels and the like having a diameter which will permit of its being normally driven short of the centre of the bilge and provided in one side with a recess whereby in re-coopering the hoop may be driven approximately to the centre of the bilge without interfering with the removal of the bung, substantially as described.

**No. 63,179. Means for Carrying and Transferring Cases for Photographic Dry Plates. (Moyen de transporter et transférer les plaques photographiques sèches.)**

James Columbus Kimsey, Philadelphia, Pennsylvania, U.S.A., 31st May, 1899; 6 years. (Filed 3rd February, 1899.)

*Claim.*—1st. In an apparatus of the character described, the combination of a box having covers at its ends with openings at its front adjoining said covers, the openings being adapted to receive a plate

holder, slides forming a storage compartment in the body of the box between the openings, movable plates or supports located a slight

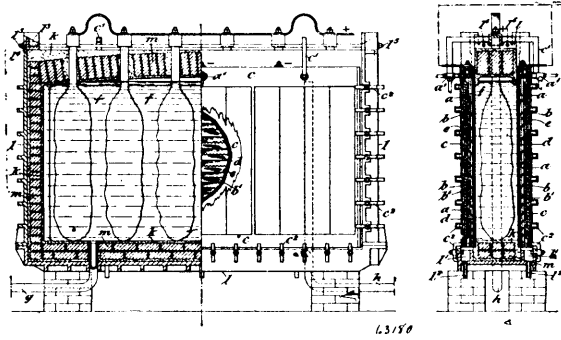


distance above the lower slide, and means for operating said plates or supports, substantially as shown and for the purpose set forth. 2nd. In an apparatus of the character described, the combination, of a box open at its lower end, a plate adapted to cover said lower end and drawn against the box by springs which permit a movement of the covering plate away from the box, a horizontal slide forming a partition in the box near the lower end thereof, movable plates or supports in the sides of the box located a slight distance above the slide, and means for operating said plates or supports, substantially as shown and for the purpose set forth. 3rd. In an apparatus of the character described, the combination, of a box open at its lower end, a plate adapted to cover said lower end and drawn against the box by springs which permit a movement of the covering plate away from the box, a horizontal slide forming a partition in the box near the lower end thereof, plates pivoted in the sides of the box with their inner ends projected normally into the box, springs acting upon said plates, and operating rods for the plates provided with bent ends projecting through a slot in the front of the box, substantially as shown and for the purpose set forth. 4th. In a carrying and transferring case for photographic dry plates, the combination, of a box open at its lower end, a plate adapted to cover said lower end and drawn against the box by springs which permit a movement of the covering plate away from the box, an apron attached to the covering plate and extending from the sides and back thereof, a slide forming a partition in the box near the lower end thereof, movable plates or supports in the sides of the box a slight distance above the slide, and means for operating said plates or supports, substantially as shown and for the purpose set forth. 5th. In a carrying and transferring case for photographic dry plates, the combination of a box open at its upper and lower ends, frames or aprons extending around three sides of the box, covering plates attached to said frames or aprons, and springs serving to draw the plates normally against the open ends of the box, together with slides forming upper and lower partitions, plates or supports located in the sides of the box a slight distance above the lower slide, and means for operating said plates or supports, substantially as shown and for the purpose set forth. 6th. In a carrying and transferring case for photographic dry plates, the combination, of a box open at its upper and lower ends, frames or aprons extending around three sides of the box and provided with inwardly projecting flanges, covering plates having channels or recesses in their edges to receive said flanges, and springs serving to draw the covering plates normally against the open ends of the box, together with slides forming upper and lower partitions, plates or supports located in the sides of the box, a slight distance above the lower slide, and means for operating said plates or supports, substantially as shown and for the purpose set forth. 7th. In a carrying and transferring case for photographic dry plates, the combination of a box open at its upper and lower ends and provided with vertical recesses in its side walls, slides forming upper and lower partitions, plates or supports adapted to project into the aforesaid recesses, and means for operating said plates or supports, together with devices connecting two photographic plates and provided with projecting flange or lips that extend into the vertical recesses of the box, the supports being located a distance above the lower slide equal to the combined thickness of the photographic plates and connecting means therefor, substantially as and for the purpose set forth. 8th. In a carrying and transferring case for photo-

graphic dry plates, the combination of a box open at its upper and lower ends and provided with vertical recesses in its said walls, slides forming upper and lower horizontal partitions, plates or supports adapted to project into the aforesaid recesses, and means for operating said plates or supports, lugs projecting into the sides of the recesses below the supports, devices connecting two photographic plates and having projecting flanges or lips of less width than the aforesaid recesses, and a division plate having flanges wider than the aforesaid flanges, substantially as shown and for the purpose set forth. 9th. In a carrying and transferring case for photographic dry plates, the combination of a box open at its upper and lower ends, frames extending around the sides and back of said box and vertically movable with respect thereto, springs bearing upon the forward ends of the frames, covering plates attached to said frames and adapted to bear normally against the open ends of the box, together with slides forming upper and lower horizontal partitions, plates or supports in the sides of the box a slight distance above the lower slide, and means for operating said plates or supports, substantially as shown and for the purpose set forth. 10th. In a carrying and transferring case for photographic dry plates the combination of a box open at its upper and lower ends, frames extending around the sides and back of said box and vertically movable with respect thereto, flanges at the upper and lower edges of said frames, plates having recessed edges engaging one set of flanges and springs bearing against the opposite set, together with slides forming upper and lower partitions in the box, plates or supports a slight distance above the lower slide, and means for operating said plates or supports, substantially as shown and for the purpose set forth. 11th. In a carrying and transferring case for photographic dry plates, the combination of a box open at its upper and lower ends, plates adapted to cover the open ends of the box and provided with aprons extending into the same, springs acting against the movement of the covering plates away from the box, and slides forming upper and lower horizontal partitions, together with plates pivoted in recesses in the sides of the box, wire springs let into the forward end of the box and attached to the outer ends of said plates to project their inner ends into the box, and operating rods let into the horizontal recesses in the front of the box and provided with bent ends extending outward through a slot in the centre of the front of the box, said rods being connected to the wire springs and their outer ends located adjoining each other, substantially as shown for the purpose set forth. 12th. A carrying and transferring case for photographic dry plates, comprising an inner box having horizontal recesses in its sides and open at its top and bottom, frames embracing three sides of the box and having flanges extending into the recesses, springs located in the recesses and bearing upon the flanges, covering plates removably connected to the frames, and an outer box enclosing the four sides of the inner box, together with slides forming upper and lower partitions, plates or supports located above the lower slide, and means for operating said supports, substantially as shown and for the purpose set forth. 13th. A photographic plate holder for the purpose set forth, comprising an open frame having shoulders therein at opposite sides, a sliding plate mounted in the frame and provided with projecting fingers, in combination with binding strips for the plates provided with projecting flanges, the plate holder having the usual slides, substantially as shown and described. 14th. A photographic plate holder for the purpose set forth, comprising a frame having a longitudinal recess in the rear cross piece and recesses in the side pieces thereof, upper and lower slides mounted within the frame, and a sliding-plate provided with projecting fingers, the recesses in the sides of the frame extending slightly below the upper slide, in combination with the strips for the photographic plates having projecting flanges, substantially as shown and described. 15th. A photographic plate-holder for the purpose set forth, comprising a frame having a longitudinal recess in the rear cross-piece and vertical recesses in the side pieces, a sliding-plate located in the plate holder and having an extension passing through the same, engaging fingers projecting from said sliding-plate, and springs actuating the sliding-plate, in combination with binding strips for the photographic plates provided with projecting flanges, the plate holder having removable slides, substantially as herein shown and described. 16th. A photographic plate holder for the purpose set forth, comprising a frame having a longitudinal recess in the rear cross piece and vertical recesses in the side pieces, a sliding-plate located in the plate holder and having an extension passing through the same, the outer end of the extension having a grasping portion and hook, fingers projecting from said sliding plate, and springs actuating the sliding plate, in combination with the binding strips for the photographic plates provided with projecting flanges, the plate holder having removable slides, substantially as shown and described. 17th. In combination with a plate holder constructed substantially as shown, said plate-holder having slits to receive the slides and recesses communicating with said slits, of a shutter composed of a fabric secured to the plate holder and folded upon itself, a felt strip enclosed within the folds, and a plurality of springs bearing against the folded part of the shutter along its length, substantially as shown and for the purpose set forth. 18th. In combination with a plate holder constructed substantially as shown and described, of a septum adapted to separate the photographic plates, binding strips attached to the septum, and flanges projecting from said binding strips, substantially as shown and for the purpose set forth. 19th. In combination with a plate-

holder constructed substantially as shown and described, of a septum adapted to separate the photographic plates and provided with projecting tongues, binding strips overlapping the edges of the plates and having recesses through which the tongues are passed and bent upon said strips, and flanges projecting from one edge of the binding strips, substantially as shown and for the purpose set forth.

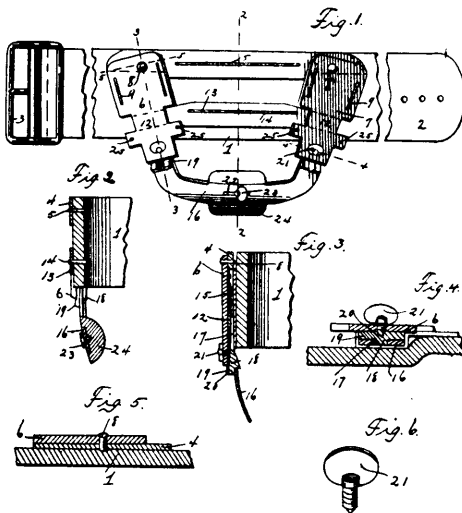
**No. 63,180. Manufacture of Alkalies.**  
(Fabrication d'alcali.)



James Hargreaves, Farnworth-in-Widnes, Lancaster, England, 31st May, 1899; 6 years. (Filed 31st January, 1899.)

*Claim.*—1st. In the manufacture of alkalies by electrolysis, a series of inclined metal strips arranged in the cathode chamber of the cell and extending from the cover plate to the surface of the cathode, substantially as herein described, and whereby the cathode is supported in close contact with the diaphragm, the condensed vapour is directed against the surface of the cathode and the product is more completely and expeditiously removed as it is formed upon the surface of the cathode. 2nd. The herein described method of holding the inclined strips in position on the cover plate, same consisting in bedding the strips in cement, loss of heat from the cell being hereby prevented. 3rd. In the manufacture of alkalies by electrolysis, a series of inclined metal strips or plates arranged in the cathode chamber of the cell, and extending from the cover plate to the surface of the cathode, the lower edges of the inclined strips or plates being serrated so as to form openings for the free passage of the steam and gases over the surface of the cathode, substantially as described. 4th. In an electrolytic cell, a woven wire cathode having the projecting parts of the wires where they cross one another flattened by rolling, substantially as and for the purpose specified. 5th. In the production of alkalies by electrolysis, the improved electrolytic cell constructed or operating substantially as herein described, and wherein the walls of the cell are formed by casting in a suitable framing Portland or other cement with or without a filling of brick, stone or similar material saturated with paraffin wax, pitch, tar or the like, substantially as described.

**No. 63,181. Truss. (Bandage herniaire.)**



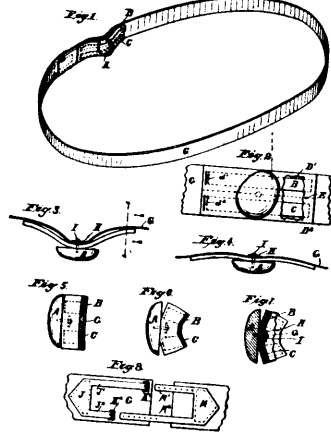
63181

James M. Flower, Pottsville, Arkansas, U.S.A., 31st May, 1899; 6 years. (Filed 1st February, 1899.)

*Claim.*—1st. In combination the belt 1, the curved springs 4 and 13 secured to said belt, the shoes 6 and 7 formed with transverse

recesses 10 and pockets 15, and pivoted at their upper ends to the spring 4, the semi-circular spring 16 having its free ends adjustably secured in said pockets and the pad 24 adjustably secured to said spring 16, substantially as and for the purposes set forth. 2nd. In combination the belt 1, the curved springs 4 and 13 secured to said belt, the shoes 6 and 7 pivoted at their upper ends to said spring 4 and formed with recesses 10 for the reception of the ends of said spring 13, and having their lower ends provided with a pocket 15, the semi-circular spring 16 having its free ends provided with longitudinal slots 17, the wedge 19 formed with the tongue 18 and groove 20, said wedge and contiguous edge of said spring 16 being adapted to be adjustably secured independent of each other in said pocket in said shoe, and the pad 24 adjustably secured to the spring 16, substantially as and for the purposes specified.

**No. 63,182. Truss. (Bandage herniaire.)**



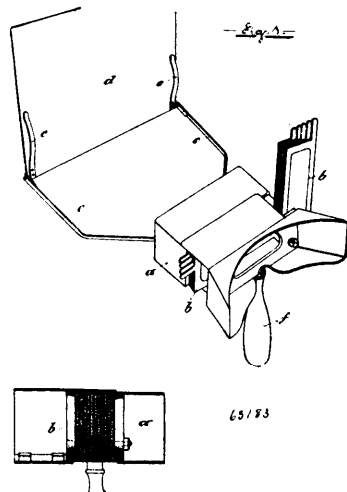
63182

William Francis LeSeur, New York City, New York, U.S.A., 31st May, 1899; 6 years. (Filed 4th February, 1899.)

*Claim.*—1st. In a truss for hernia, the combination of the upper and upper and lower leaf springs B, C, inwardly curved in a horizontal plane, flexible connections D<sup>1</sup>, D<sup>2</sup>, of leather, pad A secured independently of the the springs B, C, webbing or belt G, and suitable securing means for the latter, as herein specified. 2nd. In a truss for hernia, the combination of the inwardly curved springs B, C, having their ends secured as shown, with the double pocket D<sup>1</sup>, D<sup>2</sup>, and fastening provision I between them engaging the pad A and washer H, the flexible webbing or belt G, two straps J<sup>1</sup>, J<sup>2</sup>, of differing lengths, two buckles K<sup>1</sup>, K<sup>2</sup>, out of coincidence, with two straps M<sup>1</sup>, M<sup>2</sup>, all arranged to serve, substantially as herein specified.

**No. 63,183. Light Testing Apparatus.**

(Appareil à éprouver la lumière.)



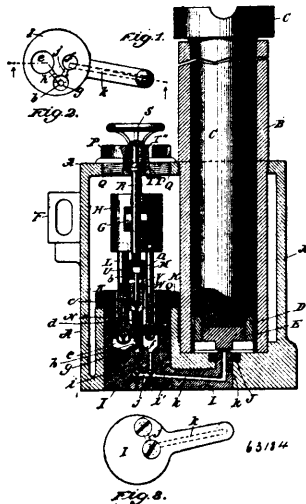
63183

Hermann Cohn, Schweidnitzer-Stadtgraben 25, Breslau, Germany, 31st May, 1899; 6 years. (Filed 1st February, 1899.)

*Claim.*—1st. The improved combined apparatus for testing and gauging the light in a work place characterized by a number of photometrically graduated coloured or obscured glasses b, arranged in the case a, with an observation opening in front and an objective

test carrying board *c, d, e*, substantially as and for the purpose herein set forth. 2nd. In a light and sight testing apparatus, as set forth, the slides *b*, hinged at *b'* to the case *a*, and combined with the test carrying object board *c, d, e*, and front observation orifice and screen, constructed and operating as and for the purpose specified.

**No. 63,184. Hydraulic Jack. (Cric hydraulique.)**



John Weeks, New York City, New York, U.S.A., 31st May, 1899; 6 years. (Filed 3rd January, 1899.)

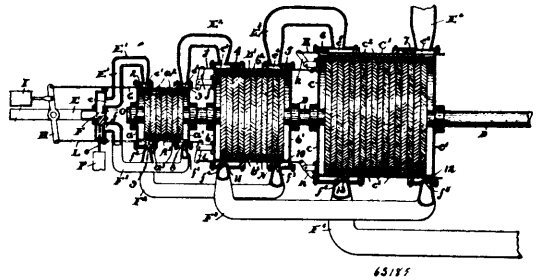
*Claim.*—1st. The combination, in an hydraulic jack, of two pumps, each provided with an egress valve and each connecting with the force chamber of the ram, a supplemental passage connecting the bore of the large pump with the reservoir, a relief valve in said passage, a threaded stem, actuated from the exterior of the jack, adapted to unseat the relief valve, and likewise, when given additional movement, adapted to unseat the egress valve of the large pump, for the purposes set forth. 2nd. The combination in an hydraulic jack, of two pumps, each provided with an egress valve and both connecting with the force chamber of the ram, a passage connecting the bore of the large pump with the reservoir and likewise connecting with the passage from the pumps to the force chamber of the ram, a relief valve in said passage, and a threaded stem, actuated from the exterior of the jack, adapted to unseat the relief valve and likewise, when given additional movement, to unseat the egress valve of the large pump, for the purposes set forth. 3rd. The combination in an hydraulic jack, of two pumps, each provided with an egress valve and both connecting with the force chamber of the ram, a supplemental passage connecting the bore of the large pump with the reservoir and connecting also with the passage leading to the force chamber of the ram, two valves set in said first named passage, one of them the relief valve and the other the egress valve for the large pump, and means, actuated from the exterior of the ram, adapted to unseat the relief valve upon a certain degree of movement and to hold it unseated and to unseat the egress valve upon additional movement, for the purposes set forth. 4th. The combination in an hydraulic jack, of two pumps, one larger than the other, a supplemental passage which forms part of the connection between the larger pump and the force chamber of the ram, two valves set in said passage, one the relief valve for the large pump and the other its egress valve, and means, substantially as described, whereby said relief valve may be first unseated and then the egress valve unseated, for the purposes set forth. 5th. The combination, in an hydraulic jack, of a pump block having three borings, two of them for pumps and one for a combined lowering device and means for throwing out one of the pumps, a water passage connecting one of the pumps with said third boring, two valves set in said third boring, one a relief valve for said pump and the other its egress valve, and means located in said boring, actuated from the exterior of the jack, whereby the relief valve may be first unseated and then, being additionally moved, the egress valve unseated, for the purposes set forth. 6th. In an hydraulic jack having two pumps, a relief valve and the egress valve for one of the pumps set in the same line, and that line different from the axial line of the said pump, and means substantially such as described, for unseating said relief and egress valves, for the purposes set forth.

**No. 63,185. Steam Turbine. (Turbine à vapeur.)**

James Harry Keighly McCollum, Toronto, Ontario, Canada, 31st May, 1899; 6 years. (Filed 14th September, 1898.)

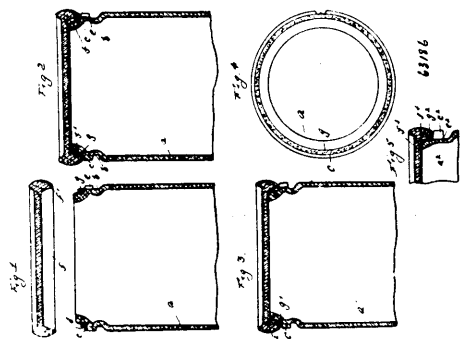
*Claim.*—1st. The combination with the high, intermediate and low pressure cylinders provided with stationary directing vanes and the alternately arranged rotating vanes or wings attached to the driving shaft, each cylinder being separated and provided with

suitable heads, of suitable ports at the front and rear of each cylinder of increasing size from the smallest to the largest, suitable



valves for such ports and suitable pipes at one side of increasing size from the smallest to the largest connecting the ports, such pipes being connected from the rear end of one cylinder to the front end of the next succeeding cylinder and having the final exhaust at the rear end of the last cylinder, as and for the purposes specified. 2nd. The combination with the high, intermediate and low pressure cylinders provided with stationary directing vanes and the alternately arranged rotating vanes or wings attached to the driving shaft, each cylinder being separated and provided with suitable heads, of suitable ports at the front and rear of each cylinder of increasing size from the smallest to the largest, suitable valves for such ports and suitable pipes at one side of increasing size from the smallest to the largest connecting the ports, such pipes being connected from the rear end of one cylinder to the front end of the next succeeding cylinder and having the final exhaust at the rear end of the last cylinder and suitable pipes at the opposite side of increasing size from the high pressure to the low pressure cylinder and having the inlet pipe leading into the rear of the cylinder and the outlet or exhaust at the front of the cylinder or *vice versa* to the pipes at the opposite side, and a suitable throttle valve for admitting the steam into the high pressure cylinder from either steam pipe, as and for the purpose specified. 3rd. The combination with the high, intermediate and low pressure cylinders provided with stationary directing vanes and the alternating arranged rotating vanes or wings attached to the driving shaft, each cylinder being separated and provided with suitable heads, of suitable ports at the front and rear of each cylinder of increasing size from the smallest to the largest, suitable valve for such ports and suitable pipes at one side of increasing size from the smallest to the largest connecting the ports, such pipes being connected from the rear end of one cylinder to the front end of the next succeeding cylinder, and having the final exhaust at the rear end of the last cylinder and suitable pipes at the opposite side of increasing size from the high pressure to the low pressure cylinder and the outlet or exhaust at the front of the cylinder or *vice versa* to the pipes at the opposite side, a suitable throttle valve for admitting the steam into the high pressure cylinder from either steam pipe and means whereby when the one set of valves is closed on one side the opposite set of valves on the other side of the cylinders is simultaneously opened, as and for the purpose specified.

**No. 63,186. Jar. (Jarre.)**

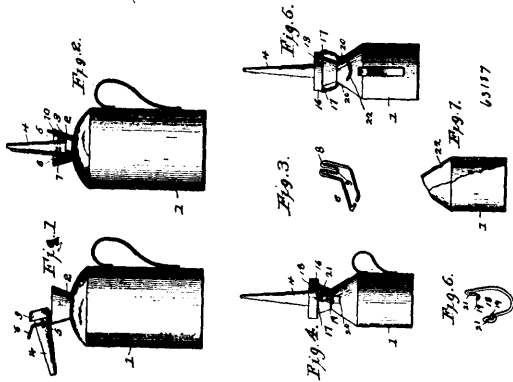


Julian P. Lyon, Detroit, Michigan, U.S.A., 31st May, 1899; 6 years. (Filed 8th May, 1899.)

*Claim.*—1st. A jar having its outer wall adjacent to the mouth disposed perpendicularly and having an annular rib run around its outer side at the base of said perpendicular wall, and the rib having a recess at one point, the recess extending into the rib toward said perpendicular wall, and a cap having a web or main portion extending over the mouth of the jar to close the same, the cap having at its edges a downwardly projected flange extending into proximity to the outer portion of the rib on the jar, and the inner side wall of the flange being disposed diagonally downward and outward, said wall extending from the upper edge of the perpendicular wall of the jar downward to the outer portion of the upper face of the rib, and

beyond the inner wall of the recess in said rib, the space between the said perpendicular wall of the jar and the inner wall of the flange serving to accommodate a gasket. 3rd. A jar having its outer wall adjacent to the mouth disposed perpendicularly, the jar also having an annular rib running around said perpendicular wall and projecting out therefrom, the rib having a recess therein which extends inward to the perpendicular wall so as to completely cut away the rib at the point of the recess, and a cap having a web or main portion extending over the mouth of the jar to close the same, and a cap having at its edges a downwardly extending flange running into proximity with the outer portion of the rib, and the flange having its inner side wall disposed diagonally and extending from the upper edge of the said perpendicular wall of the jar downward and outward to the outer portion of the upper face of the rib, the space between the said perpendicular wall of the jar and the inner wall of the flange serving to accommodate a gasket.

**No. 63,187. Oil Can. (Bidon à huile.)**



Arthur C. Hersberger, Poolesville, Maryland, U.S.A., 31st May, 1899; 6 years. (Filed 6th March, 1899.)

*Claim.*—1st. An oil can, comprising a body portion, a spout, and a frame or bail mounted to swing relatively to the body portion and upon which the spout is mounted to slide, substantially as described. 2nd. An oil can, comprising a body portion, a spout, and a locking device hinged to the body portion and having the spout slidingly connected with and adapted to engage the said body portion, whereby the spout is maintained thereon, substantially as described. 3rd. An oil can, comprising a body, a spout provided with eyes, a loop or bail hinged to the body portion and passing loosely through the eyes of the spout, and a catch for engaging the loop or bail at the free end thereof, substantially as described. 4th. An oil can, comprising a body portion having a neck and provided at one side thereof with a catch, a loop or bail hinged to the opposite side of the neck on the inner face of the same and provided at its free end with a bend adapted to engage the catch, said loop or bail being extended above the neck, and a spout carried by the loop or bail, substantially as described.

**No. 63,188. Alcoholic Liquids Purification.**

(Purification de liquides alcooliques.)

John Theodore Hewitt, 65 Silverdale, Sydenham, Kent, England, 31st May, 1899; 6 years. (Filed 9th February, 1899.)

*Claim.*—A process for the purification of alcoholic liquids, which consists in adding to the liquid a primary hydrazine, such as phenylhydrazine, or a substitution derivative thereof such as a sodium salt of phenylhydrazinepara-sulphonic acid, and distilling the mixture, substantially as described.

**No. 63,189. Metal Refining Process.**

(Procédé pour raffiner le métal.)

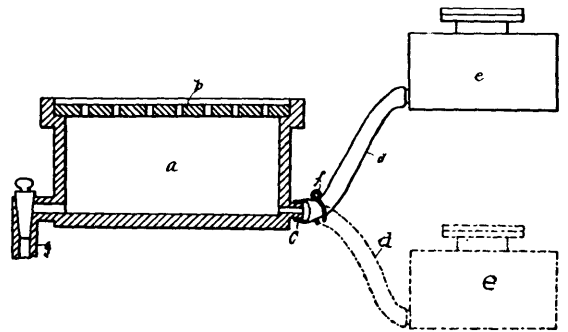
Benjamin Talbot, Pencoyd, Pennsylvania, U.S.A., 31st May, 1899; 6 years. (Filed 12th January, 1899.)

*Claim.*—1st. The process of refining metal, as herein described, which consists in intermittently charging unrefined metal into a heating furnace containing refined molten metal, and intermittently drawing off portions of said metal as it is thus refined. 2nd. The process of purifying metal, as herein described, which consists in providing a furnace with a partial charge of purified molten metal, intermittently charging impure or partially purified metal into the purified molten metal in said furnace, and intermittently withdrawing portions of said metal as it is thus purified. 3rd. The process of refining metal, in making open hearth steel, which consists in providing a furnace with a partial charge of purified molten metal, pouring a charge or charges of impure or partially purified metal into the partial charge of purified molten metal in said

furnace, and, after the purification of the mixed charge is effected, drawing off a portion of the same, leaving the remainder of the molten charge in the furnace for admixture with a fresh charge or charges of impure or partially purified metal, substantially as specified. 4th. The process of refining metal, in making open hearth steel, which consists in providing a furnace with a partial charge of purified molten metal, having a covering of slag, pouring a charge of impure or partially purified molten metal through said slag and into the partial charge of purified molten metal in said furnace, and, after the purification of the mixed charge is effected, drawing off a portion of the same, and leaving the remainder of the molten charge in the furnace for admixture with a fresh molten charge of impure or partially purified metal, substantially as specified. 5th. The process of refining metal, as herein described, which consists in intermittently charging unrefined metal into a heating furnace containing refined metal having a covering of slag, and intermittently withdrawing portions of molten metal as it is refined by filtration through said covering of slag and admixture with said refined molten metal. 6th. The process of refining metal, as herein described, which comprises, first, purifying liquid pig metal by pouring it into a bath of desilicised metal, then pouring the metal thus purified into a second bath of metal of greater purity, thereby producing steel by continuous refining.

**No. 63,190. Egg Preserving Apparatus.**

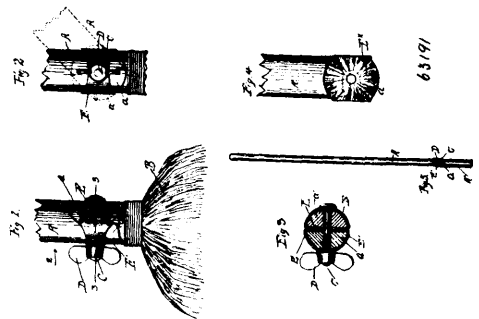
(Appareil à conserver les œufs.)



Carl Reinhardt, Kaiserslantern, Germany, 31st May, 1899; 6 years. (Filed 9th February, 1899.)

*Claim.*—1st. A process for preserving eggs consisting in treating the egg shell with a chemical agent, such as sulphuric acid, whereby the egg shell is chemically changed for a sufficient depth, into an impervious coating impenetrable by air, as set forth. 2nd. The use of a liquid for preserving at the same time disinfecting eggs, and consisting of a mixture of sulphuric and salicylic acids and an iron salt, such as ferric chloride, as herein set forth. 3rd. An apparatus for treating eggs with acid for the purpose of preserving the same, and consisting of a container *a* for the eggs, having a perforated *b* and an acid container *e*, to be raised and lowered, both said vessels *a* and *e* being connected together by a flexible tube *d*.

**No. 63,191. Broom Handle. (Manche de balai.)**



Jay Frederick Kinney, Evanston, Illinois, U.S.A., 31st May, 1899; 6 years. (Filed 13th February, 1899.)

*Claim.*—As a new article of manufacture, a broom handle formed in two sections provided with overlapping perforated ears, a metallic band surrounding each of said ears and having corresponding perforations, a bolt passing through said perforations, and a thumb-nut turned onto the bolt, substantially as set forth.

## TRADE-MARKS

Registered during the month of May, 1899, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

6896. HEALTH TOBACCO COMPANY, New York, N.Y., U.S.A. Tobaccos, Cigars, Cheroots and Cigarettes, 1st May, 1899.
6897. NEW YORK CONDENSED MILK COMPANY, New York, N.Y., U.S.A. Condensed Milk, 1st May, 1899.
6898. FERDINAND COURSOL, Montréal Que. Une Préparation Alimentaire pour Enfants et Invalides, (La Peptonine.) 2 mai, 1899.
6899. THE GRIFFITHS & MACPHERSON COMPANY, Toronto, Ont. A Medical Compound, 4th May, 1899.
6900. JOHN H. LAKIN, Boston, Massachusetts, U.S.A. An External Application for the cure of Headache, 4th May, 1899.
6901. SAMUEL BASSETT, Toronto, Ont. A Medical Preparation, (Perspirene) 4th May, 1899.
6902. SAMUEL BASSETT, Toronto, Ont. Pills, 4th May, 1899.
6903. EDMUND A. WADHAMS, Vancouver, B.C. Canned Salmon, 4th May, 1899.
6904. NOBLES & HOARE, London, England. General Trade Mark, 4th May, 1899.
6905. FRANK K. DOANE, St. Louis, Missouri, U.S.A. Proprietary Medicines, 4th May, 1899.
6906. JOHN DUFF & SON, Hamilton, Ont. Hams, Bacon, Lard and all other Pork Meat Products, 5th May, 1899.
6907. SUSMAN J. VALK, New York, N.Y., U.S.A. Olives, 5th May, 1899.
6908. } THE MAGGI FOOD WORKS, Kempthal, Canton of Zurich, Switzerland.  
6909. } Alimentary and Dietary Products, 5th May, 1899.
6910. FREDERICK ROBERT SMITH, Hamilton, Ont. Men's Clothing, 5th May, 1899.
6911. THE AMERICAN DRESSING COMPANY, Montreal, Que. A Dressing for Boots and Shoes, 8th May, 1899.
6912. } THE E. B. EDDY COMPANY, LIMITED, Hull, Que. Palmetto, Tampico,  
6913. } Rice Root and other Fibre Brushes, 8th May, 1899.
6914. THE MILTON DRUG COMPANY, Montreal, Que. Drugs or Medical Preparations, 8th May, 1899.
6915. TRENCH'S REMEDIES, LIMITED, Dublin, Ireland. Chemical Substances Prepared for use in Medicine and Pharmacy, 9th May, 1899.
6916. THE EUMETRA PHARMACAL COMPANY, Detroit, Michigan, U.S.A. Remedy for Uterine Diseases, 9th May 1899.
6917. THE J. D. KING COMPANY, LIMITED, Toronto, Ont. Boots and Shoes, 9th May, 1899.
6918. JOHN JAMES CODVILLE, Winnipeg, Man. Teas, Baking Powders and Spices, 10th May, 1899.
6919. } THE AMERICAN MUTOSCOPE COMPANY, New York, N.Y., U.S.A.  
6920. } Consecutive View or Moving Picture Apparatus, 10th May, 1899.
6921. JOHN SOMERVILLE & COMPANY, LIMITED, Leith, Scotland. Whisky, 10th May, 1899.
6922. THE PETOLITE FUEL SYNDICATE, LIMITED, London, England. Artificial Fuel, 10th May, 1899.
6923. PETER LYALL, Montreal, THOMAS A. TRENHOLME, Coteau St. Pierre, and WILLIAM FRANCIS MACDONELL, Montreal West, Que. Mineral Water, 12th May, 1899.
6924. GRIERSON, OLDHAM & COMPANY, LIMITED, London England. Wines and Spirits, 15th May, 1899.
6925. WILLIAM CLARK, Montreal, Que. Tinned Beef, 16th May, 1899.



6926. ROBINSON-DANFORTH COMMISSION COMPANY, St. Louis, Missouri, U.S.A. General Trade Mark, 16th May, 1899.
6927. CHARLES HUDSON SMITH, Halifax, N.S. An Appetizer and Tonic, 16th May, 1899.
6928. EDWARD GEORGE BALLARD and DOUGLAS HERMAN, respectively of Newton Lane, Chester, County of Chester, and Eccleston Park, Prescott, County of Lancaster, England. Preparations for the production of Nascent Sulphur for use in Baths, 16th May, 1899.
6929. THE E. S. BURNHAM COMPANY, New York, N.Y., U.S.A. Cream Custard, 16th May, 1899.
6930. LENNARD BROTHERS, Leicester, England. Boots, Shoes and Slippers, 16th May, 1899.
6931. THE EMPIRE TOBACCO COMPANY, LIMITED, Granby, Que. Plug Tobacco, 16th May, 1899.
6932. POSTUM CEREAL COMPANY, LIMITED, Battle Creek, Michigan, U.S.A. Cereal Food for Human Consumption, 18th May, 1899.
6933. JULES BALGER, Three Rivers, Que. General Trade Mark, 18th May, 1899.
6934. ANNIE WARDROPER, London, England. Corset Attachments, 22nd May, 1899.
6935. ROBERT WOOD CAMPBELL, Toronto, Ont. A Medicated preparation for the relief of smarting, perspiring, aching or sore feet, wounds and general skin irritation, 25th May, 1899.
6936. THOMAS SHORTISS, Toronto, Ont. Candies, 25th May, 1899.
6937. THE JAMES ROBERTSON COMPANY, LIMITED, Montreal, Que. White Lead, 25th May, 1899.
6938. ALFRED RICHARD, St. Denis, County of St. Hyacinthe, Que. Shoe Knives, 29th May, 1899.
6939. HUGH WILLIAM JESMER, Montreal, Que. A Composition for use on the Skin, 29th May, 1899.
6940. ARCHIBALD LAMONT, Mount Forest, Ont. A Pile Remedy, 29th May, 1899.
6941. FOULDS & SHAW, Oakville and Thorold, Ont. Flour, 30th May, 1899.
6942. LA MAISON ACKERMAN-LAURANCE, St. Hilaire, St. Florent, France. Champagne and Saumur Wine, 30th May, 1899.
6943. } THE ROCK CITY TOBACCO COMPANY, LIMITED, Quebec, Que.  
6944. } Tabac coupe et en torquette a chiquer et à fumer, 30 mai 1899.
6945. THOMAS TOMPKINS, Brockville, Ont. Mineral Water, 31st May, 1899.
6946. CHARLES H. MASON, Chatham, N.Y., U.S.A. Remedies for Cancer and other Blood Diseases, 31st May, 1899.

## COPYRIGHTS

Entered during the month of May, 1899, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

10568. STATUE OF A FIREMAN. Bernard Serafini, Montreal, Que., 1st May, 1899.
10569. STATUE OF A POLICEMAN. Bernard Serafini, Montreal, Que., 1st May, 1899.
10570. SANTIAGO MARCH. By Walter von Joel. The Anglo-Canadian Music Publishers' Association, (Ltd.), London, England, 1st May, 1899.
10571. PAPERS READ BEFORE THE ENGINEERING SOCIETY OF THE SCHOOL OF PRACTICAL SCIENCE, TORONTO, NO. 12, 1898-9. The Engineering Society of the School of Practical Science, Toronto, Ont., 1st May, 1899.
10572. BY BERWEN BANKS. A Novel. By Allen Raine. The W. J. Gage Co., (Ltd.), Toronto, Ont., 1st May, 1899.
10573. RAGGED LADY. A Novel. By W. D. Howells. Illustrated by A. J. Keller. W. D. Howells, New York, N.Y., U.S.A., 3rd May, 1899.
10574. THE STENOGRAPHER'S COMPANION. Vol. II, No. 2, May, 1899. Robert Goltman, Montreal, Que., 3rd May, 1899.
10575. A DASH FOR A THRONE. By Arthur W. Marchmont. William Briggs, Toronto, Ont., 3rd May, 1899.
10576. THE CANADIAN MAGAZINE. May 1899. The Ontario Publishing Co. (Ltd.), Toronto, Ont., 3rd May, 1899.
10577. MR. DOOLEY: IN PEACE AND IN WAR. By F. P. Dunne. George N. Morang & Co. (Ltd.), Toronto, Ont., 4th May, 1899.
10578. CATECHISME DE LA LOI ET DES RÈGLEMENTS SCOLAIRES. Par l'Abbé Th. G. Rouleau, Québec, Qué., 4 mai 1899.
10579. JOURNAL OF PSYCHOSOPHY. Vol. 1, No. 4. May, 1899. W. N. Barnhardt & R. S. J. DeNiord, Toronto, Ont., 5th May, 1899.
10580. CATECHISM OF PRIVATE AND PUBLIC HYGIENE. By Dr. J. I. Desroches. Translated from the French by Alexander Wright, Montreal, Que., 5th May, 1899.
10581. SPRING AND SUMMER CATALOGUE, NO. 62, 1899. The Robert Simpson Co. (Ltd.), Toronto, Ont., 6th May, 1899.
10582. HISTOIRE DE LA MILICE CANADIENNE-FRANCAISE, 1760-1897. Par Benjamin Sulte. Lt.-Col. Alphonse David Aubry, Montréal, Qué., 6 mai 1899.
10583. PIONEER DAYS IN WELLINGTON. Letters published in the "Mercury," Guelph, Ont. (Temporary Copyright.) Annie Girdwood, Guelph, Ont., 6th May, 1899.
10584. SILENT DRUMMER. (Price List *re* Tobacco, Pipes, &c.) Steele & Honeysett, Toronto, Ont., 9th May, 1899.
10585. THE STREET RAILWAY POCKET COMPENDIUM. W. M. Adams & J. L. Brown, Toronto, Ont., 9th May, 1899.
10586. CANADA FROM OCEAN TO OCEAN. The Dominion Publishing Co., Toronto, Ont., 10th May, 1899.
10587. CATALOGUE P *re* ARCHITECTURAL SHEET METAL BUILDING MATERIAL. The Metallic Roofing Company of Canada, (Ltd.), Toronto, Ont., 10th May, 1899.
10588. CADRAN GÉNÉALOGIQUE. (Tableau.) Rév. Stanislas Brault, O.M.I., Ottawa, Ont., 13 mai 1899.
10589. THE FOWLER. By Beatrice Harraden. (Book.) The Copp, Clark Co. (Ltd.), Toronto, Ont., 13th May, 1899.
3590. THE AMATEUR CRACKSMAN. By E. W. Hornung. (Book.) Charles Scribner's Sons, New York, N.Y., U.S.A., 13th May, 1899.
- DROSS. By Henry Seton Merriman. (Book.) The W. J. Gage Co. (Ltd.), Toronto, Ont., 13th May, 1899.

10592. THE WINDSOR HOTEL FIRE. (Song.) By Robson and Sykes. William John Robson and William John Sykes, Toronto, Ont., 13th May, 1899.
10593. THE REGISTER OF DEBENTURES. The Municipal World Publishers, St. Thomas, Ont., 13th May, 1899.
10594. A LABORATORY GUIDE IN PRACTICAL BACTERIOLOGY. By W. T. Connell, M.D., M.R.C.S. (England.) Kingston, Ont., 13th May, 1899.
10595. BECOME YOUR OWN LANDLORD. (Book.) Alexander M. Campbell, Toronto, Ont., 16th May, 1899.
10596. BELLE OF THE HUNT. (March and Two-Step.) By J. Hellmuth Clucas, London, Ont., 19th May, 1899.
10597. RED ROCK. A Chronicle of Reconstruction. By Thomas Nelson Page. The Publishers' Syndicate of Ontario (Ltd.), Toronto, Ont., 19th May, 1899.
10598. A FONTAINEBLEAU. By Ethelbert Nevin, Op. 30. No. 1. (Music.) The John Church Co., Cincinnati, Ohio, U.S.A., 19th May, 1899.
10599. IN DREAMLAND. By Ethelbert Nevin, Op. 30. No. 2. (Music.) The John Church Co., Cincinnati, Ohio, U.S.A., 19th May, 1899.
10600. THE CONFOUNDING OF CAMELIA. By Anne Douglas Sedgwick. (Book.) George N. Morang & Co. (Ltd.), Toronto, Ont., 19th May, 1899.
10601. VEST POCKET COMPENDIUM. W. M. Adams and J. L. Brown, Toronto, Ont., 19th May, 1899.
10602. CARTE DE MONTRÉAL CHIFFRÉE AUX COINS DE RUES. Laurent Achille Dufresne, Montréal, Qué., 22 mai 1899.
10603. CANADIAN CITIZENSHIP. A Treatise on Civil Government. By John Millar, B.A. William Briggs, Toronto, Ont., 22nd May, 1899.
10604. THE MARKET PLACE. By Harold Frederic. Illustrated by Harrison Fisher. William Briggs, Toronto, Ont., 26th May, 1899.
10605. OFFICIAL TELEPHONE DIRECTORY, DISTRICT OF NORTHERN QUEBEC, MAY 1899. The Bell Telephone Company of Canada, (Ltd.), Montreal, Que., 26th May, 1899.
10606. THE HONOURABLE GEORGE BROWN. (Portrait.) The Carbon Studio, J. Fraser Bryce, Manager, Toronto, Ont., 27th May, 1899.
10607. THE CANADIAN NEWSPAPER DIRECTORY, 1899. A Complete List of the Newspapers and Periodicals published in the Dominion of Canada and Newfoundland, with full particulars. A. McKim & Co., Montreal, Que., 29th May, 1899.
10608. LOVELL'S ORDER FORM. Robert James Lovell, Toronto, Ont., 29th May, 1899.
10609. FAMOUS FIRESIDES OF FRENCH CANADA. (Illustrated.) By Mary Wilson Alloway, Montreal, Que., 29th May, 1899.
10610. GUIDE DU VOYAGEUR DE MONTRÉAL À PARIS, VIA LIVERPOOL ET LONDRES. Joseph Eugène Costin, Montréal, Qué., 31 mai 1899.
10611. LEETLE LAC GRENIER. Poem published in "Rod and Gun in Canada." Dr. William Henry Drummond, Montreal, Que., 31st May, 1899.