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The Canadian Patent Office Record

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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. 66,863. Electric Motor. *(Moteur électrique.)*

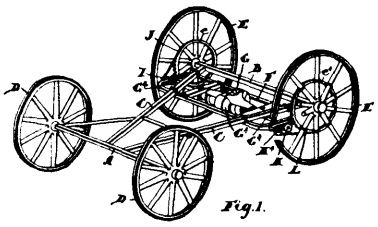


Fig. 1.

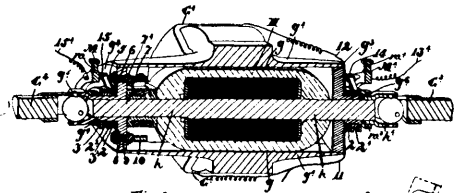


Fig. 2.

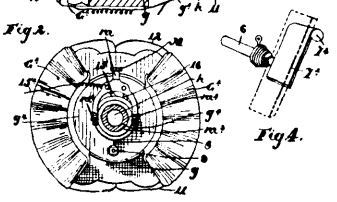


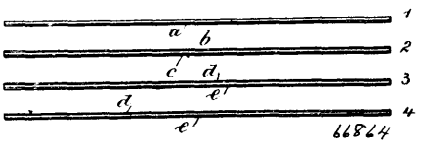
Fig. 4.

Fig. 3. 66863

William Joseph Still, Toronto, Ontario, Canada, 2nd April, 1900; 6 years. (Filed 13th June, 1899.)

Claim.—1st. In a motor vehicle and the like, the combination with the main driving axle and sprocket wheel secured at each end thereof, of the frame, the armature and axle thereof designed to rotate in one direction and having a sprocket pinion on one end, an idler sprocket pinion suitably journalled in the frame and a chain passing around the idler under the gear pinion and over the gear wheel, at one end of the main axle, and the field suitably journalled peripherially outside the armature and upon the axle of the same designed to rotate in the opposite direction, the field axle, a gear pinion on the end of the field axle and the chain connecting such gear pinion to the sprocket wheel at the opposite end of the main axle as specified. 2nd. In a motor for vehicles or the like purposes, the combination with the armature and axle thereof designed to rotate in one direction, and the supplemental axle forming an extension thereof and a universal joint connecting the same, of the fields suitably journalled peripherially outside the armature and upon the axle of the same and designed to rotate in the opposite direction and the supplemental shaft forming an extension of the rotating fields and a universal joint connecting the shaft to the field, as and for the purpose specified. 3rd. In a motor for vehicles and like purposes, the combination with the amature and axle thereof designed to rotate in one direction, and the supplemental axle forming an extension thereof and a universal joint connecting the same, of the fields suitably journalled peripherially outside the arma ture and upon the axle of the same and designed to rotate in the opposite direction and the supplemental shaft forming an extension of the rotating field and a universal joint connecting the shaft to the field, the hangers pivotally connected to the frame of the carriage so as to have a vertical swing, the collars connected on horizontal pivots to the hangers and forming supporting bearings for the fields and armature, as and for the purpose specified. 4th. The combination with the fields having the longitudinal extensions and the end nonmagnetic rings and the commutator and brushes of the armature and the shaft extending through such rings, the hangers located at each end and pivoted on a stud forming part of the same, the collars pivoted on end pins at the lower ends of the hangers and forming bearings for the motor, the insulated ring at each end provided with metal rings, the brushes journalled on the hangers and contracting with such rings and leads from such brushes at one end to the commutator brushes, and at the opposite end to the fields, as and for the purpose specified. 5th. The combination with the fields having longitudinal extensions, the end nonmagnetic rings and the commutator and brushes, of the armature and the shaft thereof extending through such rings, the hangers located at each end suitably connected to the frame and forming a bearing for the field axle and the armature axle, the insulated rings at each end provided with metal rings, the brushes suitably journalled and contacting with such rings and leads from such brushes to the commutator brushes and to the fields as specified.

No. 66,864. Manifold Writing Material.
(Matériel á copier multiple.)



66864

John O. Foster, Newark, New Jersey, U.S.A., 2nd April, 1900; 6 years. (Filed 8th April, 1899.)

Claim.—1st. For manifold writing, a sheet prepared with a light coloured transfer material upon the back, and a second sheet prepared with a darker coloured receiving surface that is sufficiently adhesive to receive and hold the material transferred from the back of the first sheet to the surface of the second sheet by pressure upon the surface of the first sheet by a pen, pencil, types, or otherwise, substantially as set forth. 2nd. For manifold writing, a sheet of paper adapted to being written upon and having a coating upon the back of pulverulent light coloured material caused to adhere by

a mixture of adhesive material, in combination with a second sheet having a surface of adhesive material to which the material from the back of the first is caused to adhere by the pressure in writing, printing or drawing, substantially as set forth. 3rd. A sheet of paper for manifold writing, having upon the back light coloured material in a pulverulent condition with an adhesive material mixed therewith, and adapted to adhere to a second sheet at the places where there is pressure from writing or printing upon the first sheet, substantially as specified. 4th. A transfer sheet for manifold writing, having on the back a coating of clay in a pulverulent condition and an adhesive material such as glue mixed therewith and bichromate of potassium, tannic acid or similar material to render such glue substantially waterproof, substantially as set forth. 5th. A manifold sheet coated on both surfaces, the one surface having an adhesive material, such as a wax or resinous material, and the other surface having a coating of pulverulent material in a contrasting colour, and adhesive material to hold the coating upon the back of the sheet, substantially as set forth. 6th. For manifold writing, a sheet of paper adapted to being written upon and having a coating upon the back of pulverulent material and adhesive material, in combination with a second sheet having a surface of adhesive material of a colour contrasting to the colour of the material that is transferred from the back of the first sheet by the pressure in writing, printing or drawing, substantially as set forth. 7th. A manifold sheet coated on the face with an adhesive material, such as a wax or resinous material, and on the back with pulverulent and adhesive materials, substanially as specified.

No. 66,865. Vehicle Brake. *(Frein de vehicule.)*

Fig. 1

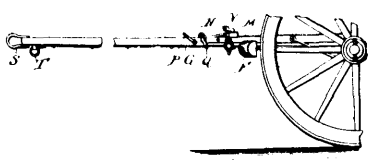


Fig. 2

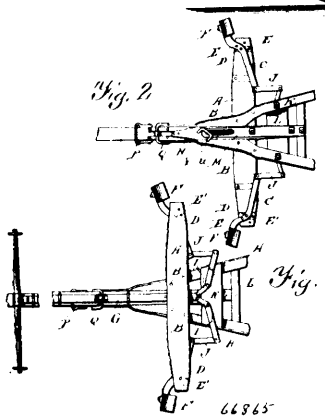


Fig. 3.

66865

Gustaf Abel Stark, Kensington, Minnesota, U.S.A., 2nd April 1900; 6 years. (Filed 2nd January, 1900.)

Claim.—In an automatic wagon brake, the combination with the front axletree and front wheels of the running gear of a wagon, of the wagon pole provided with a longitudinal slot between the rear side braces secured to said wagon pole, the resting block E secured to the lower faces of said side braces, the transverse stationary bar secured to the lower faces of said side braces in front of said resting block, the levers C C provided with brake shoes and pivoted to the upper face of the transverse stationary bar, the levers H H pivoted to the lower faces of the resting block, the links J J connecting the outer ends of the levers H H to the inner ends of the leevrs C C, the push bar G loosely secured to the lower face of the wagon pole by staples driven over it into said wagon pole, the neck yoke connected with the front end of the push bar G, the levers I I connecting the rear end of said push bar G with the inner ends of the levers H H, the ring Q connected with the strap N and with the push bar G, and the link P hinged to the wagon pole and adapted to engage the ring Q for locking the brakes in the unapplied position substantially as specified.

No. 66,866. Gate. *(Barrière.)*

John Leslie McCullough, Whitby, Ontario, Canada, 2nd April, 1900; 6 years. (Filed 14th September, 1899.)

Claim.—A double swinging gate embracing in its construction a substantially rectangular gate frame, having a hollow upright at its end journalled in suitable brackets connected to the gate post, a shaft passing through the hollow upright terminating at its upper end in a crane, and having its lower end provided with a drum, a chain connected at its middle to the drum, a moveable rod connected

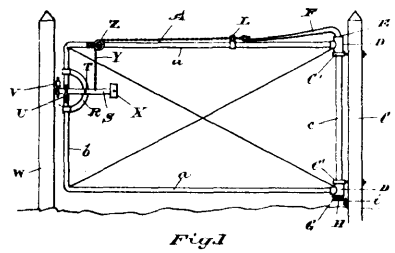


Fig. 1

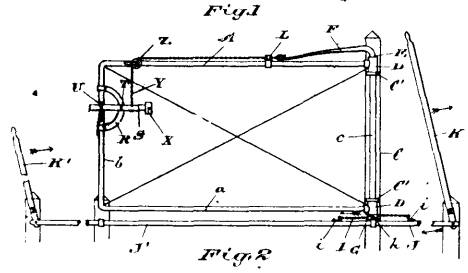


Fig. 2

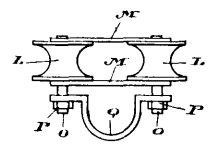


Fig. 4 66866

to the ends of the chain, levers connected to the ends of the rod, a latch pivoted to the gate frame, a connection between the latch and crane whereby it can be operated, and a keeper connected to the gate post to temporarily hold the latch, substantially as specified.

No. 66,867. Quad Forming Attachments for Linotype Machines. *(Alligneur à ajouter aux machines linotypes.)*

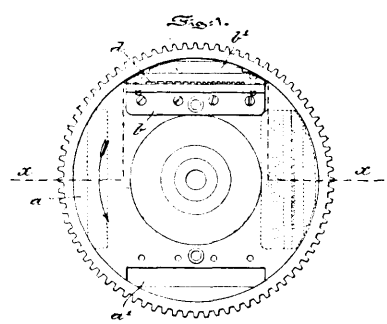


Fig. 2.

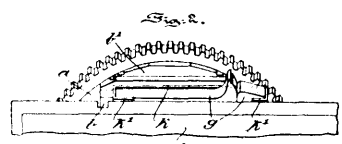
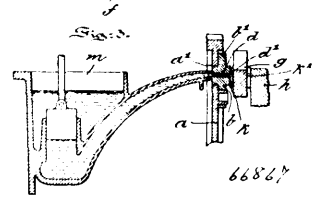


Fig. 3.



66867

William Hotchkiss Doolittle, Philadelphia, Pennsylvania, U.S.A., 2nd April, 1900; 6 years. (Filed 15th March, 1900.)

Claim.—1st. A quad forming attachment for linotype machines comprising a mould disc, a mould consisting of a body adapted to be removably secured to said mould disc, and a cap adapted to be removably secured to the body, the contiguous faces of said cap and body being provided with a series of channels or grooves corresponding in width to that of the quads to be formed, vice jaws located

adjacent to one face of said mould and means adapted to form a backing for said mould, substantially as and for the purposes described. 2nd. In a quad forming attachment for linotype machines, a mould disc, a quad mould comprising a body removably secured to the disc and a cap removably secured to the body, the contiguous faces of the body and cap being provided with channels or grooves of a width corresponding to that of the quads to be produced, vice jaws located adjacent to the front face of said mould, and means for clamping said jaws together, said means forming a backing for said mould, substantially as and for the purposes described.

No. 66,868. Indexed Book. (*Livre d'index.*)

FIG. 1.

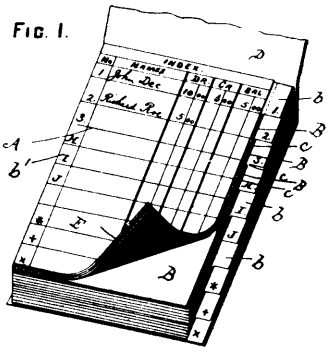
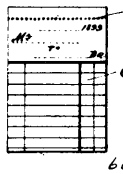


FIG. 2.



66868

Abraham L. Yates, Niagara Falls, New York, U.S.A., 2nd April 1900; 6 years. (Filed 17th March, 1900.)

Claim.—1st. In an indexed book, the combination with a series of permanent pages provided with distinguishing marks upon extensions or tabs arranged in a stepped progression, of detachable pages arranged between the said permanent pages, and a single superposed index page bound up with all the said pages and marked to correspond with the said permanent pages, the said detachable pages and index page being arranged so as not to cover the said extension or tabs, substantially as set forth. 2nd. In an indexed book, the combination with a series of permanent pages provided with distinguishing marks upon extensions or tabs arranged in a stepped progression, of a series of detachable pages arranged in alternation with the said permanent pages, and a single superposed index page bound up with all the said pages and marked to correspond with the said permanent pages at a series of points in line with the marks on the said extensions or tabs, substantially as set forth.

No. 66,869. Wagon Brake. (*Frein de wagon.*)

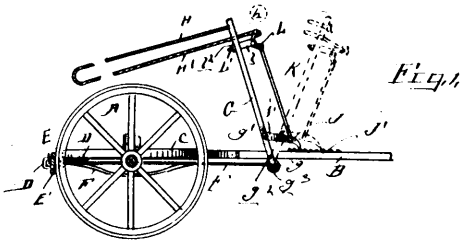


Fig. 1.

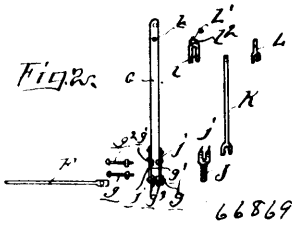


Fig. 2.

66869

William N. Gantt and James M. Gantt, both of Liberty, South Carolina, U.S.A., 2nd April, 1900; 6 years. (Filed 3rd January, 1900.)

Claim.—1st. In combination with a brake, an elongated brake lever pivotally secured to the tongue and projecting slightly below the same, a connecting rod between the brake beam and lever, a gravity catch pivoted to said brake lever, a rack adapted to be engaged by said catch and means for independently operating the catch and brake lever respectively, substantially as described. 2nd. In combination with a brake, an operating lever pivoted to the tongue and projecting below the same, a connecting rod between the brake beam and the lower end of the brake lever, and antifriction rollers on the lower end of the brake lever, substantially as described. 3rd. In combination with a brake, of an operating lever thereof, a cable attached to the upper end of said lever, a catch pivoted directly to said operating lever near its lower end, stops adapted to be engaged by said catch to retain the lever in locked position, and a cable attached to said catch and guided by the operating lever, substantially as described.

No. 66,870. Sewing Stand. (*Table de couture.*)

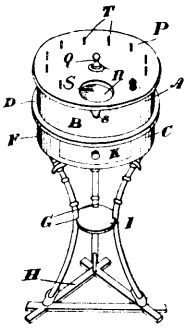


Fig. 1.

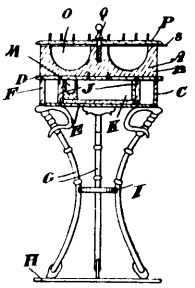


Fig. 2.

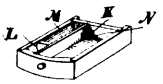


Fig. 3.

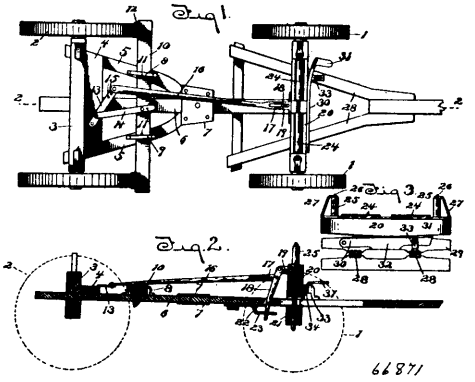
Fig. 4.

66870

Hilkiah Martin, Preston, Ontario, Canada, 2nd April, 1900; 6 years. (Filed 28th November, 1899.)

Claim.—1st. In a sewing stand, the combination of the stand body composed of an upper portion and a lower portion, pockets formed in the upper surface of said upper portion, a revoluble cover centrally secured by a pivot to the centre of and over said upper portion and provided with a hole which registers with the pockets in said upper portion, pins secured on the upper side of said revoluble top, a cover slide swung on said pivot and between the said revoluble top and upper portion, the outer end of said cover slide extending beyond the periphery of said revoluble top, a suitably divided drawer held in said lower portion, and suitable legs secured to said lower portion for supporting the stand body, substantially as set forth and for the purpose specified.

No. 66,871. Wagon Rrake. (*Frein de wagon.*)



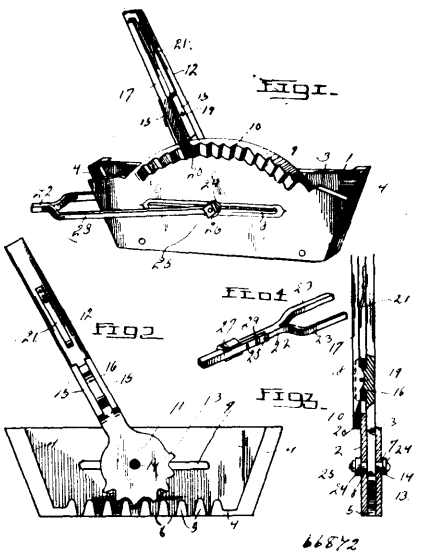
66871

John M. Heid, Hyde, Indiana, U.S.A., 2nd April, 1900; 6 years. (Filed 26th January, 1900.)

Claim.—1st. In a wagon brake, the combination with a brake beam, of a reach adapted to move longitudinally independently of the front bolster, an arm pivotally secured to the front bolster and

extending through an elongated slot in the reach, a brake rod pivotally secured at its front end to said arm, connections between said brake rod and brake beam, and means for permitting backing of the wagon, comprising a lever arranged transversely in front of the front bolster and pivoted at one end, formed with a depending lip at its centre and a treadle at its free end, and a catch for supporting the free end of said lever. 2nd. In a wagon brake, the combination with the brake beam, a longitudinally movable reach, and a brake rod connected by a lever and link to the break beam, of a front bolster, a supplemental bolster below said front bolster, a lever fulcrumed at one end to said supplemental bolster, a lip depending from said lever, a treadle at the free end of said lever, and a catch supported in front of said lever, formed with a shoulder upon which the free end of the lever normally rests.

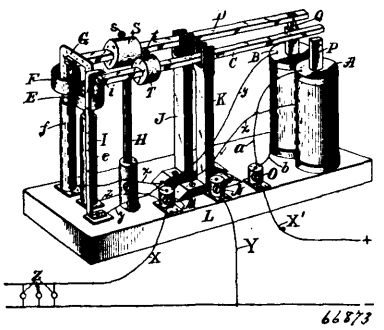
No. 66,872. Wagon Brake. (*Frein de wagon.*)



Enoch T. Robertson, El Dorado Springs, Missouri, U.S.A., 2nd April, 1900; 6 years. (Filed 7th February, 1900.)

Claim.—1st. In a brake lock, the combination of a support having slots arranged in parallel alignment in opposite portions thereof and also provided with outer and inner projections, a brake lever having a fulcrum in the said slots of the support and provided with devices for engaging the said projections, and a brake rod attached to the fulcrum of the lever. 2nd. In a brake attachment, the combination of a support having slots in opposite sides thereof and inner and outer projections arranged in different engaging planes, a brake lever having a fulcrum movably mounted in the said slots and its lower end meshing with the inner projections, a movable device on the brake lever to engage the outer projections, and a brake rod attached to the fulcrum of the brake lever. 3rd. In a brake attachment the combination of a support having elongated slots in opposite sides thereof in parallel relation and also formed with a lower series of ratchet teeth, a brake lever having a tubular fulcrum mounted in said slots and also provided with a segmental toothed head, a brake rod having a forked end movably embracing said tubular fulcrum, and a fastening movably inserted through the opposite portions of said forked end of the brake rod and fulcrum. 4th. A brake lock, comprising a recessed back plate having teeth in the lower portion thereof with open spaces between them and also provided with a slot in the side, a face plate having a slot in its side in parallel relation to the slot of the back plate and also formed with a series of ratchet teeth, a brake lever having a head with a fulcrum in the said slots and teeth on its lower edge to engage the teeth in the lower portion of the back plate, and a dog movably attached to said lever and adapted to engage the ratchet teeth on the free plate. 5th. A brake lock comprising a recessed back plate having teeth in the lower portion, a face plate provided with ratchet teeth on the upper exterior portion, a brake lever with a lower head having teeth meshing with the teeth of the back plate, and a fulcrum bearing in both plates, and a dog on the brake lever to co-act with the ratchet teeth on the face plate. 6th. A brake lock comprising a recessed back plate having teeth in the lower portion with openings between them, a face plate, a brake lever having a head fulcrumed in both of said plates and provided with peripheral teeth to engage the teeth of the back plate, and means on the brake lever to co-act with the teeth on the face plate. 7th. A brake lock comprising a support having longitudinal slots in opposite portions in parallel relation, a brake lever having a tubular fulcrum mounted in said slots, a brake rod having a forked end embracing said support, and a fastening extending through the opposite portions of the forked end of the brake rod and the said fulcrum.

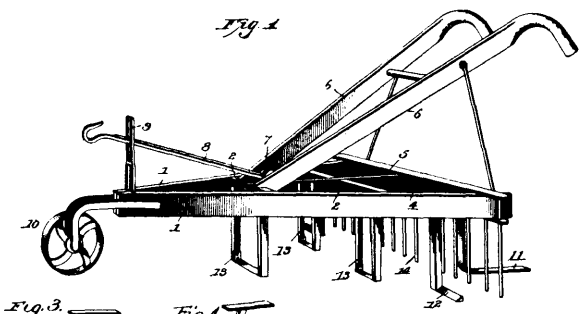
No. 66,873. Controller for Electric Light.
(*Contrôleur pour lumières électriques.*)



Orra Mell Lacey, Hanford, California, U.S.A., 2nd April, 1900; 6 years. (Filed 23rd February, 1900.)

Claim.—1st. The combination of an electric circuit, lights in said circuit, and automatic make-and-brake devices, whereby if more lights than a fixed number are traversed by the electric current, said lights will be alternately lighted and extinguished in rapid succession, substantially as described. 2nd. The combination of a main electric circuit, lights in said circuit, a shunt circuit and automatic make-and-break devices located in said circuits, the parts being so arranged that an increase of current through said make-and-break devices beyond a certain limit will break-and-make the main circuit in rapid succession, substantially as described. 3rd. The combination of a main electric circuit, lights in said circuit and automatic make-and-break devices, one being located in each circuit, said main circuit being normally uninterrupted until lights in excess of a certain number are turned on, whereupon the increase of current in the main circuit caused thereby makes the shunt circuit, breaks the main circuit, breaks the shunt-circuit and makes the main circuit, in rapid succession, substantially as described. 4th. The combination of a main circuit, lights therein, a shunt-circuit and an automatic controlling device in each circuit, consisting of an electric magnet, a weighted lever and electrical connections, the parts being so arranged that the passage of a current above a certain strength in the main circuit, will make the shunt circuit, break the main circuit, break the shunt circuit and make the main circuit, in rapid succession, substantially as described.

No. 66,874. Cultivator, Harrow and Hiller.
(*Cultivateur, herse, etc.*)

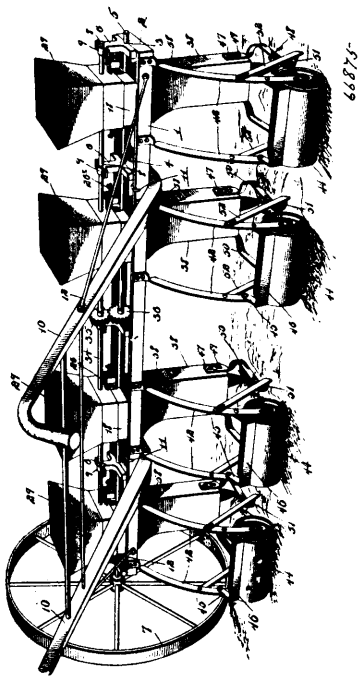


Alexander Theodore Fischer and Edwin Charles Lewis, both of Detroit, Michigan, U.S.A., 2nd April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. A combined gang cultivator involving the combination of a triangular frame, a wheeled gauge in front of the frame, adjustable gauges at the rear of the frame and interchangeable cutters and hillers, substantially as described. 2nd. In gang cultivators, the combination of a frame, gauges in front and rear for regulating the depth of the work, interchangeable cutters and hillers arranged in rows in the frame, and a rake adjustably connected with the frame, substantially as described. 3rd. For combined gang cultivators, the combination of a frame, interchangeable cutters and hillers arranged in rows in the frame, gauges in front and rear for regulating the depth of the work, a removable rake, and a draft appliance attached to the middle of the frame, substantially as described. 4th. For the combined gang cultivators, the combination of a frame, a draft appliance attached to the middle of a frame by a bifurcated riser or bracket, and a guide also connected to the frame for holding the draft bar in proper alignment, substantially

as described. 5th. In a cultivator, the combination of a frame, cutters or hillers connected with the frame, a wheeled gauge at the front of the frame, and slide gauges at the rear of the frame, substantially as described.

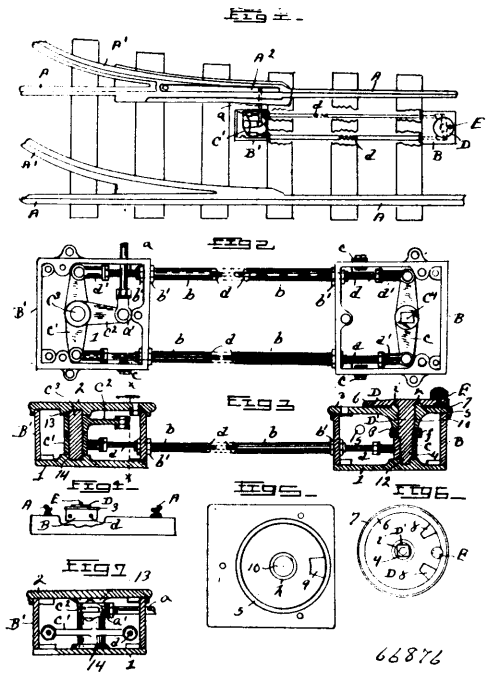
No. 66,875. Seed Drill. *(Semoir en ligne.)*



Alexander Theodore Fischer and Edwin Charles Lewis, both of Detroit, Michigan, U.S.A., 2nd April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. In a seed drill, the combination of a frame, hoppers, boots and regulating caps in separable parts and fitted in said frame, agitating and distributing devices for said hoppers, rollers connected to the frame in rear of the boots, and coverers between the boots and rollers. 2nd. In a seed drill, the combination of a frame, a drive shaft extending thereover and having distributing cylinders thereon at regular intervals, each provided with pockets of varying dimensions, means for regulating the supply of seed or grain to the said cylinders, hoppers and boots in intimate relation to the cylinders, and means for rotating said cylinders. 3rd. In a seed drill, the combination of a frame, a drive shaft extending thereover, a series of distributing cylinders on the said drive shaft, each having pockets therein of varying dimensions, and means for supplying the grain or seed to the said cylinders and conveying it away therefrom. 4th. In a seed drill, the combination of a series of hoppers, a drive shaft extending therethrough and having distributing cylinders thereon with pockets therein of varying dimensions, regulating caps fitted over the said cylinders and having apertures in the top thereof corresponding in size to the pockets of the cylinders, slides for uncovering or covering the said apertures in the sockets, and means for conveying the seed or grain away from the cylinders. 5th. In a seed drill, the combination of a frame, a drive shaft extending thereover having distributing cylinders thereon provided with pockets of varying dimensions, hoppers and boots fitted in the frame above said cylinders, caps mounted over the cylinders and located within a part of the hoppers, said caps being provided with apertures in the upper portion thereof corresponding in size to the pockets in said cylinders, an agitating shaft extending through the lower portion of the hoppers and having agitators thereon above the caps, and slides for regulating the apertures in the caps. 6th. In a drill, the combination with seed or grain distributing devices, of rollers in rear thereof adapted to be adjusted, and adjustable coverers in advance of the rollers and having a lateral extension greater than the width of said rollers. 7th. In a grain drill, the combination of a frame having a series of hoppers therein and boots extending from said hoppers, distributing devices within the hoppers, rollers in rear of the boots having a vertical adjustment, shovels adjustably attached to the lower front portion of the boots, and coverers in advance of the rollers and adjustably attached to the supports for said rollers and to said boots. 8th. In a drill, the combination of a frame having end and intermediate bearings, a drive shaft fitted in a part of said frame and said bearings, an agitator shaft in the upper part of the bearings, hoppers through which the agitator shaft extends and fitted over the drive shaft, distributing cylinders on the drive shaft having pockets therein of varying dimensions, regulating caps within the lower portion of the hoppers and over the distributing cylinders, and provided with top apertures corresponding in size to the pockets in the cylinders, agitators on the agitator shaft and within the hopper above the caps, slides for regulating the apertures in the caps, boots depending from the hoppers and having shovels adjustably connected to the lower portions thereof, and covering devices in rear of the boots. 9th. In a drill, the combination with a frame, hoppers and boots, of bracket arms extending rearwardly from the frame, rollers adjustably mounted in said arms, and coverers adjustably connected to the boots, and bracket arms for the rollers and projecting laterally a distance greater than the length of the rollers. 10th. In a seed drill, the combination with hoppers and boots, of a shaft having distributing cylinders thereon provided with pockets varying in dimensions, and caps mounted over said rollers having regular apertures in the top thereof which align with the pockets in the cylinders.

No. 66,876. Railway Switch. *(Aiguille de chemin de fer.)*



Walter Scott Phelps, Muncie, Indiana, U.S.A., 2nd April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. A railway switch provided with a case and a vertical shaft journalled in the case and provided with a horizontal disc working upon the top of the case, a vertical contact pin secured to the disc, and a lever detachably secured to the vertical shaft within the case and operatively connected to the switch. 2nd. A switch operating mechanism comprising a pair of connected cases, connected levers mounted in the cases, a rod connecting the switch point with a lever in one of the cases, a crank pin connected with the lever in the other case, a trip bar and a guide bar therefor acting upon the rail or like stable element and mounted movably upon a motor or equivalent vehicle, and means whereby the trap bar may be actuated to form contact with the crank pin for operating the switch. 3rd. A switch operating mechanism comprising a lever having a vertical crank pin and having connection with a switch point, a trip bar and a guide bar therefor acting upon the rail or like stable element and mounted movably upon the motor vehicle, and a lever whereby the trap bar may be shifted to form contact with the crank pin for operating the switch. 4th. A switch operating mechanism comprising a lever having a vertical crank pin and suitably mounted in the roadway and connected to control the switch, a trip bar mounted upon a motor, a compression beam controlled by the trip bar, a guide bar actuated by the compression beam and provided with a roller, springs whereby the trip bar and the guide bar are normally retained in inactive position, levers whereby the trip bar is actuated to connect with the crank pin to operate the switch and whereby the guide bar is forced into contact with the rail to limit the movement of the trip bar whereby the same is prevented from interfering with obstructions. 5th. A switch operating mechanism comprising a laterally moving lever having a vertical contact pin and to which the switch is connected, and a vertically movable trip bar adapted to engage with the contact pin and controlled in its vertical movement downward by means acting against the railway rail as a gauge whereby accurate adjustment for contact with the pin is obtained. 6th. A railway switch provided with a case having an annular bearing upon the top thereof and a lever

mounted within the case and operatively connected to the switch, a horizontally rotating disc mounted on the annular bearing upon the case and provided with a vertical contact pin and operatively connected to the levers within the case below. 7th. A switch-operating mechanism comprising a pair of counterpart cases, levers mounted in the cases and connected together comparatively, a rod connecting the switch with the lever in one case, a vertical contact pin mounted above the opposite case and operatively connected to the lever therein, a pair of vertically movable trip bars each having a bevelled foot facing each other and carried by a motor vehicle and controlled by either of the trip bars to contact with the railway rail or like stable element already existing as a gauge whereby accurate adjustment may be had for either of the pair of trip bars in contact with the vertical contact pin. 8th. A switch operating mechanism comprising a pair of connected cases, a disc mounted upon one of the cases, a vertical contact pin secured to the disc, a lever in each of the cases and connected, and one of which is operatively connected to the switch, a pair of trip bars each provided with an adjacently disposed bevelled contact face whereby the contact pin is engaged, a guide bar adapted to engage the downward movement of the pair of trip bars and operated by either of the trip bars independently of the other, and means whereby the trip bars are operated. 9th. In a switch operating mechanism, the combination of the motor, the brackets attached to the motor frame, the housings attached to the brackets, the trip bar, the guide bar, the supporting springs for the trip bar and the guide bar, the compression beam, and the levers and connections whereby the trip bar and guide bar are forced downwardly, substantially as shown and described. 10th. In a switch operating mechanism, the combination of the switch, the motor, the separately situated cases, the connecting tubes, the levers mounted in the cases, the switch connecting rod, the rods extending through the tubes and connecting the levers in the cases, the disc connected to the case cover and provided with a shaft removably connected to the lever in the case below, the vertical pin attached to the disc, the stops, the trip bars, the guide bars, the compression beam, the supporting springs, the levers for operating the trip bars, the pressure bars, and the connecting cables, substantially as specified. 11th. In a switch operating mechanism, the combination with a switch, of the cases B and B^1, the connecting tubes b, b, the lever C^1 and attached lever C^2 mounted in the case B, the switch connecting rod, the jaws G^1, the lever C in the case C and having the aperture C^4, the cover 2 upon the case B^1, the cover 3 upon the case B and provided with the annular bearings 5 and stops, 9, the journal bearing 10 and annular flange h surrounding the top of the bearing 10, the disc D provided with the annular bearing 6 and flange 7 and stops 8, the annular air chamber i above the flange h, the shaft D^1 attached to said disc and extending through the bearing 10 and aperture C^4, and the pin E, substantially as shown and described. 12th. In a switch operating mechanism, the combination of the switch, the operating levers connected with the switch the vertical crank pin whereby the levers are actuated, the motor, the brackets attached to the motor frame, the housings attached to the brackets, the trip bars in pairs spring pressed upward in a housing, the guide bars spring pressed upward in a housing, the compression beam extending through the trip bar and connecting a guide bar whereby the same is pressed down as a gauge, the levers whereby the trip bars are forced down, and the pressure bars and connections whereby the trip bar levers are operated, substantially as set forth. 13th. The combination of the cases B B^1, the connecting tubes adjustably attached to said cases, the lever C^1 and its supporting shaft, the lever C^2 rigidly connected to said lever and its shaft, the connecting rod a, the lever C having the square central aperture, the rods d d, extending through said tubes and adjustably connected to said levers C and C^1, the cover 2, the cover 3 having the journal bearing 10, the shaft d^1 engaging said lever C and provided with the nut to retain the same in position, the lever at the top of said shaft D^1 and having the pin E, whereby said levers may be actuated, substantially as set forth. 14th. The combination of the case B having the bottom 1 provided with the bearing 12, the cover 3 provided with the bearings 10 and 5, the raised flange h around the one of said bearing 10, the disc lever having the pin E and provided with the bearing 6 and flange 7, and annular air chamber i, substantially as shown and described. 15th. The combination with the motor vehicle of the bracket G, the housings H and k secured to said bracket, the trip bar 1 and a spring therefor, the guide bar J and a spring therefor, the compression beam L connecting said trip bar and said guide bar, and the compression levers suitably actuated, substantially as set forth. 16th. In a railway switch, the combination with the switch of a case and a horizontal lever mounted therein having a connected rod attached to the switch point and having a pair of oppositely disposed horizontal arms situate at a right angle to the horizontal lever, a second case and a horizontal lever mounted thereon and provided with a vertical contact pin and having a pair of oppositely disposed horizontal arms situate at right angles thereto, and rods connecting the four described horizontal arms, substantially as set forth. 17th. In a railway switch operating mechanism, the combination of a pair of serrated cases one of which is provided with an annular bearing upon the top thereof and a journal bearing at the centre of the annular bearing, a vertical shaft in the journal bearing and provided with a disc bearing upon the annular bearing, a vertical contact pin secured to the disc, a pair of tubes adjustably connecting the cases, a lever in each of the cases and having each three arms situate horizontally, one of which is detachedly secured to the vertical shaft and one of the arms of which in the opposite case is connected with the switch point, adjustable rods extending through the tubes and connecting the levers in the two cases, and an annular air chamber at the top of the journal bearing whereby water is prevented from entering the journal bearing, substantially as set forth. 18th. In a switch board operating mechanism, the combination of the switch, the motor, the separately situated cases, the connecting tubes, the levers mounted in the cases, the switch connecting rod, the rods extending through the tubes and connecting the levers in the cases, the disc mounted upon the case cover and having frictional bearing surfaces and provided with the shaft connected to the lever in the case below, the vertical pin attached to the disc, the trip bars, the guide bars, the compression beam, the supporting springs, and means whereby the trip bars may be operated, substantially as shown and described. 19th. In a switch operating mechanism, the combination of the contact pin, the motor, the brackets mounted on the motor, the trip bars in pairs supported by the brackets and spring pressed upward, the guide bars supported by the brackets and spring pressed upward, the compressing beam extending through the trip bars and connecting a guide bar whereby the same is pressed down as a gauge by the trip bar, and means whereby the trip bars are forced down, substantially as shown and described. 20th. In a switch operating mechanism, the combination with a switch, of the cases B and B^1 the conecting tubes b b, the lever C^1 and attached lever C^2 mounted in the case B^1, the cover 3 upon the case B and provided with the annular bearing 5, the journal bearing 10 and annular flange h surrounding the top of the bearing 10, the disc D provided with the annular bearing 6 and flange 7, the annular air chamber i above the flange h, the shaft D^1 attached to said disc and extending through the bearing 10 and aperture C^4 and removably secured in said aperture, and the contact pin E, substantially as shown and described. 21st. The combination of the case B having the bottom i provided with the bearing 12, the cover 3 provided with the bearing 10, the shaft D^1 in said bearings, the lever detachably secured to such shaft, and the vertical contact pin operatively connected to such shaft D^1 whereby the same may be rotated, substantially as set forth. 22nd. The combination of the case B provided with the cover 3 having the bearing 10, the shaft D^1 in said bearing, the disc lever secured at the top of said shaft, the contact pin secured to said disc lever, the lever C secured to said shaft, the case B^1, the three arm lever in said case B^1, and the rods connecting said three arm lever with said lever C substantially as set forth. 23rd. The combination of the case B^1, the shaft D^1, the lever C, the disc lever provided with the pin E, the case B^1, the lever C^1, the lever C^2, the rod A, the tubes b b, and the connecting rods d d, substantially as set forth. 24th. The combination of the case B, the cover 3 provided with the bearing 10 and the annular flange at the top thereof, the shaft D^1 in said bearing and provided with the disc at the top thereof and the annular air chamber between said flange and the disc, substantially as set forth. 25th. The combination of the case B, the cover provided with the annular frictional bearing, the shaft mounted vertically in the case, the lever attached to the shaft, the disc provided with the annular frictional bearing upon the cover whereby the shaft is prevented from shifting accidently, and the contact pin attached to the disc, substantially as set forth. 26th. The combination with a vertical contact pin for actuating the switch, of a pair of vertically moving trip bars mounted on a vehicle face to face and each provided with a foot bevelled at the working face so that the point of either foot when depressed may engage with such contact pin and draw the same laterally so as to pass under the adjacent one of such pair of trip bars, substantially as set forth. The combination with a vertical contact pin for actuating the switch, of a pair of vertically moving trip bars mounted on a vehicle and provided each with a bevelled or laterally curved foot and a vertical slot in the body of the bar, a guide bar also mounted on the vehicle and provided with a compression beam extending through the slots in the trip bars whereby either of the trip bars may actuate the guide bar, and means whereby the trip bars may be operated independently, substantially as set forth. 26th. In a switch operating mechanism, the combination of the trip bars l l^1 provided with the foot 14 and slot t, the supporting springs, the guide bar, and the compression beam connected to the guide bar and extending through the slots t t, substantially as set forth. 29th. In a switch operating mechanism, the combination of the trip bars l l^1 provided each with the opening u, the bearing plate v extending through said opening u in both bars, and the spring in each of said openings, substantially as set forth. 30th. In a switch operating mechanism, the combination of the guide bar J provided with the opening n, the bearing plate p, the spring in said opening, the compression beam connected to said guide bar, substantially as set forth.

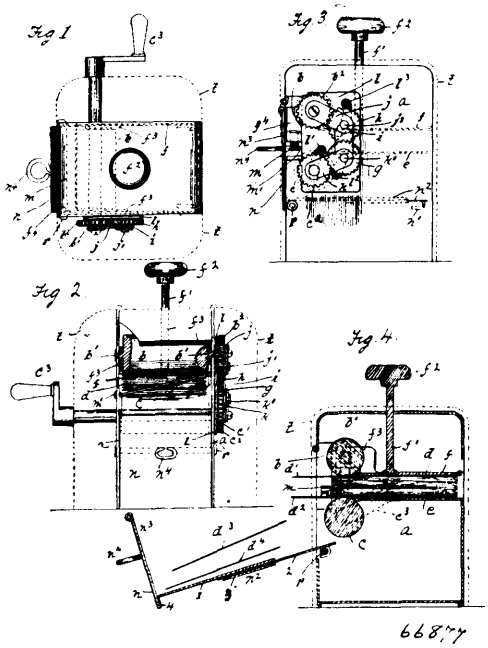
No. 66,877. Card Shuffling Machine.

(Appareil à mêler les cartes.)

John M. Bowden, Pittsburg, Pennsylvania, U.S.A., 2nd April 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. A card shuffling machine comprising two suitably operated feed rolls arranged one above and shiftable toward and from the other, a table arranged at the receiving side of the rolls, in position to deliver a pack of cards from it to and between the rolls, and means for obstructing the feed of all the cards of a pack of cards interposed between the rolls except the limited number desired to

be fed at a time from the pack. 2nd. In a card shuffling machine, the combination with the stationary portion of the machine, and



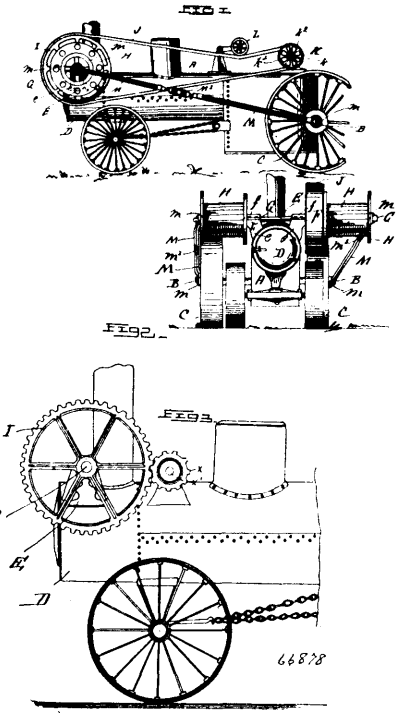
two suitably operated feed rolls arranged to feed cards simultaneously from the top and bottom of a pack of cards placed between them of a vertically tilting stop forming bar arranged at the delivering side of the rolls and between the top and bottom and diagonally of the space occupied by the pack of cards, which bar is supported from machines's stationary portion and is connected to and tiltable with the shifting of the upper roll and has such arrangement relative to the rolls that it shall form a stop or abutment for all of the cards of the pack except the limited number desired to be fed at a time from the pack. 3rd. In a card shuffling machine, the combination of two feed rolls arranged one above and shiftable relative to the other, such an operative connection between the rolls as will render the rolls capable of turning simultaneously but in opposite directions, respectively, and remaining operatively connected with each other during the shifting of the upper roll relative to the lower roll, and means for positively limiting the number of cards capable of being fed from between the rolls at one time. 4th. In a card shuffling machine, the combination with suitably operated feed rolls arranged one above the other, a table arranged at the receiving side of the rolls slightly below the top of the lower roll, a vertically shiftable plate or follower above the table and carrying the upper roll, and means for obstructing the feed of all cards, of a pack of cards interposed between the rolls except the limited number desired to be fed at a time from the pack. 5th. In a card shuffling machine, the combination with the stationary portion of the machine, and two suitably operated feed rolls arranged to feed cards simultaneously from the top and bottom of a pack of cards placed between them of a stop forming bar arranged at the delivering side of the rolls and diagonally of the space occupied by the pack of cards, which bar is hinged, pivoted or fulcrumed at one end to the stationary portion of the machine, and connected, at its opposite end, with the upper roll, and has such arrangement, relative to the rolls, that it shall form a stop or abutment for all of the cards of the pack except the limited number desired to be fed at a time from the pack. 6th. A card shuffling machine, comprising two standards arranged a suitable distance apart, a two-sided V-shaped receptacle having the arrangement and dimensions required to render it capable of being slid into the space between the standards, and means for holding a pack of cards and feeding a limited number from the pack at a time to the aforesaid receptacle.

No. 66,878. Traction Engine Drum.

(Tambour de machine de traction.)

Abram L. Adams, Breakman, Ohio, U.S.A., 2nd April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. The combination with a traction engine having a horizontal boiler casing or smoke box, of a saddle plate secured thereto and provided with a bearing bracket, a windlass shaft mounted in said bracket and extending to the sides thereof, and brace rods connecting the ends of said windlass shaft with a part of the traction engine. 2nd. The combination with a traction engine having a horizontal boiler casing or smoke box, of a saddle plate secured thereto, a bearing bracketed on said saddle plate, a windlass shaft journalled in said bearing bracket and extending to each side thereof, a drum on said shaft, a driving means for said shaft, and brace rods one on each side of the traction engine and coupling



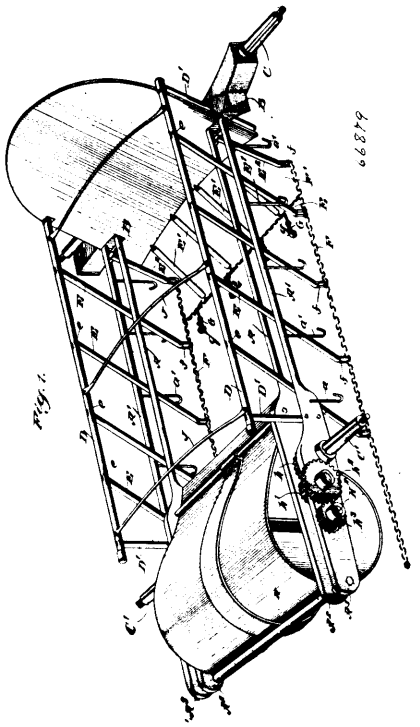
the ends of said windlass shaft to the ends of the axle of the traction engine, substantially as described. 3rd. The combination with a traction engine having a horizontal boiler casing or smoke box, of a saddle plate secured thereto, a bearing bracket on said saddle plate, a windlass shaft journalled in said bearing bracket and extending to each side thereof, a drum on said shaft, a driving means for said shaft, and brace rods adjustable in length, one on each side of the traction engine and coupling the ends of said windlass shaft to the ends of the axle of the traction engine, substantially as described. 4th. The combination with a traction engine having a crank shaft, a bearing bracket for the windlass shaft, a windlass shaft mounted in said bearing bracket, a drum thereon, a drive pulley or wheel on said windlass shaft, a drive connection from said pulley or wheel to a pulley or wheel on said crank shaft, and means for locking said pulley or wheel to or releasing it from said crank shaft, substantially as described.

No. 66,879. Improvements in Grass and Stubble Burner. *(Appareil à brûler l'herbe et le chaume.)*

Daniel Morrison, Maple Creek, North-west Territories, Canada, 2nd April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. A grass and stubble burner, comprising a bottomless enclosing structure having fire-proof curtains at the sides and adapted to be moved over the ground, and a flexible weighting device, as a chain, secured to the bottom of the curtains, substantially as described. 2nd. A grass and stubble burner, comprising a bottomless enclosing structure having fire proof curtains at the sides and adapted to be moved over the ground, a flexible weighting device, as a chain, secured to the bottom of the curtains, and a fan at the rear discharging forwardly upon the grass, substantially as described. 3rd. A grass and stubble burner, comprising a bottomless enclosing structure having flexible fire-proof curtains at its sides and adapted to be moved over the ground, a flexible weighting device, as a chain, secured to the bottom of the curtains, a fan at the rear discharging forwardly upon the grass, and fire-setting devices within the forward end of the enclosure, substantially as described. 4th. A grass and stubble burner, comprising a bottomless enclosing structure having flexible fire-proof curtains at its sides and adapted to be moved over the ground, a flexible weighting device, as a chain, secured to the bottom of the curtains, and fire-proof devices within the forward end of the enclosure, substantially as described. 5th. A grass and stubble burner, comprising a frame mounted on wheels to be moved over the ground, curtains adapted to be secured to the frame to form a bottomless enclosure, bars pivoted by their upper ends to the frame and adapted to drag their lower ends upon the ground, said bars being connected at their lower ends with the curtains, and means for securing and maintaining a fire within the enclosure as the device is moved over the ground, substantially at described. 6th. A grass and stubble burner, comprising a frame mounted on wheels to be moved over the ground, curtains adapted

to be secured to the frame to form a bottomless enclosure, bars pivoted by their upper ends to the frame and adapted to drag their

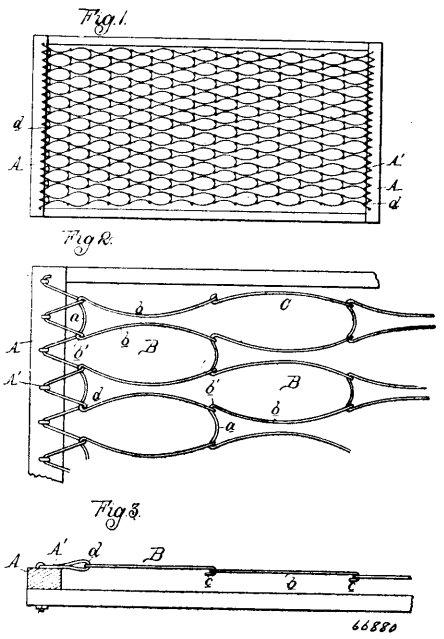


lower ends upon the ground, chains secured to the lower ends of said bars and extending along the sides and forward end of the device, the curtains being secured to the chains, and means for securing and maintaining a fire within the enclosure as the device is moved over the ground, substantially as described. 7th. A grass and stubble burner, comprising a frame mounted on wheels to be moved over the ground, curtains adapted to be secured to the frame to form a bottomless enclosure, bars pivoted by their upper ends to the frame and adapted to drag their lower ends upon the ground, the said bars being connected at their lower ends with the curtains, torches at the forward end of the enclosure, and a fan at the rear discharging forwardly upon the grass, substantially as described. 8th. A grass and stubble burner, comprising a frame adapted to be moved over the ground, curtains suspended from the frame, bars pivoted by their upper ends to the frame and adapted to drag their lower ends upon the ground, the said bars being connected at their lower ends with the curtains, and a traction operated fan at the rear of the enclosure discharging forwardly, substantially as described. 9th. In a grass and stubble burner, the enclosing aprons having a flexible weighting device, as a chain, at their lower edges, substantially as described. 10th. In a grass and stubble burner, the enclosing aprons having a flexible weighting device, as a chain, at their lower edges, and hooks adapted to support the chains in an elevated position, substantially as described. 11th. A grass burner, comprising a wheeled enclosure adapted to be drawn over the grass, and a mattress at one side of the said enclosure to extinguish the fire as the enclosure passes over it.

No. 66,880. Bed Bottom. *(Sommier.)*

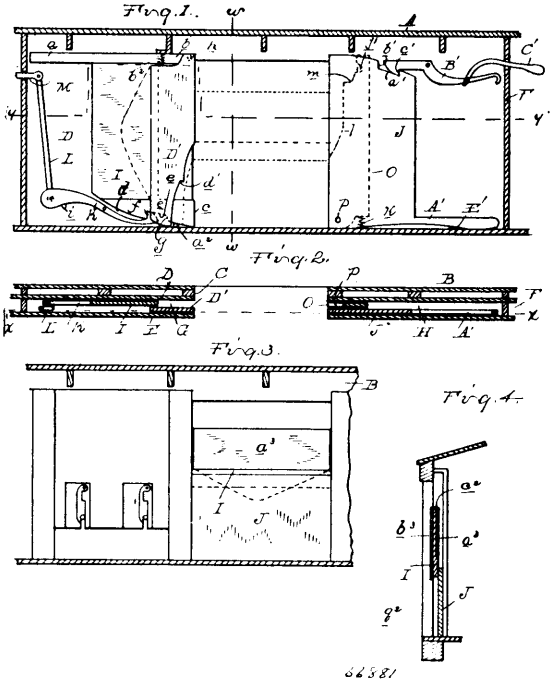
Arthur H. Viel, Fenton, Michigan, U.S.A., 2nd April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. The combination with the supporting frame, of a wire fabric bed bottom composed of a series of interlocking transverse rows of spring links, each link formed of spring wire with an inwardly curved connecting portion at one end and with two like arc shaped spring arms extending therefrom in the same plane and terminating in hooks at the other end, each link in a row connecting the hooked ends of the adjacent arms of two links in the preceding row of links with the opposite corners b^1 of two adjacent links in the succeeding row of links correspondingly in every row, the first and last rows of links being secured at their ends to the end bars of the frame. 2nd. The herein described spring link composed of the inwardly curved connecting portion a and the inwardly curved arms b provided with hooks c at their free ends. 3rd. The herein described spring link B, composed of the inwardly curved connecting portion a and the arms b forming between them at their junction the curved corners b^1, said arms being provided at their free ends with downwardly bent hooks c, said hooks and corners b^1, forming the means for connecting a number of like links into a homogeneous wire fabric in the manner described. 4th. The combination with the supporting frame, of the zig zag wires A^1 secured



to the head bars thereof, one of the said wires having its free ends d twisted in a plane at right angles thereto and the spring links B detachably connected together in transverse rows, the first and last rows of which are respectively connected to said wires A^1.

No. 66,881. Grain Car Door. *(Porte de chars à grain.)*



George P. Hoffman, Durand, Michigan, U.S.A., 2nd, April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. In a grain car door, the combination of a slotted housing arranged adjacent to one side of the door opening, a door section for closing a portion of said opening, pivoted and adapted to swing in its own plane within the housing, and an extension upon the section of its pivoted side and in the plane of the section, constructed to extend vertically within and fully close the housing when the door is in its forward or closed position. 2nd. In a grain car door, the combination of a slotted housing arranged adjacent to one side of the door opening, a door section for covering a portion of the said opening pivoted and adapted to swing in its own plane

within the housing, said section being of a length to entirely close the housing when in its open or retracted position, and an extension upon the section side having lesser dimension, said extension being of a length sufficient to make the length of said lesser side equal at its edge to the length of the longer side, to fully close the housing when the section is in its closed position. 3rd. In a grain car door, the combination of slotted housings arranged respectively adjacent to opposite sides of the door opening, a door section pivoted to swing into one of said housings in its open position, and in its closed position to extend across into the slot of the opposite housing, and a latch strip in said latter housing adapted to engage with said door section to lock the same and to close the slot in said housing. 4th. In a grain car door, the combination of slotted housings arranged respectively adjacent to opposite sides of the door opening, door sections pivoted to swing in parallel planes adjacent to each other and respectively into said opposite housings, and latch strips in said housings adjacent to said door sections each adapted to engage with the said door section pivoted in the opposite housing, when in its closed position 5th. In a grain car door, the combination of slotted housings arranged respectively adjacent to opposite sides of the door opening, a lower and an intermediate door section, said sections being pivoted to swing in parallel planes adjacent to each other and respectively into said opposite housings, and a top door section carried by the intermediate section adapted to close the extreme upper portion of the door section. 6th. In a grain car door, the combination of slotted housings arranged respectively adjacent to opposite sides of the door opening, a lower and an intermediate door section, said sections being pivoted to swing in parallel planes adjacent to each other and respectively into said opposite housings, a top door section carried by and having a sliding engagement with the intermediate section, means for automatically locking the top section in its closed position, and means for unlocking said section to permit of its being lowered. 7th. In a grain car door, the combination of slotted housings arranged respectively adjacent to opposite sides of the door opening, a lower and an intermediate door section, said sections being pivoted to swing in parallel planes adjacent to each other and respectively into said opposite housings, the extensions *b* and *c* upon the intermediate section, each having a vertical recess formed therein, uprights pivoted within the recessed extensions, springs bearing against the uprights and acting to throw the upper ends of said uprights out of the recesses, the top door section slidingly engaging the intermediate section between the extensions and resting in its closed position upon the uprights, and means for moving the uprights within their recesses to permit of the opening of the top door section.

No. 66,882. Mattress. (*Matelas.*)

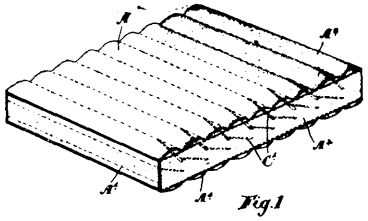


Fig. 1.

Fig. 2.

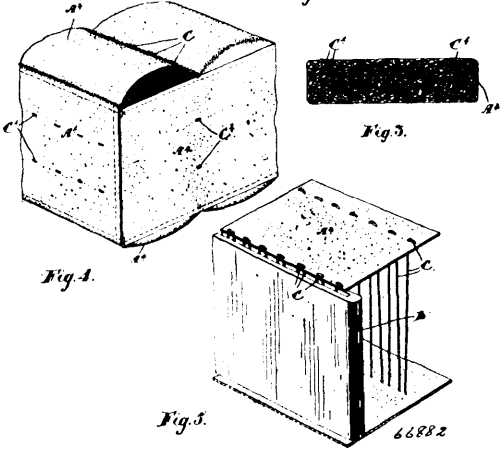


Fig. 3.

Fig. 4.

Fig. 5.

66882

William Henry Smith, Toronto, Ontario, Canada, 2nd April, 1900; 6 years. (Filed 19th March, 1900.)

4—2

Claim.—1st. The method of making a mattress, consisting in inserting therein a temporary board or partition, forming a line of stitching along the line of said temporary board, then filling the space between the temporary board and the next longitudinal space by putting in the filling from the end and then finally withdrawing the temporary board, so as to leave a longitudinal unobstructed block of filling of equal density throughout, as and for the purpose specified. 2nd. In a mattress, the combination with the top and bottom and sides and ends, of the longitudinal, substantially rectangular blocks of filling extending from side to side of the mattress, and the line or rows of stitching or cording extending from top to bottom of the mattress and separating the blocks of filling, as and for the purpose specified. 3rd. In a mattress, the combination with the top and bottom and sides and ends, of the longitudinal, substantially rectangular blocks of filling extending from side to side of the mattress, the line or rows of stitching or cording extending from top to bottom of the mattress and separating the blocks of filling, and the diagonally arranged bracing cords extending through the lines of stitching to the sides, as and for the purpose specified.

No. 66,883. Cuff Holder. (*Agrafe-poignet.*)

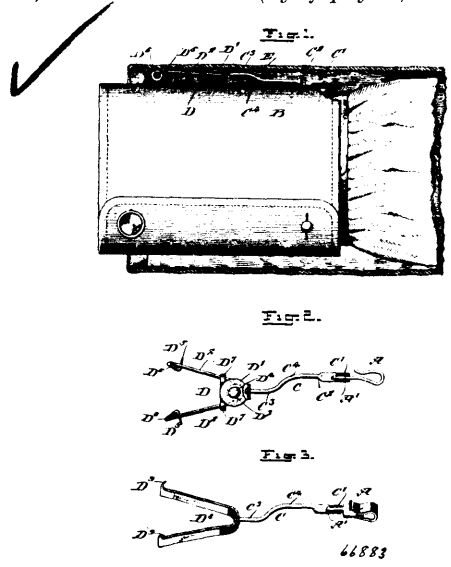


Fig. 1.

Fig. 2.

Fig. 3.

66883

Mary Logan Cummins, assignee of Logan Cummins, Memphis, Tennesse, U.S.A., 3rd April, 1900; 18 years. (Filed 18th March, 1900.)

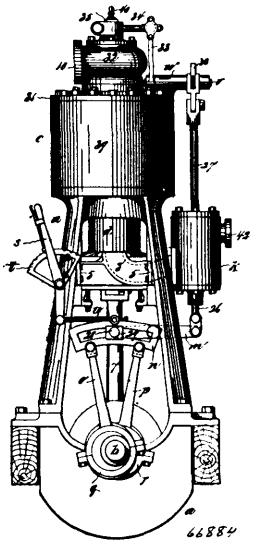
Claim.—1st. A cuff holder, comprising a clasp for engagement with the inner edge of a cuff, an attaching device for engagement with a sleeve, and a link with an offset and having a swivel connection with the said clasp and the said attaching device, substantially as shown and described. 2nd. In a cuff holder, such as claimed under head 1, the attaching device having a casing, and a spring with divergent arms secured at its middle to said casing, the spring arms having outwardly extending prongs, the extreme outer ends of the arms forming finger pieces to be taken hold of by the operator, for compressing and releasing the spring arms when attaching or detaching the device to or from the sleeve, substantially as shown and described.

No. 66,884. Steam Engine. (*Machine à vapeur.*)

The Whitfield Co., assignee of Marcy Lelland Whitfield, all of Memphis, Tennessee, U.S.A., 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. In a compound engine, means for establishing direct communication between the source of live steam supply and the low pressure cylinder through the high pressure cylinder to change the operation of the engine from compound to semi-compound, for the purpose specified. 2nd. In a compound engine comprising a low pressure cylinder, a stationary piston abutment and a high pressure piston cylinder working on said abutment and in said low pressure cylinder respectively, means for establishing direct communication between the source of live steam supply and the low pressure cylinder through the high pressure cylinder to change the operation of the engine from compound to semi-compound, for the purpose set forth. 3rd. A compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment and a piston cylinder working on said abutment and in said stationary cylinder, and means for changing the operation of the engine from compound to semi-compound and vice versa at will, for the purpose set forth. 4th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment and a piston cylinder, means for changing the operation of the engine from compound to semi-compound and vice versa, and means for reversing the rotation of the crank in either operation, for the purpose set forth.

5th. In a compound engine, means operating automatically for establishing direct communication between the source of live steam



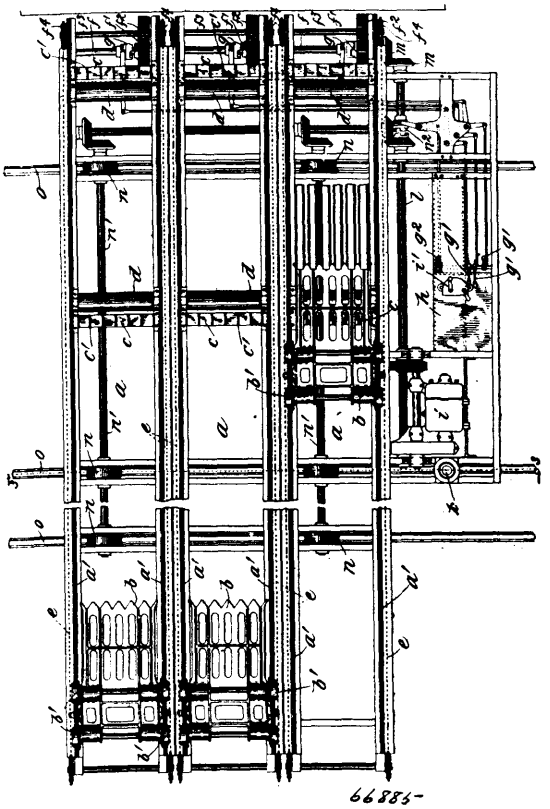
supply and the low pressure cylinder through the high pressure cylinder, to change the operation of the engine from compound to semi-compound, and thereby increase the power of the engine for the purpose of overcoming inertia in starting or on an increase in the load on the engine while running, as set forth. 6th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder having motion on said abutment in said stationary cylinder, means for admitting steam alternately to said piston and stationary cylinders and means for changing the direction of motion of the crank, for the purpose set forth. 7th. A steam engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder working on said abutment and in said stationary cylinder, suitable steam distributing appliances and means for changing the direction of motion of the crank, for the purpose set forth. 8th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder, means for admitting steam to said piston cylinder through said abutment and means for admitting steam to the stationary cylinder through said piston cylinder, for the purpose set forth. 9th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary bifurcated abutment, a piston cylinder having motion on said abutment and in said stationary cylinder, a cross head connected with said piston cylinder and having motion between the legs of the abutment, a crank shaft and a driving rod connecting said cross head with said crank shaft, for the purpose set forth. 10th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary bifurcated abutment having steam passages in its legs and an outlet port in its head, and a piston cylinder having motion on said abutment and in said stationary cylinder, for the purpose set forth. 11th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder having motion on said abutment and in said stationary cylinder and means for causing the engine to work semi-compound or compound, for the purpose set forth. 12th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder having motion on said abutment, means for causing the engine to work semi-compound or compound and means for changing the direction of motion of the crank whether the engine works semi-compound or compound, for the purpose set forth. 13th. A combined compound and semi-compound engine, comprising a stationary cylinder open at its outer end, a stationary bifurcated abutment arranged in the axial plane of said cylinder, a piston cylinder open at its outer end and having extensions therefrom, said piston cylinder working on the abutment and in a stationary cylinder, a cross head connected with the piston cylinder extensions and having motion between the legs of the abutment, a crank shaft and a connecting rod connected with the crank on said shaft and with the aforesaid cross head, for the purpose set forth. 14th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder having motion on said abutment and in said cylinder, a crank shaft, a connection between the crank of said shaft and the piston cylinder, a main or distributing valve controlled by the movement of the crank shaft, an exhaust valve for the stationary cylinder, and an intermediate valve in the piston head of the piston cylinder, both of said valves controlled by the movements of the distributing valve, for the purpose set forth. 15th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder having motion on said abutment and in said cylinder, a crank shaft, a connection between the crank of said shaft and the piston cylinder, a main or distributing valve controlled by the movements of the crank shaft, an exhaust valve for the stationary cylinder, an intermediate valve in piston head of the piston cylinder, both said valves controlled by the movements of the distributing valve, and means for adjusting the last-named valve to cause the engine to work semi-compound or compound, substantially as set forth. 16th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder having motion on said abutment and in said cylinder, a crank shaft, a connection between the crank of said shaft and the piston cylinder, a main or distributing valve controlled by the movements of the crank shaft, an exhaust valve for the stationary cylinder, an intermediate valve in piston head of the piston cylinder, both said valves controlled by the movements of the distributing valve, and means for adjusting the last-named valve to change the direction of motion of the crank, for the purpose set forth. 17th. A combined compound and semi-compound engine, comprising a stationary cylinder, a stationary abutment, a piston cylinder having motion on said abutment and in said stationary cylinder, a crank shaft, a connection between the crank of said shaft and the piston cylinder, a main or distributing valve controlled by the movements of the crank shaft, an exhaust valve for the stationary cylinder, an intermediate valve in piston head of the piston cylinder, both said valves controlled by the movements of the distributing valve, means for adjusting the last-named valve to cause the engine to work semi-compound or compound, and means for adjusting said valve to change the direction of motion of the crank whether the engine works semi-compound or compound, substantially as set forth. 18th. In an engine of the type described, a bifurcated stationary abutment forming a way in which the cross head reciprocates, for the purpose set forth. 19th. In an engine of the type referred to, a bifurcated stationary abutment forming a way in which the cross head reciprocates and serving to admit live steam to the piston cylinder, for the purpose set forth. 20th. In an engine of the type described, a bifurcated stationary abutment forming a way in which the cross head reciprocates and serving to admit live steam to the piston cylinder and to the stationary cylinder, for the purpose set forth. 21st. In a compound engine comprising a low pressure cylinder, a piston abutment, a high pressure piston cylinder working on said abutment and in said low pressure cylinder, respectively, a valve controlling the supply of live steam to the high pressure cylinder, a valve controlling passages leading from the high pressure cylinder into the low pressure cylinder, and an exhaust valve for the latter cylinder, a valve gear operated from a moving element of the engine and actuating the valves to cause the engine to normally work compound, a governor influencing the operation of said valve gear and valves so as to establish, under certain conditions, direct communication between the source of live steam supply and the low pressure cylinder through the high pressure cylinder to change the normal operation of the engine from compound to semi-compound, for the purpose set forth. 22nd. In a compound steam engine, a low pressure cylinder, a piston abutment, a high pressure piston cylinder working on said abutment and in said low pressure cylinder, said high pressure piston cylinder extended for connection with the crank shaft beyond the steam area determined by the packing on said abutment, a self packing distributing valve working in a suitable chamber, and having its operating stem located externally of said chamber for connection with the valve operating device, a semi-rotary intermediate valve in the head of the high pressure piston cylinder, a semi-rotary exhaust valve for the low pressure cylinder and the valve stem for said intermediate valve operated by said exhaust valve and located wholly within the steam area of the low pressure cylinder, said exhaust valve having its stem externally of said steam area, substantially as set forth and for the purpose of dispensing with stuffing boxes and glands for said parts.

No. 76,884. Charging Machine. *(Machine à charger.)*

Edwin W. McKenna, Milwaukee, Wisconsin, assignee of David Holliday Lentz, Joliet, Illinois, and Henry C. Shaw Pittsburg, Pennsylvania, all in the U.S.A., 3rd April, 1900; 6 years. (Filed 27th February, 1899.)

Claim.—1st. In a charging machine, the combination with a table adapted to support a number of rails and to permit a number of such rails to be moved off from it together, of pushing mechanism adapted to travel along said table in the direction of its length and simultaneously to charge a number of the rails accommodated upon said table, and means for causing said pushing mechanism to perform its excursion along said table, substantially as described. 2nd. In a charging machine, the combination with a table adapted to support a number of rails, of a series of guiding blocks located at intervals along said table in the line of the rails to maintain said rails parallel to one another and at given distances apart, pushing mechanism adapted to travel along said table in the direction of its length, said pushing mechanism being adapted to engage a number of rails, and means for causing said pushing mechanism to perform its excursion along said table, whereby a number of rails may be charged by one excursion of said pushing mechanism, substantially as described. 3rd. In a charging machine, the combination with frame work forming a table and adapted to support a number of rails, said table being adapted to permit all of such rails to be moved off from it longitudinally, of pushing mechanism adapted to engage all of said rails at one time

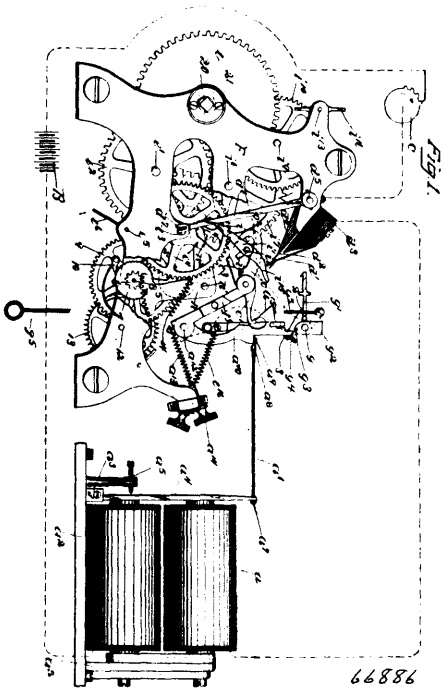
and to travel longitudinally along said table, means for causing said pushing mechanism to perform its excursion along said table,



whereby all of the aforesaid rails upon said table may be charged by one excursion of said pushing mechanism, a travelling carrier adapted to support and carry at one time a number of rails, and means for causing said travelling carrier to deposit such number of rails all together upon said table, substantially as described. 4th. In a charging machine, the combination with frame work forming a number of sections or tables, each of said sections being adapted to support a number of rails, of pushing mechanism associated with each of said sections and adapted to engage and charge a number of rails therein, and means for causing said pushing mechanism to perform its excursion, substantially as described. 5th. In a charging machine, the combination with a table, said table consisting of a number of sections or smaller tables, each of said sections or smaller tables being adapted to support a number of rails, of pushers associated one with each of said sections, each of said pushers being adapted to engage all of the rails upon its section, means for causing any one of said pushers to perform its excursion along the section with which it is associated, a travelling carrier associated with said charging machine adapted to support and carry a number of rails at one time, and means for causing said travelling carrier to deposit such number of rails upon either of said sections, substantially as described. 6th. In a charging machine, the combination with frame work forming a number of sections or tables, each of said sections being adapted to support a number of rails, a pusher associated with each of said sections and adapted when actuated to charge a number of the rails upon its section, a driving shaft, and motor mechanism assseiated therewith for rotating the same in either direction, and means for connecting said driving shaft with either of said pushers, whereby either of the latter may be caused to travel backward and forward along the section with which it is associated, according to the direction of rotation of said driving shaft, substantially as described. 7th. The combination with a charging machine having a table adapted to support a number of rails and to permit a number of such rails to be charged by one operation, of pushing mechanism adapted to engage and charge a number of rails at one time, a travelling carrier associated with said charging machine for transparting rails thereto, an electro magnet associated with said travelling carrier, said electro magnet having pole pieces adapted simultaneously to engage a number of rails, thereby constituting an electro magnetic grapple, a source of electric current, and means for connecting the same with said electro magnet and disconnecting the same therefrom, substantially as described.

No. 66,886. Telegraph Repeater.

(Télégraphe à répétition.)



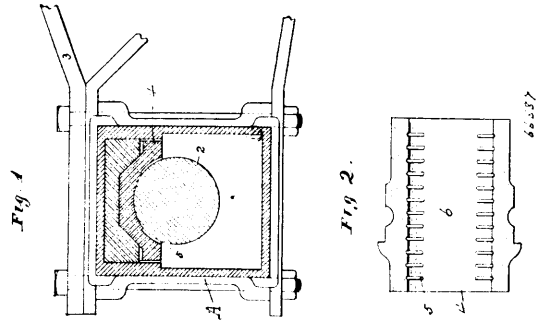
The Gamewell Fire Alarm Telegraph Company, New York City, New York, U.S.A., assignee of Frederick William Cole, 3rd April, 1900; 6 years. (Filed 17th November, 1899.)

Claim.—1st. In a repeater, a train, a locking lever therefor, a series of operating levers, one for each circuit connected with the repeater, movement of any one of which will operate said locking lever to release the train, independently movable locking devices, one for each operating lever, a locking out train adapted to co-operate with said locking devices when in their normal positions, and means for moving any of said locking devices from its normal position, to a position in which it cannot be operated by said locking out train, substantially as described. 2nd. In a repeater, a train, a locking lever therefor, a series of operating levers, one for each circuit connected with the repeater, movement of any one of which will operate said locking lever to release the train, independently movable locking devices, one for each operating lever, a locking out train, in the path of movement of which said locking devices are normally held by engagement with said operating levers, any one of said locking devices automatically moving from its normal position to a position in which it cannot be operated by said locking out train upon the operation of its corresponding operating lever, substantially as described. 3rd. In a repeater, a series of operating levers, one for each circuit, connected with the repeater adapted to respond to changes therein, a repeating train and a locking out train controlled by said repeating train, a locking device for each operating lever, having engaging portions for both the operating lever and the locking out train respectively, and adapted to be released by the first movement of the operating lever, and to thereafter move automatically to a predetermined position independently of the operating lever or locking out train, substantially as described. 4th. In a repeater, a series of operating levers, one for each circuit, connected with the repeater adapted to respond to changes therein, a repeating train and a locking out train controlled by said repeating train, a locking device for each operating lever having engaging portions for both the operating lever and the locking out train respectively, and adapted to be released by the first movement of the operating, and to thereafter move automatically out of co-operative engagement with said locking out train, substantially as described. 5th. In a repeater, a series of operating levers, one for each circuit, connected with the repeater, each having a stop a^{15}, and a projection a^{16}, a locking out train, a locking device for each operating lever, said locking devices being normally held by said stops a^{15}, in the path of engagement with said locking out train, which latter, when operated, moves them into engagement with said projections a^{16}, to thereby mechanically hold said levers, substantially as described. 6th. In a repeater, a series of operating levers, one for each circuit connected with the repeater, each having a stop a^{15}, and a projection a^{16}, a locking out train, a locking device for each operating lever, said locking devices being normally held by said stops a^{15}, in the path of engagement with said locking out train, which latter, when operated, moves them into engagement with said projections a^{16}, to thereby mechanically hold said levers, any one of which however is free to move out of said engaging position

with the locking out train upon the initial movement of its corresponding operating lever, to thereafter permit continued vibration of said operating lever, substantially as described. 7th. In a repeater, a series of operating levers, a locking out train, an independent locking device for each operating lever, each locking device having engaging portions adapted to co-operate with said locking out train and with its corresponding operating lever, to be moved by said locking out train into position to mechanically lock said operating levers, any one of which locking devices being movable automatically out of co-operative engagement with said locking out train upon the operation of its corresponding operating lever, to thereby permit free vibration of said lever, substantially as described. 8th. In a repeater, a series of circuit controllers, a repeating train for operating them, a locking lever for said train, a series of operating levers, one for each circuit connected with the repeater, movement of any one of which will operate said locking lever to release the train, a locking out train, an independent pivoted locking device for each operating lever, one end of which is normally engaged and held by the operating lever, and the other end of which has portions o^2, o^{21}, adapted and arranged to co-operate with the locking out train, the portion o^2 being acted upon by said train when its opposite end is engaged by the operating lever, and the portion o^{21} being acted upon by said train when said locking device is released, substantially as described. 9th. In a repeater, a series of circuit controllers, a repeating train for operating them, a locking lever for said train, a series of operating levers for said locking lever connected respectively with the armature of the operating electro-magnets, a locking out train having as a co-operative part of it a rotatable projection, as i^{20}, a series of pivoted controlling levers having bent fingers o^2 normally held in the path of movement of the projection i^{20} by the operating levers, but removed therefrom when released, and also having fingers o^3, substantially as described. 14th. In a repeater, an operating lever for each circuit connected with the repeater, responsive to changes in the conditions thereof, an independently movable locking device for each operating lever, a motor for moving said locking devices to lock the operating levers, each locking device being normally held by its corresponding operating lever in a position to be thus operated upon the starting of said motor to lock its operating lever, but adapted to move automatically when released by its operating lever to a position in which it is not operated upon the starting of said motor, said locking devices each having a portion adapted to be engaged by said motor to move said locking device into its locking position, means for causing said motor to start at the first impulse of the signal and to stop at the completion of the signal, substantially as described. 11th. A repeater having a number of independent operating levers, one for each circuit connected therewith and responsive to changes therein, and each adapted by its movement from its normal position to control the operation of the instrument, an electro-magnet and armature for each circuit, said operating levers being connected with said armatures held by them in normal position, a spring for each operating lever operating when unopposed to move said operating levers to abormal position, an independent locking device for each operating lever, and means for moving all of said locking devices to their locking positions at each complete operation of the repeater, any or all of said locking devices being held in such locking position by said operating levers to thereby hold said operating levers until said levers are otherwise held, substantially as described. 12th. In a repeater, an operating lever for each circuit connected therewith, an independently movable locking device for each, a locking out train with which all of said locking devices co-operate, said locking devices having portions which are engaged by said locking out train at the final movement thereof, whereby all of said locking devices are carried to a position in which they lock their respective operating levers and remain in such locking position unaffected by subsequent operations of the repeater, and means for retaining said locking devices in such position dependent upon the condition of their respective circuits, substantially as described. 13th. In a repeater, an operating lever for each circuit connected therewith and responsive to changes therein, a repeating train, a locking out train controlled by said repeating train, a pivoted locking device for each operating lever weighted at one side of its pivot, engaging portions at one end thereof, one of which is engaged by the operating lever in its normal position and the other when said operating lever is moved in response to a change in its circuit, allowing said locking device to rock on i s pivot, and engaging portions at the opposite end of said locking device adapted to be engaged by the said locking out train, the co-operation of said train with said engaging portions being dependent upon the position of said locking devices determined by their relation to said operating levers, substantially as described. 14th. In a repeater, a series of circuit controllers, a repeating train for operating them, a locking lever for said train, a series of operating levers arranged adjacent to said locking lever, a series of electro-magnets and armatures therefor, and connecting rods connecting said armatures with the operating levers, substantially as described. 15th. In a repeater, a series of circuit controllers, a repeating train for operating them, a locking lever for said train having a horizontal cross piece, a series of vertical operating levers arranged side by side adjacent to said cross piece, a series of electro-magnets and armatures therefor, and connecting rods connecting said armatures respectively with the operating levers, substantially as described. 16th. In a repeater, a series of circuit controllers, a repeating train for operating them, a locking lever for said train, a series of operating levers arranged adjacent to said locking lever, a series of electro-magnets and armatures therefor, extensions on said armatures, and connecting rods connected at one end with said operating levers and at the other end with the extensions on said armatures, substantially as described. 17th. In a repeater, a series of circuit controllers, one for each circuit, adapted to be opened and closed at each operation of the repeating train, a series of controlling levers governing the operative posittions of said circuit controllers, and a series of operating levers any one of which releases the repeating train for each impulse, substantially as described. 18th. In a repeater, a repeating train, a locking lever therefor, a series of circuit controllers, one for each circuit, adapted to be opened and closed at each operation of the repeating train, a series of operating levers movement of any one of which will operate said locking lever and release the repeating train, an independent locking device for each operating lever, and a locking out train for moving said locking devices to mechanically hold the operating levers and retain them while the repeating train operates the circuit controllers, said locking devices having portions adapted to engage the circuit controllers and place them in position to be operated by the repeating train when moved to lock the operating levers, substantially as described. 19th. In a repeater, a repeating train, a locking lever therefor, a series of operating levers, one for each circuit, connected with the repeater, responsive to changes therein, movement of any one of which will release said train, a series of circuit controllers, one for each circuit, adapted to be opened and closed at each operation of the repeating train, and an independent locking device for each operating lever having a portion adapted to engage one of the circuit controllers, and a locking out train for moving said locking devices into position to mechanically hold the operating levers and to open the circuit controllers, substantially as described. 20th. In a repeater, a repeating train, a locking lever therefor, a series of operating levers, one for each circuit, connected with the repeater, responsive to changes therein, movement of any one of which will release said train, a series of circuit controllers, one for each circuit, adapted to be opened and closed at each operation of the repeating train, and an independent locking device for each operating lever having a portion adapted to engage one of the circuit controllers, and a locking out train for moving said locking devices into position to mechanically hold the operating levers and to retain them in such position until the end of a signal, and to engage and raise one of the contacts of the circuit controllers and retain it in elevated position until the end of a signal, substantially as described. 21st. In a repeater, a repeating train, locking lever therefor, and a series of operating levers, one for each circuit connected with the repeater, movement of any one of which will operate said locking lever, independently movable locking devices, one for each operating lever, a repeating circuit controller for each circuit, a portion of each locking device adapted when said locking device is in locking position to engage one member of one of the circuit controllers and thus open the circuit, and a locking out train for moving said locking devices into locking position and retaining them there until the close of the message, substantially as described. 22nd. In a repeater, a repeating train, a locking lever therefor, and a series of operating levers, movement of any one of which will operate said locking lever, independently movable locking devices, one for each operating lever, consisting of pivoted levers normally held by said operating levers in a position to be engaged by a cam operated by a locking out train, a projection on said lever adapted when the lever is engaged and moved by said cam to engage and hold the said operating lever, and a portion of said lever adapted to engage one member of a circuit closer at the repeater and thus open the circuit belonging to the said lever through the repeater, substantially as described. 23rd. In a repeater, a series of normally closed circuit controllers, one for each circuit connected therewith, a series of operating levers, a series of controlling levers governed by said operating levers, which when operated open all of said circuit controllers except the one connected with the operating circuit, and hold them open until the end of a signal, and also mechanically hold the corresponding operating levers, and a repeating train responsive to the operating circuit for successively closing the circuit controllers thus opened, and means for closing said circuit controllers a predetermined time after the repeating train has ceased to operate, and in case of a broken circuit to also mechanically hold the operating lever of said circuit, substantially as described. 24th. In a repeater, a series of circuit controllers, one for each circuit adapted to be opened and closed at each operation of the repeating train, and a series of controlling levers governing the operative positions of said circuit controllers, a locking out train with which said controlling levers co-operate, a series of operating levers governed by electro magnets in the circuits, any one of which releases the repeating train for each impulse, substantially as described. 25th. In a repeater, a series of normally closed circuit controllers, one for each circuit connection therewith, a series of controlling levers for said circuit controllers which when operated engage one member of and separate it from the other member of the said circuit controller and thereby open all of said circuit controllers except the one connected with the operating circuit, means for thus operating the controlling levers, and for holding them open until the end of the signal, and a repeating train responsive to the operating circuit for successively and materially closing the circuit controllers thus opened, sub-

stantially as described. 26th. In a repeater, a repeating train, a locking lever therefor, a series of operating levers, movement of any one of which will operate said locking lever, a locking out train adapted to be released by the repeating train, a normally closed circuit controller for each circuit, means operated by the locking out train for opening said circuit controllers at the beginning of a message and retaining them normally open until the end of said message, and an actuator for momentarily closing the said circuit controllers at each operation of the repeating train, whereby the circuit controllers of the receiving circuits are open at the beginning of the signal and produce the repeated signal by momentary closures, substantially as described. 27th. In a repeater, a series of circuit controllers normally in inoperative condition, a repeating train responsive to the operating circuit for operating them to repeat a signal when they are placed in operative condition, a series of controlling levers for placing all of said circuit controllers in operative condition to be operated by the repeating train except the one connected with the operating circuit, a locking out train for operating said controlling levers, and a series of operating levers which determine which controlling lever shall be operated by the locking out train, substantially as described. 28th. In a repeater, an operating lever for each circuit adapted to respond to changes therein, a repeating train adapted to operate in response to a movement of any of said operating levers, and a locking out train adapted to restore said operating levers to their normal positions, as set forth. 29th. In a repeater, an operating lever for each circuit adapted to respond to changes therein, a repeating train adapted to operate in response to a movement of any of said operating levers, a locking out train controlled by said repeating train, and independently movable devices, one for each operating lever, adapted to be operated by the said locking out train to restore said operating levers to their normal positions, substantially as described. 30th In a repeater, an operating lever for each circuit adapted to respond to changes therein, a repeating train adapted to operate in response to a movement of any of said operating levers from its normal position, a locking out train controlled by said repeating train and having an initial and final movement, and independently movable devices one for each operating lever adapted to be operated by the final movement of said locking out train to restore said operating levers to their normal positions, substantially as described. 31st. In a repeater, a number of operating levers, each having a locking device adapted to be operated by a locking out train common to all, said locking out train being adapted by its initial movement to lock all the operating levers ex ept the one belonging to the operating circuit, and a repeating train adapted by its first operation to release said locking out train and permit it to make its initial movement and by its subsequent operations to repeat the signal over the other circuits, and restoring mechanism consisting of a train adapted to be wound up at each operation of said repeating train, and a device carried by said train adapted to arrest and hold said locking out train in position to lock said operating levers until said train has run down, the final movement of said locking out train thus released restoring the locking devices to their normal position substantially as described. 32nd. In a repeater, a repeating train, a locking lever therefor adapted by its movement from a normal to an abnormal position to permit said train to start and to then arrest and hold said train, and an operating lever for each circuit adapted when said circuit is open to move said locking lever from its normal to its abnormal position, and retain it there with the train arrested until said operating lever is restored to its normal position, substantially as described.

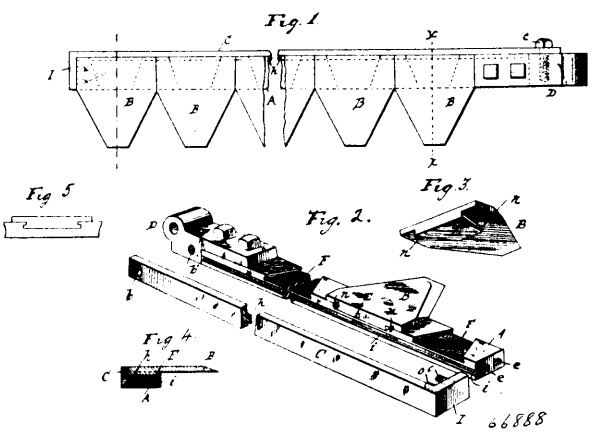
No. 66,887. Lubricating Journal Bearings.
(Graisseur de coussinet de tourillon.)



Benjamin John Knapp and Ernest Martin Flood, all of St. Paul, Minnesota, U.S.A., 3rd April, 1900; 6 years. (Filed 27 January, 1900.)

Claim.—A bearing of the class described, formed with transverse grooves in its bearing face, said grooves extending only a short distance inward from each side of the bearing leaving an ungrooved bearing face between the two rows of grooves, whereby the lubricant is fed to the ungrooved central portion of the bearing.

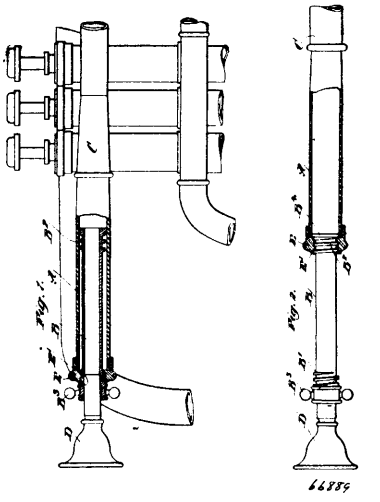
No. 66,888. Sickle for Harvesters. *(Lame de moissonneuse.)*



Charles S. Bone, Lineville, Iowa, and David F. Bone, Albany, Missouri, U.S.A., 3rd April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—In combination with the bar A, provided with the undercut dovetailed recesses or sockets F, decreasing in width toward the front face of the bar, a groove *i* formed in the rear edge of the bar, the teeth B, each provided with a dovetailed projection E, upon its under face, adapted to fit in the recesses or sockets F, and a locking bar C, provided with a dovetailed rib *h* adapted to fit in the groove *i*, with means for fastening the locking bar in place when inserted, substantially as shown and described.

No. 66,889. Shanks for Cornets and like Musical Instruments. *(Instrument de musique.)*



William Henry Horn and Charles Lewis Wain, both of Kamloops, British Columbia, Canada, 3rd April, 1900: 6 years. (Filed 25th January, 1900.)

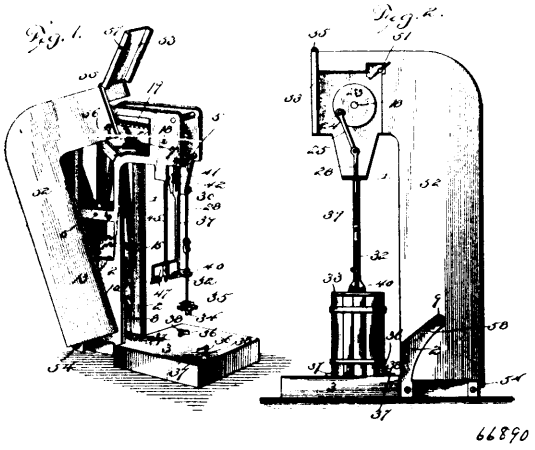
Claim.—1st. A musical instrument of the class described, provided with a shank made in sections, one of which is the body section and is provided with an internally threaded head and the other is provided with a mouth piece section, and is arranged to telescope in the body section, the mouthpiece section having two sets of screw threads adapted to screw in said head, to hold the mouthpiece section locked in either an extended or closed position, substantially as shown and described. 2nd A musical instrument, having a shank made in two sections sliding the one within the other, the outer section having a head with internal threads and the inner section having two external threads capable each of engaging with the threads of the head to hold the inner section in either one of two positions.

No. 66,890. Churn Power. *(Moteur de baratte.)*

John T. Coleman, Miccosukee, and Louis E. Voyles, Puntagora, Florida, U.S.A., 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

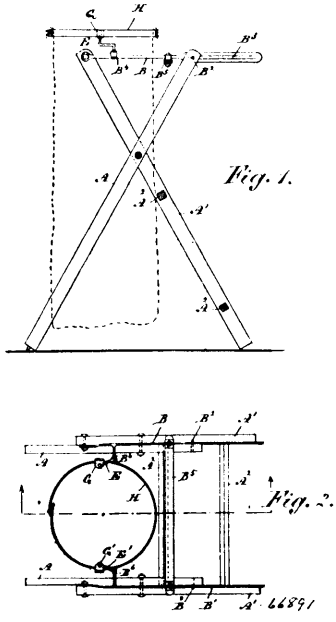
Claim.—1st. In a device of the class described, the combination of a supporting frame, gearing arranged within the frame, and a casing conforming to the configuration of the latter and composed of a body portion hinged at its bottom and adapted to swing outwardly from the frame, a hinged front mounted on the body portion

of the casing and arranged to engage the front of the frame to hold the casing in position, and means for detachably securing the front



of the body portion of the casing, whereby the latter is removably held on the frame, substantially as described. 2nd. In a device of the class described, the combination of an L-shaped supporting frame having a horizontal arm at the top, gearing mounted on the frame, an L-shaped casing covering the supporting frame and hinged at its bottom to the back of the same, said casing being provided with a front hinged at the top to the body portion of the said casing, and a locking device securing the lower portion of the front to the body portion of the casing, whereby the said casing is detachably held on the supporting frame, substantially as described. 3rd. In a device of the class described, the combination of an L-shaped supporting frame having a horizontal arm at the top, sprocket gearing arranged in the vertical and horizontal portions of the frame, a barrel spring mounted on the frame at the lower portion thereof and connected with the said sprocket gearing, the curved flange 10 arranged above the spring, forming a guard for the same and connected with the outer end thereof, and a casing arranged over the frame, substantially as described. 4th. In a device of the class described, the combination of a supporting frame, a shaft 18 journalled thereon, a vertical fan shaft depending from the frame and connected by gearing with the shaft 18, a dasher rod, a crank disc or wheel mounted on the shaft 18, a pitman connecting the dasher rod with the crank disc or wheel, a brake wheel mounted on the shaft between the ends thereof, a resilient bar or shoe engaging the brake wheel and having one end free, and a cam arranged within the frame and engaging the resilient bar or shoe, and having an exteriorly arranged operating handle, substantially as described.

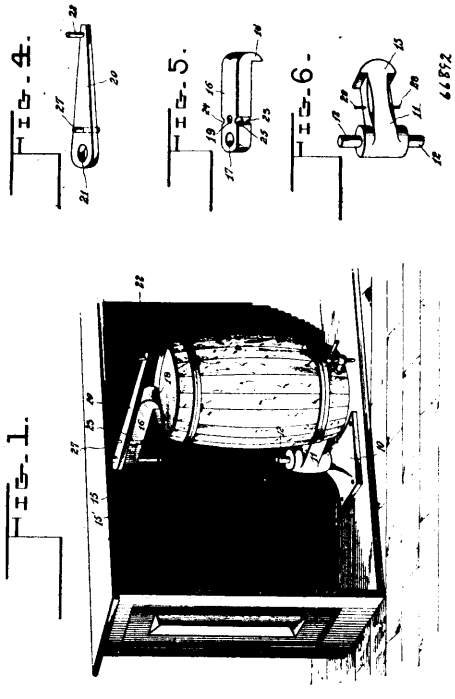
No. 66,891. Bag Holder. *(Porte-sac.)*



Edward Noble, Oso Station, Ontario, Canada, 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. A bag holder, comprising a supporting frame consisting of two pairs of crossed legs pivoted at their intersections, and adjustable in height to the length of a bag, a supporting rod connected to each pair of legs near the top to permit said legs to close together, and a compressible spring bag retaining ring connected to said rods by crank arms pivoted thereto, said arms yielding by a swinging motion to permit the circumference of said ring to be reduced by external manual pressure and by resiliency expand the mouth of the bag, as set forth. 2nd. In a bag holder, the combination with a supporting frame consisting of two pairs of crossed legs, of horizontal supporting rods connecting the upper part of each pair of legs, a crank arm, arms pivotally connected on said rods, and a spring bag retaining ring pivotally connected to said arms diametrically, said arms swinging to permit the circumference of the ring to be reduced diametrically by external pressure, as set forth. 3rd. In a bag holder, the combination of a supporting frame comprising two pairs of crossed legs pivoted at their intersections to allow of elevation and depression to suit the length of a bag, supporting rods bearing on said each pair of said legs above the intersections and a spring bag retaining ring connected to said rods by crank arms hinged thereto to swing when the circumference of the ring is reduced by external pressure, as set forth. 4th. In a bag holder, the combination with a supporting stand or frame, of parallel supporting rods and a spring bag retaining ring connected to said rods by crank arms pivoted thereto, as and for the purpose set forth.

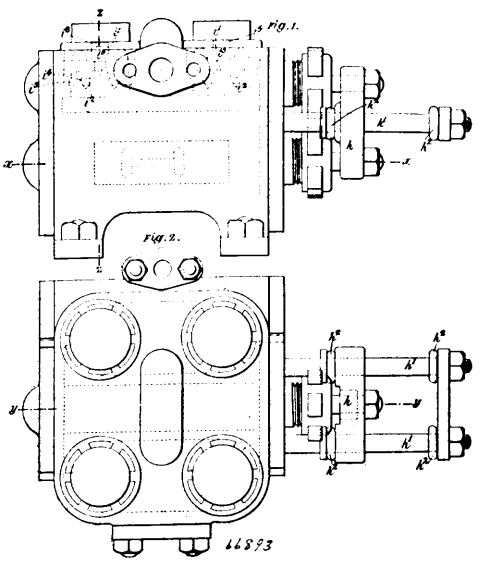
No. 66,892. Barrel Support. *(Support de baril.)*



Amedée Proulx, St. Aimé, Quebec, Canada, 3rd April, 1900; 6 years. (Filed 21st March, 1900.)

Claim.—1st. In a barrel support, the combination with movable arms adapted to receive and carry a cask, of a handle bar shiftably related to one of said arms, and means for making the handle bar fast with said arm, as and for the purpose set forth. 2nd. In a barrel support, the combination with movable arms adapted to receive and carry a barrel, of a handle bar turning on the same axis as one of the arms and movable independently thereof, and a locking device detachably connecting the handle bar to said arm, as and for the purposes set forth. 3rd. In a barrel support, the combination of a foot block, a lower arm detachably pivoted to said foot block and reversible thereon, an upper arm, and a handle bar for operating the said arm, as and for the purposes set forth. 4th. In a barrel support, the combination with a lower arm, of a fixed spindle, an upper arm loosely fitted on the spindle to turn and slide thereon, and a handle bar for operating the upper arm, as and for the purposes set forth. 5th. In a barrel support the combination with a lower arm, of a fixed spindle, an upper arm having a series of openings and loosely fitted on the spindle, a handle bar also fitted loosely on the spindle, and a locking pin carried by the handle bar and arranged to engage with either of the openings of the upper arm, substantially as described.

No. 66,893. Pump Valve. (*Soupape de pompe.*)



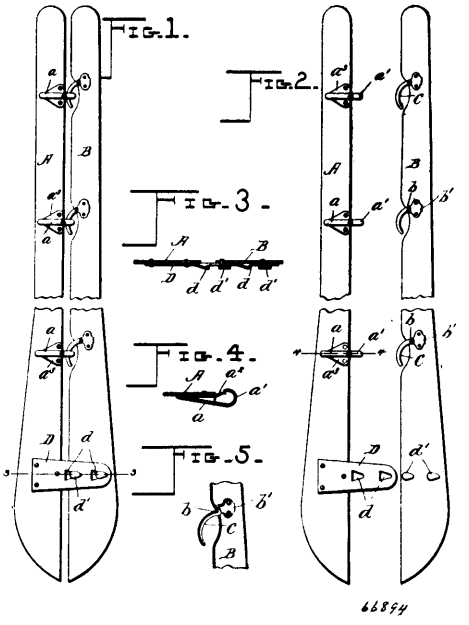
James McCulloch, Portreath, Cornwall, England, 3rd April, 1900. 6 years. (Filed 21st March, 1900.)

Claim.—1st. In a pump, the combination with a piston valve having a space at each end for motive fluid, of a working piston having two annular recesses, or ports on opposite sides of a central disc, or junk, a central exhaust port having an opening into the working cylinder, and subsidiary steam passages opening into the cylinder on opposite sides of the central exhaust passage and crossing each other to the spaces at the ends of the piston valve, substantially as described. 2nd. In a pump, the combination with a piston valve having spaces for motive fluid in its ends, of a working piston having two annular recesses, or ports, on opposite sides of a central disc, or junk, a central exhaust port having an opening into the working cylinder, subsidiary steam passages opening into said cylinder on opposite sides of the exhaust opening and crossing each other to the end spaces of the piston valve, and cushioning passages for live steam from one end space to the other, substantially as described. 3rd. In a pump, the combination of a valve, a working cylinder, spaces at the ends of said valve, passages leading from said spaces to said cylinder, means for causing the working piston to control said passages, and cushioning passages, extending directly between the said spaces so as to cushion the valve to and fro movements. 4th. In a pump, the combination of a piston valve, means for operating the same by motive fluid from the cylinder, spaces at the ends of the valve to receive said motive fluid, cushioning passages, extending between said spaces, and buffers for arresting the movements of the valves, substantially as described. 5th. In a pump, the combination with a working cylinder and piston, of a piston valve for said cylinder, live steam passages from said cylinder to end spaces in the valve and cushioning passages directly connecting said spaces, substantially as described. 6th. In a pump, the combination with a working piston and cylinder, the latter having a central opening communicating with an exhaust passage, of steam passages from the cylinder to end spaces of the piston valve, and cushioning passages connecting said spaces, substantially as described. 7th. In a pump, the combination of a working cylinder, two pump cylinders parallel therewith and on each side thereof, a cross head connecting the pistons of said pump and working cylinders, a distributing valve parallel with said cylinders, and means for controlling the distribution of working fluid from the working cylinder to the ends of said valve so as to reverse the latter, substantially as described.

No. 66,894. Corset Clasp. (*Agrafe de corset.*)

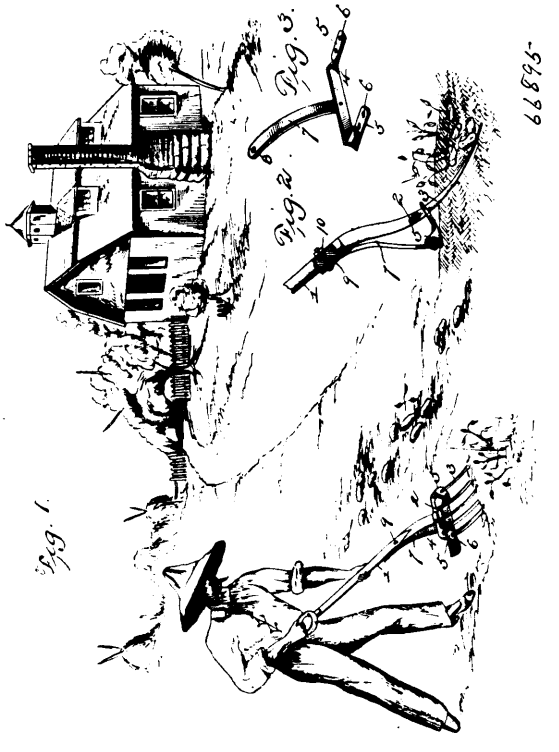
Joseph Gaudiose Dallaire, St. Laurent D'Orleans, Quebec, Canada, 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. A corset fastener, comprising two corset clasps, one having the eye members and the other the hook members adapted to engage therewith, a plate secured to one of said clasps and having tapered openings, and a plurality of lugs secured to the other of said clasps and adapted to detachably engage said openings, substantially as described. 2nd. A corset fastener, comprising two clasps, eye members secured upon one of said clasps and having a hook portion and a spring snap adjacent to said hook portion, hook members secured upon the other of said clasps and adapted to engage said eye members, a plate secured to one of said clasps and having tapered openings, and lugs having enlarged heads adapted



to engage and be retained in the narrowed portion of said openings, substantially as described.

No. 66,895. Potato Fork. (*Fourche pour patates.*)

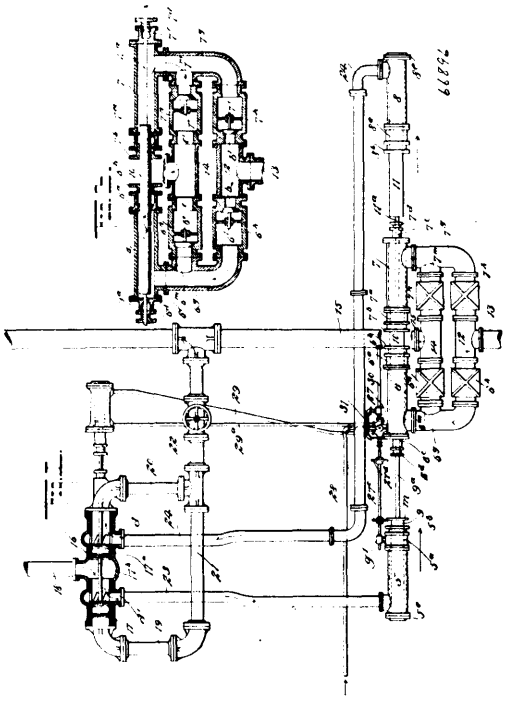


Robert M. Michael, Lapeer, Michigan, U.S.A., 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. The combination with a potato fork, comprising a handle, and a fork proper, of a fulcrum attachment having a transversely adjustable connection with the fork. 2nd. The combination with a potato fork, of a fulcrum attachment, which is adjustable toward and away from the fork. 3rd. The combination with a potato fork, comprising a handle, and a fork proper, of a fulcrum attachment having perforations receiving respective prongs of the fork, and also having a connection with the handle of the imple

ment. 4th. The combination with a potato fork, comprising a handle, and a fork proper, of a substantially U-shaped fulcrum attachment having its opposite sides provided with perforations receiving the respective prongs of the fork, and a rearwardly extending shank detachably connected to the under or rear side of the handle of the implement. 5th. A fulcrum attachment for a potato fork, comprising a substantially U-shaped body, the opposite sides of which are disposed in a substantially horizontal plane, and are provided with corresponding perforations, and a bowed shank extending rearwardly from an intermediate point of the transverse portion of the body, and provided at its rear end with a perforation, and a fastening fitting in said perforation. 6th. The combination with a potato fork having tines, of a fulcrum attachment having a plurality of corresponding openings or perforations adjustably receiving respective tines of the fork.

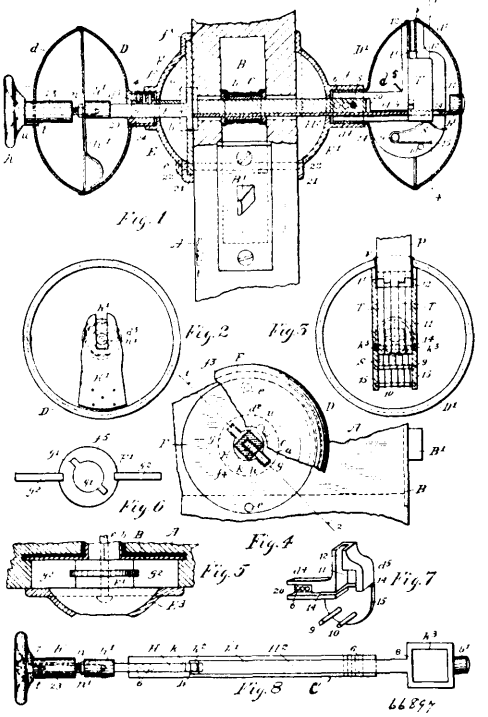
No. 66,896. Hydraulic Pump. *(Pompe hydraulique.)*



Cornelius B. Lakeman, Grass Valley, Nevada County, California, U.S.A., 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. A hydraulic pump, composed of two cylinders axially aligned, a single plunger slidable alternately into each cylinder, a plurality of valves for the pump, coacting with the reciprocal movement of the plunger to raise and force liquid, and a motor device adapted to reciprocate the plunger. 2nd. A hydraulic pump, comprising two cylinders axially aligned, an elongated plunger slidable alternately into each cylinder, a double set of valves communicating with these cylinders and adapted for lifting and forcing liquid in accord with the reciprocation of the elongated plunger, and a pressure device at each outer end of the cylinders adapted to reciprocate the plunger therein. 3rd. A hydraulic pump, embodying four cylinders axially aligned, a plunger in each outermost cylinder, an elongated plunger slidable alternately into each intermediate cylinder, a plurality of valves co-acting with the reciprocal movement of the elongated plunger to raise and force liquid, a liquid conduit pipe attached to the outer end of each outermost cylinder, and means to supply liquid under pressure to said conduit pipes for the reciprocation of the three plungers. 4th. A hydraulic pump, embodying four cylinders axially aligned, a plunger in each outermost cylinder, an elongated plunger slidable alternately into each intermediate cylinder, a rod extended between each outer plunger and an adjacent end of the elongated plunger, having a socketed loose connection therewith, a plurality of valves co-acting with the reciprocal movement of the elongated plunger to raise and force liquid, a liquid conduit pipe attached to the outer end of each outermost cylinder, and a liquid supply device adapted to alternately conduct liquid under pressure through the conduit pipes to the outermost cylinders for the reciprocation of the three plungers. 5th. In a hydraulic pump, the combination of four aligned cylinders, a plunger in each outer cylinder, a longer plunger slidable in the two intermediate cylinders, valve mechanism operated by a reciprocation of the plungers, and means to alternately conduct liquid under pressure into the ends of the outer cylinders. 6th. In a hydraulic pump, the combination of four aligned cylinders, a plunger in each outer cylinder, a longer plunger slidable in the two intermediate cylinders, plunger rods having connection between the ends of the outer plungers and the intermediate plunger, valve mechanism operated by the reciprocation of the plungers, a balanced valve device for supplying water under pressure to the two outer cylinders alternately, and a suction pipe and a discharge pipe, both connected with the valve mechanism. 7th. In a hydraulic pump, the combination of four aligned cylinders, a plunger in each outer cylinder, a longer plunger slidable in the two intermediate cylinders, rods connecting the three plungers in sequence, valve mechanism operated by the reciprocation of the plungers, a balanced valve device connected by conduit pipes to the ends of the outer cylinders for supplying liquid under pressure alternately thereto, a supplementary liquid motor device which co-acts with the balanced valve device for controlling the action thereof, and a suction pipe and a discharge pipe, both connected with the valve mechanism.

No. 66,897. Lock. *(Serrure.)*

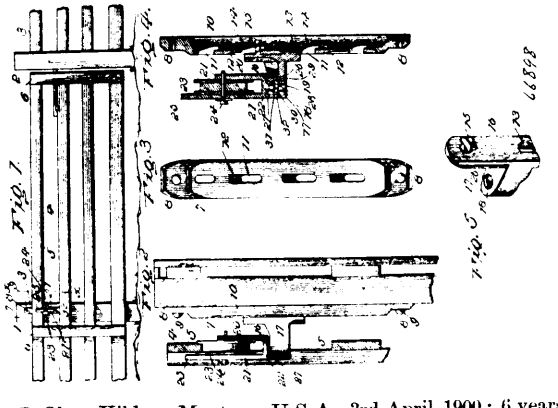


Peter V. Cornils, Seattle, Washington, U.S.A., 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim. 1st. In locks providing mortise lock case, latch mechanism, a knob spindle normally rotatable to operate same, locking means engaged with the knob spindle and movable thereon exterior the lock case, means at one face of the door stile adapted to engage said locking means to lock the spindle from rotation, and other means, operative from the ends of said spindle, whereby said locking means may be adjusted to release and lock the spindle, substantially as shown and described. 2nd. In locks providing a mortise lock case, latch mechanism, a knob spindle normally rotatable to operate same, a lock plate at one face of the door stile, locking means engaged with the knob spindle and movable thereon to engage with said lock plate to lock the spindle from rotation and means, operative from either end of said spindle, to adjust said locking means to release and lock the spindle, substantially as shown and described. 3rd. In locks providing a mortise lock case, latch mechanism, a knob spindle normally rotatable to operate same, a lock plate at one face of the door stile, a detent movably engaged with the knob spindle exterior the lock case and spring pressed to engage said lock plate to lock the spindle from rotation and means, operative from either end of said spindle to adjust said detent to release and lock said spindle, substantially as shown and described. 4th. In locks providing a mortise case, latch mechanism, a knob spindle normally rotatable to operate same, a lock plate exterior the lock case, a detent engaged with the spindle and adjustable thereon, means pressing said detent to engage the lock plate to lock the spindle and means, engaging said detent and independently operating from each end of the spindle, whereby the detent may be adjusted to lock and unlock said spindle, substantially as shown and described. 5th. In locks, latch mechanism, a knob spindle normally rotatable to operate same, a lock plate, a movable detent engaged with the knob spindle and spring pressed to engage with the lock plate from one side thereof, to lock the

spindle and to disengage from said plate at the opposite side, to unlock the spindle, means, operative from one end of the knob spindle, to withdraw and secure the detent from engagement with the plate and adjustable to permit spring action thereof and other means opposing spring action of the detent when engaging the plate, and operative from the opposite end of the knob spindle to permit full spring action of and to move said detent to again engage the plate, substantially as shown and set forth. 6th. In locks, latch mechanism, a knob spindle normally rotatable to operate same and providing a hollow knob, a lock plate, a locking bolt slidably engaged with the knob spindle and providing a detent, a spring within said knob pressing said bolt to engage the detent with said lock plate to lock the knob spindle, and means engaging the locking bolt and operative from the exterior of said knob whereby said bolt may be adjusted to unlock the spindle, substantially as shown and described. 7th. In locks, latch mechanism, a spindle normally rotatable to operate same and having a hollow knob, a lock plate, a locking bolt slidably engaged with the spindle and providing a detent, a spring, pressing the detent to engage the lock plate to lock the spindle, a knob engaging said bolt and projecting from the spindle knob and providing means whereby the detent may be adjusted to unlock the spindle, substantially as shown and described. 8th. In locks, latch mechanism, a rectangular spindle, normally rotatable to operate same, and having a hollow knob and a longitudinal slot, a lock plate, a locking bolt slidably engaged in said slot and providing a detent, a spring within said knob pressing the locking bolt to engage said detent with the lock plate, a knob attached to the locking bolt and projecting from the spindle knob and providing means whereby said detent may be adjusted in said slot and secured in adjusted positions to lock and unlock the spindle, substantially as shown and described. 9th. In locks, latch mechanism, a knob spindle normally rotatable to operate same, a lock plate secured at one face of the door stile, a movable detent engaging said spindle and plate and spring pressed to disengage from the plate, and means operative from one end of the spindle, to oppose spring action of said detent when engaging the plate, and adjustable to permit of said action and to force the detent to move against said pressure to engage the plate, substantially as shown and described. 10th. In locks providing a mortise lock case, latch mechanism, a knob spindle normally rotatable to operate same, a lock plate exterior the lock case, a detent movably engaged with the knob spindle and normally engaging with the lock plate to lock the spindle, and spring pressed to disengage from said plate, and adjustable means opposing spring section of the detent and operative from one end of the spindle to permit said action and force said detent to engage the plate, substantially as shown and described. 11th. In locks, latch mechanism, a spindle normally ratatable to operate same and having hollow knobs, a lock plate, a locking bolt slidably engaged with the spindle and providing a detent to normally engage said plate to lock the spindle, means within one spindle knob pressing said locking bolt to disengage the detent from said plate, and adjustable means engaging said bolt to oppose said pressure, and operative from the opposite knob to adjust said detent to unlock and lock said spindle, substantially as shown and described. 12th. In locks, latch mechanism, a rectangular spindle normally rotatable to operate same and having a hollow knob, and a longitudinal slot, a lock plate, a detent engaged with said spindle and normally engaging the lock plate to lock the spindle and spring pressed to disengage from the plate, an adjustable push bar in said slot opposing spring action of the detent and extending through and projecting from said spindle knob, and tumblers within said knob engaging the push bar to secure said detent in its engaging position and operative, by means of key to release same for spring action, substantially as shown and described.

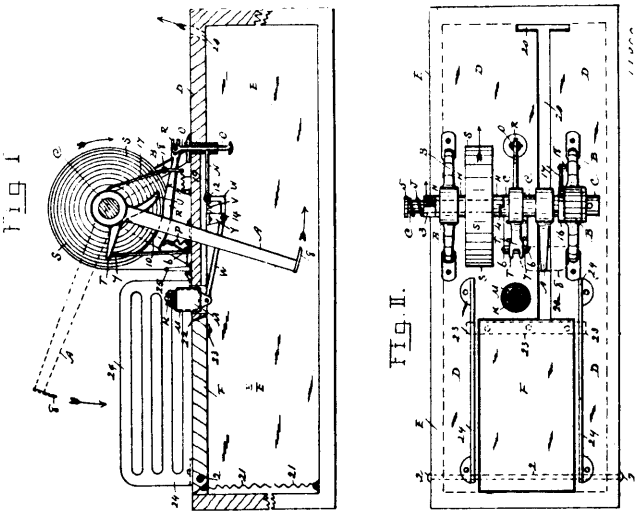
No. 66,898. Gate Hinge. *(Penture de barrière.)*



John J. Ober, Kibbey, Montana, U.S.A., 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. A gate hinge comprising a fixed vertical bar adapted for attachment to gate post, a bracket adjustable on said bar, and a roller support consisting of a yoke swivelled to the bracket and having a roller journalled between its arms, said arms being of unequal length and the longer arm forming a guard extending some distance above the roller to hold a gate resting thereon against outward displacement, substantially as described. 2nd. A gate hinge comprising a fixed vertical bar adapted for attachment to a gate post and provided with a series of locking slots, an adjustable bracket having a locking projection to engage said slots and carrying a bearing, and a roller support consisting of a yoke swivelled to the bracket and having a roller journalled between its arms, said arms being of unequal length and the longer arm forming a guard extending some distance above the roller to hold the gate resting thereon against outward displacement, substantially as described. 3rd. A gate hinge comprising a fixed bar, a bracket adjustably connected with the bar and having a bearing formed with an opening having at or below its centre a groove or raceway in the wall thereof and a filling bore communicating with said groove, a roller support consisting of a yoke having a roller journalled therein and provided with a pendent shank fitting in said opening and also having a groove or raceway, anti-friction balls in said grooves and between the underside of the yoke and upper surface of the bearing, and a plug closing the filling bore, substantially as described.

No. 66,899. Animal Trap. *(Piège.)*



Hugh Toland and Richard A. Dunham, both of Jerseyville, Ontario, Canada, 3rd April, 1900; 6 years. (Filed 7th July, 1899.)

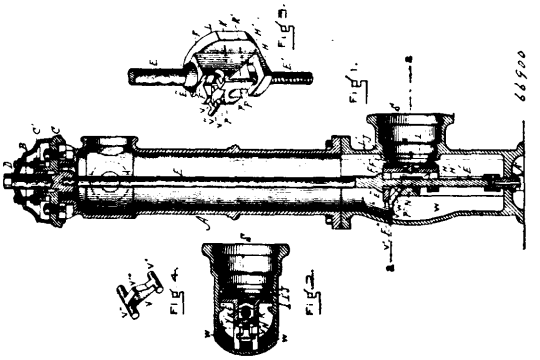
Claim.—1st. An animal trap of the character described comprising a transverse shaft mounted on bearings above the top, or floor, of the trap, a striking arm and levers on said shaft, a coil spring secured to a coupling sleeve on the reduced part of the shaft and capable of revolving said arm at the down pressure of the bait to strike the animal and force it through a trap door, and mechanism suitably arranged and connected to retain said striking arm in lock position, substantially as set forth. 2nd. An animal trap of the character described comprising a striking arm mounted on a transverse shaft, above the floor of the trap, the inner end of a coil spring secured to a sleeve on a reduced part of said shaft, and the outer end of said spring secured to the floor, said sleeve capable of revolving said shaft, hence a striking arm secured to said shaft, and over a trap door, and connected mechanism to allow one revolution only of said striking arm, by means of animal contact with the bait, as described.

No. 66,900. Valve. *(Soupape.)*

George Sutherland Walker, Boston, Massachusetts, U.S.A., 3rd April, 1900; 6 years. (Filed 8th January, 1900.)

Claim.—1st. In a valve of the character described, a valve stem, a wedge nut adapted to be raised and lowered on said stem, a valve provided with a suitable gate and adapted to be operated on said stem by engagement with the inclined surface of the wedge nut, a guide placed within the pipe behind the wedge nut, and a lever pivotally secured at one end to the wedge nut and adapted to extend outward therefrom between said guide and valve, substantially as described. 2nd. In a valve of the character described, a valve stem, a wedge nut adapted to be raised and lowered on said stem, a valve provided with a suitable gate and adapted to be operated on said stem by engagement with the inclined surface of the wedge nut, a guide placed within the pipe behind the wedge nut, and a lever pivotally secured at one end to the wedge nut and adapted to extend outward therefrom between said guide and valve, the openings in said valve through which the stem passes being sufficiently large to allow of a horizontal movement of the valve toward and from its seat, substantially as set forth. 3rd. In a valve of the character described, a screw threaded valve stem, a wedge nut on and engaged thereby, a gate valve on said valve stem adapted to be moved both

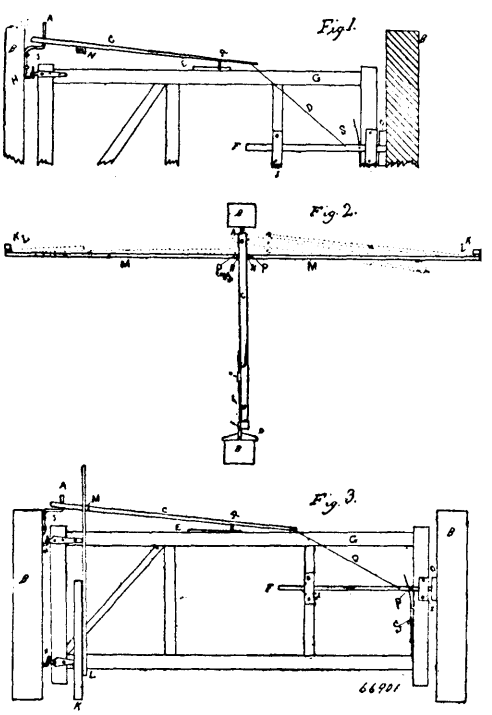
horizontally and vertically with relation thereto and provided with the lip F^{11} extending substantially horizontally from said valve,



a guide located within the pipe and provided with a substantially vertical edge next and behind the wedge nut, and a lever pivotally secured to the wedge nut and extending therefrom between the guide and said lip, whereby as the nut moves vertically on the stem the valve is moved with relation to the nut by the action of the lever upon the lip as it is swung by being drawn over the edge of the guide, substantially as described. 4th. In a valve of the character described, the stem E, E^1, the wedge nut N provided with the inclined surface P^1, the valve provided with a suitable gate and formed with the elongated openings F^1 H^1 through which the stem extends and with the inclined surface K^1, said valve being provided with the lip F^{11}, the parallel guides W set between the wedge nut and the opposite surface of the pipe, and the cam lever V pivotally secured at one end to the wedge nut and with its outer end formed to be engaged by the upper and inner edges of said guides, the inner edges of said guides being set sufficiently apart to allow the lip F^{11} to travel vertically between them, substantially as described. 5th. In a valve of the character described, a screw threaded valve stem, the wedge nut on and engaged thereby and comprising the central portion N having its upper edge formed with the notch P^{11} and the sides P formed with the inclined edges P^1, the valves K provided with the gate L, elongated openings F^1, H^1, inclined edges K^{11} and overhanging lip F^{11}, the parallel guides W secured within the pipe, and the cam lever V pivotally secured to the wedge nut and extending out therefrom through said notch, said cam lever being formed on its upper surface with the protuberance V^{111} and with its outer end formed with the wings V^{11}, substantially as set forth.

No. 66,901. Gate Operating Mechanism.

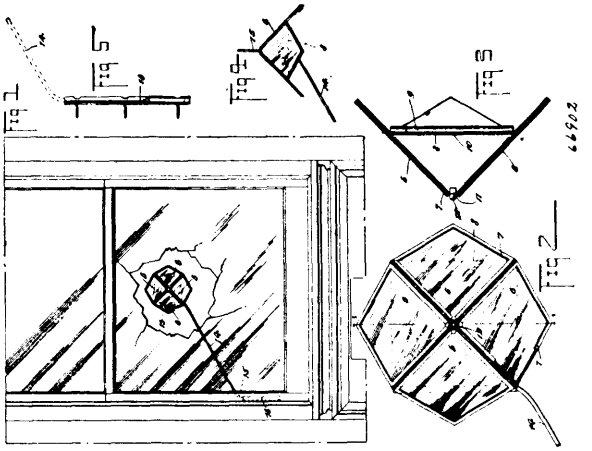
(*Mécanisme pour fermer et ouvrir les barrières.*)



James Nagle, Blanshard, Ontario, Canada, 3rd April, 1900; 6 years. (Filed 23rd December, 1899.)

Claim.—The combination in a machine for opening and closing gates, of a crank A, and the draw bar, or pole C, which when pushed by the bar M, unlatches and works the gate, all substantially as set forth.

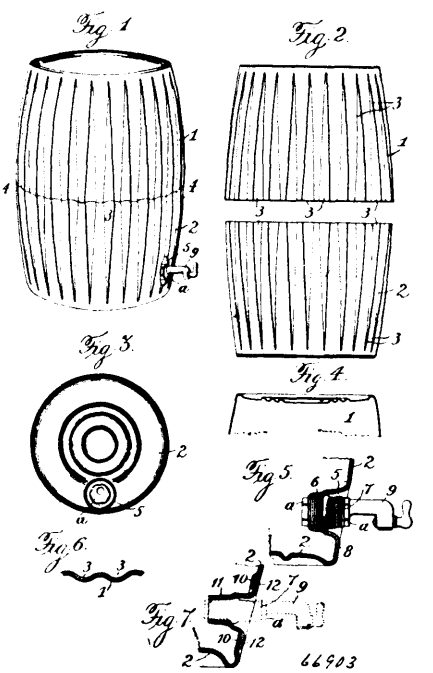
No. 66,902. Reflector. (*Réflecteur.*)



Oscar Hillstrom, New York City, County and State of New York, U.S.A., 3rd April, 1900; 6 years. (Filed 19th February, 1900.)

Claim.—1st. A reflector, formed of a number of mirrors arranged in pyramidal form, and having an opening in the apex, a web extending across the base of the reflector, a tubular socket formed on the web, the web having an opening in the centre thereof, in alignment with the opening in the apex of the reflector, and a stopper removably fitted in the opening in the apex of the reflector. 2nd. A reflector, composed of a number of mirrors fastened together in the form of a tapering figure, a web extending between the mirrors at essentially the base of such figure, and means for supporting the reflector, such means passing through the web and having connection with the reflector, at the apex thereof. 3rd. A reflector, composed of a number of mirrors fastened together in the form of a tapering figure, a web extending between the mirrors at essentially the base of such figure, a socket attached to the web, and means for supporting the reflector, such means being removably and loosely fitted in the socket to permit the adjustment of the reflector.

No. 66,903. Liquid Barrel. (*Baril pour liquides.*)

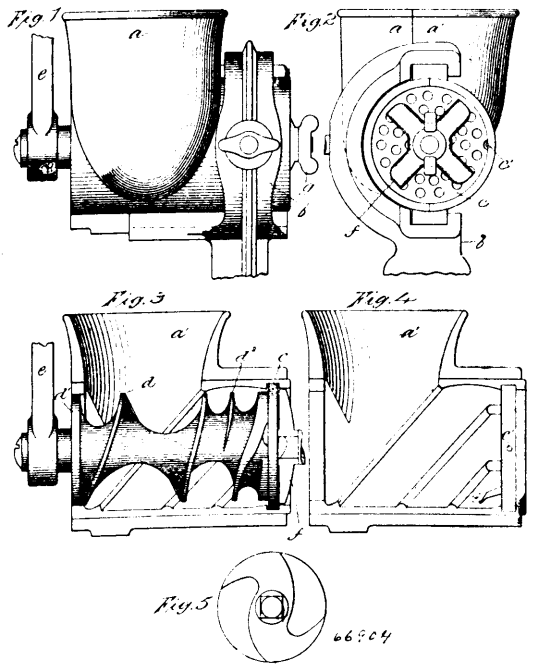


Charles Robert Harris, Williamsport, Pennsylvania, U.S.A., 3rd April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. A barrel made in telescoping sections of sheet steel welded together, said sections having longitudinal corrugations

extending from points inwardly removed from the heads of the barrel to the inner telescoping extremities of said sections, the corrugations of one section aligning and communicating with the corrugations of the adjacent telescoping section. 2nd. A barrel made in two sections of drawn sheet steel, said sections telescoping at their meeting edges and electrically welded together, each section having longitudinal communicating corrugations, substantially as set forth. 3rd. A barrel made in two sections of sheet metal, said sections welded together at their meeting edges, and having longitudinal communicating corrugations, the corrugations in each section being tapering with their wider ends at the meeting ends of the sections, and their pointed ends terminating near the heads of the barrel. 4th. A sheet metal barrel having a hole therein, an annular flange projecting into the barrel from the wall of said hole, said annular flange being contracted in diameter at its inner end, and said contracted portion of the flange being screw threaded, and a combined spigot and bung adapted to screw into the contracted portion of the annular flange, the wider portion of said annular flange constituting a housing for said bung, substantially as set forth.

No. 66,904. Meat and Vegetable Cutter.
(Coupe viande et végétanx.)



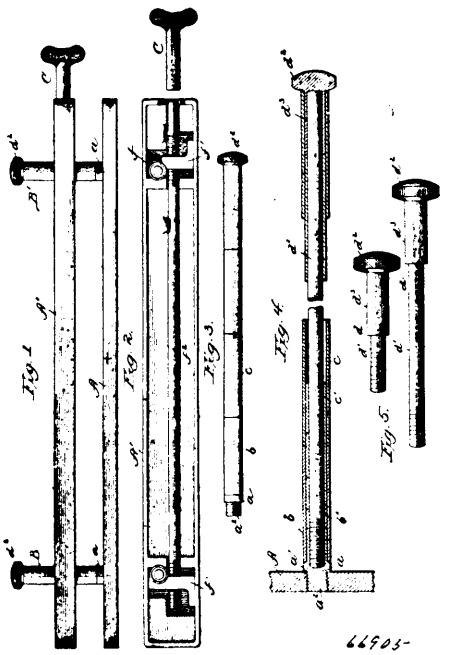
The Peck, Stowe and Wilcox Company, Southington, Connecticut assignee of R. C. Ellrich, Southington, Connecticut, U.S.A. 4th April, 1900; 6 years. (Filed 6th July, 1898.)

Claim.—1st. In combination, the cutter case, the perforated flat plate inserted diaphragmwise in said case, and the rotary screw forcer having an additional screw leaf at the delivery end, with both leaves extended to contact with said perforated plate and terminating in recesses in the end of the screw forcer adapted to draw the material under operation toward the centre of said plate, all substantially as and for the purposes set forth. 2nd. In combination, the cutter case, the perforated flat plate inserted diaphragmwise in said case, the rotary cutter on the exterior face of said plate, and the rotary screw forcer having an additional screw leaf at the delivery end, with both leaves extended to contact with said perforated flat plate and terminating in recesses in the end of the screw forcer adapted to draw the material under operation toward the centre of said plate, all substantially as and for the purposes set forth

No. 66,905. Transfer Ledger. *(Transfert de grand livre.)*

The Jones Perpetual Ledger Company, assignee of Harvey Peirce Jones and Harry Sloper Jones, all of Chicago, Illinois, U.S.A., 4th April, 1900; 6 years. (Filed 5th March, 1900.)

Claim.—1st. In a binder of the nature described, the combination with a base and a movable clamping bar co-operating therewith provided with a perforation, of a post received by said perforation, comprising sleeve sections jointed together and to the base, and a bolt passing through said sleeve sections and serving to secure them together and bind them rigidly to the base, substantially as and for the purpose set forth. 2nd. In a binder, the combination with a lower bar A, and an upper bar A^1 provided with perforations, of posts, each comprising a sleeve section jointed to said lower bar and provided with a socket, a sleeve section provided at its lower end with an extension fitting into said socket and provided at its



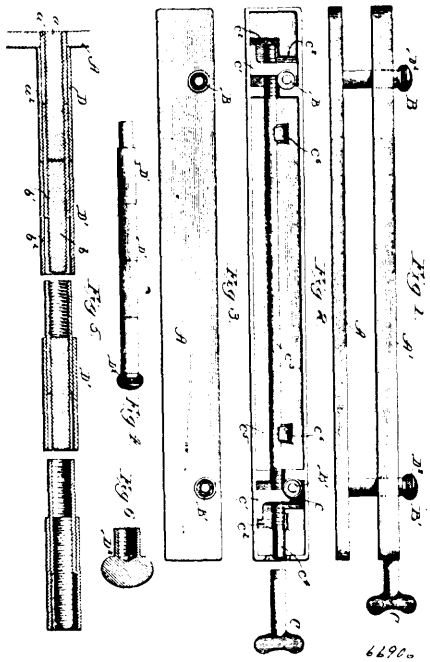
upper end with a socket, and a screw bolt for securing said sleeve sections firmly together and binding them to said lever bar, substantially as and for the purpose set forth. 3rd. In a binder, the combination with a lower bar A, and an upper bar A^1 provided with perforations, of posts, each comprising a sleeve section jointed to said lower bar and provided with a socket, a sleeve section provided at its lower end with an extension fitting into said socket and provided at its upper end with a socket, and a screw bolt for securing said sleeve sections firmly together, and binding them to said lower bar, said screw bolt being provided at its upper end with an enlargement fitting into the adjacent socket of a sleeve section, substantially as and for the purpose set forth. 4th. In a binder, the combination of a bar provided with threaded bolt sockets, sleeve sections jointed to said bar at said sockets, sleeve sections jointed together and to said first named sleeve sections, screw bolts passing through said sleeve sections and entering said threaded sockets, and a bar movably secured to the posts thus formed, substantially as and for the purpose set forth. 5th. In a binder, the combination of a bar provided with internally threaded projecting stubs, sleeve sections fitting over said stubs and provided with sockets, sleeve sections fitting into said sockets of said first named sleeve sections and themselves provided with sockets, and screw bolts passing through said sleeve sections and entering said stubs and provided at their upper ends with enlargements fitting the sockets of the upper tube sections, substantially as and for the purpose set forth. 6th. The combination with a bar A, of lower sleeve sections connected therewith provided with sockets, tube sections formed of outer and inner tubular members, said inner members projecting beneath the outer members to enter said sockets, and screw bolts for securing said last named sleeve sections to said lower sleeve sections, substantially as and for the purpose set forth.

No. 66,906. Temporary Binder. *(Relieure temporaire.)*

The Jones Perpetual Ledger Company, assignee of Harvey Peirce Jones, all of Chicago, Illinois, U.S.A., 4th April, 1900; 6 years (Filed 5th March, 1900.)

Claim.—1st. A binder frame comprising superimposed clamping bars for clamping leaves between them, posts carried by one of the bars, fixed guideways on the other or movable bar and located near one side thereof, the said posts extending through the movable bar and engaging the fixed guideways, a right and left hand screw rod journalled in the movable bar and located near the opposite side thereof, and clamping nuts screwing on said screw rod and located at the outer sides of the posts, the said nuts being arranged to clamp the posts opposite said fixed guideways, substantially as shown and described. 2nd. A binder frame comprising superimposed clamping bars for clamping leaves between them, posts carried by one of the bars and extending loosely through the movable bar, fixed guideways on the movable bar arranged to engage the inner sides of the posts, a right and left hand screw rod journalled in the movable bar, clamping nuts screwing on said screw rod and located at the outer sides of the posts, and arranged to simultaneously move in and out of clamping engagement with said posts, bearings for said nuts to slide in, said bearings being arranged on the ends of said movable clamp

ing bar, and means located at one end of the movable bar for turning said screw rod, as set forth. 3rd. In a binder, the combination with



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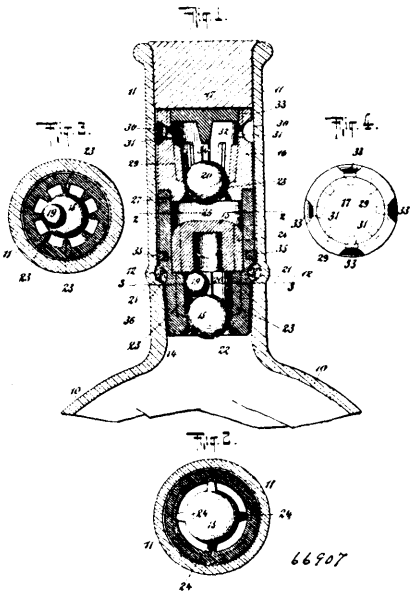
the clamping sections, of a post or posts secured to one of said sections, each post being adapted to pass through an opening in the other or movable section, a fixed guideway for each post, on the movable section and located near one side thereof, a right and left hand screw rod journalled in the movable section and located near the opposite side thereof, and a clamping nut for each post arranged on said screw rod and extending in line with the fixed guideway and arranged to clamp the post opposite the fixed guideway, substantially as described. 4th. A binder frame, provided with posts for receiving the leaves, each post being made in sections with one end of a section formed with a reduced portion having a central threaded bore, the other end of the section being hollow, and a screw rod central in the hollow end to screw into the threaded reduced portion of the adjacent section, and which reduced portion fits into the hollow end, substantially as shown and described. 5th. A binder frame, provided with clamping bars, posts carried by one of the bars and extending loosely through the other or movable bar, fixed guideways on the movable bar arranged to engage the posts at one side thereof, bearings arranged on the movable clamping bar, nuts mounted to slide in said bearings and adapted to engage the sides of the posts opposite the fixed guideways, a screw rod journalled in said movable clamping bar, and having right and left hand screw threaded portions on which screw the said nuts, to simultaneously move the nuts in or out of clamping engagement with said posts, and means located at one end of said movable clamping bar for turning the screw rod, substantially as set forth. 6th. A binder frame, provided with posts for receiving the leaves, each post being made in sections, one end of one section being hollow and having a screw rod central in the hollow end, and one end of the other section being formed with a reduced portion having a central threaded bore, the said reduced portion being adapted to fit into the hollow end of the first mentioned section and the central bore of said reduced portion receiving the said central screw rod, substantially as described. 7th. A binder frame, comprising superimposed clamping bars for clamping leaves between them, posts carried by one of the bars and made in sections, the engaging ends of the sections of the posts being formed one with a reduced portion having a central threaded bore, the other being hollow and having a screw rod central in the hollow end, a button removably held on the upper end of the uppermost section of said posts, the said posts extending through the other or movable clamping bar, and means for locking the movable clamping bar in position on the posts, substantially as described. 8th. In a binder frame, a sectional post, the engaging end of one section of the post being formed with a reduced portion having a central bore and the engaging end of the other section being hollow and having a central rod, for the purpose set forth.

No. 66,907. Non-refittable Bottle.

(Bouteille non-réemplissable.)

Charles Bates Overbaugh and Percy Sandford, both of Plainfield, New Jersey, U.S.A., 4th April, 1900 ; 6 years. (Filed 21st March, 1900.)

Claim.—1st. The bottle, combined with the plug for preventing refilling, said plug comprising the parts 14, 15 and 16, and balls 18, 19 and 20, the part 14 having the valve seat 22 for the ball 18, the part 15 being a cap adapted to receive the ball 19 and forming at its



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lower edges the shoulder 26 for restraining the ball 19, and the part 16 having the seat 28 for the ball 20, and outlet passages above said ball, substantially as set forth. 2nd. The bottle and the plug for preventing refilling, said plug being cylindrical in form and adapted to the inner walls of the neck of said bottle and having passages for the outflow of the liquid through the same, combined with the ball 18 adapted to the seat 22 at the lower end of said plug, the float ball valve 20 adapted to the seat 28 formed within the upper portion of said plug, and the part 15 within said plug and intermediate the valve seats 22, 28, and retaining the ball 18 in the lower portion of said plug, substantially as set forth. 3rd. The bottle, combined with the plug for preventing refilling, said plug comprising the cylindrical part 14 having the valve seat 22 and ribs 23, the intermediate part 15 enclosed within said part 14 and at its lower edges projecting inward beyond said ribs 23 to form the shoulder 26, the part 16 secured upon the upper edges of said part 14, and having the valve seat 28, ribs 29, transverse apertures 31, annular groove 30 and vertical grooves 33, the ball 18 adapted to said seat 22, the ball 19 engaging said ball 18 and adapted to rest between said ball 18 and said shoulder 26, and the ball 20 adapted to said valve seat 28, substantially as set forth. 4th. The bottle and the plug for preventing refilling, said plug being adapted to enter the neck of said bottle and having the valved passages through it for the outflow of the liquid, and said neck having the annular groove 12, and below said groove being of smaller diameter than it is above said groove, whereby upon the application of cement to the lower portion of said plug and the insertion of said plug into said neck a portion of said cement will, by meeting the lower portion of said neck, be moved back upon said plug and enter said annular groove 12, substantially as set forth. 5th. The bottle, having the neck 11 formed with the annular groove 12, and below said groove being of reduced diameter, combined with the plug for preventing refilling, said plug having the valved passages through it, and also having the annular groove 21 and packing ring 35, the said plug and bottle neck being so proportioned to one another that upon the application of cement to the lower exterior surfaces of the said plug and the insertion of said plug into said neck a portion of said cement will, upon meeting the reduced diameter of said neck, be moved back to fill said annular grooves 12 and 21, and form when hardened a locking bead to prevent the removal of said plug from the bottle neck, substantially as set forth. 6th. The bottle, combined with the plug for preventing refilling, said plug comprising the parts 14, 15 and 16, and balls 18, 19 and 20, the part 14 having the valve seat 22 for the ball 18 and ribs 23 above said seat, the part 15 being in the form of a cap adapted to receive the ball 19 and forming at its lower edges the restraining shoulder 26 and also having the ribs 24 to engage the inner walls of said part 14, and the part 16 being upon the upper edges of said part 14 and having the seat 28 for the ball 20, the ribs 29 above said seat, the transverse apertures 31, the annular groove 30 and the vertical grooves 33, and said part 16 being closed at its upper end except at the said vertical grooves 33, substantially as set forth. 7th. The bottle, combined with the plug for preventing refilling, said plug comprising the part 14 having the valve seat 22 and vertical ribs 23, the cap 15 within said part 14 and permitting the flow of the liquid around the same, the part 16 having the valve seat 28, ribs 29, transverse apertures 31, and vertical grooves 33 communicating with the said apertures, the ball 20 confined within said part 16 and adapted to said seat 28, and the ball 18 within said part 14 and adapted to said seat 22, substantially as set forth.

8th. The bottle, combined with the plug for preventing refilling, said plug comprising the part 14 having the valve seat 22 and vertical ribs 23 extending upward from about the upper edges of said valve seat, the cap 15 within said part 14 and having its lower edges extending inward beyond the inner edges of said ribs 23 to form the annular shoulder 26, an upper part containing passages for the exit of the liquid passing by said cap 15, the ball 18 adapted to said seat 22, and the ball 19 adapted to pass into said cap 15 when the bottle is inverted, and when the bottle is in its upright position to pass below said shoulder 26 and against the ribs 23 and contact with the ball 18 at one side of the centre thereof, whereby said ball 19 will retain said ball 18 against its seat 22 except when the bottle is inverted beyond a horizontal position and to a sufficient extent to send the ball 19 into the cap 15, substantially as set forth.

No. 66,908. Nail Holding Device.

(*Appareil à tenir les clous.*)

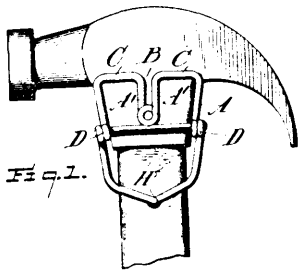


Fig. 1.

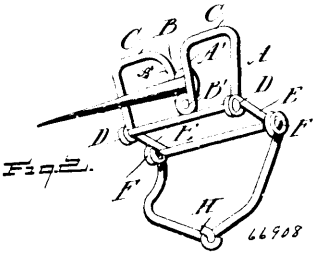


Fig. 2.

Willis R. Bargar and Lettie L. Woodhouse, Elk Lake, Pennsylvania, U.S.A., 4th April, 1900; 6 years. (Filed 2nd November, 1899.)

Claim.—1st. A device for holding nails to hammer heads, consisting of a wire which is bent to form a nail receiving slots, said wire thence being bent to form two sets of eyes, rods mounted in said eyes adapted to be held one on each side of the handle of a hammer, and the ends of said wires being hooked and adapted to be sprung over the handle and interlocked, as shown and described. 2nd. A nail holding device for hammer heads, consisting of a wire which is bent to form a V-shaped slot, thence bent to form two pairs of eyes, and the rods held in said eyes parallel to each other and at right angles to the nail carrying slot, the ends of said wire being thence downwardly bent and having hooks whereby when the device is placed upon the handle of a hammer, said ends may be interlocked and the tension of the spring arms when interlocked may cause the nail slot to bear against the face of the hammer as set forth.

No. 66,909. Cylindrical Muffler Furnace.

(*Fournaise à enveloppe cylindrique.*)

Harrison B. Meech, Denver, Colorado, U.S.A., 4th April, 1900; 6 years. (Filed 6th March, 1899.)

Claim.—1st. In a cylindrical roasting furnace, an oven, a hollow vertical shaft in sections, joined together by centre pieces, having horizontal arms fast thereto, said centre pieces and arms each interiorly divided into two chambers by a horizontal partition therein. 2nd. In a cylindrical roasting furnace, an oven, a hollow vertical shafs in sections joined together by centre pieces, having horizontal arms fast thereto, said centre pieces and arms each interiorly divided into two chambers by a horizontal partition therein, and an opening in each of the partitions in said arms, connecting said chambers. 3rd. In a cylindrical roasting furnace, two or more ovens one above the other, each having an opening in the bottom or bed thereof, a flanged discharge wheel located in each of said openings, and mechanism for rotating said discharge wheel, in combination with a hollow vertical shaft in sections, joined together by centre pieces, having horizontal arms fast thereto, said centre pieces and arms each interiorly divided into two chambers by a horizontal partition therein, and mechanism for rotating said shaft. 4th. In a cylindrical roasting furnace, two or more ovens one above the other, each having an opening in the bottom or bed thereof, and a rotary flanged, discharge wheel located in each of said openings, in combination with a hollow vertical shaft in sections, joined together by centre pieces having horizontal arms fast thereto, said centre pieces and arms each interiorly divided into two chambers by

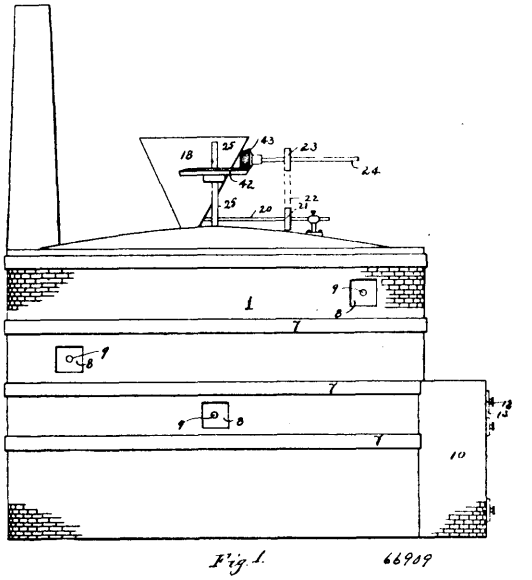
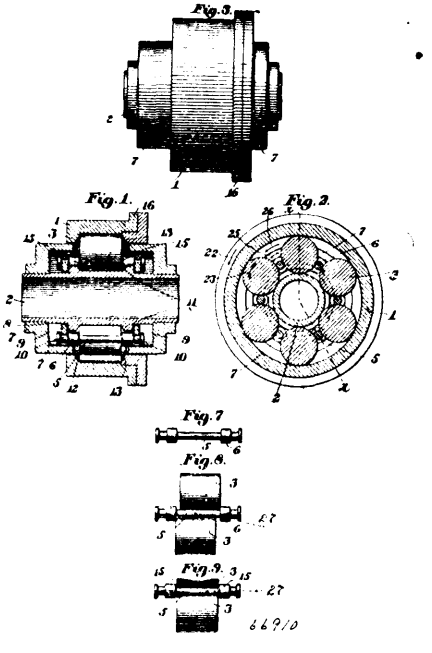


Fig. 1.

a horizontal partition therein, and mechanism for rotating said shaft, in combination with a pawl and ratchet mechanism connected to said discharge wheel and actuated by said arms.

No. 66,910. Roller Bearing. (*Coussinet à rouleaux.*)



Myron Francis Hill, Cambridge, Massachusetts, U.S.A., 4th April 1900; 6 years. (Filed 11th September, 1899.)

Claim.—1st. In a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers between said sleeves, separating rollers between said main rollers, collars and rings supporting said separating rollers, said collars mounted on one of said sleeves. 2nd. In a roller bearing, an axle sleeve, a hub sleeve, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned supports for said separating rollers, endwise guiding edges thereon holding said parts in place. 3rd. In a roller bearing, an angle sleeve, a hub sleeve, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned supports for said separating rollers at the r ends, and endwise guiding edges thereon holding said parts in place. 4th. In a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers between said sleeves, separating rollers between said main rollers, collars and rings supporting said separating rollers, said collars mounted on said axle sleeve. 5th. In

a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned collars and rings supporting said rollers which separate said collars mounted on one of said sleeves. 6th. In a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned collars and rings supporting said separating rollers, said collars mounted on said axle sleeve. 7th. In a roller bearing, an axle sleeve, a hub sleeve, main rollers mounted between said sleeves, separating rollers between said main rollers, harmoniously proportioned supports for said separating rollers, endwise guiding edges on said separating rollers to hold said supports in place, and additional guiding edges to prevent any twisting of the main rollers. 8th. In a roller bearing, an axle sleeve, a hub sleeve, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned supports for said separating rollers at their ends, endwise guiding edges thereon holding said parts in place, and additional guiding edges on said separating rollers to prevent any twisting of said main rollers. 9th. In a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers, between said sleeves, separating rollers between said main rollers, collars and rings supporting said separating rollers, said collars mounted on one of said sleeves, and endwise guiding edges on said separating rollers to prevent any twisting of said main rollers. 10th. In a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers between said sleeves, separating rollers between said main rollers, collars and rings supporting said separating rollers, said collars mounted on said axle sleeve, and endwise guiding edges on said separating rollers to prevent any twisting of said main rollers. 11th. In a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned collars and rings supporting said separating rollers, said collars mounted on one of said sleeves, and endwise guiding edges on said separating rollers to prevent any twisting of said main rollers. 12th. In a roller bearing, an axle sleeve, a hub sleeve, endwise guiding edges thereon, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned collars and rings supporting said separating rollers, said collars mounted on said axle sleeve, and endwise guiding edges on said separating rollers to prevent any twisting of said main rollers. 13th. In a roller bearing, an axle sleeve, a hub sleeve, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned supports for said separating rollers, endwise guiding edges thereon holding said parts in place, and one of said sleeves comprising two parts held together by a piece of metal over them. 14th. In a roller bearing, an axle sleeve, a hub sleeve, main rollers between said sleeves, separating rollers between said main rollers, harmoniously proportioned supports for said separating rollers, endwise guiding edges thereon holding said parts in place, and one of said sleeves comprising two parts held together by a piece of metal spun over them.

No. 66,911. Stoker and Furnace.

(Chauffoir et fourneau.)

Fig 2.

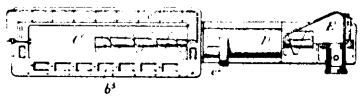
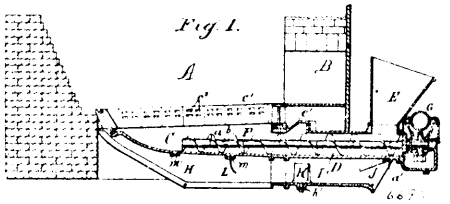


Fig 1.

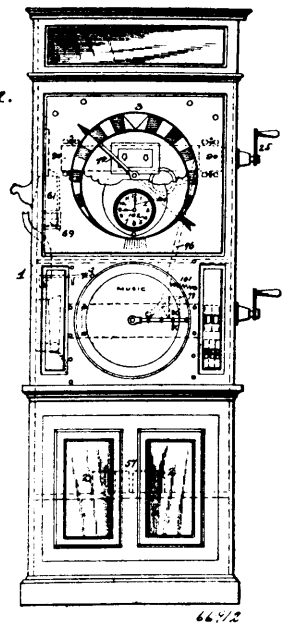


The American Stoker Co., assignee of Wilfred R. Wood, all of Brooklyn, New York, U.S.A., 4th April, 1900; 6 years. (Filed 5th November, 1898.

Claim.—1st. In an underfeed stoker, the combination of a retort or magazine, a series of tuyere openings on both sides, said openings being directed across the magazine, a second series of tuyere openings above the floor of the fire chamber directed away from the magazine, and means for forcing air through said tuyere openings, substantially as described. 2nd. In an underfeed stoker, the combination of a retort or magazine, a series of openings in the upper part of said magazine discharging toward the interior thereof and additional openings above the floor of the fire chamber directed away from said magazine, and means for forcing air through said openings, substantially as described. 3rd. In an underfeed stoker, the combination of a retort or magazine, provided with a series of tuyere openings at or near its top, a wind conduit communicating with the tuyere openings, and a deflector in said wind conduit, substantially as described. 4th. In an underfeed stoker, the combination of a retort or magazine, provided with a series of tuyere openings at or near its top, a wind conduit communicating with the tuyere openings and an adjustable deflector in said wind conduit, substantially as described. 5th. In an underfeed stoker, the combination of a retort or magazine, provided with a series of tuyere openings at or near its top, a jacket entirely surrounding said magazine to form a wind box and communicating with the tuyere openings, a wind trunk communicating with said wind box and a deflector, substantially as described. 6th. In an underfeed stoker, the combination of a retort or magazine, a jacket surrounding the same to form a wind box provided with openings and a series of tuyere blocks seated thereon and provided with openings communicating with the openings in the wind box, substantially as described. 7th. In an underfeed stoker, a fuel magazine having one or more sets of lugs arranged transversely around the same with the metal of the body of the magazine between the lugs made thinner to afford a line of fracture, and clamping bolts uniting said lugs, substantially as described. 8th. In an underfeed stoker, the combination of a magazine having a conduit leading into the same, tuyere blocks arranged at the top of said magazine and communicating with said conduit and an air trunk partly surrounding said conduit and communicating with said magazine, substantially as described. 9th. In an underfeed stoker, the combination of a magazine, a jacket to form an air chamber around said magazine, tuyere blocks communicating with said air chamber and bolts adapted to engage in recessed openings in the abutting ends of said tuyere blocks, substantially as described. 10th. In an underfeed stoker, the combination of a magazine, a laterally projecting flange therefrom, an air chamber surrounding said magazine, tuyere blocks mounted thereon and bolts extending through said flange and having heads adapted to engage oppositely arranged recessed openings in adjacent ends of said tuyere blocks, substantially as described. 11th. In an underfeed stoker, the combination of an air chamber, a fuel magazine, an air trunk, and a fuel conduit, said air chamber surrounding said magazine and said air trunk partly surrounding said conduit, of a pocket in said conduit, and an air pipe leading from said air trunk to said pocket, substantially as described. 12th. In an underfeed stoker, the combination of a fuel magazine having an air chamber, completely surrounding the same, a laterally projecting flange connecting the tops of both and adapted to form a top for said air chamber, with openings in said flange having tapered sides, and tuyere blocks having correspondingly tapered flanges to fit in said openings, said tuyere blocks being formed with openings on the faces thereof, and adapted to fit together to form a continuous extension for the top of said magzine, substantially as described. 13th. In an underfeed stoker, the ball bearing mechanism for the screw conveyer consisting of the recessed plate c, annularly grooved rings d in said recess, balls e in said grooves between the rings, and the shouldered sleeve g fast on the conveyer shaft and having a bearing in said place c, substantially as described. 14th. In the motor mechanism of an underfeed stoker, the combination of a screw conveyer, a ratchet for operating the same, a vibrating dog carrier with means for vibrating the same, and a double nosed dog having two pivotal bearings connected by a slot pivoted to said carrier and adapted to be shifted so that either nose may engage the ratchet to control the direction of revolution of the screw conveyer, substantially as described. 15th. In the motor mechanism of an underfeed stoker, the combination of a screw conveyer, a ratchet for operating the same, a vibrating dog carrier with means for vibrating the same, a double nosed dog having two pivotal bearings connected by a slot pivoted to said carrier and adapted to be shifted so that either nose may engage the ratchet to control the direction of revolution of the screw conveyer, and a stop dog for said ratchet adapted to be shifted to either side thereof, substantially as described. 16th. In the motor mechanism of an underfeed stoker, the combination of a screw conveyer, a ratchet for operating the same, a vibrating dog carrier with means for vibrating the same, a double nosed dog pivoted to said carrier and adapted to be shifted so that either nose may engage the ratchet to control the direction of revolution of the screw conveyer, and a two part stop dog, of unequal lengths, for said ratchet adapted to be shifted to either side thereof, substantially as described. 17th. In the motor mechanism of an underfeed stocker, the combination of a screw conveyer, mechanism for actuating the same, a casing for said mechanism provided with an opening in front and an eccentrically set indicator revolving with the conveyer shaft adjacent to the opening in the casing, whereby the attendant can observe the rotation of the screw conveyer, substantially as described. 18th. In the motor mechanism of an underfeed stoker, the combination of the screw conveyer ratchet j and its vibrating dog carrier k of the double nosed dog n having two pivotal bearings e, r, connected by a slots s, substantially as described. 19th. In an underfeed stoker, the combination of a fuel magazine, a fuel conduit leading therefrom, a fuel hopper for said conduit, and a screw conveyer in said conduit and magazine journalled through the front wall of said conduit and having a removable bearing plate within the conduit at its rear end, substantially as described. 20th. In an underfeed stoker, a fuel magazine having one or more portions of less thickness than the body thereof combined with a bridge or bridges spanning the same, whereby the parts are held together in case of fracture, substantially as described.

21st. In an underfeed stoker, the combination with the door of furnace of one or more air passages discharging air through the joint about the door and means for supplying thereto air at a pressure higher than the pressure in the furnace, substantially as described. 22nd. In an underfeed stoker, a variable mechanism consisting of the combination of two rods movable with respect to one another, a connecting part engaging with both of them and means for varying the position of one of them with respect to said connecting part by which the amount of lost motion between the two parts is varied, substantially as described.

No. 66,912. Coin Controlled Vending and Advertising Apparatus. (*Appareil de vente et annonce actionné par une piece de monnaie.*)



Charles A. Yale, Burlington, Vermont, U.S.A., 4th April, 1900; 6 years. (Filed 8th January, 1900.)

Claim.—1st. In an advertising and vending apparatus, the combination, with a coin controlled balance, of a dial, a hand or indicator electrically connected to said balance, a music box, an advertising ribbon, a series of incandescent bulbs, and a ticket ejector all included in an electrical circuit for simultaneous operation, substantially as described. 2nd. In an apparatus of the class described the combination of a music box, advertising ribbon and a ticket ejector, with a series of differently colored lights and an indicator hand, all connected for substantially simultaneous operation. 3rd. The combination of the dial, the indicator hand and the ticket ejector, with mechanism to give an initial impetus to the hand, and means whereby said hand may then run free to stop at any point on the dial, the point of said hand being electrically connected to the ticket ejector, and a series of differently colored electric light bulbs, a music box, and an advertising ribbon, substantially as described. 4th. In a machine of the character described, the combination with the dial, provided with a number of contact pins near the edge, the central shaft, the indicating hand or pointer of conducting material, means for operating said hand, the pivoted trigger having a contact arm adapted to engage with said pins, and the battery and electrical connections between the same, the hand or pointer and the said pins, substantially as specified. 5th. In a mechanism of the character described, the combination with the battery, the dial provided with a number of contact pins near the edge, the hand or pointer electrically connected with the battery, and means for rotating the same, the trigger pivoted to said hand, the incandescent lamps, the armature, and the conductor, connected therewith and with the battery, substantially as specified. 6th. In a machine of the character described, the combination with the battery, the musical instrument connected therewith and means for operating the same, the lamps in circuit with said battery, the hand or pointer, and means for operating the same, and the endless band and means for moving the same, of the clock formed with a series of holes, the removal pins, the bands of conducting material, and the conductors connected with said pins and in electrical connection with the battery, substantially as specified. 7th. In a machine of the character described, the combination of the pivoted balance arm provided with a counter balance weight, the coin receptacle, the oscillating rod provided with a catch for holding a coin in said receptacle, the crank at the other end of said rod, the rod connected therewith, the elbow lever, with which said rod is connected, the rod also connected with said elbow lever, the elbow lever connected therewith, the train of spring actuated gearing one of the gears of which is provided with a pin adapted to engage with last mentioned elbow lever, and means for locking and releasing said train of gearing, substantially as specified. 8th. In a machine of the character described, the combination with the dial, the central shaft, the indicating hand or pointer, the ratchet fixed to said shaft, the loose pinion and the pawl pivoted thereto, of the train of spring actuated gearing one of the gears of which is provided with a pin, the electro magnet, the armature thereof provided with a projection adapted to engage with said pin, the positive conductor connected with said magnet, the battery, the negative conductor connected with said magnet, the binding post carried by an inwardly extending arm with which said negative conductor is connected, the spring contact, the weighted balance arm provided with a pin adapted to engage with said spring contact, the binding post and the conductor connected therewith and with the negative pole of the battery, substantially as specified. 9th. In a machine of the character described, the combination with the dial, the pins near the edge thereof, the central shaft, the hand or pointer of conducting material, the trigger pivoted to said hand or pointer and provided with a contact arm, of the train of spring actuated gearing for operating said shaft, one of the gears of which is provided with a pin, the electro magnet, the armature of provided with a projection and the battery of the positive conductor connected with said magnet and battery, the negative conductor connected with said magnet and with a binding post, the inwardly extending arm carrying said binding post, the spring contact, the weighted balance arm provided with a pin, the binding post on said bar, the conductor connected therewith and with said pins and the battery and the conductor electrically connecting said hand or pointer with the battery, substantially as specified. 10th. In a machine of the character described, the combination with the coin tube, the pivoted balance arm, the coin receptacle, the oscillating rod provided with a catch for holding a coin in said receptacle, the pin on the balance arm, the spring contact, the dial, the central shaft, the indicating hand or pointer, the ratchet on said shaft, the loose pinion provided with a pawl, of the train of spring actuated gearing one of the gears of which is provided with a pin, the electro magnet, the armature thereof provided with a projection adapted to engage with said pin and electrical connection with a battery for actuating said armature and releasing the pin, substantially as specified. 11th. In a machine of the character described, the combination with the coin tube, the pivoted balance arm, the coin receptacle, the oscillating rod provided with a catch for holding a coin in said receptacle, the pin on the balance arm, the spring contact, the dial, provided with a number of contact pins near the edge, the central shaft, the indicating hand or pointer of conducting material and the train of spring actuated gearing for operating said hand, the pivoted trigger having a contact arm adapted to engage with said pin, and the battery and electrical connections between the same, substantially specified. 12th. In a machine of the character described, the combination with the coin tube, the pivoted balance arm, the coin receptacle, the oscillating rod provided with a catch for holding a coin in said receptacle, the pin on the balance arm, the spring contact, the battery, the electro-magnet near the bottom of the machine electrically connected with the battery, the armature, the lever having an arm connected therewith, the spring barrel provided with a notch with which the arm of said lever engages, and with a cam, of the lever provided with a cam projection with which said cam engages, the arm pivoted to the upper end of said lever, the roller, the endless band passing there around and the hooks on said band, substantially as specified. 13th. In a machine of the character described, the combination with the coin tube, the pivoted balance arm, the coin receptacle, the oscillating rod provided with a catch for holding a coin in said receptacle, the pin on the balance arm, the spring contact, the battery, the spring barrel connected therewith and means for operating the same, the lamps in circuit with said battery, the hand or pointer and means for operating the same, and the endless band and means for moving the same, of the clock dial formed with a series of holes, the removable pins, the bands of conducting material, and the conductors connected with said pins and in electrical connection with the battery, substantially as specified.

No. 66,913. Wagon. (*Wagon.*)

George W. Reed, Lafayette, Indiana, U.S.A., 4th April, 1900; 6 years. (Filed 12th January, 1900.)

Claim.—1st. The combination with the wagon body, of platforms extending out therefrom, hinged wings constituting supplemental sides for the body when raised, wing supporting posts resting on the platforms, and removable bolts adapted to be passed through the supporting posts, the wings, and the platforms when the wings are resting on the supporting posts. 2nd. The combination with a wagon body, of sockets secured to the sides thereof, standards removably fitted in the sockets and having an upper hinged section, wings secured to the upper hinged sections of the standards, platforms

extending out from the body, wing supporting posts resting on the platforms and removable bolts adapted to be passed through the

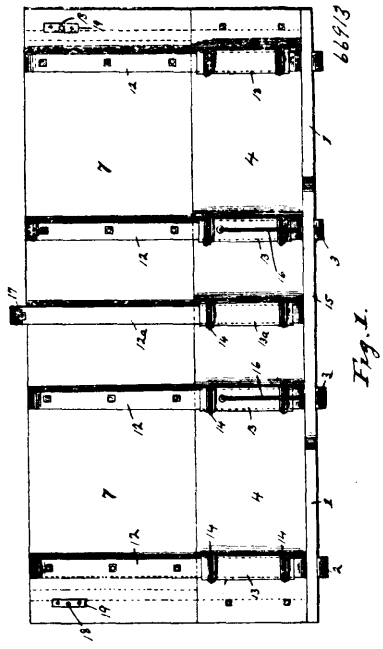


Fig. 1.

supporting posts, the wings an the platforms, when the wings are resting on the supporting posts.

No. 66,914. Railway Car. *(Char de chemin de fer.)*

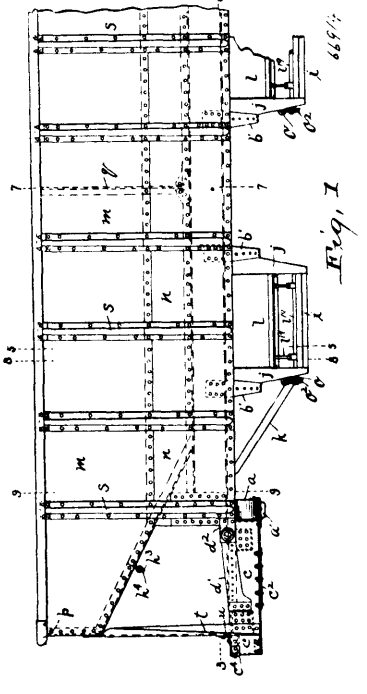


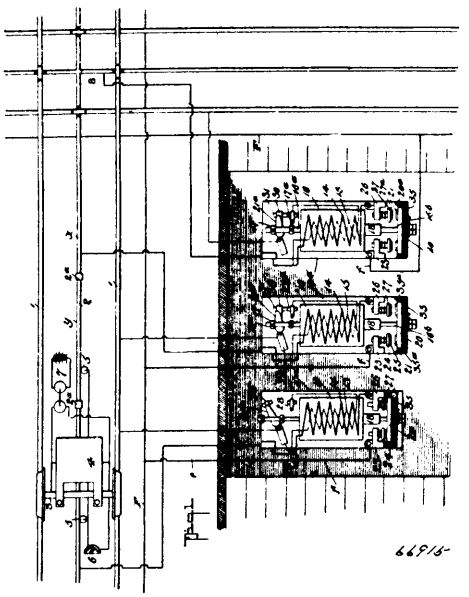
Fig. 1.

Edgar Webster Summers, Akron, and Hadley Herbert Summers, Portsmouth, both in Ohio, U.S.A., 4th April, 1900; 6 years. (Filed 21st March, 1900.)

Claim—1st. A car body, having its sides composed of plates of metal, the lower part of these side plates forming one side of a hollow lungitudinal beam triangular in cross section, the other two sides being also formed of plates, substantially as described. 2nd. A car body, having its sides composed of plates of metal, the plate at the upper edge of the car side being flanged outward and downward, the downturned edge being riveted to the outturned end of a stiffener secured to the car side, substantially as described, 3rd. In a car, the floor plates of metal being flanged downward at their intersection, riveted together through such flanges, the flanged joints extending crosswise of the car, the plates being flanged at their intersection with the car sides and riveted through such flanges to the car sides, the flanges being integral parts of the plate, substantially as described. 4th. In a hopper bottom car, the end floor plate having its lower edge flanged downward, its upper edge turned up forming the end of the car, its sides flanged and riveted to the car sides, substantially as described. 5th. In a car, metallic floor plates flanged downward and such flanges riveted to the bolster, substantially as described. 6th. In a car, metallic floor plates flanged downward and such flanges riveted to transverse floor beams, substantially as described. 7th. In a hopper bottom car having dumping doors, the combination with the side plates of the chute, of a floor plate with its upper portion at an inclination and in the plane of the floor, and its lower portion substantially vertical and extending down to the closed position of the dumping doors, the vertical portion being riveted to the side plate of the chute, said side plate being flared out or offset away from the floor plate far enough to admit the upturned flanges of the door between the two plates, substantially as described. 8th. In a hopper bottom car, a substantially horizontal plate at each side of the lower edge of the car body extending longitudinally of the car from bolster and connected thereto, its outer edge being flanged and riveted through such flange to the car side, its inner edge being riveted to an inclined plate, which latter is connected to the car side, substantially as described. 9th. In a railway car, a transverse horizontal girder having its web plate attached to the draw beam and to upper and lower parts of the bolster, being adapted to transmit the forces caused by the draw beam action to the sides of the car, substantially as described. 10th. In a hopper bottom car, a transverse horizontal girder attached to the draw beam having its greatest depth near the longitudinal centre line of the car, and tapering from the side toward the end of the car to its shallowest depth near the side of the car, leaving a large open space between the ends of adjacent cars, substantially as set forth. 11th. In a hopper bottom car, a draw beam extending from the bolster to the end of the car, the outer end of the draw beam depending on the overhanging part of the car body for its vertical support, substantially as described. 12th. In a railway car, a draw beam having its body of an inverted trough shaped section with its lower edges flanged outward and its inward end attached to the bolster, substantially as described. 13th. In a railway car, a body bolster composed of an upper and a lower part, the upper and lower parts being flanged at their intersection and riveted through said flanges to each other and to a horizontal transverse girder, substantially as described. 14th. In a hopper bottom car, a body bolster composed of an upper and a lower part, its upper part being riveted through its upper edge to the down turned flange of a floor plate, its ends being flanged, and such flanges being riveted to the car side, substantially as described. 15th. In a hopper bottom car, a body bolster composed of an upper and lower part, the upper part being riveted to the floor plate, substantially as described. 16th. In a railway car, a body bolster composed of an upper and a lower part, the lower part supporting the center bearing plate on its under side, also being riveted to the end flanges of the draw beam, substantially as described. 17th. In a car, a transverse floor beam having its upper edge riveted to the down turned flange of a door plate, and its ends attached to the side plates for support, substantially as described. 18th. In a hopper bottom car, a transverse floor beam, having its upper edge riveted to the down turned part of a floor plate for the middle portion of the beam and for the end portions to a horizontal longitudinal plate, substantially as described. 19th. In a railway car, a cross strut consisting of a plate bent into a tubular form and riveted together along the meeting edge and having its ends flanged out for connection to the car sides, substantially as described. 20th. In a metallic car, the stiffeners for side plates of a substantially triangular cross section, flanged out at the base of the triangle for riveting to the side plates, and curved to a small radius at the apex of the triangular cross section, substantially as shown and described. 21st. The combination in a car botton, of one or more doors hinged at both the inner and the outer end, and adapted to be released at either hinged end, substantantially as described. 22nd. The combination with a car bottom, of doors with their outer ends hinged at or near the sides of the car, and also hinged at the intersection of their inner ends, the axis of hinges being lengthwise of the car, substantially as described. 23rd. The combination of a car bottom, and doors with hinges at their outer ends and at the intersection of the doors, and releasing mechanism adapted to release either end, substantially as described. 24th. The combination, with a car bottom, of doors hinged at two opposite sides, the axis of the hinges being lengthwise of the car, and of a latch mechanism for releasing the doors at their hinged edges, substantially as described. 25th. The combination with a car bottom, of doors hinged at their inner and outer ends with their side edges upturned, and fixed plates in the car bottom extending downward overlapping the upturned edges of the doors, substantially as described. 26th. The combination with a car bottom, of doors hinged at both their inner and outer ends, and of plates crosswise of the car extending from the floor downward, between which the doors may open and close forming a chute which is adapted to convey the contents of the car out over the car track rail, substantially as described. 27th. The combination, with a car bottom, of doors hinged at both their inner and outer ends, the axis of the hinges being lengthwise of the car, and of stops fixed

under the doors and adapted to stop the lower end of the doors when either the inner or outer end of the door is released, substantially as described. 28th. The combination, with a car bottom, of doors hinged at both their inner and outer ends, the axis of the hinges being lengthwise of the car, of floor plates sloping in and down from the side of the car and extending substantially to the outer end of the doors, substantially as described.

No. 66,915. Electric Railway. (*Chemin de fer électrique.*)



The Murphy Safety Third Rail Electric Company, New York City New York, assignee of John McLeod Murphy, Torrington, Connecticut, U.S.A., 4th April, 1900; 6 years. (Filed 19th February, 1900.)

Claim.—1st. In a surface contact railway system, a solenoid switch having independent inner and outer windings of different resistance, the high resistance coil being grounded and having a lead connected with the low resistance coil, a circuit breaker in the said lead governed by the shifting of the plunger, a plunger carrying a duplex set of contacts, said contacts being set in different planes whereby one set of which makes after and breaks before the other set of contacts correspondingly acts, for the purpose specified. 2nd. An automatic circuit making and breaking mechanism of the character described, comprising a high resistance coil having a ground return and connected with one of the sectional conductor rails, a switch in said high resistance coil, a low resistance coil connected with the feeder wire and with the conductor rail section a pair of contacting members in the said low resistance coil normally held open, one of said members being fixedly held, the other having limited free movement and projected in a plane in advance of the fixedly held member of the said contacting members, a plunger rod governed by the energizing of the high or low resistance coils, said plunger including a pair of contacting members, said plunger contacting members being held in different planes, whereby one set will engage the forwardly projecting contacting members of the low resistance coil before the other set engage the fixedly held portion of the said low resistance contacting members, said plunger having means for breaking the switch in the high resistance winding immediately after the first active contact members engage. 3rd. In a solenoid switch of the character described, the combination with the fixedly held contacting portions, the yielding carbon block holding contacts and the circuit wires, of the plunger armature carrying a bridge piece having carbon blocks to engage the yielding contacts and carrying metallic contacts consisting of a laminated pack of spring copper plates, the ends of which are bent up to engage the fixedly held or bracketed contacts after the carbon contacts are closed, said ends having their impacting portions arranged to engage the brackets successively from the outermost one toward the innermost one, for the purpose specified. 4th. In an electro-magnetic switch mechanism of the character described, the combination with the lead connecting the inner and outer windings and the armature plunger, of a circuit breaker in the aforesaid lead, consisting of a fixedly held contact, a bracket connected with the inner terminal of the lead, a hinged member carrying a contact to engage the fixedly held contact, said hinged member being arranged in the path of the plunger and adapted to be swung in opposite directions by the opposite movements of said plunger, and a spring device for holding the said swinging member in either its open or closed position until positively engaged by the plunger in its opposite movements, all being arranged substantially as shown and for the purposes described.

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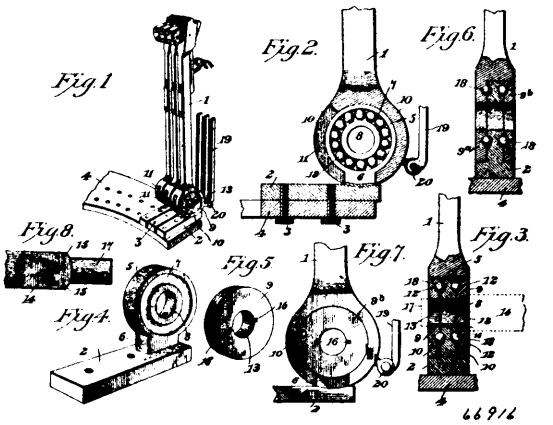
No. 66,916. Type Arm Bearing.

(*Coussinet de bras de caractères.*)

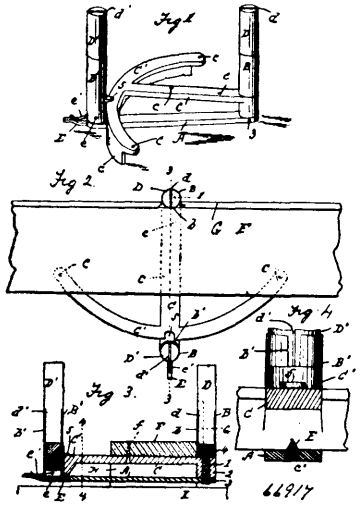


The Fisher Typewriter Company, assignee of Robert Joseph Fisher, all of Athens, Tennessee, U.S.A., 4th April, 1900; 6 years. (Filed 21st September, 1899.)

Claim.—1st. In a ball bearing pivotless type arm for typewriting machines, the type arm and hanger having bearing members, of which that carried by the type arm comprises spaced side elements, and that carried by the hanger consists of a single element interposed between those of the type arm members, and bearing elements having an interlocking engagement with the adjacent faces of said elements, substantially as specified. 2nd. In a ball bearing pivotless type arm for typewriting machines, the type arm and hanger having bearing members, one of which has an element interposed between spaced elements of the other, an annular series of anti-friction balls interposed between, and seated in, ball races formed in the facing surfaces of said elements, the diameter of each ball race being greater than the interval between the plane of the races, substantially as specified. 3rd. In a ball bearing pivotless type arm and hanger having bearing members, of which that carried by the type arm comprises spaced side elements, and that carried by the hanger consists of a single element interposed between those of the type arm member, and anti-friction balls arranged in races formed in the adjacent facing surfaces of said elements concentric with the axis of movement of the type arm to provide an interlocked engagement with said surfaces, substantially as specified. 4th. In a ball bearing pivotless type arm for typewriting machines, the type arm and hanger having bearing members, one of which has a single element interposed between duplicate spaced elements of the other, the first named element having outwardly facing ball races concentric with the axis of movement of the type arm, and the spaced elements having inwardly facing ball races registering with those of the first named element, and duplicate series of anti-friction balls seated in said registering races to provide the interlocked engagement with the elements, substantially as specified. 5th. In a ball bearing pivotless type arm for typewriting machines, the type arm and hanger having bearing members, one of which has an element interposed between spaced elements of the other, said elements being provided with registering ball races concentric with the axis of movement of the type arm, and facing in opposite directions parallel with said axis, and duplicate series of anti-friction balls seated in said races to provide an interlocked engagement with said elements, substantially as specified. 6th. In a ball bearing pivotless type arm for typewriting machines, the type arm and hanger having bearing members, one of which has an element interposed between spaced elements of the other, and an annular series of balls interposed between, and having interlocked engagement with the adjacent faces of said elements, the spaced elements of one of the members being connected by a band which is slotted for the reception of the elements of the other member, substantially as specified. 7th. In a ball bearing pivotless type arm for typewriting machines, the type arm and hanger having bearing members, one of which has a core disc and the other a band concentric with the axis of movement of type arm and enclosing the core disc, and side cheeks carried by said band in planes parallel with and at opposite sides of the core disc, said band being slotted in a plane between said cheeks to receive a stem of the core disc, and bearing balls interposed between and engaging the adjacent surfaces of said core disc and cheeks, substantially as specified. 8th. In a ball bearing pivotless type arm for typewriting machines, the type arm and hanger having bearing members, one of which has a core disc and the other a band concentric with the axis of movement of the type arm and enclosing the core disc, and side cheeks carried by said band in planes parallel with and at opposite sides of the core disc, said band being slotted in a plane between said cheeks to receive a stem of the core disc, one of said cheeks being axially adjustable, and bearing elements interposed between and engaging the adjacent surfaces of said

core disc and cheeks, substantially as specified. 9th. In a ball bearing type arm for typewriting machines, the type arm and hanger having bearing members, one of which has a single element and the other duplicate spaced elements between which the single element is interposed, a band encircling said spaced elements and having a slot, in a plane between said elements, to receive the single element, and bearing elements interposed between the single element and the spaced elements, and having an interlocked engagement therewith, substantially as specified. 10th. In a ball bearing pivotless type-arm for typewriting machines, the type arm and hanger having bearing members, one of which is provided with a single element, and the other with parallel spaced elements between which said single element is interposed, a band encircling and connecting said spaced elements, and one of them being threaded in the band for axial adjustment, said band being cut away between the spaced elements to provide for the insertion of the single element, and bearing balls interposed between and engaging the adjacent faces of said spaced and interposed elements, and having an interlocked engagement therewith, substantially as specified. 11th. A ball bearing pivotless type arm for typewriting machines, in which the ball bearing includes duplicate annular series of balls, substantially as specified. 12th. A ball bearing pivotless type arm for typewriting machines, in which the ball bearing includes duplicate axially spaced annular series of balls, substantially as specified. 13th. A ball bearing pivotless type arm for typewriting machines, in which the ball bearing includes duplicate axially spaced annular series of balls, the diameter of each series being greater than the interval between the series, substantially as specified. 14th. A ball bearing pivotless type arm for typewriting machines, wherein the bearing comprises intermediate and spaced elements, disposed perpendicular to the axis of movement of the type arm, and anti-friction balls disposed in a plurality of annular series concentric with the axis of movement of the type arm, and between the adjacent faces of said elements, substantially as specified. 15th. A ball bearing pivotless type arm for typewriting machines, in which the ball bearing includes a plurality of annular series of balls, substantially as specified. 16th. A ball bearing pivotless type arm for typewriting machines, in which the ball bearing includes a plurality of axially spaced annular series of balls, substantially as specified. 17th. In a typewriting machine, the combination of a pivotless type arm, a hanger, and anti-friction balls arranged in a plurality of annular series, in contact with opposing faces of the type arm and hanger, substantially as specified.

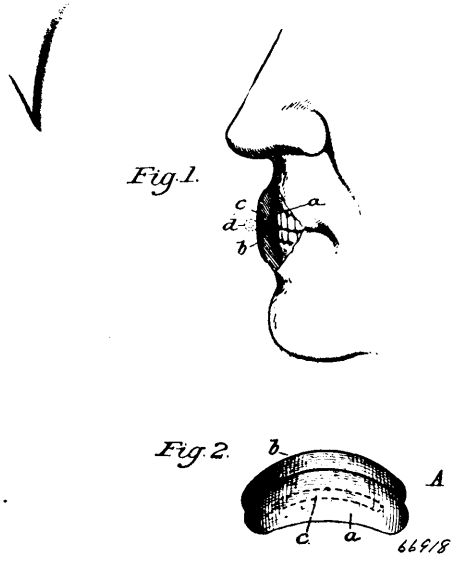
No. 66,917. Mitre Board. *(Planche à onglet.)*



Peter A. Holmbeg, Los Angeles, California, U.S.A., 4th April, 1900; 6 years. (Filed 21st September, 1899.)

Claim.—1st. A skeleton mitre board attachment, comprising an arm provided at its opposite ends with oppositely projecting slitted socket pieces, a flanged T-shaped arm pivoted at one end to one of the socket pieces, the head of the T forming an arc, a catch being provided to hold the socket arm and arc arm at different relative positions, and slitted posts being in the sockets. 2nd. In a mitre board attachment, the combination of a swinging socket arm, a hollow post or socket piece mounted on the arm by means of a pin fastened to the arm, a hollow post or socket piece mounted at the other end of the arm, a T-shaped arm, the T-head of which consists in an arc which rests upon the swinging socket arm at one post, the other end of the arm being provided with a downwardly projecting hub to rest upon the other end of the swinging socket arm, a pivot fastened to the socket arm and passing through the hub and fastened at its upper end to the slitted hollow post, substantially as set forth. 3rd. A mitre board attachment provided with a swinging arm having slitted hollow posts or socket pieces and posts fitted in the socket pieces and being solid at the bottom above the slits of their respective socket pieces and slitted upward to the top, a T-shaped arc arm being pivoted to one end of the swinging arm and arranged to be detachably fastened to the mitre board. 4th. A mitre board attachment, comprising a swinging arm, an arc arm, a slitted post fastened to one end of the swinging arm, a pivot fastened to the other end of the swinging arm and passing through the hub of the arc arm, and a slitted post detachably attached to the swinging arm by the pivot which passes through the hub of the arc arm. 5th. In a mitre board attachment, the combination of an arm provided with a downwardly extending hub and a downwardly extending arc flange, an arm pivoted thereto by a pivot extending through the hub, an upright slitted socket piece mounted on the upper end of said pivot, an upright stilted socket piece, fixed to the other end of the pivot arm and provided with a projection which extends over the arc flange, slitted posts in the sockets, and a catch on the pivoted arm to detachably attach it to the arc at different positions.

No. 66,918. Device for the Prevention of Mouth Breathing. *(Appareil pour empecher la respiration par la bouche.)*



The Columbia Finance and Trust Company, and Curran Pope, all of Louisville, Kentucky, U.S.A., 4th April, 1900; 6 years. (Filed 7th December, 1899.)

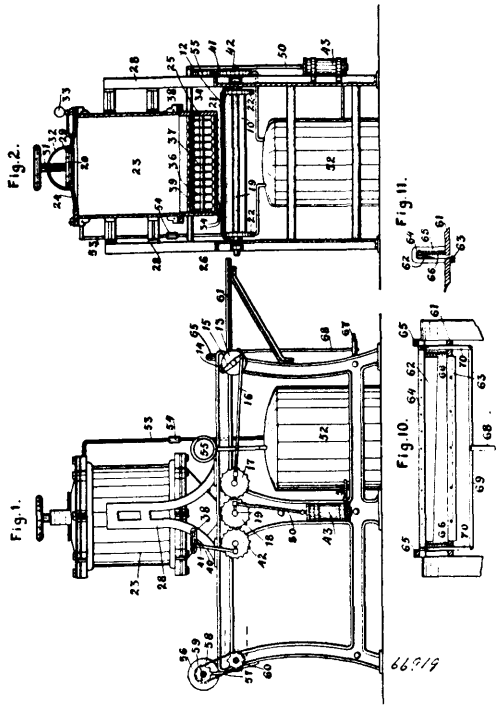
Claim.—1st. A device for preventing breathing through the mouth, the same consisting of a diaphragm of soft, pliable material shaped to fit between the front teeth and the inner surface of the lips. 2nd. A device for preventing breathing through the mouth, the same consisting of a diaphragm of soft, pliable rubber moulded to shape to fit between the front teeth and the inner surface of the lips. 3rd. A device for preventing breathing through the mouth, the same consisting of a member of soft, pliable material adapted to fit between the teeth and the inner surface of the lips, and a similar member adapted to fit against the outer surface of the lips, said members being secured together along their median line. 4th. A device for preventing breathing through the mouth, the same consisting of a thin member of soft, pliable, elastic material adapted to fit between the teeth and the inner surface of the lips, and an auxiliary retaining member of similar material adapted to fit against the outer surface of the lips, said members being secured together along their median horizontal line.

No. 66,919. Candy Making Machine.
(Machine pour la confection des bonbons.)

Arthur Ames, assignee of Alexander G. McCausland, Brantford, Ontario, Canada, 5th April, 1900; 6 years. (Filed 3rd January, 1899.)

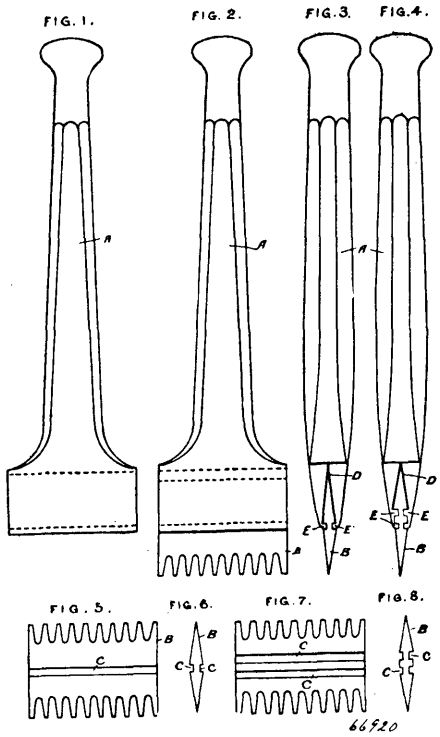
Claim.—1st. The combination with a frame, of a drive shaft, a cam on the drive shaft, a table raised and lowered by the cam and held by the frame, a reservoir above the table and having a plurality of outlets, valves controlling the outlets, a rock shaft mounted in the reservoir, means in connection with the rock shaft by which the valves may be operated, a gear wheel fixed to the drive shaft, a second gear wheel meshing with the first gear wheel, a connection between the second gear wheel and the rock shaft to operate the latter, a pump driven from the first-named gear wheel, a container charged from the pump and delivering to the reservoir, a belt carrying roller mounted in the frame, a third gear wheel meshing with the first-named gear wheel, and a connection between the third gear wheel and the belt carrying roller by which the roller is driven. 2nd. In a candy machine, the combination with a frame, of a reser-

voir, a valve in the reservoir, means for periodically operating said valve, an air pump, gearing operating the air pump in unison with



the said means for operating the valve, and a container charged by the air pump and having communication with the reservoir, whereby to maintain fluid pressure within the reservoir.

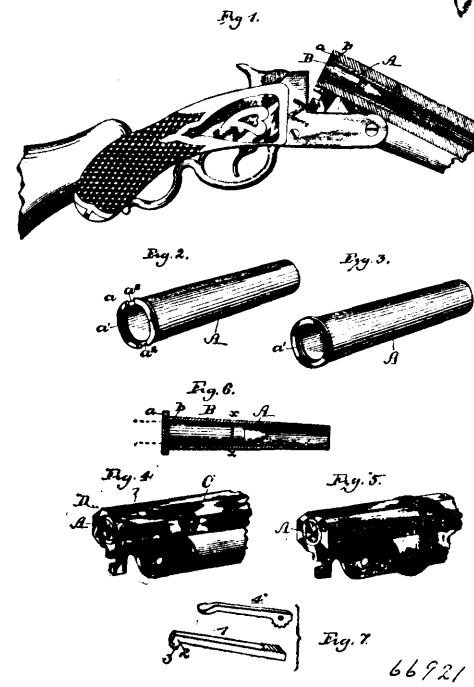
No. 66,920. Combination Tool. (*Outil à combinaison.*)



John Dobbie, Old Bridge End, Leith, Midlothian, Scotland, assignee of Henry Smith of 103 Artizan View, Heeley Sheffield, County of York, England, 5th April, 1900; 6 years. (Filed 16th March, 1899.)

Claim.—1st. In hand tools of the combination type the handle A having the slit or mouth D formed therein, the mouth being provided on both of its inner surfaces with one or more projecting lugs or strips E placed transversely to the longitudinal axis of the handle and parallel to one another, substantially as and for the purpose specified. 2nd. In hand tools the bit B having one or more grooves or indentations C formed in each side parallel to the cutting edge of the said bit, substantially as and for the purpose specified. 3rd. In hand tools of the combination type the handle A having the slit or mouth D formed therein, the mouth being provided on both of its inner surfaces with one or more projecting lugs or strips E placed transversely to the longitudinal axis of the handle and parallel to one another, in combination with the bit B having one or more grooves or indentations C formed in each side parallel to the cutting edge of the bit and corresponding in size and form to the projecting lugs or strips E of the handle, substantially as and for the purpose specified.

No. 66,921. Fire Arm. (*Arme à feu.*)



Hiram Benjamin Gillette, Millard F. Rapp and Edward B. Long, all of Roseburg, Oregon, U.S.A., 5th April, 1900; 6 years. (Filed 9th May, 1899.)

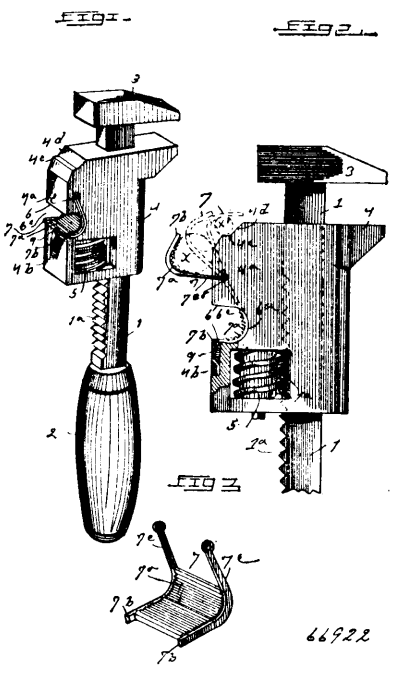
Claim.—1st. The combination with a breech loading fire arm, of a tubular receiver adapted to be fitted within the breech end of the gun and support a cartridge smaller than the normal cartridge for the gun, and means permanently mounted on the gun for removing said receiver and permitting the introduction of a normal or regular charge cartridge, substantially as set forth. 2nd. The combination with a breech loading fire arm, of a tubular receiver adapted to be inserted in the breech of the gun and support a reduced or miniature cartridge, a longitudinally movable arm mounted on the gun barrel and adapted to engage with said receiver, and means for moving said arm to cause it to force the said receiver from the gun, substantially as set forth. 3rd. The combination of a gun or fire arm and a short or auxiliary chamber having a notched and countersunk flange or rim on its rear end and a retractor or ejector for the auxiliary chamber, comprising a sliding arm with an angular rear end and a lug thereon, and a lever on the exterior surface of the gun barrel for operating the sliding arm, substantially as described.

No. 66,922. Wrench. (*Clé à écrou.*)

Oscar M. Millar, Benedict, Nebraska, U.S.A., 5th April, 1900; 6 years. (Filed 27th February, 1900.)

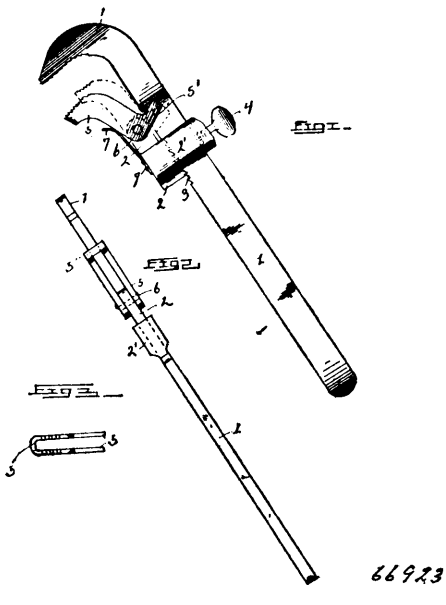
Claim.—1st. In a monkey wrench, in combination with the sliding jaw having a seat in its rear edge, of a swinging grip jaw pivotally hung on such jaw to swing outward to oppose the rear edge of the jaw, and constructed to fit into the jaw seat when held to an inoperative position, as specified. 2nd. In a sliding jaw wrench, in combination with the sliding jaw having a socket or seat in its rear edge, of a grip jaw pivotally hung on the sliding jaw to close into the said socket or seat when held to its inoperative position, and a spring detent on the sliding jaw for locking the grip jaw in the said socket or seat, as specified. 3rd. In a sliding jaw wrench, having a seat or socket in its rear edge, said rear edge having a bevelled bearing portion, a grip jaw having a semi-circular bearing face, said grip jaw being being pivotally hung on the sliding jaw, and so constructed as to be swung out to oppose the straight or

the bevelled portions of the rear edge of the sliding jaw and to fit in the seat of such sliding jaw, as and for the purpose specified. 4th.



A monkey wrench, having its sliding jaw provided with a seat 6^a in its rear edge, said edge having a bevelled portion provided with angle bearings, in combination with the grip member 7, having a gripping face 7^a, guide fingers 7^b, arms 7^c, pivoted on the rear edge of the jaw at a point between the seat and a bevelled bearing portion, and the spring latch, all being arranged substantially as shown and for the purpose described.

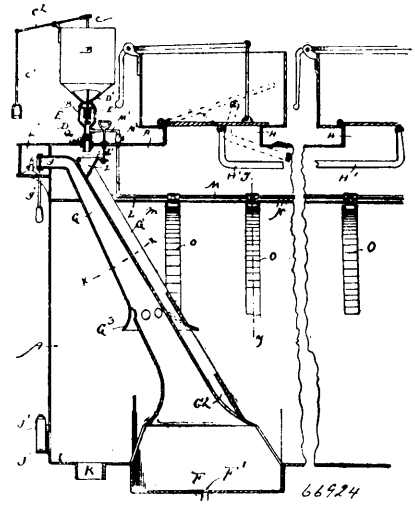
No. 66,923. Pipe Wrench. *(Clé à tuyau.)*



David Robert Ramsay, New Haven, Pennsylvania, U.S.A., 5th April, 1900; 6 years. (Filed 27th February, 1900.)

Claim.—1st. In a wrench of the class described, the combination, with the stock or shank bent at its outer end to form a fixed head or jaw, having its inner face provided with teeth inclined inwardly toward the stock or shank, of an adjustable block mounted upon the stock or shank and adapted to be moved longitudinally thereon, a set screw arranged in said block and adapted to engage the back of the stock or shank for holding the block in the desired position, and a spring pressed double inner jaw pivotally secured to the block and having its gripping faces provided with teeth inclined outwardly, and its ends bent at right angles to loosely embrace the stock or shank and guide the said double jaw during its movement, substantially as shown and described. 2nd. In a wrench of the class described, the combination with the stock or shank bent at its outer end to form a fixed jaw, which is provided on its inner face with teeth inclined toward the stock or shank and being also provided on its inner face about midway of its length with a series of teeth 3, of a block adjustably mounted on said stock or shank and adapted to engage said teeth 3, a set screw arranged in said block and engaging the back, of the stock or shank for holding the block in its adjusted position, a double jaw pivotally secured to said block with its ends bent at right angles to loosely embrace the stock or shank and guide the double jaw during its movement, said double jaw having its gripping faces provided with teeth which are inclined outwardly or in the reverse direction to the teeth on the fixed jaw, and a spring having its one end rigidly secured to the block and its other end frictionally engaging the double jaw, substantially as shown and described.

No. 66,924. Vacuum Suction Apparatus.
(Appareil d'aspiration)

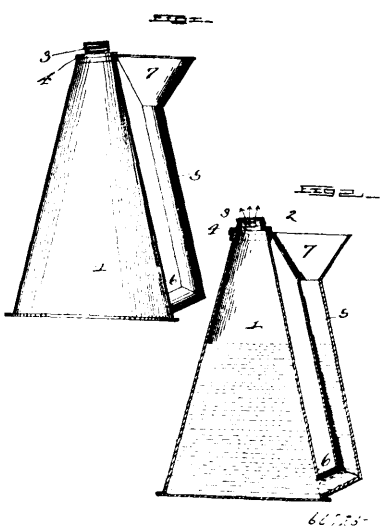


Ludwig L. Gross, Petaluma, California, U.S.A., 5th April, 1900; 6 years. (Filed 2nd March, 1900.)

Claim.—1st. In a vacuum suction apparatus, the combination of a tank having inlet and outlet openings, a source of supply for gas producing material, a measuring chamber intermediate between the source of supply and the vacuum tank and adapted to discharge the gas producing material into said tank, a valve stem extending vertically therethrough having valves fixed to it within the measuring chamber, with such relation to each other that when one valve is closed, the other is opened, a spring by which the lower valve is normally closed and a lever by which the upper valve may be closed and the lower one opened, and means for producing an explosion in the tank to create a vacuum therein. 2nd. In a vacuum suction apparatus, the combination of a tank having inlet and outlet openings, a source of supply for gas producing material, a measuring chamber intermediate between the source of supply and the tank and connecting with the interior of the latter a valve stem having valves fixed to it within the measuring chamber at such a distance apart that one valve is opened when the other is closed, a spring normally pressing upon the lower valve to retain it in a closed position, and an inclosing cylinder therefor, the top of said cylinder being closed by the upper valve when opened and the bottom when the lower valve is opened, mechanism whereby the valve stem may be moved to reverse the normal condition of the valves and allow the charge to be delivered from the chamber, and means for producing an explosion in the tank to create a vacuum therein. 3rd. In an apparatus of the character described, a main tank having water inlet and outlet openings, a source of supply for gas producing material, with an interposed valve controlled measuring chamber, a water chamber in the lower part of the main tank, an inclined tube having a trough formed upon its upper side, a receiving cup near the upper end of said trough into which the measuring chamber discharges, means for tilting said cup to allow its contents to flow down the trough and be discharged into the chamber at the bottom of the tank, and means for causing an explosion in the tank for creating a vacuum therein. 4th. In an apparatus of the character described, a main tank having a water inlet and outlet and having a depressed water chamber in the bottom, an inclined tube having a funnel shaped mouth at the bottom, a second funnel surrounding it at a point intermediate between the top and bottom, and a trough fixed upon the upper side of the tube passing through the funnels with the lower end discharging into the chamber beneath the lower funnel, a tilting cup pivoted at the upper end of the trough, a source of supply for gas producing material, a charge measuring chamber intermediate between the source of supply and

the tank and a conductor by which the charge is delivered into the cup and a lever or means for tilting the cup to allow its contents to pass down the trough into the chamber of the main tank, and means for producing an explosion in said tank. 5th. In an apparatus of the character described, a main tank with the depressed chamber and water inlet and outlet, means for supplying a gas producing material to said tank, an inclined tube having a funnel shaped mouth diverging above the chamber, a second funnel surrounding the tube, between its upper and lower ends, holes made through the sides of the tube within said second funnel whereby the gas produced and rising through the tube is partially diverted and distributed through the tank, means for exploding the gas within the tank. 6th. In an apparatus of the character described, a main tank with water inlet and outlet, a supply and measuring chamber for gas producing material, an inclined tube fixed within the tank having a trough on its upper side and a receiving cup into which the measuring chamber discharges, with means for distributing the gas arising within the tube, an ignition chamber into which the upper end of the tube opens, means for igniting the gas and a valve whereby the escape of gas from the tube into the ignition chamber is controlled and regulated. 7th. In an apparatus of the character described, a main tank having a water inlet and outlet, a source of supply for gas producing material, a measuring chamber intermediate between it and the main tank, valves controlling the ingress and egress of the material to said chamber, a pipe extending through the upper part of the main tank and having discharge tubes at intervals in its length, arched diverging distributing troughs situated beneath these discharge pipes to receive the flow therefrom, said troughs having corrugated bottoms, substantially as described, and means for producing an explosion within the tank. 8th. In an apparatus of the character described, a main tank having a water inlet and outlet, a source of supply for gas producing material, a measuring chamber with controlling valves intermediate between the supply and the tank, a pipe through which the material from the measuring chamber is delivered through the upper part of the tank, a trough within which said pipe extends, holes made in the pipe at intervals whereby the material may pass into the trough to produce vapor throughout the length of the tank, and means for igniting said vapor. 9th. In an apparatus of the character described, a main tank having a water inlet and outlet, a source of supply for gas producing material, a valve controlled measuring chamber interposed between the two, with means for discharging and directing the gas producing substances and distributing it within the tank, means for igniting the gas, outwardly opening valves in the upper part of the chamber, ond levers connecting therewith, whereby the valves may be simultaneously opened.

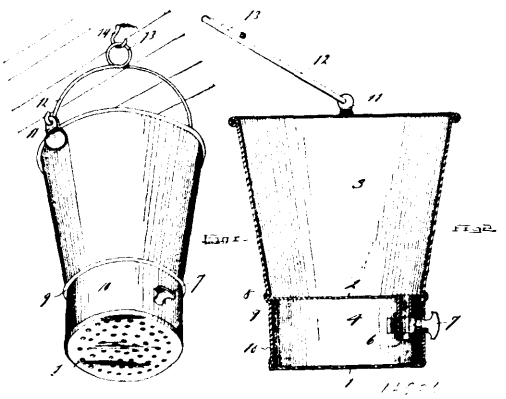
No. 66,925. Water Sprinkler. *(Arrosoir.)*



Telesphore Babin, Houma, Louisiana, U.S.A., 5th April, 1900; 6 years. (Filed 27th February, 1900.)

Claim.—1st. In a water sprinkler, the combination with the conical water receptacle, provided with a perforated nozzle at the upper end of the filing tube connected with the lower end of said receptacle and inclined at an angle corresponding with the shape of said receptacle, and also serving as a handle and an air vent, and the funnel at the upper end of said tube, substantially as described. 2nd. In a water sprinkler, the combination with the central water receptacle having a screw threaded cap at the upper end and the removable perforated nozzle connected therewith, of the inclined filling tube inclined at an angle corresponding with the slope of said receptacle, the short downwardly inclined pipe connected with the lower ends of said tube and receptacle, and the funnel at the upper end of said tube, substantially as described.

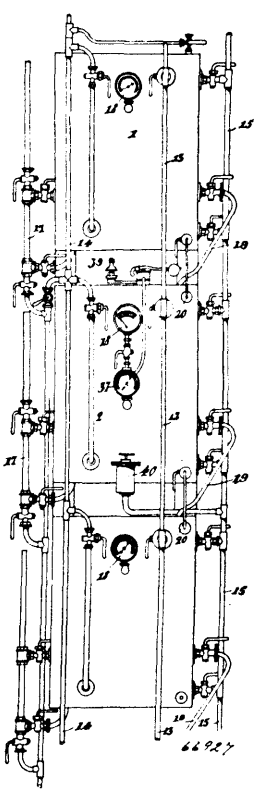
No. 66,926. Shower Bath Bucket. *(Baquet pour douches.)*



William M. Davis, Gatesville, Texas, U.S.A., 5th April, 1900; 6 years. (Filed 27th February, 1900.)

Claim.—A shower bath bucket comprising a main reservoir wall, a supporting bail connected with the upper edge of said wall, a distributing chamber having a perforated bottom and an upstanding side wall terminating in a bead in which the lower edge of the main reservoir wall is secured, a main reservoir floor fitted at its edge in said bead of the distributing reservoir wall, and having a depending tube 5 for conveying the contents of the main reservoir into the distributing chamber, and a valve controlling the communication through said tube and provided, exteriorly of the distributing chamber wall, with a grip or handle by which the valve may be turned, substantially as described.

No. 66,927. Process and Apparatus for the Sterilization of Butter, Etc. *(Procédé et appareil pour la stérilisation du beurre, etc.)*

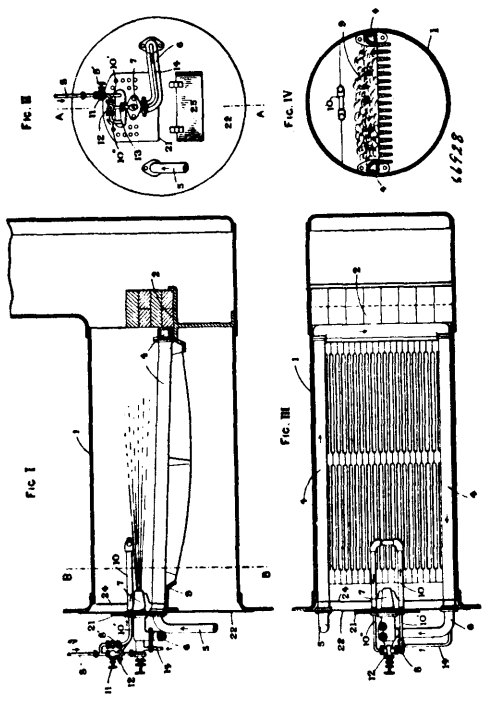


Adonis Dubuisson, Brussels, Belgium, 5th April, 1900; 6 years. (Filed 30th August, 1899.)

Claim.—1st. A process for the sterilization of natural and artificial butter and of all alimentary fats or greases consisting in first melting the butter by means of a water bath at a low temperature in a closed vessel so as to separate the fermentable matter, then heating it again to a high sterilizating temperature in a closed vessel, afterwards again heating it by means of a water bath at the temperature of the fusion of clear butter, the butter so treated being finally

churned with a quantity of sterilized water and then exhausted from the churn and rammed by means of suitable pumps into a refrigerator, or cooling it when leaving the churn by means of ice cold jet of water substantially as described. 2nd. Apparatus for the sterilization of natural and artificial butter and all alimentary fats or greases, said apparatus consisting in the combination of three autoclaves in which the liquefaction, sterilization and cooling of the butter may be successfully effected, an ordinary churn for churning the sterilized butter, and a refrigerating pump for the complete solidification of the butter and its pressing into a suitable mould, all being provided with steam pipes and conduits for water, and with measuring and safety apparatus arranged in a suitable manner, substantially as described. 3rd. Apparatus for the sterilization of natural and artificial butter and all alimentary fats or greases consisting of an autoclave made in two parts of which each part is provided with an interior partition strongly undulated, said pieces being tightly joined together in such a manner that the projecting parts of the undulated portion of one enter the spaces in the other, so as to produce a serpentine or worm path for the butter, said worm being furnished in its lower portion with a receptacle for deposit, the chambers or spaces between the curved partitions and the side walls of the autoclaves serving for the circulation of the steam or water so as to liquefy or cool the butter, substantially as described. 4th. Apparatus for the sterilization of natural and artificial butter and all alimentary fats or greases, consisting in a refrigerating pump having a cylinder in which small pumps are placed and each of them provided with a back stroke valve, and piston actuated simultaneously in their respective cylinders, a water bath for preserving the butter at a suitable temperature, several refrigerating tubes which pass through a tank provided with cross bars and filled with cold water, and a mould for receiving the butter forced through the refrigerating tubes by pumps, substantially as described.

No. 66,928. Liquid Fuel Burning Apparatus.
(Appareil pour bruler les liquids combustibles.)



John Jonathan Kermode, Liverpool, Lancaster, England, 5th April, 1900; 6 years. (Filed 9th February, 1900.)

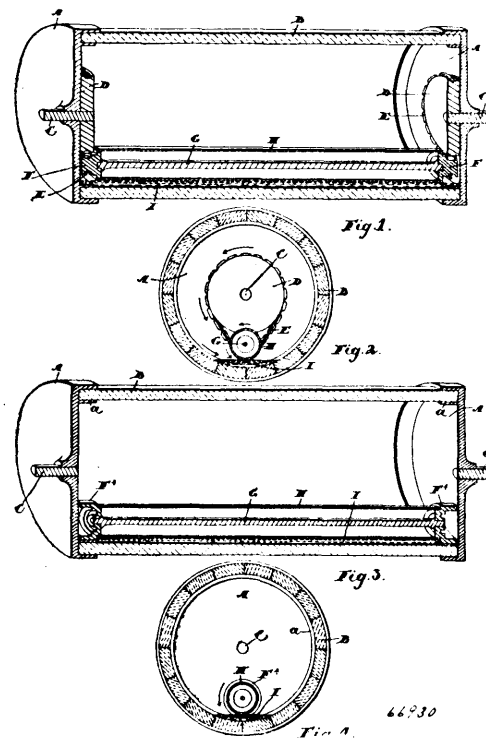
Claim.—1st. The combination with a furnace, of a burner comprising an outer casing secured in the wall thereof, having a nozzle projecting into the furnace, an inner tube forming a mixing passage having its forward end extending to the mouth of said nozzle, an oil and an air inlet leading through said casing back of the rear end of the mixing tube, and an enlarged air inlet leading through said casing in advance of the rear end of said tube communicating with the chamber surrounding said mixing tube, the contracted mouth of said nozzle forming the discharge from said chamber, substantially as described. 2nd. The combination with a furnace, of a burner comprising an outer casing secured in the wall thereof, having a nozzle projecting into the furnace, an inner tube forming a mixing passage having its forward end extending to the mouth of said nozzle, an oil and an air inlet leading through said casing back of the rear end of the mixing tube, and an enlarged air inlet leading through said casing in advance of the rear end of said tube communicating with the chamber surrounding said mixing tube, the mouth of said nozzle forming the discharge from said chamber, valves controlling the inlet of air and gas to the mixing tube, and a valve controlling the discharge from said chamber located directly at the nozzle mouth, substantially as described. 3rd. In a burner for burning liquid fuel, in combination, a casing having an oil inlet, and branch and main air inlets therein, a central tube forming a mixing passage and an annular chamber surrounding the same, an oil valve controlling the oil supply to the central passsge, an inner sliding tube controlling the branch air supply thereto, and an outer sliding tube controlling the discharge from the surrounding chamber at the nozzle of the burner, substantially as described and illustrated. 4th. In a burner for burning liquid fuel, and having a central tube forming an oil passage, in combination with said tube, a helical prolongation of the valve controlling the said passage, adapted to scrape the said tube and forming a deflecter therein, substantially as described and ilustrated.

No. 66,929. Method for Preserving Eggs.
(Méthode de preserver les oeufs.)

Max Marx, Crefeld, German Empire, 5th April, 1900; 6 years. (Filed 17th March, 1899.)

Claim.—1st. Improved preparation for preserving eggs consisting of solution of water glass in combination with solution of powdered alum. 2nd. Improvement in the preservation of eggs, consisting in immersing the eggs in a solution of one-eighth litre of liquid water glass to 5 grammes of powdered alum dissolved in 4 litres of boiling water, mixing the solution, allowing them to cool, immersing the eggs therein, allowing the solution to dry upon the surface of the said eggs, substantially as described. 3rd. As a new commercial product, eggs having their outer surface coated with a dried crust of water glass and alum compound.

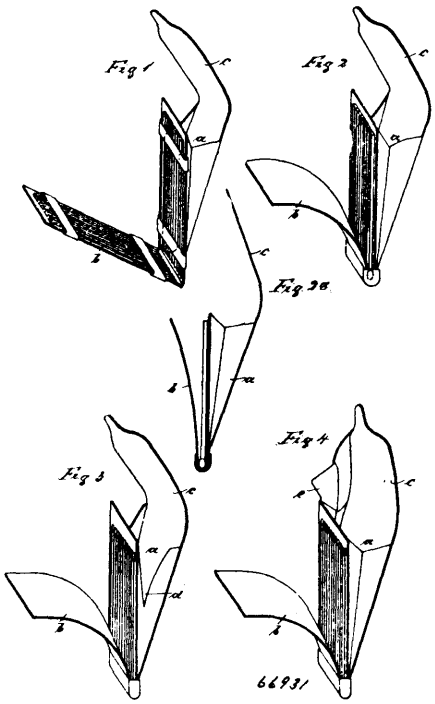
No. 66,930. Amalgamating Barrel. (*Baril à amalgamer.*)



Robert Henry Ahn, Rat Portage, Ontario, Canada, 5th April, 1900; 6 years. (Filed 10th April, 1899.)

Claim.—1st. The combination with the amalgamating barrel suitably driven, of a cylinder extending throughout the length of the barrel near the bottom thereof and having the surface thereof formed of amalgamated copper, as and for the purpose specified. 2nd. The combination with the amalgamating barrel suitably driven, of a cylinder extending throughout the length of the barrel near the bottom thereof, and means for driving such cylinder at a different speed to the surface speed of the interior of the barrel, and thereby produce a rubbing or grinding action between the surface of the inner cylinder and the inner surface of the barrel, as and for the purpose specified. 3rd. The combination with the amalgamating barrel suitably driven, of a cylinder extending throughout the length of the barrel near the interior thereof, and end pinions of a different diameter than the amalgamating cylinder, and means for causing the rotation of such cylinder in the barrel, as and for the purpose specified.

No. 66,931. Match Case. *Boîte à allumettes)*



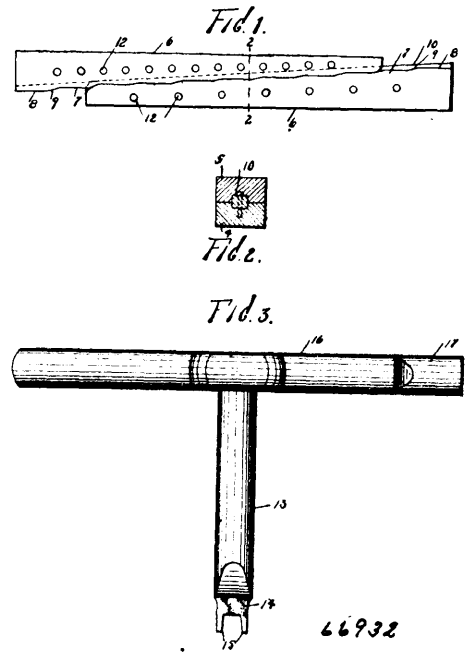
Johannes Köster, Hamburg-on-the-Elbe, German Empire, 5th April, 1900; 6 years. (Filed 23rd November, 1899.)

Claim.—1st. In an improved match case, the combination of two plates between which suitably are clamped matches, with a pocket fixed to the back side of the case adapted to be folded and allowing protection of the burning match against draught, substantially as and for the purpose hereinbefore set forth. 2nd. In an improved match case, the combination of two plates between which are clamped matches, with a pocket fixed to the back side of the case and adapted to be folded, one side wall being provided with a recess allowing an easy introduction of the burning match, substantially as and for the purpose hereinbefore set forth. 3rd. An improved match holder, upon which suitably are clamped matches in combination with a pocket, substantially as and for the purpose hereinbefore set forth.

No. 66,932. Locking Coins for Printers' Galleys.
(Coin pour serrer les formes d'imprimeurs.)

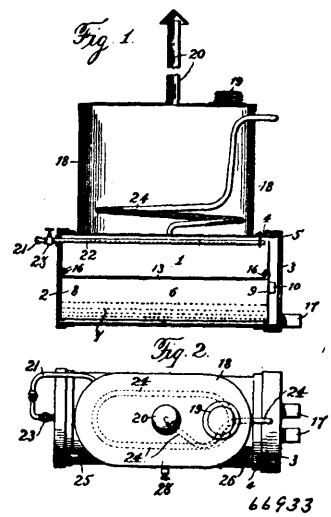
George Assenmacher, Brooklyn, New York, U.S.A., 5th April, 1900; 6 years. (Filed 12th December, 1899.)

Claim.—1st. The herein described device, comprising two oblong blocks which are placed side by side, and the adjacent faces of which are inclined from end to end, and the opposite faces parallel, the inclined faces being provided with separate spaces parallel with the parallel sides, substantially as shown and described. 2nd. The herein described device, comprising two oblong blocks which are placed side by side, and the adjacent faces of which are inclined from end to end, and the opposite faces parallel, the inclined faces being provided with separate spaces parallel with the parallel sides, and connected by inclined shoulders, substantially as shown and described. 3rd. The herein described device, comprising two oblong blocks which are placed side by side, and the adjacent faces of which are inclined from end to end, and the opposite faces parallel, the inclined faces being provided with separate spaces parallel, with the parallel sides, and connected by inclined shoulders, and means for moving said blocks longitudinally, substantially as shown and described. 4th. The herein described device, comprising two oblong blocks which are placed side by side, and the adjacent faces of which are inclined from end to end and the opposite faces parallel, the inclined faces being provided with separate spaces parallel with the parallel sides, and connected by the inclined shoulders, and means for moving said blocks longitudinally, consisting of cavities or recesses formed



in the top faces thereof and adapted to receive the prongs of a key, substantially as shown and described.

No. 66,933. Acetylene Gas Generator.
(Générateur de gaz acétylène.)

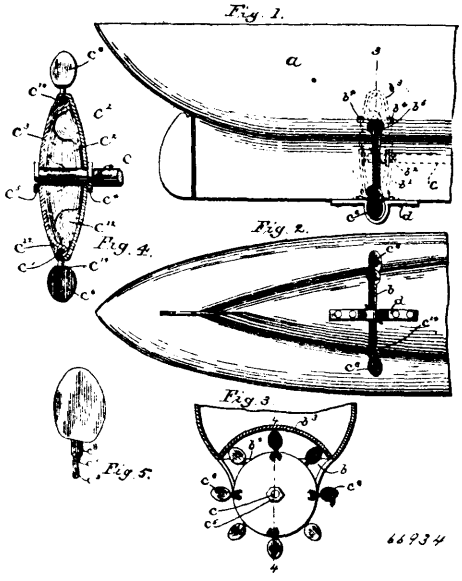


Charles Davis Howell, Stewart Sansom Stiffey, and Maurice Supple Connors, all of Columbus, Ohio, U.S.A., 6th April, 1900; 6 years. (Filed 14th October, 1899.)

Claim.—1st. In an acetylene gas generator, the combination of a horizontally arranged cylindrical carbide box closed at one end by a removable gas tight cap, a semi-cylindrical carbide drawer provided with disc-shaped ends and arranged within the carbide box, a cloth extended over the carbide in said drawer, a spring frame to hold said cloth in place, a water reservoir above the carbide box, a water drip pipe connected with the water reservoir and extended through the upper part of the carbide box, and a gas delivery pipe extended from the box and through the water reservoir, substantially as described. 2nd. In an acetylene gas generator, the combination of a carbide box, a removable gas tight cap for one end of said box, a carbide drawer removably placed within the carbide box, a cloth to cover the carbide in said drawer, a spring frame supported by the ends of the carbide drawer and adapted to bear on said cloth and hold the same in place over the carbide, a water reservoir above the carbide box, a water drip pipe connected with the water reservoir

and extended into the the carbide box, a valve for said pipe, a gas delivery pipe extended from the carbide box into and through the water reservoir, and a ventilator for the water reservoir, substantially as described. 3rd. In an acetylene gas generator, the combination of a cylindrical, horizontally arranged carbide box having a permanent head at one end and provided at its other end with a removable gas tight cap, a semi-cylindrical carbide drawer provided with disc-shaped ends, the longitudinal side edges of said drawer being provided with spring seats, a cloth extended over the carbide in said drawer, a spring frame supported by the ends of said drawer and adapted to bear on said cloth over said spring seats, a water reservoir, a valved drip pipe connected with the water reservoir, and extended from the carbide box and through the water reservoir, substantially as described. 4th. In an acetylene gas generator, the combination of a cylindrical carbide box, a semi-cylindrical carbide drawer placed in said box and provided with disc-shaped ends, a cloth extended over the carbide in said drawer, a spring frame supported by the ends of the carbide box in position to bear upon and hold said cloth in place, a water reservoir, a valved water drip pipe connected with said water reservoir and extended into the carbide box above said carbide drawer, and a gas delivery pipe extended from the carbide box into and through said water reservoir, substantially as described. 5th. In an acetylene gas generator, the combination of a carbide box, a gas tight cap for one end of said box, a cloth to cover the carbide, a spring frame adapted to bear on said cloth and hold the same in place over the carbide, a water reservoir above the carbide box, a valve controlled passage through which said reservoir is adapted to communicate with the carbide box, and a gas delivery pipe extended from the carbide box into and through the water reservoir, substantially as described.

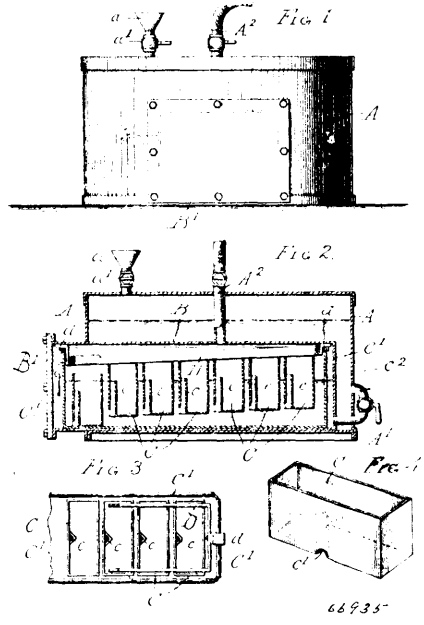
No. 66,934. Propeller. *(Propulseur.)*



Gerolamo Catanzano and Giacomo Catanzano, Naples, Italy, 6th April, 1900; 6 years. (Filed 5th March, 1900.)

Claim.—1st. The combination with the hull of a vessel, having a transverse narrow opening or slit therein adjacent the stern, said slit having enlarged upper ends, of a water-tight housing secured within the vessel at said opening, whereby the entrance of water through said opening into the vessel is prevented, a propeller mounted in said housing and comprising a central hub or frame rotating in said housing and having thin or narrow peripheral edges fitting said narrow slit and extending at its periphery adjacent the said opening or slit, and a plurality of propeller blades extending from the periphery of said hub, said blades having small stems at said hub and passing out through said slit as the propeller rotates and the blades having a size substantially corresponding to the enlarged upper ends of the slit, the blades being external to the vessel excepting when passing therethrough from one enlarged end to the other, substantially as described. 2nd. The combination with the hull of a vessel, having a transverse opening or slit therein adjacent to the stern, of a water-tight housing secured within the vessel at said opening, whereby the entrance of water through said opening into the vessel is prevented, the upper portion of said housing being removable, a propeller mounted in said housing and comprising a central hub or frame rotating in said housing and extending at its periphery adjacent the said opening or slit, and a plurality of propeller blades extending from the periphery of said hub, and passing out through said slit as the propeller rotates, substantially as described. 3rd. The combination with the hull of a vessel, having a transverse narrow opening or slit therein, said slit having enlarged upper ends, of a water-tight housing secured within the vessel at said opening whereby the entrance of water through said opening is prevented, a propeller mounted in said housing and comprising a shell or frame composed of two opposite shallow dish-like plates held together edge to edge and having a plurality of fan-shaped propeller blades removably mounted in said shell at the meeting edges thereof, the blades being external to the vessel except when passing through from one enlarged end of said slit to the other, the said enlargements of the slit being provided to accommodate the fan-shaped blades, substantially as described. 4th. The combination with the hull of a vessel having a transverse narrow opening or slit therein, of a water-tight housing secured within the vessel at said opening whereby the entrance of water through said opening into the vessel is prevented, a propeller mounted in said housing and comprising a shell or frame composed of two opposite shallow dish-like plates held together edge to edge, each plate being provided with a plurality of depressions or pockets adjacent its periphery, said depressions being arranged alternately or in staggered order in said respective plates, and a plurality of propeller blades respectively mounted in said depressions or pockets at the meeting edges of the shell or frame, said blades being external to the vessel excepting when passing through from one enlarged end of the slit to the other, substantially as described.

No. 66,935. Acetylene Generator. *(Générateur acétylène.)*



F. Cortez Wilson, assignee of Elias L. Wilson, both of Chicago, Illinois, U.S.A., 6th April, 1900; 6 years. (Filed 22nd June, 1899.)

Claim.—1st. The combination with a generating chamber, of one or more carbide receptacles adapted to float independently of each other within the chamber, and arranged to fill and sink as additional carbide is demanded to keep up generation. 2nd. The combination with a generating chamber, of a number of separate buoyant carbide receptacles adapted to float within the chamber, means for limiting the relative upward flotation of the receptacle, and inlet apertures in the receptacles arranged to stand at different levels when the receptacles rise in contact with said limited means, whereby the receptacles fill and sink in succession to supply additional carbide as demanded to keep up the generation. 3rd. The combination with a generating chamber and means for supplying water thereto, of a number of separate carbide receptacles adapted to float within the chamber, and means for limiting the upward flotation of said receptacles, said means differing for each receptacle with respect to the uppermost position of its inlet opening, whereby the receptacles fill and sink in succession as the water levels rises, or the means for limiting the upward flotation is depressed. 4th. The combination with a generating chamber, and means for supplying water to said chamber under a head acting in opposition to the pressure of the generated gas, a plurality of separate carbide receptacles adapted to float within the generating chamber, and means for limiting the flotation of said receptacles to different water levels. 5th. The combination in a generating chamber adapted to contain a body of water, of a plurality of separate buoyant carbide receptacles within the chamber, means for limiting the flotation of said receptacles to different relative water levels, and means for raising the relative water level to fill and sink the receptacles in succession. 6th. The combination with a generating chamber, of a plurality of carbide receptacles adapted to float within the chamber, stops for

variously limiting the flotation of said receptacles, and means whereby the levels of the stops and of the water within the generating chamber will vary with reference to each other. 7th. The combination with a generating chamber, of a numbere of carbide receptacles fitting loosely within a pan or drawer adapted to be closed within the chamber, said receptacles being arranged to normally float with a charge of carbid, and means whereby said receptacles fill and sink in succession as the level of the water rises relatively thereto.

No. 66,936. Acetylene Gas Generator.

(Générateur de gaz acétylène.)

FIG. 5.

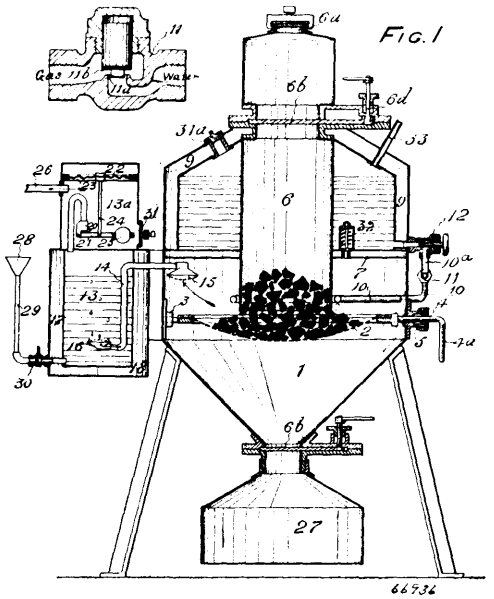


FIG. 1

George Daniel Scott, Vancouver, British Columbia, Canada, 6th April, 1900; 6 years. (Filed 26th July, 1899.)

Claim.—1st. An acetylene gas generator having a body 1 with a depending cone, a carbide support and shaker arranged above the cone, a cylindrical chamber 6 passing through and made integral with the top of the body 1 for the introduction of the carbide, and a water chamber 8 surrounding the chamber 6, having a pipe communicating therefrom to above the carbide, and a check valve in such pipe to regulate the flow of water, in combination with a water bottle 13 within a jacket 17 secured to the side of the body 1, a pipe 14 having a gauze over each end communicating between the generating chamber and the washing bottle, and a pipe 19 communicating between the water bottle and a pressure regulating chamber 13^a, a valve 20 on a lever 21 pivoted to a lug on the mouth of said pipe, and a rod 24 connecting the lever 21 with a flexible diaphragm 22, which closes the upper end of the chamber 13^a, and means for holding said lever 21 down until a certain pressure is generated. 2nd. In combination with a generating chamber having a tray 2 for the support of the carbide therein, and a water chamber 8 arranged around the carbide chamber above the same, and means for delivering water to the carbide, a pipe 14 having a gauze on its opposite ends communicating with a washing bottle 13, a chamber 13^a arranged above the washing bottle and a valve pipe 19 communicating therewith, a flexible diaphragm 22 closing the uppper part of the chamber 13^a, and communicating between the same and a lever 21, whereby the valve will be opened or closed, for the purposes specified. 3rd. In combination with a generating chamber having a depending coned portion, a vessel 27 detachably secured to the lower end of the said cone, and means for closing the aperture in the cone while vessel 27 is detached, substantially as and for the purposes specified. 4th. In a gas generator, the combination with the body or chamber 1, having its lower portion tapered downwards and its upper portion forming a jacket for a water supply chamber, a carbide chamber 6 passing vertically through the centre of the water supply chamber, a closable opening at the top of said carbide chamber, and a gate valve arranged at some distance from the top to form a tight chamber above the body of the machine, a movable tray 2 beneath the lower end of the carbide chamber, which lower end of carbide chamber is open, a pipe 10 for drawing the water from the water supply chamber and distributing it uniformly over the carbide, and means for controlling such supply by the pressure of the gas, substantially as specified. 5th. In a machine of the class described, a chamber or body 1 having a tapering bottom, a diaphragm 7 dividing the upper portion from the lower, a carbide supporting tray 2, with exterior means for shaking the same, a vertically placed closable chamber 6, having an open bottom above the tray passing upwards through the diaphragm and the shell of the chamber 1 and made integral with the same, and means for dividing off the upper part of the carbide chamber from the lower part, a water chamber 8 surrounding the chamber 6, and an air space 9 between the same and the shell of the chamber 1, in combination with a pipe 10 communicating between the water chamber and the generating chamber, said pipe having a coil passing round the open end of the carbide chamber above the carbide, and apertures in such coil for uniform distribution of the water to the carbide, a check valve in the pipe 10 at a point outside of the shell of the chamber 1, and a stop cock 12 for shutting off the water inside of the air chamber 9, substantially as specified. 6th. In an acetylene gas generator, having a chamber 1 divided off into a water compartment, and a generating chamber in combination with a pipe 10 communicating between the water and generating chambers, a check valve 11 in such pipe having a narrow seat 11^a and a vertically movable valve having a rubber disc 11^b designed to engage the narrow seat, substantially as specified.

No. 66,937. Acetylene Gas Generator.

(Générateur de gaz acétylène.)

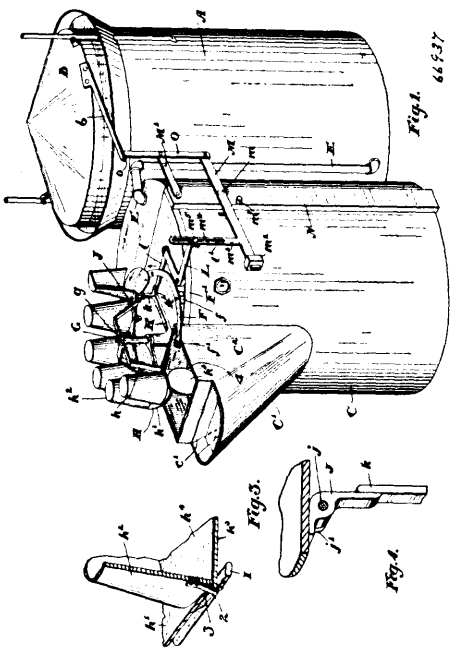


Fig. 1. 66937

Fig. 3.

Fig. 4.

James Walter Falls, Wiarton, Ontario, Canada, 6th April, 1900; 6 years. (Filed 13th May, 1899.)

Claim.—1st. The method of generating acetylene gas, consisting in depositing the carbide into an open mouthed generator filled with water, and having the water in the mouth covered by a layer of suitable oil or composition of oils, as shown and for the purpose specified. 2nd. In an acetylene gas generator, the combination with the generator provided with a double hopper at one side thereof having the bottom of the lower hopper extending down in the form of a chute across the generator, and a suitable orifice at the bottom to remove the waste carbide, of a horizontally arranged wheel suitably journalled and provided with a series of carbide receptacles having hinged bottoms and means operated by the fall of the gasometer for turning the wheel and releasing the bottom of each carbide receptacle in the wheel at predetermined intervals, as and for the purpose specified. 3rd. In an acetylene gas generator, the combination with the generator provided with a double hopper at one side thereof having the bottom of the lower hopper extending down in the form of a chute across the generator, and a suitable orifice at the bottom to remove the waste carbide, of a horizontally arranged wheel suitably journalled and provided with a series of carbide receptacles having hinged bottoms, a circular track having an opening above the hopper containing the oil on the surface, a spring catch to securely hold the carbide receptacles closed, and an arm extending outwardly from the spindle of the wheel with which such spring catches are designed to come in contact to release the hinged bottom, and means operated from the gasometer for intermittently rotating the wheel, as and for the purpose specified. 4th. In an acetylene gas generator, the combination with the generator provided with a double hopper at one side thereof, having the bottom of the lower hopper extending down in the form of a chute across the generator, and a suitable orifice at the bottom to remove the waste carbide, of a horizontally arranged wheel suitably journalled and provided with a series of carbide receptacles having hinged bottoms, a circular track having an opening above the

hopper containing the oil on the surface, a spring catch to securely hold the carbide receptacles closed, and an arm extending outwardly from the spindle of the wheel with which such spring catches are designed to come in contact to release the hinged bottoms, the L-shaped catches pivoted underneath the rim of the wheel radially opposite each carbide receptacle, and means operated from the gasometer for moving the catches and consequently the wheel at a predetermined distance upon the fall of the gasometer, as and for the purpose specified. 5th. In an acetylene gas generator, the combination with the generator provided with a double hopper at one side thereof having the bottom of the lower hopper extending down in the form of a chute across the generator, and a suitable orifice at the bottom to remove the waste carbide, of a horizontally arranged wheel suitably journalled and provided with a series of carbide receptacles having hinged bottoms, a circular track having an opening above the hopper containing the oil on the surface, a spring catch to securely hold the carbide receptacles closed, and an arm extending outwardly from the spindle of the wheel with which such spring catches are designed to come in contact to release the hinged bottoms, the L-shaped catches pivoted underneath the rim of the wheel radially opposite each carbide receptacle, the arm pivoted on the spindle of the wheel provided with an upwardly extending projection designed to come in contact with the L shaped catches, the crank arm pivoted at the top of the generator, the link connecting it to the arm, the weighted lever pivoted at the side of the gasometer and provided with a slot and a pin connection to the end of the crank, the upright bar connected to the end of the lever and to the generator by a link, and the arm extending from the gas holder of the gasometer over the top of the upright bar, as and for the purpose specified.

No. 66,938. Puzzle. (*Jeu de patience.*)

Fig 1.

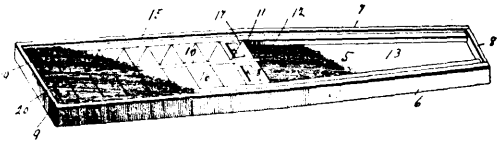
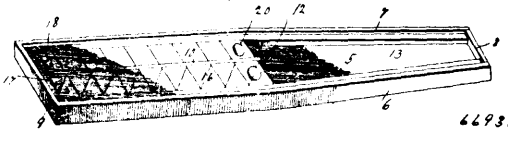


Fig. 2



66938

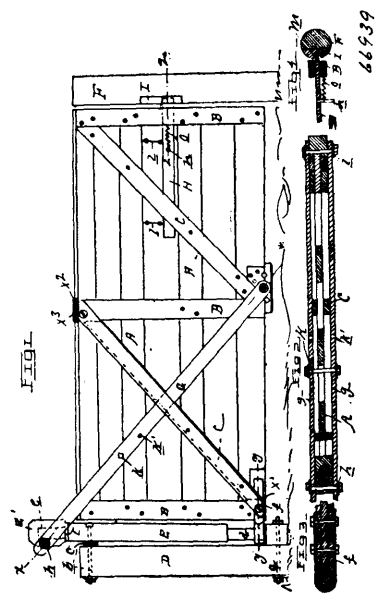
William Hazell, Beloit, Wisconsin, U.S.A., 6th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—1st. A box having raised edges and comprising a major rectangular portion and a minor tapered portion, a central longitudinal partition in the major portion forming two passages, each of which has a width substantially equal to the minor end of the passage formed by the tapered portion of the box, and a plurality of movable objects within the box. 2nd. A puzzle comprising a box having a major rectangular portion provided with a central longitudinal portion resulting in the formation of two passages, said box having also a minor tapered portion inclosing a tapered passage, the width of the minor end of which is equal to the width of each of the first-named passages, and a plurality of rectangular blocks within the box, and movable longitudinally of the passages, said blocks being rotatable in the major portion of the tapered passage only.

No. 66,939. Gate. (*Barrière.*)

Emon Cook, Imlay City, Michigan, U.S.A., 6th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—1st. In a swinging gate, the combination of a gate supporting post composed of a lower member fixedly connected to the gate post, and an upper member pivotally supported on said lower member free to turn on its axis, a gate body having at its inner lower corner a hinge eye engaging with the pintle bearing on the fixed member of the pivot post, a stirrup formed of bars diagonally embracing the body of the gate and having their upper and lower ends pivotally connected to the upper member of the pivot post and to the gate at a point along its lower edge at or near the middle thereof and means for adjusting the position in the stirrup. 2nd. In a swinging gate, the combination of the gate post, a pivot post composed of a lower member fixedly connected to the gate post, and an upper member pivotally supported on said lower member free to turn on its axis, a gate body having at its inner lower corner a hinge eye, a pintle bearing on the fixed member of the pintle post with which said hinge eye engages, and on which it is vertically adjustable, and a stirrup diagonally embracing the body of the gate and having its upper end pivotally secured to the upper member of the pintle post, its lower end being adjustably pivoted to the lower edge of the gate, which is free to tilt thereon. 3rd. In a self closing swinging gate, the combination of a vertical gate post, a pintle post



66939

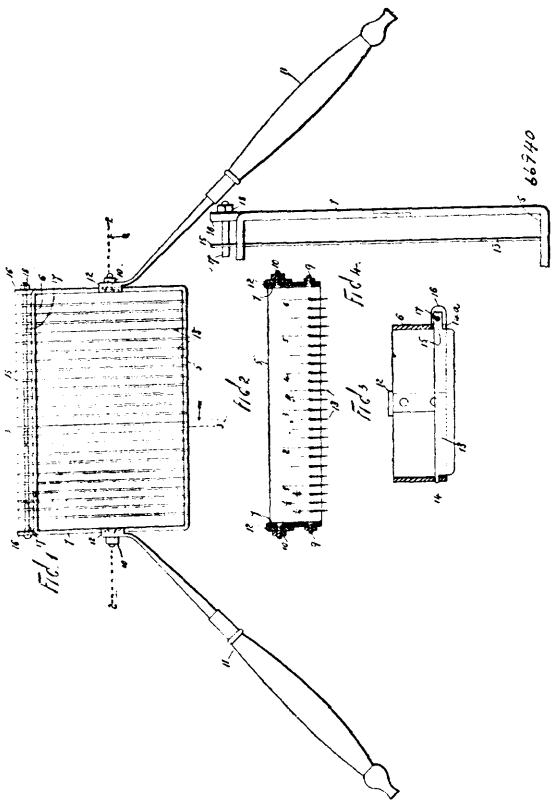
composed of a fixed lower member secured to the gate post with its axis inclined thereto, and an upper member pivotally mounted on said lower member free to turn, an extended pintle bearing on the fixed member of the pintle post, a gate body having a hinge eye at its lower inner corner loosely engaging said pintle bearing, two bars diagonally embracing the gateway upon opposite sides and having their upper ends pivotally secured to the upper member of the pintle post above the top of the gate body, a pivot pin through the lower ends of said bars, a plurality of bearings on the lower edge of the gate body with any one of which said pivot pin may engage to support the gate body. 4th. In a self closing gate, the combination of the vertical gate post, the pivot post having a lower fixed member adjustably secured to the gate post with its axis inclined thereto, a pintle bearing at the foot of said pivot post, a pintle formed at the upper end of said pintle post, an upper member or cap mounted upon the pintle, a gate body having a hinge eye secured to its lower end corner engaging with the pintle bearing on the pivot post, a stirrup composed of two bars diagonally embracing the gate body, a pivot bolt pivotally securing the upper ends of said bars to the cap of the pivot post, a pivot bolt passing through the lower ends of said bars, a series of bearings for said pivot bolt on the lower edge of the gate body at or near its middle, a clamping bolt through the bars adjustably securing the gate body in position in the stirrup, a self closing latch in the gate body, and a keeper for said latch in the gate post. 5th. In a swinging gate, the combination with a gate body and gate post supporting it, of a pintle post E, having its lower end in contact with the gate post and with its upper end inclined away therefrom inwardly, the bolts *a*, *b*, passing through said pintle and gate posts, and adjustably securing the former to the gate post, and the washers *c*, upon the bolt *b*, interposed between the pintle and gate post, said pintle post formed with a pintle bearing *d*, near its foot and a pintle *e*, at its upper end provided with an upper extension or cap pivotally mounted thereon and constituting the hinge member at the upper inner corner of the gate body.

No. 66,940. Device for Cutting Ice Cream, Etc.
(*Appareil pour coupe la crème à la glace.*)

Timothy Francis Crowly, Brooklyn, New York, U.S.A., 6th April, 1900; 6 years. (Filed 20th March, 1899.)

Claim.—1st. A device of the class described, comprising an oblong rectangular frame composed of parallel sides and parallel ends, and a plurality of blades arranged in said frames, said blades being provided at one end with a pintle, and at the opposite end with a flat extension, and the sides of the frame being provided one with holes adapted to receive said pintle, and the other with slots adapted to receive said extension, the ends of the frames being also provided with shoulders or projections at one side, and a rod which is passed therethrough and through said extensions of said blades, substantially as shown and described. 2nd. A device of the class described, comprising an oblong frame provided at its ends with handles, one side of said frame being provided with holes, and the other side with slots, and transverse blades, one end of each of which is

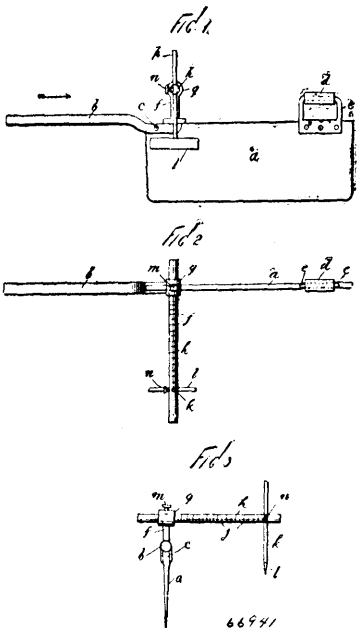
inserted in one of said holes, and the other end of each of which fits in one of said slots, and adjustible devices connected with said frame



for locking said blades in position, substantially as shown and described.

No. 66,941. Cutter for Ice Cream, Etc.

(Couteau pour crème à la glace.)

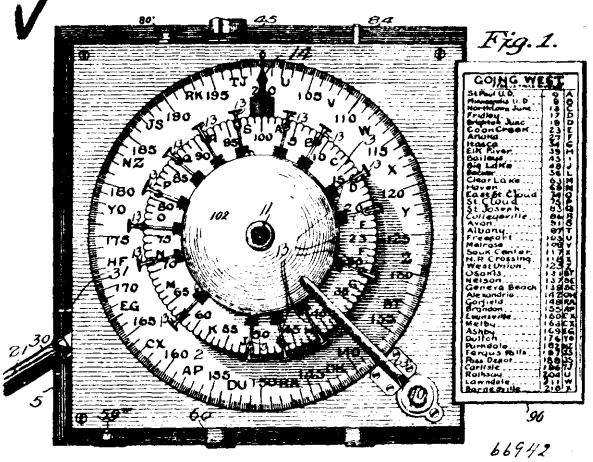


Timothy, Francis Crowley, Brooklyn, New York, U.S.A., 6th April, 1900; 6 years. (Filed 26th May, 1899.)

Claim.—The herein described instrument, comprising a knife blade provided at either end with a handle, an upwardly directed standard connected with the upper edge of said knife blade, a laterally directed graduated rod adjustably connected therewith, a downwardly directed supplemental rod adjustably connected with said rod and provided at one end with a marker, and independent devices for securing said rod and supplemental rod in adjacent position, substantially as shown and described.

No. 66,942. Train Order Signal.

(Signal pour convois de chemin de fer.)



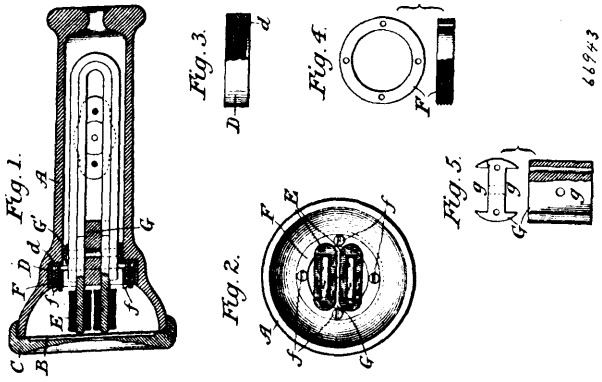
Harry DeWallace, Watertown, New York, U.S.A., 6th April, 1900; 6 years. (Filed 2nd January, 1900.)

Claim.—1st. The combination, with a train order signal device, of means for operating it from the movement of a motor vehicle carrying the same, an alarm device, and means connecting said alarm device with said signal device, said connecting means being arranged to withhold said alarm device from operation so long as said signal device remains operative, and permitting it to operate whenever said signal device becomes inoperative, substantially as described. 2nd. The combination, with a normally driven machine element, of a pressure controlled alarm device, means in connection with said element permitting the constant exercise of pressure upon said alarm device during the movement of said element to control said alarm, and preventing the removal or exercise of pressure upon said device when said element ceases to move, and means for causing the alarm upon the cessation of pressure, substantially as described. 3rd. The combination, with the train order signal, of a disorder alarm, comprising an alarm device, means to release the same, and means, actuated by the operation of said train order signal to prevent the release of the disorder alarm during the operation of said train order signal, substantially as described. 4th. The combination, with a driven machine element, of a source of steam, gas, air or other pressure, with disorder alarm connected therewith, a valve in said connection, and means holding said valve closed during the operation of said element, and, adapted to open said valve to cause the signal, when said element ceases to move, substantially as described. 5th. The combination, with a machine element normally in motion, of a source of steam, gas, air or other pressure, a disorder alarm connected therewith, a valve in said connection, a pressure device, for holding said valve closed, and whereby said valve is opened upon the relief of pressure, and means driven from said member to permit the pulsating or intermittent supply of pressure from said source to said controlling device, and cutting off said supply when said member ceases to move, substantially as described. 6th. The combination, of a machine element normally in motion, with a disorder alarm, the alarm valve controller, a source of pressure, pipes leading therefrom to said alarm and said controller, a valve in the pipe leading to said controller, and means for operating said valve from said element, substantially as described. 7th. The combination, of a normally moving element, with a disorder alarm, an alarm valve controller, a source of pressure, connections therefrom to said alarm and said controller, an auxiliary pressure tank or receiver included in the connection with said controller, and means operated from said element permitting the alternate passage of steam or air to said auxiliary tank and therefrom to said controller and preventing the direct passage of steam, air or other pressure to said controller, substantially as described. 8th. The combination, with a train order signal or like mechanism of a disorder alarm therefor, comprising a a whistle or like device, a whistle valve controller, comprising a cylinder and piston, said cylinder having a relief opening, a source of pressure, and means actuated from said mechanism to intermittently supply steam, air or other pressure to said cylinder during the operation of said mechanism, and automatically cut off such supply upon the stopping of said mechanism to permit said controller to open the whistle valve, substantially as described. 9th. The combination, with a train order signal or like mechanism, of a disorder alarm, comprising a whistle, a source of pressure, a valve controlling the passage of air, steam

or other pressure to said whistle, a controller operated by pressure from said source, the controller valve operated from said mechanism and normally permitting a pulsating supply of air, steam or other pressure from said source to said controller to normally prevent the passage of air, steam or other pressure to said whistle, but allowing said controller to open the passage to the whistle when said mechanism ceases to operate, substantially as described. 10th. In a train order signal, the combination, with a dial and hand, of the driving shaft, the sliding gears upon said shaft, and the speed reducing mechanism arranged between said sliding gears and said hand and adapted to be driven in either direction by said gears, substantially as described. 11th. In a train order signal, the combination, with a dial and hand, of the signal actuating mechanism, the driving shaft positively geared to said signal actuating mechanism and having slidable or changeable gears to drive said hand in either direction, substantially as described. 12th. The train order signal described, having the signal actuating shaft 6, the dial and hand wheel 16, the worm for driving said wheel, the perpendicularly arranged worms from one of which the first mentioned worm is driven, and the driving shaft wherefrom said works and said shaft 6 are rotated, substantially as described. 13th. In a train order signal, the combination, with the signal shaft, of the dial and hand, the driving shaft connected with said signal shaft and said hand through the medium of shifting gears, and the shifter provided with a latch to hold the same in the reversed position, substantially as described. 14th. In a train order signal, the combination, with the dial, the hand, and the actuating mechanism of the signal actuating shaft, the cam thereon, means upon the dial operating with devices upon said shaft to secure said cam thereon, the air or steam break valve and means actuated by said cam for opening said valve, as and for the purpose specified. 15th. In a train order signal, the combination, with the shaft 6, of the dial and hand, said dial provided with a dog or trigger, a jumping disc to be actuated by said dog, a cam upon said shaft adapted to be connected thereto upon the operation of said disc, the air valve, the ratch mechanism connected therewith, and the lever operated by said cam, extending across said dial, for operating said ratchet mechanism, substantially as described. 16th. The combination, in a train order signal, of the signal releasing mechanism, with the signal actuating mechanism, comprising a cam driven at predetermined times upon the action of said releasing mechanism, a lever operated by said cam, and air whistle and brake valve, a ratchet wheel having a predetermined movement, actuated by said lever, and means for releasing and returning said ratchet mechanism and therewith said valve, substantially as described. 17th. A train order signal, comprising predeterminable signal releasing means, in combination with automatic actuated means, and a signal comprising a whistle through which air or steam is permitted to escape upon the operation of said actuating means, substantially as described. 18th. The whistle for train order signals, provided with a byway or relief passage having an adjustable valve, whereby the tone of the whistle may be maintained under different pressures, substantially as described. 19th. A train order signal provided with a disorder alarm, adapted to operate for a predetermined time after each stoppage of the moving parts of the train order signal, substantially as described. 20th. A train order signal, having centrally actuated signal releasing devices, and centrally actuated signal operating devices, parts of which are arranged upon opposite sides of the dial belonging thereto, and the bridge 63[1] extending across the face of the dial and whereon the transmitting device belonging to the signal actuator is arranged, substantially as described. 21st. A train order signal, having a substantially square frame or box, provided with a pocket in one side, and a sliding panel or schedule card slidably pivoted in said pocket, and a spring in said pocket to engage said panel in either of its two positions, substantially as described. 22nd. A train order signal, comprising predeterminable signal actuating means, arranged upon the locomotive or car, a driving shaft therefor, having universal couplings, and a flexible belt, whereby said shaft is driven from the locomotive wheel, substantially as described. 23rd. The combination, with the locomotive, of the signal driving wheel, preferably one of the wheels of said locomotive, the flexible belt driven therefrom, and the telescoping cover or shield for said belt, substantially as described. 24th. The combination, with a train order signal, and means for operating the signal at predetermined points in the travel of the locomotive or train, of an air brake valve, means for operating said valve automatically, after the lapse of a given time or distance from the operation of the signal, and reversible connections to the signal and to the air brake valve, whereby said signal and valve are adapted to operate when the locomotive or train is running in either direction, substantially as described. 25th. In a train order signal, the combination, with a signal to operate automatically at a predetermined time or distance, and whether the locomotive or train is running forward or backwards, of an air brake valve, and means for operating the same automatically after the lapse of a given time from the operation of the signal, substantially as described. 26th. In a train order signal, the combination, with a signal to operate automatically at a predetermined time or point of travel, of an air brake valve, and means for operating the same automatically in either direction of travel of the locomotive or train, after the lapse of a given time from the operation of the signal, substantially as described. 27th. The combination with an engine or train and the running gear thereof, of a train order signal actuated by the escape of air from the train pipe, and means, governed by the travel of the engine or train, permitting escape of air from the train pipe to actuate the signal at any predetermined point on the road, substantially as described. 28th. In a train order signal, a signal device connected with the air brake train pipe, and means governed by travel of the locomotive or train for automatically permitting passage of air from said train pipe to said signal device at any predetermined point on the road, substantially as described. 29th. In a train order signal, a signal device connected with the air brake train pipe, and means governed by the travel of the locomotive or train for opening a valve between said train pipe and said signal device, for the purpose set forth. 30th. In a train order signal, means governed by the travel of the locomotive or train, to permit the escape of air from the air brake train pipe to, first, sound a signal, and then, if said signal is not heeded, to automatically apply the brakes and stop the locomotive or train, substantially as described. 31st. The combination with an air brake train pipe, of a signal connected therewith and automatic means, upon the locomotive or train and governed by the travel thereof for controlling said signal, substantially as described. 32nd. The combination with on air brake train pipe, of a signal connected to said pipe, and means governed by the travel of the locomotive or train, for controlling the passage of air from said pipe to said signal, whereby at a predetermined point on the road said signal will be sounded, and if permitted to continue after the lapse of a given time the pressure in the train pipe will be so reduced as to cause the automatic setting of the brake, for the purpose set forth. 33rd. The combination of the train order signal mechanism operable to cause a signal at a predetermined point on the road, and actuated by the movement of the locomotive or train, but at a relatively lower speed than the movement of the carrying wheels thereof, with a disorder alarm mechanism associated with said train order signal mechanism and having a part driven by a moving element of said train order signal mechanism and preventing the operation of the disorder alarm during the movement of said element, and said disorder alarm mechanism having another part that is rendered effective by the operation of the first mentioned part to cause the alarm when the movement of said element is stopped by accident or otherwise, substantially as described. 34th. The combination of the train order signal mechanism operable to cause a signal at a predetermined point on the road, and actuated by the movement of the locomotive or train, but at a relatively lower speed than the carrying wheels thereof, with a disorder alarm mechanism associated with said train order signal mechanism and having a part driven by a moving element of said train order signal mechanism, said part having a fixed degree of movement therefrom, without regard to the speed of said element to prevent the operation of the disorder alarm during the movement of said element, and said disorder alarm mechanism having another part that is rendered effective by the operation of the first mentioned part to cause the alarm when the movement of said element is stopped by accident or otherwise, substantially as described. 35th. The combination of the train order signal device, adapted for operation by the movement of the locomotive or train whereon the same is arranged, with the disorder alarm device associated therewith by the movement of the locomotive or train and adapted to operate or sound an alarm when and only when said part ceases to be operated as in case of the stopping of the locomotive or train, or the breaking or stopping of the driving parts of said train order signal mechanism, substantially as described. 36th. A train order signal mechanism, comprising predeterminable signal actuating or releasing means, including a dial that is provided with marks indicating mileage, in combination with a straight sided box for said mechanism, provided with a pocket, a sliding panel slidably pivoted in said pocket to hold the schedule card having marks corresponding to the dial marks and a spring in said pocket to engage said panel in either of two positions, substantially as described. 37th. The combination with the normally driven machine element upon a motor vehicle, of a disorder alarm device automatically operable to cause an alarm but the action of which is positively counteracted by the action of said machine element, so long as the said element is in motion, substantially as described. 38th. The normally driven machine element, in combination with the disorder alarm wherein movement is induced by said element while the same is in operation, but insufficiently to cause the operation of the alarm, and means independent of said element inducing a complete operation of the alarm device only upon the stoppage of said element, and capable of such operation at other times, substantially as described. 39th. The normally driven machine element, in combination with a disorder alarm device tending to a given movement, said element operating to limit the movement of the alarm device to an intermittent movement insufficient to cause the alarm operation thereof while the said element is in motion, but when stopped permitting the operation of said device, substantially as described. 40th. The machine element, in combination with a disorder alarm, the movement of the element limiting the alarm device to a partial, though constant movement tending to, but insufficient to cause the alarm to operate, substantially as described. 41st. The disorder alarm and its actuating mechanism, in combination, with a normally driven machine element, the operation of which causes the constant exercise of independent energy to effect the withholding of said disorder alarm during the operation of said element, and the cessation of operation of said element permitting the waste or loss

of said energy to cause the alarm to be given, substantially as described. 42nd. The combination, of a normally moving machine element with a disorder alarm device driven by said element, and having a fixed degree or measure movement at all speeds, and automatically operable to cause the alarm only upon the substantial or total stopping of said element, substantially as described. 43rd. A disorder alarm device in combination with a normally driven machine element mechanically connected therewith, through the medium of a pneumatically controlled automatic connection that prevents the operation of said device except upon the stoppage of said element, substantially as described. 44th. The combination, with the element of a motor vehicle, of the mechanical disorder alarm device automatically operable and having a part or mechanism normally driven by said element, and permitting an exertion of pneumatic force to prevent the automatic operation of said alarm device during the operation of said element, substantially as described. 45th. The combination upon a motor vehicle, of a normally driven machine element, with a disorder alarm device comprising an alarm device proper, a controlling member also movable and a member driven by said element with relation to said controlling member, said controlling member being secured against alarm movement by the operation of the movable part, and being operable only upon the stopping of said normally movable part, substantially as described. 46th. A normally moving machine element, in combination with a source of power, a mechanical disorder alarm device dependent for its action upon said source of power, and said element when in operation mechanically interrupting the action of the power upon said device preventing operation thereof, and mechanical means causing the operation of said alarm when said element stops, substantially as described. 47th. A disorder or movement alarm device capable of a major movement and a minor movement, the latter incapable of causing the alarm, the first to cause the alarm and the second to keep the device in working order, and a machine element normally in motion, communicating said minor movement to said device and preventing the major movement of said device, and means accomplishing said major movement when said element stops, substantially as described. 48th. A normally driven machine element, in combination, with a disorder alarm mechanism normally operated by said element to keep said mechanism in working order, and said mechanism having a greater movement than is permitted by said element while it is in motion, and operable to cause said motion when released or freed from the limiting operation of said element, substantially as described. 49th. The combination of a machine element, upon a motor vehicle, with an alarm device connected therewith and operated at all speeds of said element, to withhold the alarm and positively actuated upon the stopping of said element to cause said alarm, substantially as described. 50th. The combination, of a machine element normally in motion upon a motor vehicle and moved thereby, with the disorder alarm device connected with said element, and adapted for operation thereby, and while operated thereby to operatively withhold the alarm, and automatically operable to positive cause the alarm only when said element ceases to move, substantially as described. 51st. The combination, with a normally moving machine element upon a motor vehicle, of a disorder alarm device negatively actuated by the operation of said element, to prevent an alarm, and positively actuated only upon the stopping of said element, to cause an alarm, substantially as described.

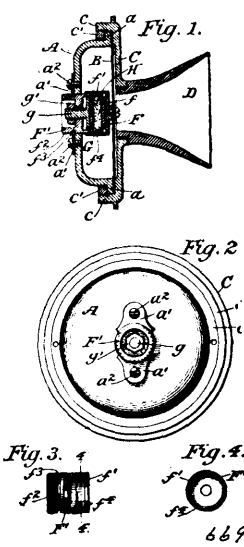
No. 66,943. Telephone Receiver. *(Récepteur téléphonique.)*



The International Telephone and Switchboard Manufacturing Co., Plainfield, New Jersey, and Albert K. Keller, Manhattan, New York, State of New York, U.S.A., 6th April, 1900; 6 years. (Filed 9th December, 1899.)

Claim.—1st. In a telephone receiver, the combination with a shell or casing and a magnet, of a sleeve or thimble secured to the shell or casing and encircling the central chamber, said sleeve or thimble being interiorly threaded and having an inwardly turned flange, a carrier for the magnet exteriorly threaded to engage said sleeve or thimble and set screws carried by said carrier and arranged to impinge against said flange, substantially as shown and described. 2nd. In a telephone receiver, the combination with a shell or casing and a magnet, of a sleeve or thimble secured to the shell or casing and encircling the central chamber, said sleeve or thimble being interiorly threaded and having an inwardly turned flange, a carrier for the magnet exteriorly threaded to engage said sleeve or thimble, set screws in said carrier arranged to impigne against said flange, and a clamping block or holder for the magnet slotted to receive the arms of the magnet and formed to fit tightly within said carrier, substantially as shown and described.

No. 66,944. Telephone Transmitter.
(Transmetteur téléphonique.)



The International Telephone and Switchboard Manufacturing Company, Plainfield, New Jersey, assignee of Albert K. Keller, Manhattan, New York City, New York, U.S.A., 6th April, 1900; 6 years. (Filed 9th December, 1899.)

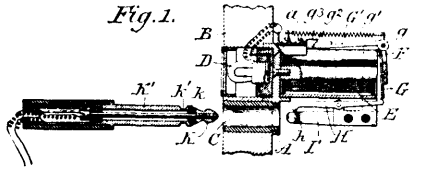
Claim.—1st. In a telephone transmitter, a rotatable carbon holder having in its interior an eccentric recess, whereby the carbon is thoroughly loosened up by the rotation of the holder, substantially as shown and described. 2nd. In a telephone transmitter, the combination with a casing of a carbon holder extended through said casing and having a circumferential groove, and clips secured to the casing and engaging said groove, substantially as shown and described. 3rd. In a telephone transmitter, the combination with a casing, of a carbon holder extended through said casing and removably secured thereto, and an electrode adjustably mounted in said holder, substantially as shown and described. 4th. In a telephone transmitter, the combination with a casing and a diaphragm, of a cup shaped holder secured to one of said parts and having a boss extended inwardly from its end wall, and a second holder secured to the other of said parts and projecting within the first named cup and overlapping said boss, substantially as shown and described.

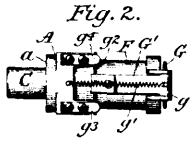
No. 66,945. Telephone. *(Téléphone.)*

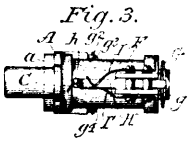
The International Telephone and Switchboard Manufacturing Company, Plainfield, New Jersey, assignee of Albert K. Keller, Manhattan, New York, U.S.A., 6th April, 1900; 6 years. (Filed 9th December, 1899.)

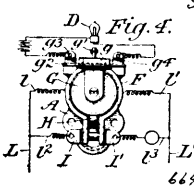
Claim.—1st. In a telephone annunciator, the combination with an electro magnet, a signaling device controlled by the armature of said magnet, and line connections to said magnet, of a latch to engage said armature and control its movements, said latch standing in the path of movement of the operator's plug and operated during the insertion of the plug and again during the withdrawal of the plug, substantially as shown and described. 2nd. In a telephone annunciator, the combination with an electro magnet, a local circuit including a signal and controlled by the armature of said magnet, and line connections to said magnet, of a latch to engage said armature and control its movements, said latch standing in the path of movement of the operator's plug and operated during the insertion of the plug and again during the withdrawal of the plug. 3rd. In a telephone annunciator, the combination with an electro magnet, a normally open circuit including a signal and closed by the armature of said magnet when the latter is attracted, and line connections to said magnet, of a latch to engage said armature and retain it in its forward position, said latch standing in the path of movement of the operator's plug and operated during the insertion of the plug and again during the withdrawal of the plug to release said armature.

4th. The combination with a telephone circuit, a magnet included in said circuit, a normally open circuit including the lamp and closed





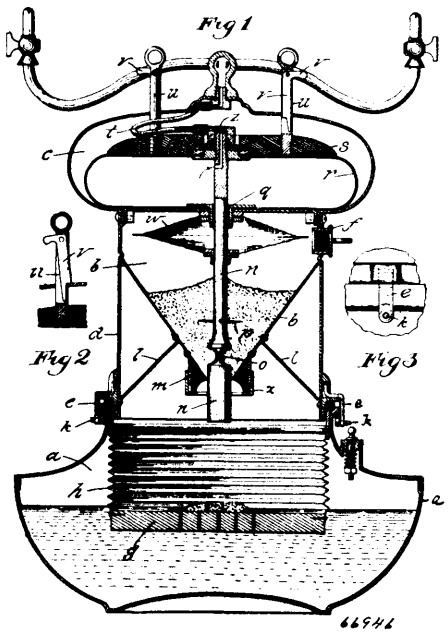




by the forward movement of the armature of said magnet, a latch to engage said armature and hold it in its forward position, said latch having a toe to co-operate with a shoulder on the operator's plug, whereby soid latch is operated to release the armature and open said local circuit when the plug is inserted and again when the plug is withdrawn.

No. 66,946. Acetylene Gas Generator.

(Générateur de gaz acétylène.)

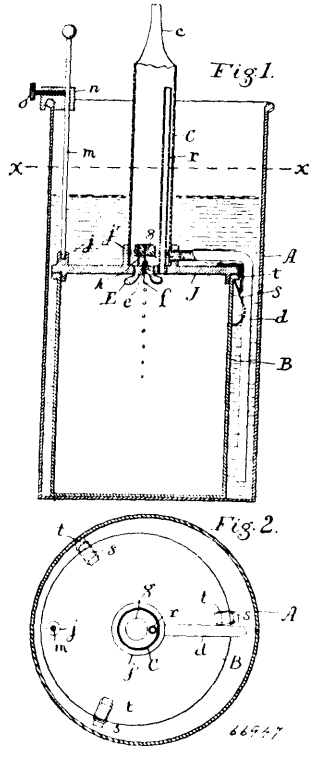


Charles W. Beck, Chicago, Illinois, U.S.A., 6th April, 1900; 6 years. (Filed 10th January, 1900.)

Claim.—1st. A feed mechanism for feeding pulverulent carbide and the like, comprising s carbide receptacle provided with a discharge orifice, the periphery of which is formed of yielding material, and a feed plunger having a portion of uniform cross sectional area adapted to form liquid tight closure for said orifice and arranged to reciprocate through the latter. 2nd. A feed mechanism for feeding pulverulent carbide and the like, comprising a carbide receptacle provided with a discharge orifice, the periphery of which is formed of yieldable material which is impervious to liquid, a feed plunger having a portion of substantially uniform cross sectional area adapted to form a liquid tight closure for said orifice, arranged to reciprocate through the latter, and means operable by pressure of gas generated, arranged to automatically reciprocate the feed plunger. 3rd. In a feed mechanism for feeding pulverulent carbide and the like, the combination of a carbide receptable provided with a discharge orifice formed through a body of a relatively soft rubber, a feed plunger having a portion of uniform cross sectional area adapted to fit closely within and reciprocate through said orifice, and means operable by pressure of gas generated, arranged to automatically reciprocate the feed plunger. 4th. In a feed mechanism for feeding pulverulent carbide and the like, the combination of a carbide receptacle provided with a discharge orifice formed through a body of relatively soft rubber, the portions of the rubber forming the periphery of said orifice being brought to a blunt edge, a feeding plunger having a portion of uniform cross sectional area adapted to fit closely within and reciprocate through said orifice, and means operable by pressure of gas generated, arranged to automatically reciprocate the feed plunger. 5th. In a feed mechanism for feeding pulverulent carbide and the like, the combination of a carbide receptacle provided with a discharge orifice formed through a body of relatively soft rubber, the portion of the rubber forming the periphery of said orifice being brought to a blunt edge, means for compressing the body of the rubber so as to reduce the diameter of the orifice therethrough, a feed plunger having a portion of uniform cross sectional area adapted to fit closely within and reciprocate through said orifice, and means operable by the pressure of the generated gas, arranged to automatically reciprocate the feed plunger. 6th. In a feed mechnism for feeding pulverulent carbide and the like, the combination of a hopper provided with a funnel shaped bottom, the lower end portion of which is formed of a body of rubber provided at its centre with a discharge orifice, an inverted cup-shaped receptacle upon the lower end of the hopper within which the body of rubber is seated, and a clamping ring threaded upon said receptacle and provided with an inturned flange adapted to hold the rubber compressed within the receptacle. 7th. In a feed mechanism for feeding pulverulent carbide and the like, the combination of a carbide receptacle provided with a discharge orifice, the periphery of which is formed of yielding material, a feed plunger having a portion of uniform cross sectional area adapted to fit within and occupy the discharge orifice, and means for positively arresting the dissent of the plunger when the latter is in position for its portion above the recess to register with the discharge orifice. 8th. In a feed mechanism for feeding pulverulent carbide and the like, the combination of a carbide receptacle provided with a discharge orifice, a feed plunger having a portion of uniform cross sectional area adapted to fit within and reciprocate through the orifice, a second portion of uniform cross sectional form with the first mentioned portion located at a distance above the latter, an intervening annular recess or reduced part, an expansible gas receptacle adapted to receive the gas generated from carbide fed through the discharge orifice, and means operatively connecting the feed plunger with the expansible gas receptacle, whereby the lower portion of the plunger will be caused to operate as a feed valve in the normal inflation and deflation of the expansible receptacle, and the upper portion of the feed plunger will be caused to act as a stopper for discharge orifice when the expansible receptacle is deflated to its greatest extent. 9th. In an acetylene gas generator, the combination of a carbide receptacle and an expansible gas receptacle, an inlet arranged to admit gas to the carbide receptacle, and an outlet to permit the gas to escape therefrom into the expansible gas receptacle, a reciprocatory part extending through the wall separating the carbide and gas receptacle, and means for preventing the passage of pulverulent carbide from the carbide receptacle to the gas receptacle while permitting free passage of the gas and free movement of the reciprocatory part, consisting of a flexible gas filtering bag through which the said reciprocatory part is arranged to extend, one side of the bag being secured closely around and embracing the reciprocatory part, and the opposite side being secured to the wall separating the carbide and gas receptacles around the passage therein through which the reciprocatory parts extend. 10th. The combination in an acetylene gas generator, of the lower saturating chamber, intermediate carbide containing chamber, and upper chamber containing a flexible gas bag supported from below, a weight arranged to rest upon said gas bag, a stem connected with a feed plunger controlling the flow of carbide into the saturating chamber, said stem extending upwardly through the gas bag and connected with the superposed weight, an inlet admitting the generated gas to the gas bag, and an outlet leading from the gas bag to the burner, substantially as described. 11th. In an acetylene gas generator, the combination with a feed mechanism and an expansible gas receptacle with which the feed mechanism is connected, of one or more guide rods connected with the feed mechanism and arranged to extend upwardly through the generator casing, and means for locking said guide rods in position to hold the feed mechanism closed, comprising a pivoted pawl normally seated within a recess in the guide rod but adapted to be swung out to engage the generator casing, substantially as described. 12th. The combination to form an acetylene generator, of the three part generator casing, comprising the front or base forming the saturating chamber, the intermediate section detachably secured to the front and within which is arranged the carbide hopper and feed plunger, the upper section detachably connected with the intermediate section and having in its lower end the horizontal partition, the gas bag arranged to rest upon said partition, the weight arranged to rest upon the gas bag, the stem connected with the feed plunger and arranged to extend upwardly through the gas bag and connected with the weight resting thereon, and the flexible gas pipe connected at one end with the burner nozzle and arranged to communi-

cate at its other end with the gas bag, substantially as described. 13th. In an acetylene generator, the combination of a saturating chamber, a carbide receptacle provided with a downwardly converging bottom mounted above said chamber, means for intermittently discharging controlled quantities of carbide into the saturating chamber, an annular gas chamber interposed between the carbide receptable and saturating chamber around the communicating passage between them, and reduced inlet and outlet apertures admitting gas from the saturating chamber to the annular gas chamber and thence to the carbide receptacle, substantially as described.

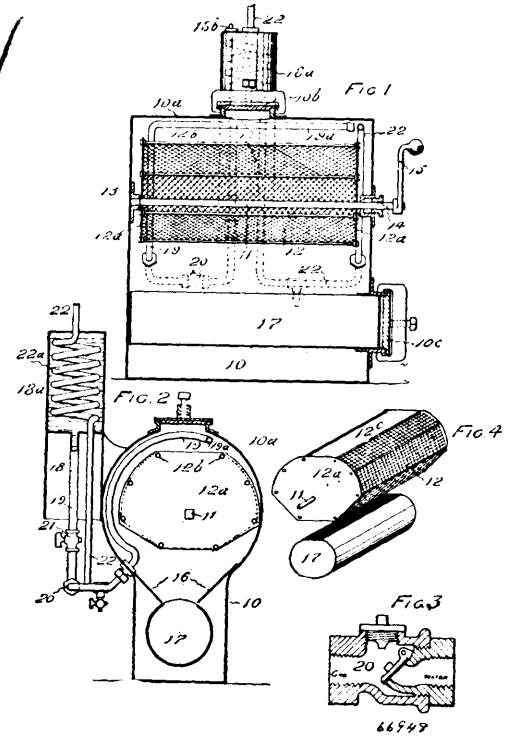
No. 66,947. Gas Generator. *(Générateur de gaz acétylène.)*



George B. Gates, Portland, Maine, U.S.A., 6th April, 1900; 6 years. (Filed 21st December, 1899.)

Claim.—1st. In a gas generating apparatus, the combination of a generating chamber, a liquid reservoir, a communicating duct or tube between said reservoir and the generating chamber, the communication between the tube and the generating chamber being a constricted opening of less area than the cross area of the said tube or duct, and a gas tube or duct connecting the generating chamber with the liquid tube or duct above the opening into the generating chamber, substantially as described. 2nd. In a gas generating apparatus, the combination of a generating chamber, a liquid reservoir, a communicating duct or tube between said reservoir and the generating chamber, the communication between the tube and the generating chamber being a capilliary opening, and a gas tube or duct connecting the generating chamber with the liquid tube or duct above the opening into the generating chamber, substantially as described. 3rd. In a gas generating apparatus, the combination of a water reservoir, a gas generating chamber contained therein, a water supply opening into said generating chamber, a water supply duct connecting with said opening and extending downward below the level thereof, and means for adjusting the vertical position of said chamber within the reservoir, substantially as described. 4th. In a gas generating apparatus, the combination of a water reservoir open to atmospheric pressure, a gas generating chamber contained therein, a water supply opening in said generating chamber connecting with the interior of the water reservoir, and means for adjusting the vertical position of said opening with reference to the water level within the reservoir, substantially as described. 5th. In a gas generating or other like apparatus, the combination of a capilliary opening through which the water is fed, a water duct or chamber above said opening through which the water passes to said opening, a wire passing loosely through said opening and adapted to have a limited longitudinal motion therein, and a float on the upper end of said wire and within said duct or chamber.

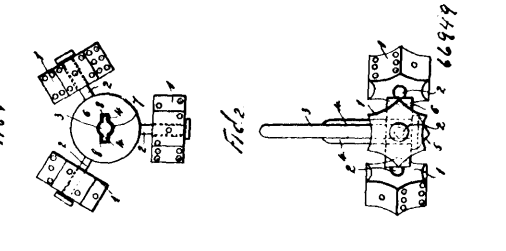
No. 66,948. Gas Generator. *(Générateur à gaz.)*



Samuel Jewell and Adanirom Judson Burlingham, both of Vancouver, British Columbia, Canada, 6th April, 1900; 6 years. (Filed 18th May, 1899.)

Claim.—1st. In a gas generator, having a generating chamber as specified, a carbide cage 12, movably arranged in said chamber, in combination with a pipe 19, communicating between the generating chamber above the carbide cage, and a water supply at a level above its outlet in said generating chamber, and a check valve 20, arranged at a lower plane in said pipe, for the purposes specified. 2nd. In a gas generator, having a closable chamber, the upper part of which is of cylindrical form placed horizontally, and a water chamber fixed thereto above the same, a carbide cage movably suspended within the upper part of the chamber, a water pipe 19, communicating between the water chamber and above the carbide cage, and a check valve in said pipe for automatically controlling the flow of the water. 3rd. In a gas generator having a vessel, and closable apertures therein for inserting the carbide and removing the residue, in combination with a water supply arranged at a plane above the closable vessel, a movable carbide cage in the closable vessel placed lengthwise, a residue holder beneath, a pipe communicating between the bottom of the water chamber and a plane above the carbide cage, a check valve in such pipe to automatically regulate the flow of water to the carbide, and a gas pipe communicating with the closable vessel and passing spirally through the water chamber. 4th. In a machine of the class described, having a closable vessel for the generation of gas, a carbide cage movably suspended therein, said cage consisting of end pieces 12*a*, connected by rods 12*b*, and covered with metal netting except at the top.

No. 66,949. Game Device. *(Appareil de jeu.)*



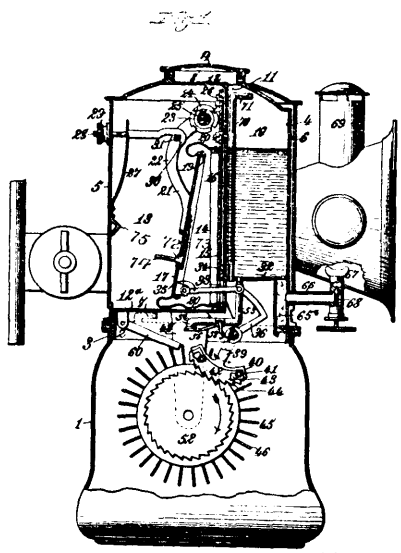
August Kuck and William Frederick Scholze, both of Brooklyn, New York, U.S.A., 9th April, 1900; 6 years. (Filed 18th September, 1899.)

Claim.—1st. A game device, consisting of dice blocks mounted on a pin or rod, and having a plurality of faces on which are spots,

figures or characters, said blocks being adapted to turn on the pin or rod by frictional contact of its periphery with a bearing surface. 2nd. A game device, consisting of a plurality of blocks loosely mounted on a pin or rod and adapted to turn thereon, said blocks being each provided with a plurality of faces on which are spots, figures or characters. 3rd. A game device, consisting of a dice block loosely mounted on a pin or rod and provided with a plurality of concave faces on which are spots, figures or characters, said blocks being adapted to turn on said pin or rod by frictional contact with its periphery. 4th. A game device, consisting of a central pin having a head at its lower end, a block mounted on said pin and provided with radial pins, and dice blocks mounted on said radial pins and provided with a plurality of faces. 5th. A game device, comprising a table, a rod, one end of which is pivotally supported on said table, and a plurality of dice blocks loosely mounted upon and adapted to turn on the rod, said blocks being provided with a plurality of faces, and being adapted to frictional contact with the table.

No. 66,950. Acetylene Gas Generating Lamp.

(Lampe à générateur de gaz acétylène.)



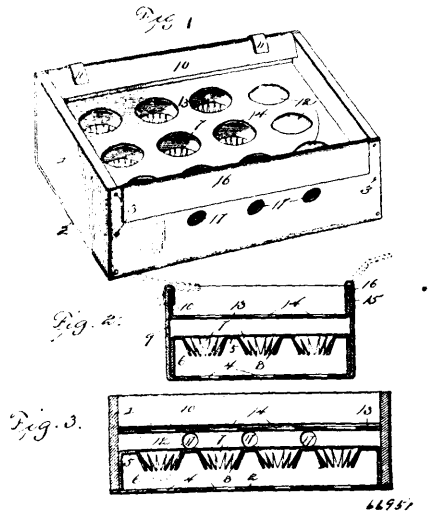
66950

William Otterbein Nelson, Louis Stedman Houghton, Baltimore, Maryland, and Edward Miller, Meriden, Connecticut, U.S.A., 9th April, 1900; 6 years. (Filed 30th November, 1899.)

Claim.—1st. In a portable acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side, of a revoluble carbide cage having a ratchet wheel a rock shaft, a water feed controlled thereby, a lever arm secured thereto, and carrying ratchet mechanism engaging said ratchet wheel, an arm secured to said rock shaft and an arm pivotally connected to said movable side, said arms being pivotally connected, the combination operating to revolve the carbide cage as the gas holder is inflated, as set forth. 2nd. In an acetylene lamp, the combination with a gas holder having a movable member, of a revoluble carbide cage having a ratchet wheel, a rock shaft, a lever arm secured thereto and carrying a curved plate having studs, a curved ratchet plate having apertures therein, each of said apertures having upwardly inclined bottoms, said ratchet plate being supported on said studs through said apertures and its teeth engaging the teeth of said ratchet wheel, an arm secured to said rock shaft and an arm pivotally connected to said movable member, said arms being pivotally connected, the combination operating as set forth. 3rd. In a portable acetylene lamp, the combination with a gas holder having a movable member, of a revoluble carbide cage having a ratchet wheel, a rock shaft, a lever arm secured thereto and carrying ratchet mechanism engaging said ratchet wheel, an arm secured to said rock shaft, an arm pivotally connected to said movable member, said arms being pivotally connected, and the mechanism operating to revolve the carbide cage as the holder is filled, a water compartment, a pipe leading therefrom having a drop orifice, and means operated by said rock shaft to open and close said drop orifice in the movements of the gas holder, substantially as described. 4th. In a portable acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side, of a revoluble carbide cage having a ratchet wheel, ratchet mechanism co-operating therewith, a rock shaft, arms operatively connecting said rock shaft with said ratchet mechanism and and movable side, respectively, the mechanism being adapted to revolve the carbide cage as the gas holder is inflated, a water compartment, a pipe leading therefrom having a drop orifice, and means operated by said rock shaft to open and close said drop orifice in the movements of the gas holder, substantially as described. 6th. In an acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side, of a revoluble carbide cage having a ratchet wheel, ratchet mechanism co-operating therewith, a rock shaft having a recess, arms operatively connecting said rock shaft with said ratchet mechanism and movable side, respectively, a water compartment, a pipe leading therefrom having a drop orifice, and a shaft revolubly mounted in the lamp and having arms, one of said arms carrying a stopper for said orifice and the other of said arms bearing at its end against said shaft, the combination operating as set forth. 6th. In an acetylene lamp, the combination with a flexible or collapsible gas holder, having a movable side, of a carbide container, a water compartment, a pipe leading therefrom having a drop orifice above said container, a rock shaft operatively connected with said movable side and having a fixed collar provided with a slot and a peripheral recess and a loose collar provided with a similar recess and a pin working in said slot, and arms on said rock shaft, one of said arms carrying a stopper for said drop orifice and the other of said arms having at its end a projection adapted to enter said recesses, the combination operating as set forth. 7th. In an acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side, of a carbide container, a water compartment, a pipe leading therefrom having a drop orifice above said container, a rock shaft operatively connected with said movable side and having a fixed collar provided with a slot an a peripheral recess and a loose collar provided with a similar but smaller recess and a pin working in said slot, and arms on said rock shaft, one of said arms carrying a stopper for said drop orifice and the other of said arms having at its end a projection adapted to enter said recess, the combination operating as set forth. 8th. In an acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side of a pivotally mounted, spring controlled arm secured at its outer end to said side and tending normally to collapse said gas holder, a revoluble carbide cage, and means operatively connecting said movable side and said cage whereby to revolve said cage in the movement in one direction of said side, substantially as described. 9th. In an acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side of a pivotally mounted, spring controlled arm secured at its outer end to said side and tending normally to collapse said gas holder, means as described for regulating the tension of the spring of said arm, a revoluble carbide cage, and means operatively connecting said movable side and said cage whereby to revolve said cage in the movement in one direction of said side, substantially as described. 10th. In an acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side, of a pivotally mounted, spring controlled arm secured at its outer end to said side and tending normally to collapse said gas holder, a water compartment, a pipe leading therefrom having a drop orifice, a revoluble carbide cage, means operated by said movable side to revolve the carbide cage in the movement in one direction of said side and to open the drop orifice in the movement in the opposite direction of said side, and means for holding the gas holder in a distended position whereby to maintain the drop orifice closed, substantially as described. 11th. In an acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side, of a pivotally mounted, spring controlled arm secured at its outer end to said side and tending normally to collapse said gas holder, a water compartment, a pipe leading therefrom having a drop orifice, a revoluble carbide cage, means operated by said movable side to revolve the carbide cage in the movement in one direction of said side and to open the drop orifice in the movement in the opposite direction of said side, and means for holding the gas holder in a distended position whereby to maintain the drop orifice closed, comprising a bar carried by said arm, a spring pressed rod having at one end a hook engaging said bar having its opposite end screw-threaded and projecting through the casing of the lamp and an adjusting nut engaging said screw-threaded end, substantially as described. 12th. In an acetylene lamp, the combination with the bottom affording a generating chamber and having a carbide cage revolubly mounted therein and the top removably secured to the bottom and having two compartments, one of said compartments affording a water chamber, a collapsible gas holder mounted in the other compartment and having a movable side, an opening formed in the partition between the two compartments and affording communication between the generating chamber and the gas holder, an arm carried by said movable side and working through said opening, a pipe leading from said water chamber and having a drop orifice and means operated by said arm the movements of said movable side to revolve said cage and open and close said orifice, substantially as described. 13th. In an acetylene lamp, the combination with flexible or collapsible gas holder having a movable side, of a generating chamber communicating therewith, a carbide container, a water compartment, a pipe leading therefrom having a drop orifice above said container, means operated by said movable side for opening and closing said drop orifice, a burner communicating with said generating chamber and a valve for said burner, the combination operating as set forth. 14th. In an acetylene lamp, the combination with a flexible or collapsible gas holder having a movable side, of a generating chamber communicating therewith and having a revoluble carbide cage mounted therein, a water compartment, a pipe leading therefrom having a drop orifice above said cage, means operated by said movable side for opening and closing said drop orifice and for revolving said cage, a burner communicating with said generating chamber, and a valve

for said burner, the combination operating as set forth. 15th. In carbide cage having its wires indented for the purpose, in operation, of preventing water from which may fall upon the wires, from running along on them, substantially as described. 16th. A carbide cage having its wires bent or indented on opposite sides of a central point, substantially as described.

No. 66,951. Egg Case. *(Boîte à oeufs.)*



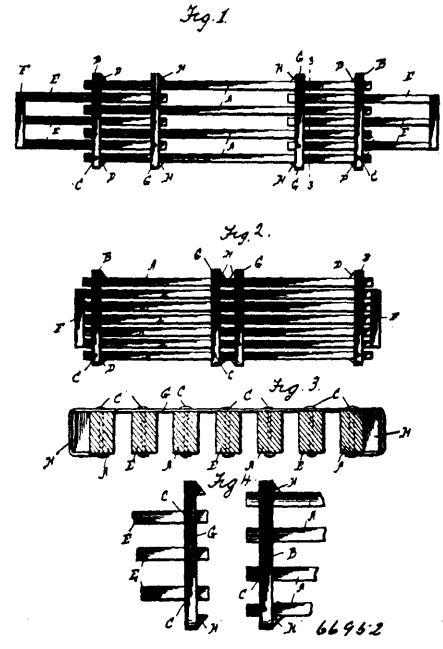
John M. Sharp, Delavan, Wisconsin, U.S.A., 9th April, 1900; 6 years. (Filed 24th March, 1899.)

Claim.—1st. An egg case, having a horizontal egg supporting partition hinged to one side of the case, and foldable to the exterior thereof, and a cover, fitting snugly the tops of the eggs, hinged to the opposite side of the case and also foldable to the exterior thereof, substantially as shown and described. 2nd. An egg case, having an egg supporting partition, a cover hinged to one side of the case, and fitting snugly the tops of the eggs, and a shoulder provided upon the inner face of the opposite side of the case, fitting against the outer side of the free edge of the cover and holding the latter in place, substantially as shown and described. 3rd. An egg case, having the upper edge of one side bent inwardly and forming a shoulder, an egg supporting partition located within the interior of the case, and a cover, located between the partition and the shoulder, fitting snugly the tops of the eggs, and hinged to one side of the case opposite the shoulder, the free edge of the cover engaging the shoulder, when said cover is in use, substantially as shown and described. 4th. An egg case, having one edge bent inwardly and forming a shoulder, spring clips embracing the bent edge, an egg supporeing partition, and a cover hinged to one side of the case, and having its free edge engaging the shoulder, in the closed position of the cover, substantially as shown and described. 5th. An egg case, having one edge bent inwardly and forming a shoulder, an egg supporting partition, a flexible strip having one edge secured to the partition, and its opposite edge secured to the adjacent side of the case, between the latter and the folded edge thereof, a hinged cover fitting snugly the eggs, and having its free edge engaging the shoulder, in the closed position of the cover, substantially as shown and described. 6th. An egg case, comprising opposite wooden end pieces, a bottom and opposite sides formed from a single sheet of cardboard or the like fastened to the edges of the end pieces, the upper edge of one side being bent inwardly to form a shoulder, an egg supporting partition formed of the same material as the bottom and sides of the case, having its peripheral edges bent downwardly forming foot flanges resting upon the bottom of the case, a flexible strip secured to one flange of the partition and to the adjacent side of the case contiguous to the bent portion thereof, a cover fitting snugly the tops of the eggs, and having one edge bent upwardly opposite the bent portion of the side of the case, and a flexible strip embracing the bent portion of the cover and the adjacent side of the case, and forming a hinge for the cover, the free edge of the latter engaging the underside of the bent portion of the case, when the cover is in use, substantially as shown and described.

No. 66,952. Extensible Platform.
(Plate-forme extensible.)

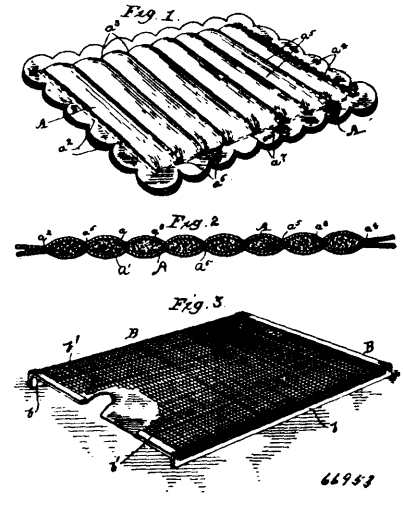
John Burwell, Shelby, Iowa, U.S.A., 9th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—1st. In a device of the kind described, the main strips, connected at their ends by means of suitable bands or straps, the brace blocks, the supplemental strips, connected at their outer ends by means of suitable end pieces and at their inner ends by means of suitable straps or bands, and the brace blocks, also carried by the said straps or bands, substantially as shown and described. 2nd. In a device of the kind described, the combination with the main



strips, of the connecting bands or straps carried down and under the side strips, the supplemental strips sliding between the main strips and connected at their ends by means of bands or straps, carried also down and under, and the brace blocks secured by the said straps and adapted to operate substantially as shown and described.

No. 66,953. Warming Pad. *(Chaufferette.)*



Lyman Cheney, Nashua, New Hampshire, U.S.A., 9th April, 1900; 6 years. (Filed 22nd March, 1900.)

Claim.—A warming pad for medicinal purposes, comprising in its construction a suitable soft covering which is formed with a plurality of independent pockets, which are filled with soapstone in a dry powdered state, the whole pad being flat and flexible throughout so that it can be conveniently applied to or around the afflicted part, substantially as described.

No. 66,954. Bottle Cork Fastening.
(Attache pour bouchons de bouteilles.)

Silas W. Bradley, Cornwall, Ontario, Canada, 9th April, 1900; 6 years. (Filed 23rd March, 1900.)

Claim.—1st. A bottle cork fastener, comprising a strip of metal A, having the ends crimped and at or near the middle of its length a laterally projecting lip or lug, the free end adapted to be engaged by a slotted tool, so that by twisting the tool, a strip will be torn

from the fastener the width of the lip to liberate the cork, as set forth. 2nd. A bottle cork fastening of C cruciform shape, cut

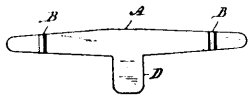


Fig. 1.

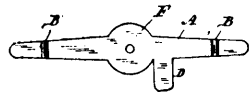


Fig. 2.

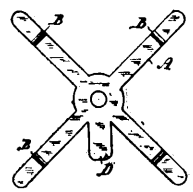


Fig. 3.

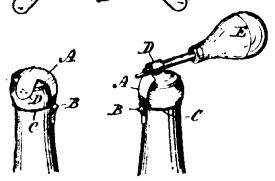


Fig. 4. Fig. 5. 66954

from a sheet of metal, having the ends crimped and a lip at the intersection adapted to be engaged by a slotted tool to tear a strip from the fastening, the width of said lip when the tool is twisted, as set forth. 3rd. A bottle cork fastener, comprising a piece of ductile sheet metal having a lip adapted to be rolled by a tool, said lip then tearing out a strip of metal crosswise of the fastener, and perforated at the centre, as set forth.

No. 66,955. Piston Rod Lubricator.

(Graisseur de tige de piston.)

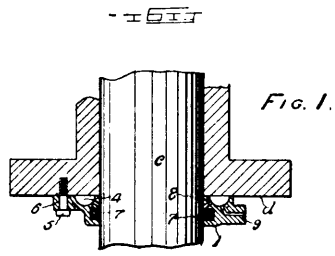


Fig. 1.

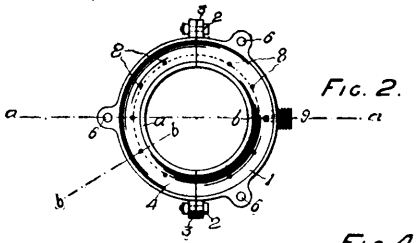


Fig. 2.

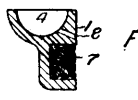


Fig. 3.

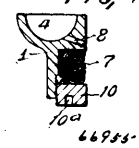


Fig. 4

66955

Thomas Benson, Vancouver, British Columbia, Canada, 9th April, 1900; 6 years. (Filed 23rd March, 1900.)

Claim.—1st. In a piston lubricator, the combination with the gland *d*, a ring 1 arranged in two parts *a* and *b*, having an annular groove therearound forming a reservoir for the oil on its face that connects with the face of the gland *d*, a groove 7 around the inner periphery for holding the packing material, communications at intervals between the groove 4 and the inner periphery of the ring and means for supplying the oil continuously to the groove 4, as specified. 2nd. In a piston rod lubricator, a ring 1 designed to be secured to the outer end of the gland, said ring being in two or more sections and made to embrace the piston rod, a groove 4 forming a reservoir for the oil adjacent to the outer end of the gland, a groove 7 for oil retaining material around the inner periphery of the ring 1, apertures communicating between the groove 4 and the inner periphery of the ring, and an aperture for supplying the oil to the groove 4, and means for securing the ring 1 to the gland, as specified.

No. 66,956. Oscillating Gravity Motors, or Engines.

(Moteur, ou machine oscillatoires.)

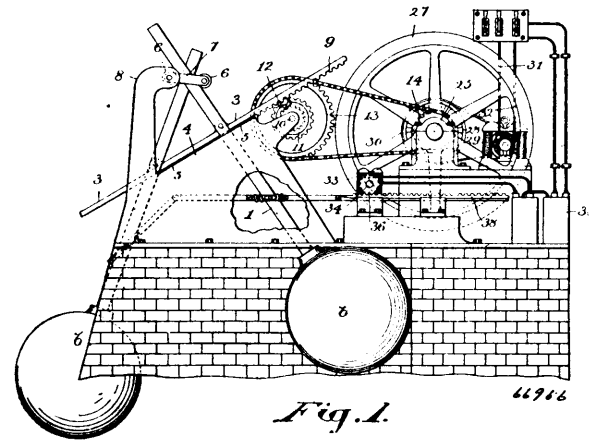


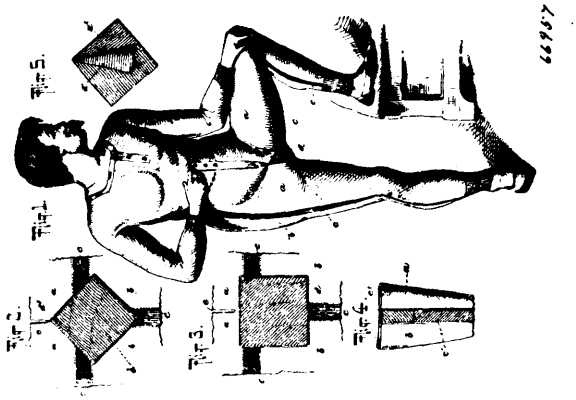
Fig. 1.

66956

William Levant Harvey, Gosford, Pennsylvania, U.S.A., 9th April, 1900; 6 years. (Filed 7th February, 1900.)

Claim.—1st. In a mechanical motor or engine, the combination of two oppositely oscillating levers, the lower ends of which are heavily weighted, pitmen connected to the upper parts of the said levers, an inclined plane upon which each pitman is adapted to reciprocate, a shaft and suitable gearing between the pitman and the shaft to convert the reciprocating motion of the former into a rotary motion of the latter, substantially as and for the purpose specified. 2nd. In a mechanical motor or engine, the combination of two oppositely oscillating levers, the lower ends of which are heavily weighted, pitmen connected to the upper parts of said levers, an inclined plane upon which each pitman is adapted to reciprocate, a shaft and suitable gearing between the pitman and shaft to convert the reciprocating motion of the former into a rotary motion of the latter, a dynamo, suitable gearing connecting the aforesaid shaft with the shaft of the dynamo, an electric motor and gearing adapted to oscillate the said oscillating levers, and an electric connection to convey current from the dynamo to the motor, substantially as and for the purpose specified. 3rd. In a mechanical motor or engine, the combination of two oppositely oscillating levers, the lower ends of which are provided with heavy weights, links pivoted upon the frame and each provided with rollers engaging each side of a lever, pitmen connected to the upper parts of the said levers, an inclined plane upon which each pitman is adapted to reciprocate, a shaft and suitable gearing between the pitmen and the shaft to convert the reciprocating motion of the former into a rotary motion of the latter, substantially as and for the purpose specified. 4th. In a mechanical motor or engine, the combination of two oppositely oscillating levers, the lower ends of which are heavily weighted, pitmen connected to the upper parts of the said levers, an inclined plane upon which each pitman is adapted to reciprocate, a shaft and suitable gearing between the pitmen and the shaft to convert the reciprocating motion of the former into a rotary motion of the latter, a dynamo, suitable gearing connecting connecting the aforesaid shaft with the shaft of the dynamo, an electric motor, a rack connected to each lever towards its lower end, gearing adapted to convert the rotary motion of the motor shaft into a reciprocating motion of the said racks, an electric connection to convey current from the dynamo to the motor, substantially as and for the purpose specified. 5th. In a mechanical motor or engine, the combination of an oscillating lever, the lower end of which is heavily weighted and the upper end so held as to permit the lever to swing, a pitman journalled on the said lever near its upper end, a shaft, means for converting the reciprocating movement of the pitman into a rotary motion of the shaft, and means connected to the lower portions of said lever for oscillating the same, substantially as and for the purpose specified.

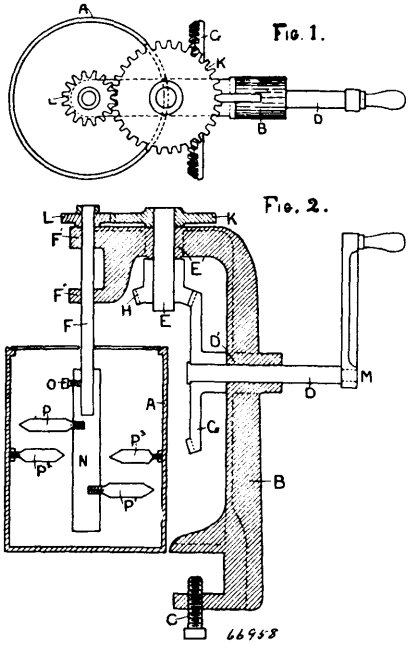
No. 66,957. Garment. (*Vêtement.*)



Jeremiah Anderson Scriven, Manhattan, New York, U.S.A., 9th April, 1900; 6 years. (Filed 23rd March, 1900.)

Claim.—1st. In an undergarment, the combination with inelastic sections of an elastic member connecting adjacent sections comprising a plurality of layers of elastic fabric, the wales or ribs of one fabric running at an angle to the wales or ribs of the other layer of fabric and so set in the garment as to receive the laterals and longitudinal strains on the garment along lines running diagonally to the wales, ribs or threads of both layers, substantially as described and for the purposes set forth.

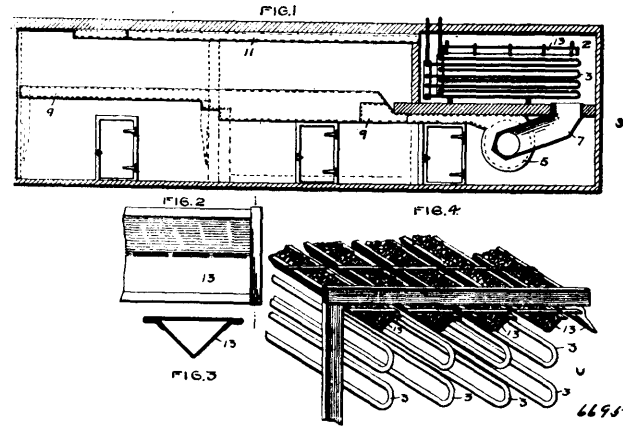
No. 66,958. Churn. (*Baratte.*)



Robert Wood, Palmerston, Frontenac, Ontario, Canada, 9th April, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. In a churn, the combination of the receptacle A, with the shaft D, to which power may be applied, the geared wheels G, H, K and L, the shaft F, the removable head N, and the dashers P^1, P^2, P^3 and P, substantially as and for purposes hereinbefore set forth. 2nd. In a churn, the combination, with a receptacle for the liquid, of a shaft to which power is to be applied, a gearing connecting the same with and imparting more rapid motion to a vertical shaft within the churn, a removable head attachable to this shaft, removable paddles or dashers attachable to this head in horizontal positions, and other removable paddles or dashers attachable in like directions to the sides of the receptacle of the churn, substantially as and for the purposes hereinbefore set forth. 3rd. In a churn, the combination, with a receptacle for the liquid, of a shaft to which power is to be applied, a gearing connecting the same with and imparting more rapid motion to a vertical shaft within the receptacle of the churn, a removable head attachable to this shaft, and removable paddles or dashers attachable to this head in horizontal positions, substantially as and for the purposes hereinbefore set forth.

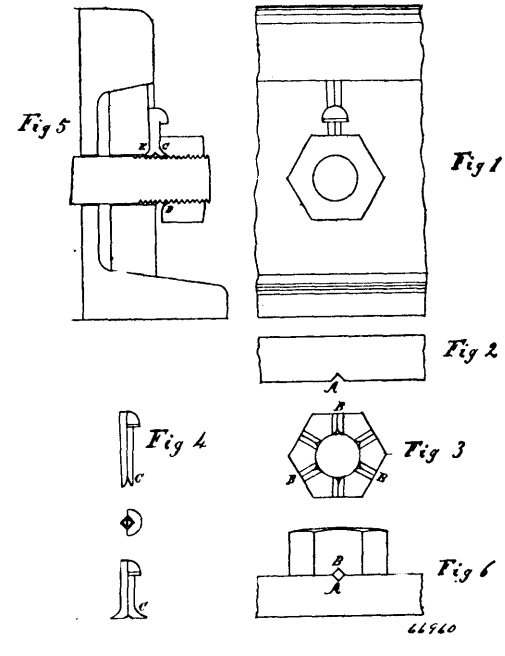
No. 66,959. Process of Preventing the Formation of Frost upon Refrigerating Surface. (*Procédé pour empêcher la formation de la gelée sur les surfaces réfrigerantes.*)



Madison Cooper, Minneapolis, Minnesota, U.S.A., 9th April, 1900; 6 years. (Filed 16th January, 1900.)

Claim.—1st. The process of preventing the formation of frost upon refrigerating surfaces, which consists in placing chloride of calcium, or other deliquescent salt in solid form, in proximity to said surfaces, permitting the moisture of the atmosphere to unite with said deliquescent salt to form a brine and allowing said brine to flow over said refrigerating surfaces. 2nd. The process of keeping refrigerating surfaces free from frost and purifying and drying the air which is to be cooled by said surfaces, which consists of placing chloride of calcium, or other deliquescent salt in solid form in proximity to said surfaces and passing air over said surfaces while they are coated with brine formed by the uniting of the moisture of th atmosphere with said salt. 3rd. The process of dehydrating and purifying air, which consists in placing chloride of calcium or other deliquescent salt in a solid form in proximity to pipes or other surfaces passing air over said pipes and other surfaces, and over said salt and permitting the brine formed by the union of the moisture of the air with said salt to flow over said pipes or surfaces.

No. 66,960. Nut Lock. (*Arrêtc-écrou.*)

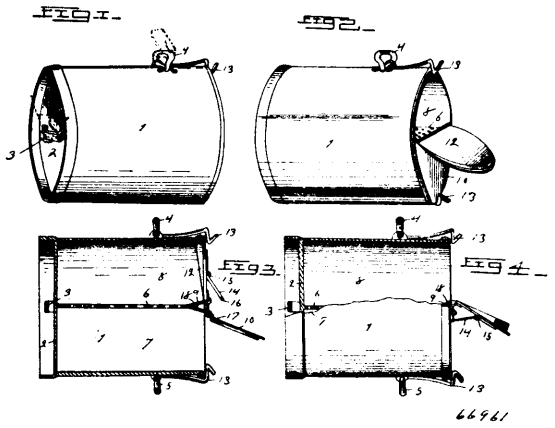


Charles C. Parker, Renfrew, Ontario, Canada, 9th April, 1900; 6 years. (Filed 12th March, 1900.)

Claim.—1st. the combination of the groove A in fig. 2 with the groove B in fig. 3, making the hole A, B in fig. 6. 2nd. The key

as in fig. 4, being placed in the above described hole A, B, and driven home, spreads, as in fig. 5, and prevents the nut from moving or coming off, as set forth.

No. 66,961. Ash Sifter. *(Crible à cendre.)*



Harry Ebert, Frederick, Maryland, U.S.A., 9th April, 1900; 6 years. (Filed 21st March, 1900.)

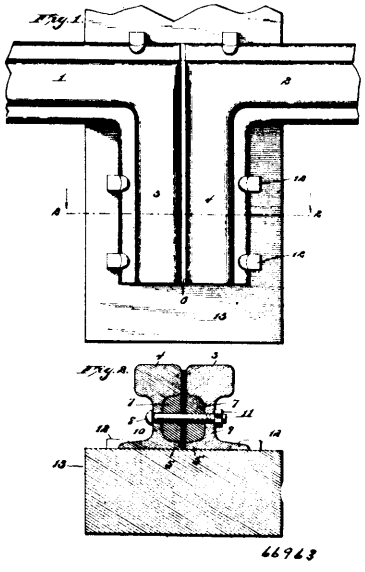
Claim.—1st. In combination, the cylindrical vessel 1 formed with a recessed bottom 2 and grip handle 3 fixed to said bottom, the longitudinal foraminous partition 6, and the independent covers 10 and 12 hinged to the opposite sides of the upper end of said partition, substantially as shown and described. 2nd. In combination, the cylindrical vessel 1, recessed bottom 2 and handle 3, the foraminous partition 6 and the V-shaped rib 9 connecting the upper end of said partition and the contiguous walls of the vessel, the covers 10, 12 hinged to the opposite edges of said rib, and the angle bracket 14 fulcrumed to the cover 12, substantially as shown and described.

No. 66,962. Process of Preserving Meat.
(Procédé pour préserver la viande.)

Siegfried Gironcoli, Kragenfurt, Carinthia, Austrian Empire, 9th April, 1900; 6 years. (Filed 19th February, 1900.)

Claim.—A process for preserving meat, the said process consisting in first subjecting the pieces of meat to the action of gaseous formaldehyde, afterwards cooking the meat, whereby the formaldehyde is expelled, placing the cooked meat into receptacles which are filled up with hot fat, and finally sealing the said receptacles, substantially as described.

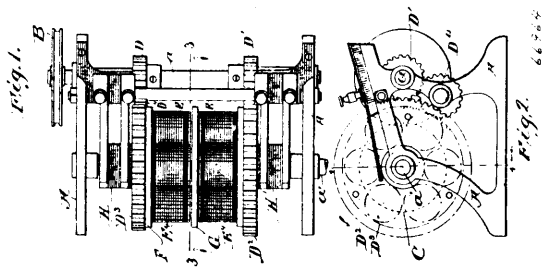
No. 66,963. Rail Joint. *(Joint de Rail.)*



Andrew Gray Michie, Brainerd, Minnesota, U.S.A., 9th April, 1900; 6 years. (Filed 22nd March, 1900.)

Claim.—1st. A rail joint, comprising rail sections turned outward at right angles and having a portion of the base of each section cut away, and means for securing said arms or braces together. 2nd. A rail joint, comprising rail sections having their ends bent outward at right angles and cut away at the base, in combination with a yielding washer between the arms or braces, and means for securing the arms together. 3rd. The combination with two rail sections having their ends bent outward at right angles and cut away at the base, a washer interposed between the bent ends of the rails, filling strips between the washer and rail sections, bolts for securing the rail ends together, and spikes for securing them to a railway tie.

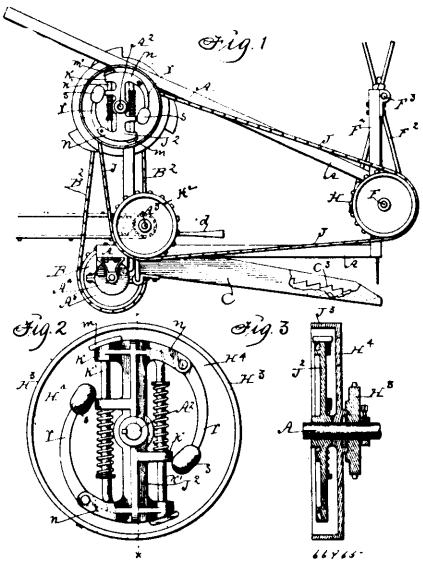
No. 66,964. Magnetic Actuator. *(Energie magnetique.)*



Daniel Bacon, Frederick Lemont Metcalf and Arthur Josiah Raymond, all of New York City, New York, U.S.A., 10th April, 1900; 6 years. (Filed 12th March, 1900.)

Claim.—A magnetic actuator adapted to be interposed between the source of power and the mechanism to be driven thereby and comprising magnets normally revolving in opposite directions and transmitting to the apparatus to be actuated thereby power applied thereto, means for revolving said magnets simultaneously in opposite directions, an armature placed in the field of said magnets, a shaft keyed to said armature and normally revolving therewith in opposite directions, as determined by the magnet or magnets energized at the time, and a rotating transmitting device mounted on said shaft, substantially as set forth.

No. 66,965. Band Cutter and Feeder.
(Coupe-hart et alimentateur.)



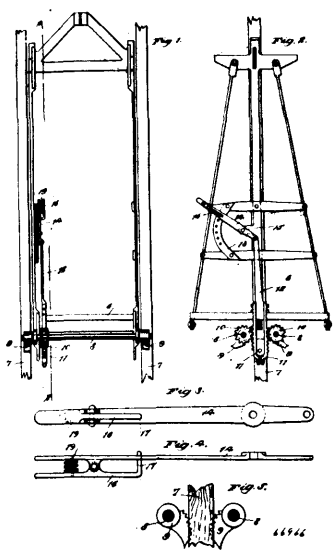
Wood Brothers' Steel Self-Feeder Company, assignee of Franz J. Wood, all of Des Moines, Iowa, U.S.A., 10th April, 1900; 6 years. (Filed 16th March, 1900.)

Claim.—1st. In a band cutter and feeder, a rotatable shaft having cams on the end portions of the shaft and inclined relative to the shaft, bearers fixed to the cross bar of the frame, fingers pivotally connected to said bearers, pinions fixed to the fingers, a rack placed on the pinions, rollers journalled to the end portions of the rack to engage the cams on the shaft, arranged and combined to operate in the manner set forth for the purposes stated. 2nd. In a band cutter and feeder, a rotatable shaft having cams on the end portions of the shaft and inclined relative to the shaft, bearers fixed to the cross bar of the frame, fingers pivotally connected with said bearers, pinions fixed to the fingers, a rack placed on the pinions, rollers journalled to the end portions of the rack to engage the cams on the shaft, a crank at the centre of said shaft and a reciprocating feed

board connected with said crank, arranged and combined to operate in the manner set forth, for the purposes stated. 3rd. In a band cutter and feeder, a rotatable shaft having cams on the end portions of the shaft and inclined relative to the shaft; bearers fixed to the cross bar of the frame, fingers pivotally connected with said bearers, pinions fixed to the fingers, a rack placed on the pinions, rollers journalled to the end portions of the rack to engage the cams on the shaft, a crank at the centre of said shaft and a reciprocating feed board connected with said crank and means for rotating said shaft when connected with the cylinder of a threshing machine, all arranged and combined to operate in the manner set forth, and for the purpose stated. 4th. In a band cutter and feeder, a rotatable shaft having a fixed wheel at one end adapted to be connected with the cylinder shaft of a thresher, a disc having a rim at its circumference and a sprocket wheel connected with the disc jointly and loosely mounted on the other end of the shaft, a frame fixed to the end of the shaft for carrying brakes to engage the rim of the disc, spring actuated brake bars slidably connected with the frame, brake shoes on the outer ends of the brake bars, ball bearers pivotally connected with ends of the brake bars and balls on the free ends of the ball bearers, arranged and combined to operate in the manner set forth, for the purpose stated. 5th. In a band cutter and feeder, a rotatable shaft carrying knives for cutting bands, a sprocket wheel and a disc having a rim jointly and loosely mounted on one end of said shaft, a frame fixed to the end of the shaft outside of the disc, brake bars carrying brake shoes to engage the rim of the disc slidably connected with said frame, coil springs on said brake bars to normally retain the brake shoes disengaged from the rim of said disc, ball bearers pivoted to the frame and pivotally connected with the brake bars, balls on the ends of the ball bearers, a rotatable shaft for operating an endless sheaf carrier and a crank shaft for operating vibrating forks, all arranged and combined to operate in the manner set forth, for the purposes stated.

No. 66,966. Elevator Controlling Apparatus.

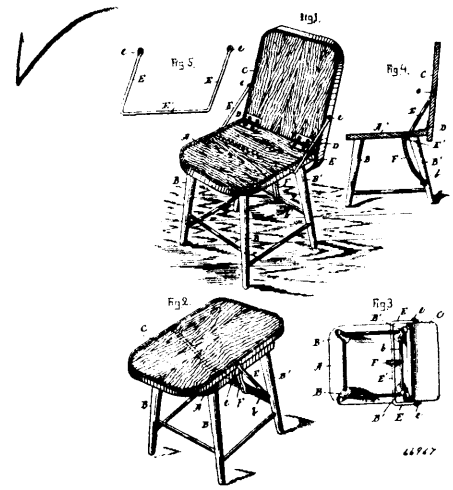
(Appareil contrôleur d'élévateur.)



John J. Cook and Walter Wilson Wishon, Butte, Silver Bow County, Montana, U.S.A., 10th April, 1900; 6 years. (Filed 22nd March, 1900.)

Claim.—1st. The combination with an elevator car and with a guide rail past which the car moves, of shafts mounted on the car, a dog attached to each shaft and working with the guide rail, a gear attached to each shaft, racks rigidly connected with each other and respectively meshed with the gears a link to which the racks are fastened, a lever mounted on the car and pivoted to the link, a hand latch mounted on the lever, and a quadrant mounted on the rack and coacting with the hand latch to hold the lever in the desired position. 2nd. The combination, with an elevator car and with a member stationary with respect thereto, of a shaft mounted to turn on the car, a dog carried by the shaft, the dog working with the stationary member to hold the car, a gear fixed to the shaft, a rack meshed with the gear to drive the same, a link connected with the rack, and a hand lever having connection with the link to impart movement thereto. 3rd. The combination with an elevator car and with a vertically disposed member stationary with respect thereto, of rock shafts mounted on the car respectively on opposite sides of said stationary member, dogs carried by the rock shafts and serving to engage said stationary member at opposite sides thereof, gears fast to the shafts, two racks situate between the rock shafts and fastened rigidly with each other and sliding in unison, the racks respectively engaging the gears, and means for throwing the racks.

No. 66,967. Chair. *(Fauteuil.)*

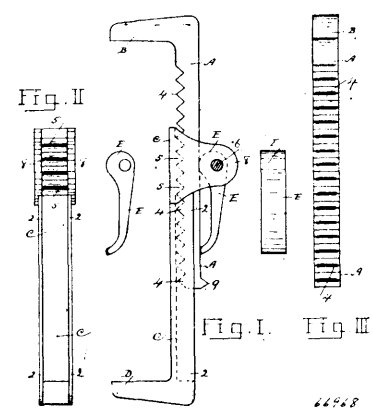


Alban Andrén and Amabel G. E. Hope, Hamilton, Ontario, Canada, 10th April, 1900; 6 years. (Filed 23rd March, 1900.)

Claim.—A chair having a seat and a back hinged or pivoted thereto, combined with a swinging [-shaped bail, pivoted at its ends to opposite sides of the back, and having its horizontal position lying below the chair seat, and adapted to abut against the underside of the said seat, and a guide piece F, secured to the underside of the seat, and rear support of the chair, and adapted to serve as a guide for the bail, during the adjustment of the back C, substantially as and for the purpose set forth.

No. 66,968. Clamp for Moulding Flasks or Boxes.

(Crampe pour boites ou châssis de moulage.)



Alfred Bray Hamilton, Ontario, Canada, 10th April, 1900; 6 years. (Filed 30th June, 1899.)

Claim.—An adjustable clamp for moulding flasks, comprising a guide with lower clamping jaw, side flanges on said guide with upper extended lugs, transverse teeth between said lugs, an adjustable sliding arm with upper clamping jaw capable of sliding in said guide between said flanges, transverse teeth on said arm to engage with the teeth in the guide, a cam lever pivotted between said lugs and capable of engaging with the back of the sliding arm to engage the sets of teeth to contract the distance between said jaws and fasten the same to the article being clamped, as described.

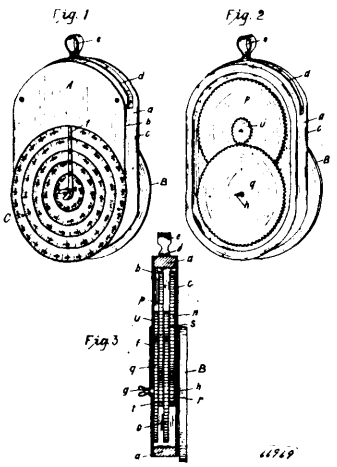
No. 66,969. Lumber Measuring Instrument.

(Appareil à mesurer le bois.)

Samuel George, Stouffville, Ontario, Canada, 10th April, 1900; 6 years. (Filed 2nd October, 1899.)

Claim. 1st. In a lumber measuring instrument, in combination, a case suitably supported to adjust itself to any thickness of lumber, said case containing gear wheels, with a running wheel, a graduated dial and finger pointer, for determining the running foot measure and also the lumber measure, substantially as set forth. 2nd. The combination in a lumber measuring instrument of a case containing a series of gear wheels, with a running wheel, a graduated dial and finger pointer, said instrument measuring the running foot measure

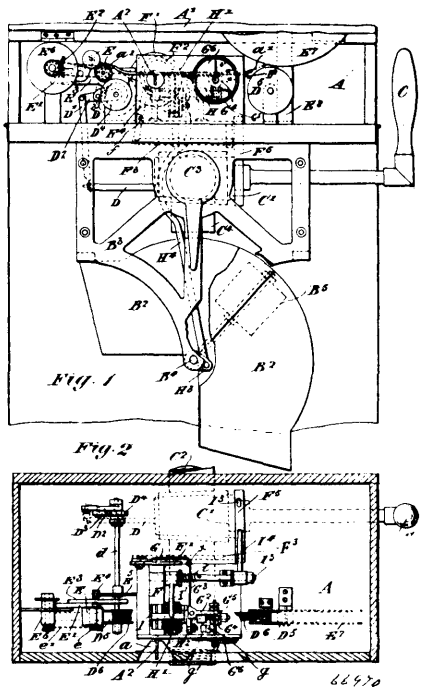
and also the lumber measure, substantially as set forth. 3rd. In a lumber measuring instrument, the combination of a gear wheel



mechanism contained in a case, said case being supported by a strap having an eye, which support allows the said instrument to adjust itself to any thickness of lumber, substantially as described. 4th. The combination in a lumber measuring instrument of a gear wheel mechanism, consisting of only two sizes of gear wheels, with a case, a running wheel which operates the gear wheels from the motion of the lumber, a finger pointer and graduated dial, whereby the running foot measure and the lumber measure for different widths of lumber are directly read from the dial, all substantially as set forth.

No. 66,970. Registering Apparatus.

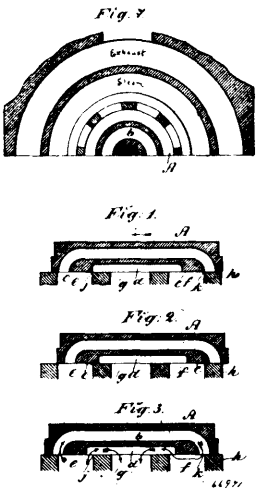
(Appareil à enrégistrer.)



Joseph Dallimore, Lake Gillear, near Warrnambool, Victoria, Australia, 10th March, 1900; 6 years. (Filed 19th September, 1899.)

Claim.—1st. In a registering apparatus, a key as A^2, having a letter or character as a^3 formed on its edge and adapted to fit a lock, the rotatable part of which has a disc as F^4 on it, provided with a spiral or cam groove as F^2, which when combined with the parts F^3, F^4 and F^5 are adapted to release or lock a supply cock or supply medium as C^1, as and for the purpose described and substantially as shown. 2nd. In a registering apparatus, a key as A^2, having a letter or character as a^3 formed on it, and so adapted in a lock barrel that the key cannot be withdrawn whilst the letter or character is uppermost or in position to be printed from, combined with a number or quantity indicating device such as H^1, an ink ribbon as D^6, a pressure piece as I, and a paper tape upon which the record is printed, and with a suitable measuring apparatus and a supply valve or regulator, as and for the purpose described and substantially as shown. 3rd. In a registering apparatus, a key as A^2, having a letter or character formed on it, adapted to open a lock which controls a supply valve or regulator leading to a measuring device, the key by opening the valve or regulator being so placed that its character or number can be printed from and that it cannot be removed from lock until the supply or regulator is closed, as and for the purpose described and substantially as shown. 4th. In a registering apparatus, a key as A^2, having a letter or character on it adapted to open a lock which releases a bolt from a lock device controlling a supply valve in order that it may be opened, combined with a numbering device as H^1, an ink ribbon as D^6, paper tape as a^1, spring presser as I, and an indicating dial as G^6, all arranged and assembled substantially as described and shown. 5th. In a registering apparatus adapted to print on a tape a record of the quantity and the distinguishing character of the person to whom delivered, in combination a key as A^2, having a letter or character on it, a slotted carrier as A^3 for key, and a lock as F, a numbering device as H^1, with ribbon as D^6, tape as a^1, spring pressure as I, indicating dial as G^6, lock quadrant as F^5, bolt as F^3, plug valve as C^1, and measuring apparatus as B^2, all arranged, assembled and manipulated substantially as described and shown.

No. 66,971. Slide Valve. (*Tiroir.*)

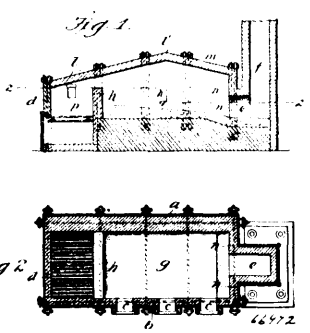


The Richmond Locomotive and Machine Works, assignee of Carl J. Mellin, all of Richmond, Virginia, U.S.A., 10th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—In a slide or piston valve having the passage *b*, from one to the other of the valve faces *c* past the exhaust cavity, the parts of said faces *c*, between the mouth of said passage and the exhaust cavity being of less breadth than than the breadth of the steam ports respectively, whereby during the fore part of the opening of direct exhaust there is also exhaust through passage *b*, and the mouth of the opposite previously exhausted steam port, substantially as described.

No. 66,972. Metallurgical Furnace.

(Fournaise métallurgique.)

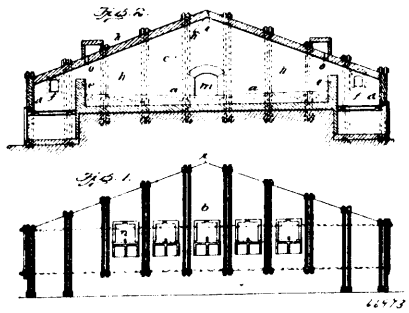


Bernard Charles Lauth, Pittsburg, Pennsylvania, U.S.A., 10th April, 1900; 6 years. (Filed 9th March, 1899.)

Claim.—1st. A metallurgical furnace having a fire chamber, a hearth, and a high peaked roof, formed of straight roof walls extend.

ing up from each end over the hearth at an angle from the horizontal and forming an angle at about the centre thereof, so forming a high furnace chamber, substantially as set forth. 2nd. A metallurgical furnace, having a fire chamber, a hearth and a high peaked roof formed of straight roof walls extending up from each end over the hearth at an angle from the horizontal and forming an angle at about the centre thereof, and an outlet flue centrally of the furnace chamber at about the level of the hearth, substantially as set forth.

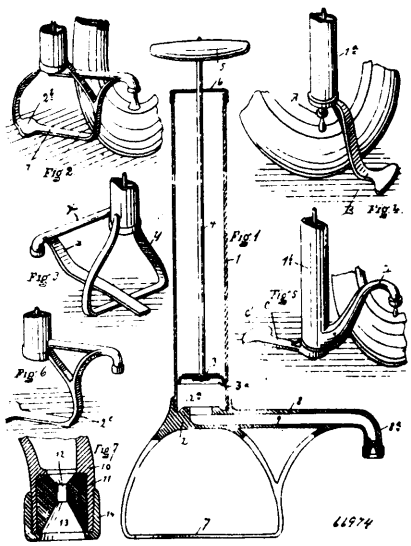
No. 66,973. Metallurgical Furnace.
(Fournaise métallurgique.)



Bernard Charles Lauth, Pittsburg, Pennsylvania, U.S.A., 10th April, 1900; 6 years. (Filed 9th March, 1899.)

Claim.—1st. A metallurgical furnace having a fire chamber at one end, an outlet flue at the other and a hearth between them, and having a peaked roof formed of straight upwardly inclined roof walls extending at an angle from the horizontal from the ends of the furnace over the hearth and meeting at about the centre thereof, and forming a high furnace chamber, substantially as and for the purpose set forth. 2nd. A metallurgical furnace having a fire chamber at one end, a hearth, and an end wall at the other end, and an outlet flue leading from the same below the top of the wall and narrower than the hearth, and having a peaked roof formed of straight upwardly inclined roof walls extending at an angle from the horizontal from the end walls over the hearth and meeting at or about the centre thereof and forming a high furnace chamber, substantially as and for the purpose set forth.

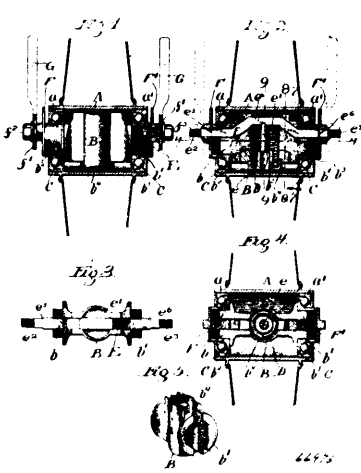
No. 66,974. Bicycle Pump. *(Pompe de bicycle.)*



DeWane B. Smith, Deerfield, New York, U.S.A., 10th April, 1900; 6 years. (Filed 26th December, 1899.)

Claim.—1st. The combination in a bicycle pump of a pump cylinder, a foot rest rigidly attached to the lower end of the cylinder, a rigid side projecting spout or tube having a downwardly open outlet and an elastic washer or bushing arranged in said outlet, and adapted to engage the valve nipple, substantially as set forth. 2nd. The combination with a bicycle pump of a downwardly opening cushion connection adapted to engage a valve nipple and rigidly supported by the pump, a pump foot or base arranged to engage the supporting surface when the said connection is engaged with the valve nipple, substantially as set forth. 3rd. In a bicycle pump, the combination of a cylinder and plunger, a pump foot or rest and a downwardly opening outlet rigidly supported from the side of the pump, fitted and arranged to engage a bicycle tire valve nipple, substantially as set forth. 4th. The combination with a bicycle pump of a downwardly opening cushion connection adapted to engage a valve nipple, and rigidly supported by the pump, a pump foot or rest arranged to engage the supporting surface when the said connection is engaged with the valve nipple, and adapted to receive the foot of the operator whereby the said connection may be held in contact with the valve nipple, substantially as set forth. 5th. In a bicycle pump, a cylinder, a plunger, a foot or rest and a sidewise projecting downwardly opening tube having a cushion connection adapted to engage with the tire nipple, substantially as set forth. 6th. The combination with a bicycle pump of a downwardly opening cushion connection adapted to engage with the valve nipple, and rigidly supported by the pump, and a foot or base arranged to engage the supporting surface when said cushion connection is connected with the valve nipple, substantially as set forth. 7th. The combination of a cylinder and plunger of a pump, of a cushion connection adapted to engage the tire rigidly supported from the pump, and a foot or rest formed and arranged to be supported, as upon a fulcrum, at a point on the opposite of the axial line of the cylinder from the said cushion connection, when the pump is connected with the tire, substantially as set forth. 8th. In a bicycle pump, a cylinder, a plunger, a sidewise projecting downwardly opening tube having a cushion connection adapted to engage with the tire nipple, and a foot or rest or stirrup having a fulcrum point or corner on the opposite side from said tube, combined, substantially as set forth. 9th. An air pump comprising essentially a pump barrel or cylinder, a stirrup rigidly attached to the lower end of the barrel or cylinder, and a rigid latterally projecting pipe or tube having a downwardly extended spout or coupling, and an elastic washer at the end of said spout or coupling adapted to engage the valve nipple of a tire, or the inlet to any other object to be inflated, substantially as set forth. 10th. In a bicycle pump, a cylinder, a plunger, a foot or rest and a sidewise projecting downwardly opening tube and cushion connection, substantially as set forth.

No. 66,975. Bicycle Bearing. *(Coussinet de bicycle.)*



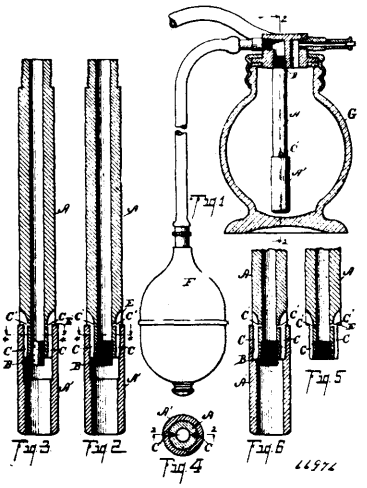
Frank Schmitz, Chicago, Illinois, U.S.A., 10th April, 1900; 6 years. (Filed 8th November, 1899.)

Claim.—1st. In a device of the class described, the combination of a hub, an axle box journalled therein, a vertically movable axle within the axle box, a spring between the axle and the axle box and a vertical arm secured to the axle and guided in the axle box, whereby relative oscillation of the axle and axle box in a vertical plane is prevented, substantially as described. 2nd. The combination with an axle box, of a spring supported axle therein and a connecting device between the axle and the axle box to keep their axes parallel, substantially as described. 3rd. In a bicycle bearing, the combination with a hub provided with suitable cups, of an axle box confined within said hub, having cones adapted, together with the cups upon the hub, to form ball races, anti-friction balls running in said races, a longitudinally extending channel and central socket in said axle box, an axle bar lying in said channel and adapted to be connected to the frame of the bicycle and a spring interposed between said axle bar and axle box, substantially as described. 4th. The combination with a bicycle hub, of an axle box journalled in said tube having a longitudinally extending channel and central socket, a yoke-shaped axle bar, a pin upon said axle bar guided in the axle box and a spring confined between said bar and box, substantially as described. 5th. The combination with a bicycle hub, of an axle box journalled in said hub having a longitudinally extending channel and central socket, an axle bar yieldingly supported therein, having a transverse arm guided in the socket and a pair of washers

upon the ends of said axle bar bearing upon the ends of said box, substantially as described. 6th. The combination with a bicycle hub having suitable bearing cups, of an axle box having bearing cones adapted to form, together with the cups, ball races, anti-friction balls in said races, a channel and a central socket in the top of said axle box, a yoke-shaped axle bar in said channel, a pin upon said axle bar, guided in the axle box, a washer surrounding said pin and engaging the axle bar and a spring resting in said socket and against said washer, substantially as described. 7th. In a bearing, the combination with a bicycle club, having bearing cups secured therein, of a suitable axle bar formed with a vertically extending pin, an axle box having a longitudinally extending channel adapted to embrace said axle bar, a vertical socket to guide said pin and with a central recess, a spring confined in said recess and supporting the axle bar, screw threaded end portions upon said axle box, bearing cones threaded thereon, and balls between the cups and cones, substantially as described.

No. 66,976. Spray Tube for Atomizers.

(Tube pour atomiseurs.)



Harley M. Dunlap, Battle Creek, Michigan, U.S.A., 10th April, 1900; 6 years. (Filed 12th July, 1899).

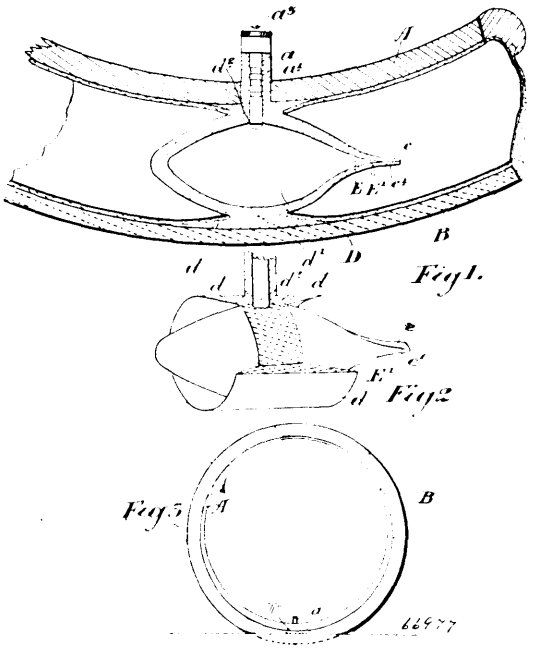
Claim.—1st. In an atomizer the combination of the main tube A, suitably plugged at the bottom, with the shoulder E thereon, and containing an upwardly projecting perforation C^1, and a passage C cut through the lower portion, and a lower section of the tube A^1 intended to fit against the shoulder to form, in connection with the upper tube, a passage for liquid leading up to the passage for air, co-acting together for the purpose specified. 2nd. In an atomizer, the combination of a main tube plugged at the bottom, and having an upwardly projecting air passage and a portion cut away for a fluid passage leading up thereto, and a lower section of tube fitting on to the same, the parts being shouldered together whereby they can be fitted together without adjustment for the purpose specified.

No. 66,977. Automatic Pumps for Pneumatic Tires.

(Pompe automatique pour bandages pneumatiques.)

Thomas Henry McCauley, Port Arthur, Ontario, Canada, 10th April, 1900; 6 years. (Filed 2nd January, 1900.)

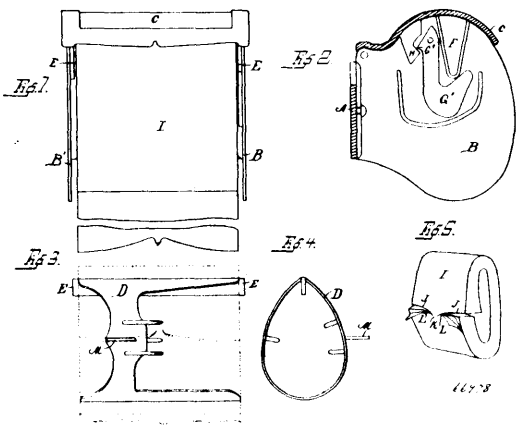
Claim.—1st. The combination with a pneumatic tire, and the inlet air valve, of a hollow rubber bulb located within said tube having an opening through which the inlet valve extends, and having an opening connecting the bulb with the interior of the tire and means for automatically opening and closing opening, as and for the purpose specified. 2nd. The cembination with the pneumatic tire, and the inlet air valve, of a hollow elastic bulb secured within said tire and having an opening through which the inlet valve extends, and having an opening provided with an extended



mouth provided with lips designed to be forced together by the pressure of air within the said tire, as and for the durpose specified.

No. 66,978. Toilet Paper Fixture and Roll.

(Appareil et rouleau pour papier de toilette.)

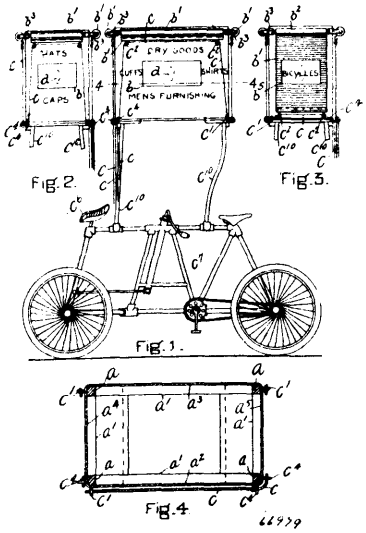


Frank H. Hoberg, Green Bay, Wisconsin, U.S.A., 10th April, 1900; 6 years (Filed 27th March, 1900.)

Claim.—1st. The combination of a toilet paper roll cut or slitted to partially sever the same longitudinally, a toilet paper fixture adapted to support the roll, and means for causing the paper on one side of the cut or slit to bulge or project outwardly, whereby the end of the strip, remaining after the separation of the sheet, will be thrown out by the elastic reaction of the paper along the severed edge, and permitted to drop and hang below the roll, substantially as and for the purpose specified. 2nd. The combination of a toilet paper roll cut or slitted to partially sever the same longitudinally, said slit or slits having a diagonal trend at their inner ends in the opposite direction to that in which the paper is wound upon the roll, and forming a narrow tongue of paper uniting the parts of the roll; a fixture adapted to support the roll, and means for causing the paper to bulge outwardly along the side of the slit between the said tongue and the end of the roll, substantially as and for the purpose set forth. 3rd. The combination of a toilet paper roll cut or slitted to partially sever the same longitudinally, a toilet paper fixture, a paper supporting core connected therewith and a lip projecting from said core and adapted to enter the slit in the roll and press the paper outwardly, substantially for the purpose set forth.

4th. The combination of a toilet paper roll, cut or slitted to partially sever the same longitudinally, said slit or slits having a diagonal trend at their inner ends and leaving the parts of the roll united by a narrow tongue of uncut paper, a toilet paper fixture provided with a removable core adapted to be inserted in said roll, and adapted to cause the paper to bulge or project outwardly on one side of the slit or slits, substantially as and for the purpose set forth. 5th. In a toilet paper roll formed with a cut or slit extending inwardly from one or both ends and nearly severing the roll, said cut or slit having a diagonal trend at its inner end extending in the opposite direction to that in which the paper is wound, whereby that portion of the roll in the angle formed by said cut or slit, tends to bulge outwardly away from the line of curvature of the roll, substantially as and for the purpose set forth. 6th. A toilet paper roll formed with a cut or slit extending inwardly from both ends and nearly severing the roll, said cut or slit having a diagonal trend at its inner end running in the opposite direction from that in which the paper is rolled, and forming a narrow tongue of paper which preserves the continuity of the roll, the portions of the roll between said tongue and the ends of the roll being adapted to bulge outwardly, away from the line of curvature of the roll, substantially for the purpose set forth.

No. 66,979. Advertising Apparatus. *(Appareil d'annonce.)*



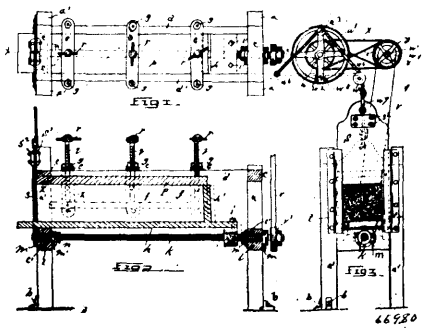
Silas Hibbard Ayer, Boston, Massachusetts, U.S.A., 10th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—1st. The combination with a vehicle, of an advertising apparatus carried thereby and comprising a supporting frame provided with a transparent or translucent surface having thereon an advertisement arranged to leave a blank space on said surface, and a curtain adapted to cover and uncover said surface and provided with a dark portion to cover the advertisement on the rear surface, and with a transparent portion having an advertisement thereon which comes in line with the blank space on the rear surface, substantially as and for the purpose specified. 2nd. An advertising apparatus comprising a framework provided with an advertisement bearing surface having the advertisement arranged thereon to leave a blank space, and a co-operating surface movable into and out of line with said advertisement bearing surface and having on it an advertisement or character arranged to come in line with the said blank space when the said surfaces are opposed to each other. 3rd. An advertising apparatus comprising a framework provided with an advertising bearing surface having the advertisement arranged thereon to leave a blank space, and a curtain to cover and uncover said surface and having a dark portion to conceal the said advertisement and a light portion provided with an advertisement or character, substantially as described.

No. 66,980. Tobacco Cutter. *(Couteau à tabac.)*

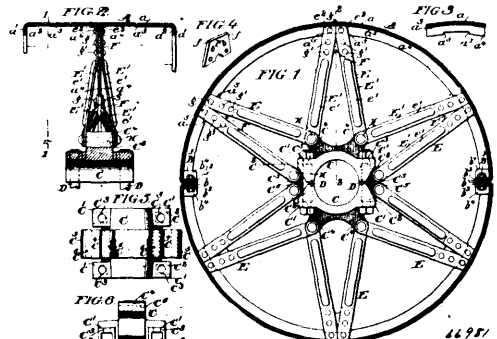
John Van Der Plaat, Paterson, New Jersey, U.S.A., 10th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—1st. In a fseding apparatus for a tobacco cutting machine, the combination with a frame comprising standards and upper and lower girths and side plates connecting said standards, of a screw journalled in said frame, a reciprocating table carrying a plunger and snpported upon a portion of said frame and at one of its ends upon the screw and operatively connected to the latter, means for rotating said screw and thereby moving said table, a pressure plate arranged above said table and its plunger and engaging one of said girths at its forward end, and binding screws for said pressure plate, substantially as described. 2nd. In a tobacco cutting machine the



combination with the frame comprising standards, and upper and lower girths, and side plates connecting said standards, of a screw journalled in the lower girths, a block penetrated by said screw and engaging the same, a table resting upon one of said girths at one of its ends and secured to and supported by said block at the other of its ends, a plunger carried by said table, a removable pressure plate arranged above said table, the forward one of said upper girths being provided with a recess adapted to receive the corresponding end of said pressure plate binding screws for said pressure plate, and means for rotating said pressure plate and means for rotating said screw and thereby reciprocating said table, substantially as described. 3rd. The combination with a frame, of a screw journalled in said frame, a table operatively connected to and adapted to be reciprocated by said screw and carrying a plunger, a vertically reciprocating knife arranged at one end of said frame and above said table, a shaft journalled parallel to said frame, a suitably and stationarily supported pulley, a wheel carried on and rotatable with said shaft, another pulley arranged concentrically on said wheel, a rope or chain passing over said pulleys and stationarily secured at one of its ends and connected to the knife at the other of its ends, said wheel and the pulley carried thereby being disposed between the securing point of the rope or chain and the stationary pulley, a counter shaft carrying a set of reversing pulleys and belts operatively connecting said shaft with the screw and with the reversing pulleys, substantially as described.

No. 66,981. Wheel Construction. *(Construction de roue.)*



Ferdinand Philips, Philadelphia, Pennsylvania, U.S.A., 10th April, 1900; 6 years. (Filed 19th December, 1899.)

Claim.—1st. A wheel having its rim and hub connected by a series of wide and thin bars arranged in pairs with their wide sides parallel to each other and lying in planes transverse to the axis of the wheel, each such pair having their outer ends secured to a point on the rim, and the bars diverging thence to two separated points on the hub to which they are secured so as to form a triangular truss spoke as described. 2nd. A wheel having its rim and hub connected by a series of wide and thin longitudinally corrugated bars arranged in pairs with their wide sides parallel to each other and lying in planes transverse to the axis of the wheel, each such pair having their outer ends secured to a point on the rim and the bars diverging thence to two separated points on the hub to which they are secured so as to form a triangular truss spoke, as described. 3rd. A wheel having its rim and hub connected by a double series of triangular truss spokes secured at their apices to the rim, and at their bases to the hub and each lying in a plane transverse to the axis of the wheel, the one series angling from the centre of the rim outward toward

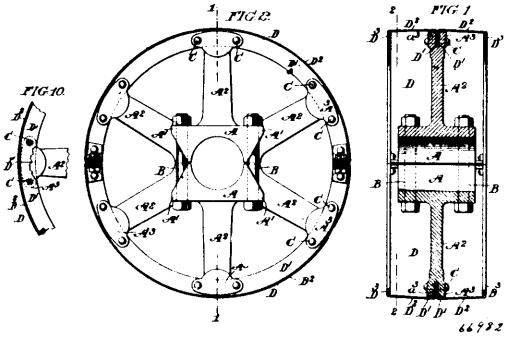
one end of the hub and the other series angling outward from the centre of the rim toward the other end of the hub. 4th. A wheel having its rim and hub connected by a double series of triangular truss spokes, each made up of two wide and thin bars secured at their apices to the rim and at their bases to the hub and each lying in a plane transverse to the axis of the wheel, the one series angling from the centre of the rim outward toward one end of the hub, and the other series angling outward from the centre of the rim toward the other end of the hub. 5th. A wheel having its rim and hub connected by a double series of triangular truss spokes, each made up of two wide and thin bars, the spokes of each series being secured at their apices to the centre of the rim and at their bases to the hub, and each lying in a plane transverse to the axis of the wheel, and being arranged in pairs, one spoke of each series being secured to the same point on the rim and diverging thence toward opposite ends of the hub. 6th. A wheel having a rim provided with an inwardly turned flange formed with notches as a^5 a^5, in combination with spokes formed of wide and thin bars secured to the rim flange above such notches, and plates, as F, secured to the spokes and fitting into the notches in the rim flange. 7th. A wheel having a rim provided with an inwardly turned flange formed with notches, as a^5 a^5, in combination with triangular truss spokes formd of wide and thin bars as described, plates F, securing said spokes together near their outer ends, and said spokes being fastened to the rim by securing their extreme outer ends to the rim flange and by the engagement of plates F, in the notches a^5 a^5. 8th. A wheel having a rim provided with an inwardly turned flange formed with notches as a^5 a^5, in combination with triangular truss spokes formed of wide and thin bars, plates F, securing said spokes together in pairs as described, and said spokes being fastened to the rim by securing their ends to the rim flange and by the engagement of plates F, with notches a^5 a^5. 9th. A wheel rim segment formed of a single sheet of metal folded inward under a central section at both sides and downward toward the centre of the rim at the ends so as to form a two-ply rim with an intermediate flange or flanges as described. 10th. A wheel rim segment formed of a single sheet of metal folded inward under a central portion at both sides and downward toward the centre of the rim at the ends to form a two-ply rim with double centrally extending flanges at its middle, substantially as described. 11th. A wheel rim segment formed of a single sheet of metal folded inward under a central portion at both sides and downward toward the centre of the rim at the ends, and the folded edges being bent also downward towards the centre of the rim, all substantially as described, and so as to form a two-ply rim with centrally extending flanges at its middle and lateral edges. 12th. A metal rim section formed with one or more centrally extending flanges and with end flanges as b^3, formed by turning inward towards the centre the metal of the ends of the section, lapping the portions of the centrally extending flange or flanges corresponding to the turned in portion of the rim on the adjacent portions of the said flange or flanges, and securing said lapped portions together. 13th. A two-ply metal rim section formed of a single sheet of metal with a middle centrally extending double flange and end flanges b, b^3, formed by turning inward the ends of the pulley section, lapping the section of the middle flange corresponding to said turned in portion on the adjacent portion of the flange and securing said lapped flange portions together. 14th. A wheel having in combination a hub formed with a series of transverse longitudinal perforations, a series of triangular spokes lying transverse to the axis of the wheel, each consisting of two wide and thin bars secured at their inner ends on the same side of the hub to pins passing through different perforations in the hub, and a rim to which the outer ends of the bars forming the triangular spokes are secured. 15th. A wheel having in combination a hub formed with a series of transverse longitudinal perforations, two series of triangular spokes lying transverse to the axis of the wheel, each spoke consisting of two wide and thin bars, said triangular spokes being secured at their apices to the rim and the diverging bars being secured to and on the same side of the hub by pins passing through the perforations in the hub and each securing place in the inner ends of two or more bars.

No. 66,982. Wheel and Wheel Rim.

(Roue et jante de roue.)

Ferdinand Philips, Philadelphia, Pennsylvania, U.S.A., 10th April, 1900; 6 years. (Filed 19th December, 1899.)

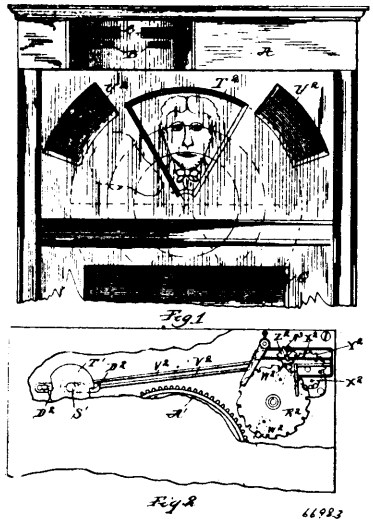
Claim.—1st. A wheel rim section consisting of a plate of sheet metal folded together at a point intermediate of its edges to form an inwardly extending two-ply flange and folded outward from the top edges of the flange folds to form the face of the wheel, said folded section being curved longitudinally in a plane parallel to the flange. 2nd. A wheel rim section consisting of a plate of sheet metal folded together at a point intermediate of its edges to form an inwardly extending two-ply flange, said plate being folded outward from the top edges of the flange folds to form the face of the wheel and again folded inward at its edges to form strengthening ribs, said folded section being curved longitudinally in a plane parallel to the flange. 3rd. A wheel rim formed of plates of sheet metal folded together intermediate of their edges to form inwardly extending two-ply flanges and folded outwardly from the top edges of said flanges to form the face to the wheel, the ends of said plates being bent in at right angles to from abutting faces and secured together in forming the complete rim. 4th. A wheel centre having raidal spokes slotted at their ends in combination with a rim of T-shaped section having its web fitted into the slots of the spoke ends and secured



thereto. 5th. A wheel centre having radial spokes enlarged and slotted at their ends in combination with a rim of T-shaped section having its web fitted into the slots of the spoke ends and secured thereto. 6th. A wheel centre having radial spokes slotted at their ends in combination with a rim of T-shaped section formed by folding sheet metal together to form a two-ply web and outwardly from the top of the web flange to form the face of the wheel, said rim section having its two ply web fitted into slots of the spoke ends and secured thereto.

No. 66,983. Vending and Display Apparatus.

(Appareil de montre et de vente.)



Levi W. Yaggy, Lake Forest, Illinois, U.S.A., 10th April, 1900; 6 years. (Filed 10th March, 1899.)

Claim.—1st. In a coin controlled apparatus, the combination of a display device with a vending apparatus, motor mechanism for operating said display device and vending apparatus, and coin controlled apparatus for first setting said display device in operation and subsequently connecting the vending apparatus to the motor mechanism to be operated thereby, substantially as described. 2nd. In a coin controlled apparatus, the combination of a display device with a vending apparatus, motor mechanism for operating said display device and vending apparatus, and coin controlled apparatus comprising a trip for setting the motor mechanism in operation to actuate the display device, and another trip for connecting said motor mechanism and vending apparatus for operation. 3rd. In a coin controlled display device, a series of indicating members capable of different combinations, with motor mechanism for varying said combinations regularly and in a predetermined manner, and coin controlled mechanism for setting the motor in operation, substantially as described. 4th. In a coin controlled display device, a series of indicating members carrying fractional indications capable of different combinations, motor mechanism for moving said members and systematically varying the combinations throughout the entire range, and coin controlled mechanism for controlling the movement of said motor. 5th. In a coin controlled display device, a series of indicating members carrying fractional indications capable of different unitary combinations, with motor mechanism for auto-

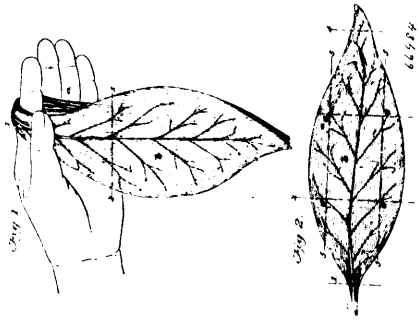
matically varying said combinations, and coin controlled mechanism for controlling the movement of said motor. 6th. In a coin controlled display device, indicating mechanism capable of displaying a variety of indications, means for moving said mechanism to vary the indications regularly and in a predetermined manner through all possible combinations, and coin controlled mechanism for controlling the movement of said indicating mechanism. 7th. In a coin controlled display device, an indicating mechanism capable of displaying a variety of indications, with motor mechanism for automatically varying the indications regularly and in a predetermined manner, and coin controlled mechanism for controlling the movement of the motor. 8th. In a coin controlled display device, an indicating mechanism comprising a plurality of indicating members carrying fractional indications whereby it is capable of displaying a variety of indications, means for moving said mechanism to vary the indications regularly and in a predetermined manner, with vending apparatus, and coin controlled mechanism for controlling the movement of said indicating mechanism and the operation of said vending apparatus. 9th. In a coin controlled apparatus, the combination with a chute through which good coins are adapted to pass, of a chute for spurious coins located above said good coin chute, an oscillatory switch piece adapted to receive a coin inserted in the apparatus and to discharge it into the upper end of either of said chutes, and a detent stationary relative to said switch piece and adapted to prevent the entrance of a coin into said spurious coin chute when the switch piece is in register therewith until said coin is forced past the detent. 10th. In a coin controlled apparatus, the combination with a chute through which good coins are adapted to pass, of a chute for spurious coins located above said good coin chute, an oscillatory switch piece adapted to receive a coin inserted into the apparatus and to discharge it into the upper end of either of said chutes, and a magnet located above said switch piece and adapted to prevent the passage of a magnetic disc therethrough until it is forced past the magnet. 11th. In a coin controlled apparatus, the combination with a chute through which good coins are adapted to pass, of a chute for spurious coins located above said good coin chute, an oscillatory switch piece adapted to receive a coin inserted into the apparatus and to discharge it into the upper end of either of said chutes, a detent stationary relative to said switch piece, and a magnet located above said switch piece, said detent and magnet adapted to prevent the passage of a spurious coin into either of the chutes until it has been forced through the switch piece and past the detent and magnet into the spurious coin chute. 12th. In a coin controlled apparatus, the combination with a pair of chutes, of an oscillatory switch piece adapted to receive a coin inserted into the apparatus and to discharge it into the upper end of either of said chutes, and a detent stationary relative to said switch piece and adapted to prevent the entrance of a coin into the obstructed one of said chutes until it has been forced through the switch piece by the insertion of another coin. 13th. In a coin controlled apparatus, the combination with a pair of chutes, of an oscillatory switch piece adapted to receive a coin inserted into the apparatus and to discharge into the upper end of either of said chutes, and a magnet located adjacent to one position of the switch piece and adapted to prevent the entrance of a magnet disc or token into one of said chutes under any circumstances, and also to prevent its passage into the other chute except after it has been forced through the switch piece by the insertion of another coin or token. 14th. In a coin controlled apparatus, the combination with a pair of chutes, of an oscillatory switch piece adapted to receive a coin inserted into the apparatus and to discharge it into the upper end of either of said chutes, a magnet located adjacent to one position of the switch piece, and a detent also co-operating with said switch piece in the same position, said magnet and said detent operating to prevent the passage of a magnetic disc or token into said chutes until it has been forced through the switch piece by the insertion of another coin. 15th. In a coin controlled apparatus, the combination of the casing having an aperture of the size adapted to permit the passage only a single coin at once, a channel in said casing through which non-magnetic coins pass at once by gravity registering the said aperture, with a magnet located inside of the casing immediately adjacent to the aperture and said channel and adapted to attract a magnetic disc adjacent thereto into contact therewith and retain said disc in the channel until it is forced away by a subsequently inserted coin coming in direct contact therewith. 16th. In a coin controlled apparatus, the combination of a plurality of chutes located one above the other, with a switch piece corresponding to and adapted to form a continuation of any of said chutes and normally located in proximity to an upper chute and adapted to discharge a coin therein if the coin is light weight, and magnet suitably located relative to the switch to attract a magnetic disc therein and to prevent its discharge except into said upper chute. 17th. In a coin controlled apparatus, the combination of a plurality of chutes, with a switch piece normally located in proximity to one of said chutes and adapted to discharge a coin therein, with a detent stationary relative to said switch piece and co-operating therewith in its normal position only. 18th. In a coin controlled apparatus, the combination of a plurality of chutes, with a switch piece normally located in proximity to one of said chutes and adapted to discharge a coin therein, and a detent in connection with said switch piece and stationary relative thereto to prevent the discharge of a coin therethrough when the switch piece is in its normal position, but releasing the coin when the switch piece is in register with another chute. 19th. In a coin controlled apparatus, the combination of a plurality of chutes with a switch piece normally located in proximity to one of said chutes and adapted to discharge a coin therein, and a yielding detent co-operating with said switch piece in one position, but not in another. 20th. In a coin controlled mechanism, the combination of the inclined chutes E and F in which coins are adapted to slide, one disposed above the other, with the switch piece pivotally mounted in relation thereto, and having its body portion adapted to form a continuation of either of said chutes, an adjustable weight on said switch piece for balancing it to determine what weight of coin shall be discharged in either chute, and a detent stationary relative to and co-operating with the chute E to prevent the passage of a coin while the switch piece is in register therewith until the coin is forced past the detent. 21st. In a coin controlled apparatus, the combination of the inclined chutes E and F located one above the other, with the switch piece pivotally mounted in connection therewith and having its body portion adapted to form a continuation of either chute, and the spring detent M projecting into said body piece when it is in register with the chute E, substantially as and for the purposes described. 22nd. In a coin controlled apparatus, the combination of the inclined chutes E and F in which coins are adapted to slide, with the switch piece pivotally mounted in connection therewith and having its body portion adapted to form a continuation of either of said chutes and the magnet K suitably located in connection with said switch piece to prevent the passage of a magnetic disc attracted thereby until it has been forced into the chute E, substantially as and for the purpose described. 23rd. In a coin controlled delivery apparatus, a plurality of delivery mechanisms, a motor for operating the same, connections between said motor and delivery mechanisms, and coin controlled mechanism for selecting the delivery mechanism to be operated and automatically operating the connections between the motor and said delivery mechanism. 24th. In a coin controlled apparatus, the combination with a motor, of a plurality of delivery mechanisms adapted to be connected to said motor, a plurality of apertures, one for each delivery mechanism, to determine by a coin inserted therein which of the delivery mechanisms shall be connected to said motor for operation, and connections between said motor and delivery mechanisms automatically operated by the insertion of a coin. 25th. In a coin controlled apparatus, the combination with a motor, of a plurality of delivery mechanisms adapted to be connected to said motor, a plurality of apertures and associated coin chutes, one for each delivery mechanism, and connecting mechanism between each delivery mechanism and the motor operated by the passage of a coin through the chute. 26th. In a coin controlled apparatus, the combination with a motor, of a plurality of delivery mechanisms adapted to be connected to said motor, a plurality of apertures and associated coin chutes, one for each delivery mechanism, connecting mechanism between each delivery mechanism and the motor, and trips controlling said connecting mechanisms extending into the respective chutes. 27th. In a coin controlled delivery apparatus, a motor mechanism set in operation by the coin, an automatic delivery mechanism capable of operation by the motor mechanism, and connections between said motor and delivery mechanisms also controlled by the coin, substantially as described. 28th. In a coin controlled delivery apparatus, a motor mechanism set in operation by the coin, a plurality of automatic delivery mechanisms capable of operation by the motor mechanism, and connections between said motor and delivery mechanisms also controlled by the coin, which also selects the delivery mechanism to be operated. 29th. In a coin controlled delivery apparatus, a motor mechanism set in operation by the coin, a plurality of delivery mechanisms capable of operation by the motor mechanism, a plurality of coin chutes, and connections between said motor and delivery mechanisms so arranged that a coin passing through any chute sets the motor mechanism in operation and connects thereto the delivery mechanism corresponding to its chute. 30th. In a coin controlled delivery apparatus, a motor mechanism set in operation by the coin, a delivery mechanism capable of operation by the motor mechanism, and connections between said motor and delivery mechanisms including the reciprocating member G^3, and a coin set escapement operated by said reciprocating member to release the coin, substantially as described. 31st. In a coin controlled delivery apparatus, a motor mechanism set in operation by the coin, a delivery mechanism capable of operation by the motor mechanism, and connections between said motor and delivery mechanisms including the reciprocating member G^3, a coin set escapement operated by said reciprocating member to release the coin, and a rod T^3 also set by the coin and when so set operated by the reciprocating member G^3. 32nd. In a coin controlled apparatus, the chute E^2, the escapement therein, the reciprocating member G^3 co-operating with said escapement, the wire T^3 also projecting into the chute beyond the escapement, and connections operated by the movement of the wire caused by the weight of the coin to connect it to the member G^3. 33rd. In a coin controlled apparatus, the chute E^2, the escapement located therein and having the projection Q^3 thereon, and the member G^3 reciprocating beneath said escapement and having the notch R^3 co-operating with the lug Q^3, the wire T^3 projecting through a slot in the member G^3 and into the tube E^2, and a notch F^4 in said member G^3 co-operating with the wire T^3, substantially as and for the purpose described. 34th. In a delivery device, the combination with the receptacle adapted to receive the packages in such manner as to cause the adjacent packages to overlap, of multiple

delivery mechanisms mounted at different sides of said receptacles and in their retaining position having their upper surfaces horizontal to sustain their respective packages and in their discharge position inclined to permit the packages to slide off, and coin controlled mechanism for operating said delivery mechanisms singly. 35th. In a delivery device, the combination with the receptacle adapted to receive the packages in such manner as to cause adjacent packages to overlap, of two or more delivery mechanisms each pivotally mounted at one side thereof at different sides of said receptacles and in their retaining position having their upper surface horizontal to sustain their respective packages and in their discharge position inclined to permit the packages to slide off, and coin controlled mechanism for operating said delivery mechanism singly. 36th. In a vending apparatus, a delivery mechanism moving to deliver the article, an unyielding support for positively holding the delivery mechanism in an article retaining position, a yielding support for holding it in said position which is supplemental to the unyielding support but which is overcome by the weight of the single article, and coin controlled mechanism for withdrawing the positive support, substantially as described. 37th. In a delivery device, the plates Y^4 and A^5 mounted upon a rock shaft, with the plates Z^4 and B^5 similarly mounted at right angles thereto, the controlling piece W^5 co-operating with said plates, and coin controlled mechanism for operating said controlling piece, substantially as and for the purposes described. 38. In a delivery device, the plates Y^4 and A^5 mounted upon a rock shaft, with the plates Z^4 and B^5 similarly mounted at right angles thereto, the springs M^5 connected to the said plates substantially as described, the controlling pieces W^5 co-operating with said plates, and coin controlled mechanism for operating said controlling piece, substantially as and for the purposes described. 39th. In a delivery device, the plates Y^4 and A^5 mounted upon a rock shaft, with the plates Z^4 and B^5 similarly mounted at right angles thereto, the springs M^5 co-operating with said plates, the controlling piece W^5 having the lugs S^5, T^5, U^5 and V^5, co-operating with the plates Y^4 and B^5, and coin controlled mechanism for operating said controlling piece, substantially as described. 40th. In a delivery device, the plates Y^4 and A^5 mounted upon a rock shaft, the plate A^5 having the curved arm D^5, with the plates Z^4 and B^5 similarly mounted and at right angles thereto, the plate Z^4 having the curved arm H^5, the controlling piece W^5 co-operating with the plates Y^4 and B^5, and controlled mecahnism for operating said controlling piece, substantially as and for the purpose described. 41st. In a coin controlled apparatus, the combination of a receptacle for articles to be delivered, with a delivery mechanism located at the lower end thereof upon which the lowermost article rests, means for supporting all but the lowermost article, a positive support for said mechanism, a yielding support for said mechanism overcome by the weight of a single article, and coin controlled mechanism for withdrawing said positive support from the delivery mechanism. 42nd. In a coin controlled apparatus, the combination of a receptacle for articles to be delivered, with a delivery mechanism located at the lower end thereof upon which the lowermost article rests, means for supporting all but the lowermost article, a positive support for said mechanism, a spring connected to said mechanism to furnish a yielding support which is overcome by the weight of a single article, and coin controlled mechanism to furnish a yielding support which is overcome by the weight of a single article, and coin controlled mechanism for withdrawing said positive support from the delivery mechanism. 43rd. In a coin controlled apparatus, the combination of a receptacle for articles to be delivered, said receptacle adapted to hold the articles in overlapped position, with a plurality of delivery mechanism located at the lower end of said receptacle, and which are adapted to ultimately support the lowermost article and all of the remaining articles, a positive support for said mechanisms, yielding supports for said mechanisms adapted to be overcome by the weight of a single article, and coin controlled mechanism for reciprocating said positive support to alternately engage one of said mechanisms while simultaneously releasing the other one. 44th. In a coin controlled apparatus, the chute E^2 having an aperature therein, with an L shaped tripping rod having the L portion projected into said aperture, said tripping rod being pivotally mounted on a pivot oblique relative to the coin chute so that the L end thereof swings longitudinally out of said chute. 45th. In a coin controlled apparatus, a coin chute having an aperture therein, with a tripping rod passing into said aperture, and a motor driven gear train released by the movement of said tripping rod under the weight of the coin, said gear train comprising the disc V^1 having the flange X^1 to prevent the immediate realease of the coin from the tripping rod. substantially as and for the purpose described. 46th. In a coin controlled apparatus, a coin chute having an aperture therein, with a tripping rod passing into said aperture, a motor driven gear train released by the movement of said tripping rod under the weight of the coin, said gear train comprising the disc V^1 having the flange X^1 to prevent the immediate release of the coin from the tripping rod, and the flange W^1 to compel the movement of the gear train for a given time, substantially as described. 47th. In a coin controlled display device, a series of indicating members capable of different combinations, means for moving said members to vary the combinations automatinally through all possible combinations, and coin controlled mechanism which exclusively controls the operation of said means. 48th. In a coin controlled display device, a series of indicating members carrying fractional indications capable of different unitary combinations, and coin controlled mechanism for exclusively and automatically controlling the movement of said members. 49th. In a coin controlled display device, indicating mechanism capable of dislaying a variety of indications, means for operating said indicating mechanism, and coin controlled mechanism for exclusively and automatically controlling the movement of said indicating mechanism. 50th. In a coin controlled display device, an indicating mechanism capable of displaying a variety of indications, means for moving said mechanism to vary the indications automatically, with vending apparatus, and coin controlled mechanism for exclusively controlling the movement of said indicating mechanism and the operation of said vending apparatus. 51st. In a coin controlled display device, an indicating mechanism capable of displaying a variety of indications, with vending apparatus, a motor independently connected to said indicating mechanism and to the vending apparatus, and coin controlled mechanism for controlling the operation of said motor. 52nd. In a coin controlled display device, an indicating mechanism capable of displaying a variety of indications, with a plurality of vending apparatuses, a motor mechanism for operating the indicating mechanism and the vending apparatus, and coin controlled mechanism for setting the motor in operation and selecting the vending apparatus to be operated. 53rd. In a vending apparatus, a skeleton receptacle for the articles, consisting of the parallel wires K^4, the wires upon one side thereof being mounted in the supplemental pivotal frames N^4 and T^4, substantially as and for the purposes described. 54th. In an indicating mechanism, the combination of a plurality of indicating members, each carrying a plurality of fractional indications, so that the system is capable of a plurality of combinations, with automatic mechanism for shifting said members separately and seriatim so as to vary the combinations. 55th. In an indicating system, the combination of a plurality of dials, each dial carrying in its different sectors a plurality of fractional indications, so that the system is capable of a plurality of combinations, with automatic mechanism for shifting said dials separately and seriatim so as to vary the combinations formed by the fractional indications of the different sectors. 56th. In an advertising system, the combination of a plurality of indicating members, each carrying a plurality of fractional indications, so that the system is capable of a plurality of combinations, with automatic mechanism for shifting said members separately and serratim so as to vary the combinations, and advertising matter located in proximity to the said indicating members, substantially as and for the purposes described. 57th. In an advertising system, the combination of a plurality of indicating dials each carrying a plurality of fractional indications, so that the system is capable of a plurality of combination, with a dial containing advertising matter located in proximity to the indicating dials, and automatic mechanism for shifting said advertising dial at regular intervals and said indicating dials separately and seriatim at said intervals so as to vary the combinations, substantially as and for the purpose described. 58th. In an indicating system, the combination of plurality of indicating members each carrying a plurality of fractional indications, so that the system is capable of a plurality of combinations, with motor mechanism for automatically shifting said members separately and seriatim at regular intervals of time so as to vary the combinations. 59th. In an indicating system, the combination of a plurality of indicating dials, each carrying a plurality of fractional indications, so that the system is capable of a plurality of combinations, with motor mechanism for automatically shifting said dials separately and seriatim at regular intervals of time to vary the combinations, a a casing with an aperture to determine what portions of the dials shall be exposed. 60th. In an indicating system, the combination of a plurality of indicating members each carrying a series of indications and movable relative to each other, through a cycle to display successively all of the indications, with mechanism co-operating with said indicating members for moving one of them a portion of its cycle, then moving another member for a portion of its cycle while the previously operated one remains unmoved, substantially as and for the purpose described. 61st. In an indicating mechanism, the combination of a plurality of movable indicating members, with another movable indicating member, mechanism for moving said last mentioned member and any one of said first mentioned members at regular intervals, and connections controlled by said last mentioned member and co-operating with the mechanism for moving the first mentioned members, whereby the first mentioned members will be moved alternately, substantially as and for the purpose described. 62nd. In an advertising device, the combination of a series of movable indicating members bearing matter adapted to attract attention and capable of different combinations, with a movable advertising member, and motor mechanism for moving one of said indicating members and the advertising member, capable of automatically varying the combinations of the indicating members through all possible combinations, substantially as described. 63rd. In an indicating mechanism, the combination of a plurality of indicating members, with anotner movable indicating member, mechanism for moving said last mentioned member and any one of said first mentioned members alternately at regular intervals, and connections controlled by said last mentioned member and co-operating with the mechanism for moving the first mentioned members, whereby the first mentioned members will be moved alternately. 64th. In an indicator operating mechanism, the combination of the rotatable discs, with the reciprocating dogs for operating said discs, and mechanism

for alternately throwing the dogs co-operating with some of said discs into and out of operation comprising connections with one of said discs which is always operated thereby while the machine is in operation, substantially as and for the purpose described. 65th. In an indicator operating mechanism, the combination of the discs, with the reciprocating dogs for operating said discs, automatic mechanism for alternately throwing some of said dogs into and out of the plane tangent to the discs comprising connections with one of said discs operated thereby, the dog of which is not thrown out, and mechanism for reciprocating said dogs, substantially as and for the purpose described. 66th. In an indicator operating mechanism, the combination of the discs, with the reciprocating dogs for operating said discs, mechanism for reciprocating said dogs simultaneously, and controlling means operated by one of said discs for determining which of the other discs shall be operated. 67th. In an advertising device, the combination of the toothed discs, connected to or carrying display matter, with the reciprocating dogs for advancing said discs, and the crank shaft upon which said dogs are mounted at different angles so that the operative movement of said dogs shall be at different times, substantially as and for the purpose described. 68th. The combination of the toothed discs, with the reciprocating dogs for advancing said discs, the crank shaft upon which said dogs are mounted, one of said dogs being mounted at a different angle from the remaining dogs so that the operative movement of the said dog shall be at a different time from that of the remaining dogs, and a controlling mechanism operated by the movement of said single dog for determining which of the remaining dogs shall operate its disc during its reciprocation.

No. 66,984. Style of Manufactured Tobacco.

(Manière de fabrication du tabac.)

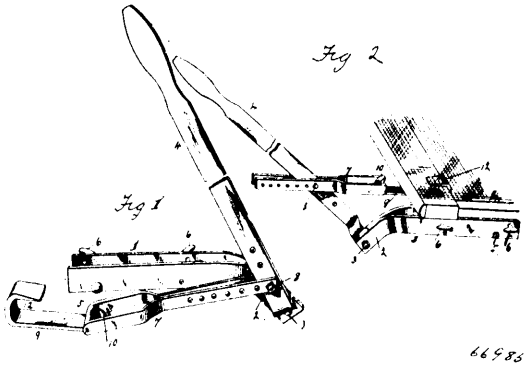


William Atkinson Fretwell, South Boston, Virginia, U.S.A., 10th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—1st. Sweetened or flavored leaves of tobacco retaining their stems intact, as a finished manufactured article. 2nd. Sweetened or flavoured leaves of tobacco, unpressed and retaining their stems intact, as a finished manufactured article. 3rd. A package of tobacco leaves with stems intact, with butt ends of stems folded inside the package and away from their wrapper. 4th. A package of manufactured tobacco consisting of a group of leaves with stems intact folded with the butt end of the stems inside and forming a stiffening core, and the leaves overwrapping and cushioning the stems, substantially as and for the purpose described. 5th. A package of manufactured tobacco consisting of a group of leaves with stems intact folded with a series of transverse bends into wrappings or convolutions, with the butt ends of the stems inside, and having its sides also folded or tucked in along the longitudinal lines of the leaf, substantially as and for the purpose described.

No. 66,985. Stretching Device for Wire Mattresses.

(Appareil tendeur pour matelas en fil de fer.)

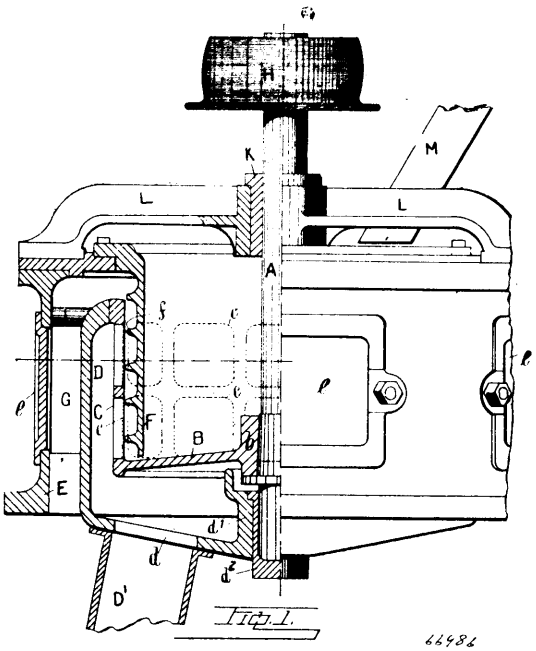


John S. Lee, Tucker, Utah, U.S.A., 12th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—The bifurcated clamp, a stay bolt or brace connecting its parallel arms, and thumb screws mounted in one of said arms, a hand lever fulcrumed on said clamp, a stirrup adjustably pivoted to said lever, and a shoe detachably engaging said stirrup, substantially as shown and described.

No. 66,986. Grain Drying Machine.

(Appareil à sécher le grain.)



William Rawlandson, Lancaster, England, 12th April, 1900; 6 years. (Filed 6th February, 1900.)

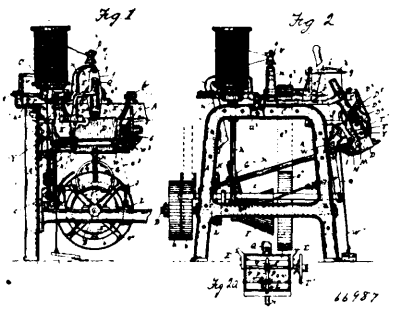
Claim.—1st. A centrifugal machine having dipping into it an internal stationary drum F having a spiral flange *f* thereon, substantially as and for the purposes described. 2nd. In a centrifugal machine, the combination of a rotating cage, a stationary spiral guide in and close to the periphery of that cage, and an outer casing into which the spiral guide can deliver the solid material, substantially as described. 3rd. The combination in a centrifugal machine of an automatic discharge for the solid material over the edge of the cage, a stationary casing surrounding the cage and having a bearing on the cage at the top, whereby the liquid material is caught and delivered at the bottom, and a second stationary casing surrounding the other, with an opening between them at bottom for the discharge of the solid material. 4th. The combination of the revolving cage C, self-acting discharge device *f*, a stationary casing E outside the revolving casing having doors *e* and means whereby the automatic discharge can discharge into this casing, substantially as described. 5th. The combination of a cage, casing B for receiving the water, a discharge for the solid material at the top of the cage, and a surrounding stationary casing E with spacing blocks holding the two casings firmly together. 6th. The combination of the cage C, the stationary casing surrounding same, and bearing on it at top the conical floor of that casing, having perforation for the escape of water, and projecting sleeve d^1 protecting the shaft and carrying the bearing, substantially as described.

No. 66,987. Twine Balling Machine. *(Pelotonse de fil.)*

Frederick G. Becker, Peoria, Illinois, U.S.A., 12th April, 1900; 6 years. (Filed 10th February, 1900.)

Claim.—1st. In a twine balling machine, the main frame, a spool carrying spindle having bearings on the said frame, a brake drum on the spindle, a lever *q*, pivoted on the frame, a brake band attached to the lever, substantially as shown, a lever *w*, pivoted to the main frame and adapted to bear on the spools, a tension device connecting the levers *q* and *w*, consisting of the link *t*, rod *m*, and spring *r*, surrounding the rod and arranged substantially as set forth and described. 2nd. In a twine balling machine, the combination with the main frame and spindle driving mechanism, a gear box pivoted to the said frame, a rock shaft supported on the frame, two arms on the said shaft, a foot lever pivoted to one of the arms, a roller on the opposite arm, a cam shaft T, in the said gear box, an adjustable cam on said shaft T, for engaging the rock shaft roller, a lock within the cam for engaging and disengaging the cam and its shaft, a ball gauging arm having pivotal bearing on the gear box, a dog pivoted to gear box and adapted to engage one of the arms of the rock shaft, an arm D^4, pivotally connecting the gauge arm and dog, all sub-

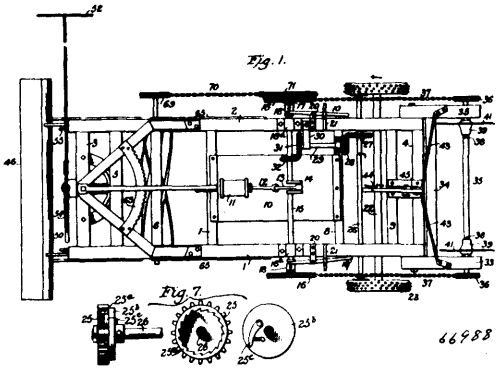
stantially as set forth and described. 3rd. In a twine balling machine, the main frame, a gear box with its driving mechanism, a



rock shaft on the main frame, a foot lever attached thereto, a roller on said rock shaft, a cam shaft on the gear box, an adjustable cam on the shaft and capable of independent movement thereon, a suitable gauge pivoted to the said gear box, and means for loosely connecting the gauge and rock shaft, a winding spindle in the gear box, substantially as described for the purposes set forth 4th. In a twine balling machine, the main frame, a gear box pivoted thereto, driving mechanism in the gear box, a winding spindle driven by said mechanism, a rock shaft on the main frame, an arm w^4, on the shaft, a foot lever attached to the arm, an arm w^1, on the said shaft, a roller on the arm, an adjustable cam on the gear box engaging said roller, the frame V, as part of the main frame, an arm A^3, thereon, a pin W^7, on the arm, a dog y, on said pin for engaging said arm W^4, an adjustable link D^6, pivoted at one end to the said dog, a gauge D^2, pivoted on the gear box, an arm D^4, operating with said gauge and engaging said link D^6, in combination with a flier for winding twine on said winding spindle, driving mechanism for same, a spool carrying spindle on the frame, and means for governing its movements, substantially as set forth. 5th. For a twine making machine, an adjustable cam consisting of the hollow body of irregular contour, a series of teeth on the inner annular surface of the hollow portion, a shaft for carrying the cam, a covering plate for the hollow portion, an independent spring actuated pawl pivoted to the said plate, an adjustable pawl pivoted to the plate, a cam ring mounted on the plate, a pin on the adjustable pawl and a slot in the cam ring for engaging the pin, substantially as set forth and described. 6th. In a twine balling machine, an adjustable cam therefor, consisting of the hollow body thereof, a shaft, a series of ratchet teeth on the inner annular surface of the said hollow body, a covering plate on the shaft adjacent to the cam, a spring actuated pawl pivoted to the said plate for engagement with the ratchet teeth, a spring actuated adjustable pawl pivoted to the plate, a cam ring mounted on the said covering plate, means on the adjustable pawl and on the cam ring for operating said pawl, all being arranged, substantially as and for the purposes set forth and described.

No. 66,988. Ice Cutting Machine.

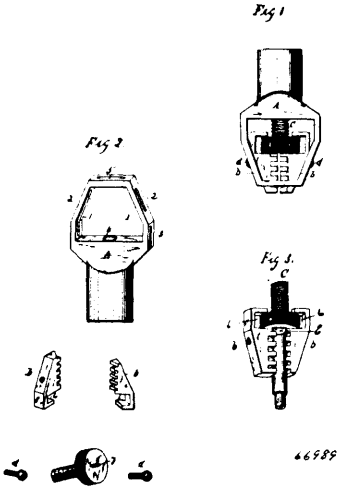
(Machine à couper la glace.)



Allen W. Winters, Greenwood Lake, New York, U.S.A., 12th April, 1900: 6 years. (Filed 1st March, 1900.)

Claim.—1st. An ice machine provided with a cylindrical planer frame having a horizontal axis and inclined blades attached at the extremities thereof of the ends of said frame, saws and means for propelling the machine and actuating said parts. 2nd. An ice machine provided with a horizontal cylindrical rotary planer having a plurality of inclined cutting blades attached at both ends thereof to the planer frame, constructed to cut or shave the ice at one point of the blade in a gradually progressing operation along the entire edge of the blade. 3rd. An ice machine, provided with a planer frame having a horizontal axis and a movable connection with the sides of the machine, adjusting rods mounted in the frame of the machine and engaging said planer frame, constructed to move the planer frame up and down upon said connections, the planer carried by said frame having inclined cutting blades and means for operating the parts. 4th. An ice machine provided with a cutter frame pivoted within the rear end of the machine and carrying a shaft, cutters or saws having screw threaded connection with said shaft and jam nuts to afford horizontal adjustment thereon and a ratchet lever mounted upon the machine and connected with both sides of the cutter frame to elevate and depress the latter. 5th. An ice machine provided with driving and steering mechanism, a scraper, a cylindrical planer having a horizontal axis and movably connected with the sides of said machine carrying inclined cutter blades, adjusting rods mounted to said machine engaging said frame to elevate or depress the same, a cutter frame movably mounted within one end of the machine and carrying a shaft, cutters having screw threaded connection with said shaft and means for operating the parts.

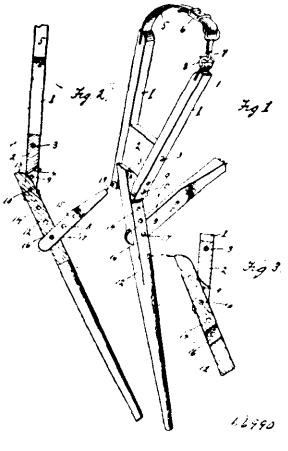
No. 66,989. Drill Chuck. *(Mandrin à forer.)*



Herman M. Reynolds, Oneida, New York, U.S.A., 12th April, 1900; 6 years. (Filed 5th March, 1900.)

Claim.—In a drill chuck, in combination, a skeleton body having oppositely bevelled, slotted sides, correspondingly bevelled jaws secured by screws in the slotted sides and having lugs to engage a driving screw, and an axially located driving screw with slot in face to admit flat end of drill shank, and for operating said jaws, substantially as described and shown.

No. 66,990. Animal Poke. *(Carcan.)*

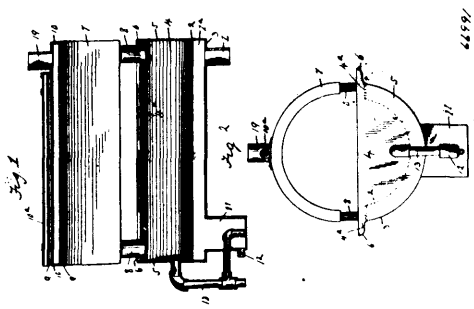


Stephen A. Clark, Amoy, Ohio, U.S.A., 12th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—In an animal poke the combination with the arms having a series of holes near the lower ends, the block, the bolt passing

therethrough, the strap and means for connecting the same to the upper ends of said arms, of the adjustable and reversible preventer bar having a series of holes near the upper end, the bolt connecting it to said arms, and the adjustable and removable short bar provided with pins at the rear ends and the bolt for connecting it with the preventer bar, substantially as described.

No. 66,991. Feed Water Heater.
(Chauffeur d'eau d'alimentation.)



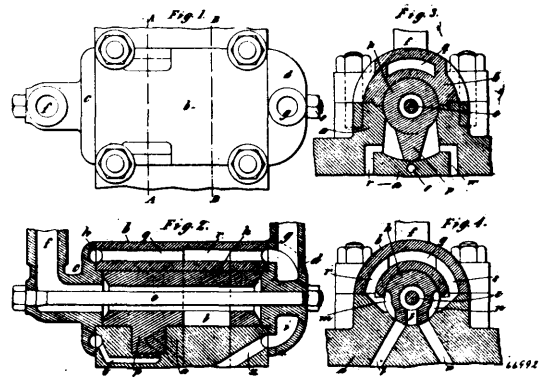
Charles A. Nelson, Alexandria, Minnesota, U.S.A., 12th April 1900; 6 years. (Filed 24th March, 1900.)

Claim.—1st. In combination, a semi-cylindrical horizontally arranged water tank having an open top, and provided with double side walls with an intermediate chamber between the same, an exhaust steam pipe leading to said chamber, a second steam chamber arranged above the first and in communication therewith, a feed water pipe above the second chamber, adapted to discharge the feed water over said second chamber into said tank and connections leading from the tank and steam chambers to the boiler, substantially as described. 2nd. In combination, a semi-cylindrical tank horizontally arranged, having double side walls forming a narrow steam space around the water space in said tank, a narrow semi-circular chamber located above said tank and having communication with the steam chamber thereof, said second chamber being reversely arranged relatively to the first chamber and open at its ends inside its inner periphery to provide a free air circulating space, a feed water pipe discharging above the second chamber and a pipe connection between the water space and steam chamber in said tank and the boiler, substantially as described. 3rd. In combination, a semi-cylindrical tank having double side walls forming a steam space, an exhaust pipe leading thereto, a narrow semi-circular steam chamber arranged above said tank of substantially the same diameter as said tank and reversely arranged in relation thereto, said chamber forming a top to said tank open throughout to permit an unobstructed air circulating space, a feed water discharge pipe located above said narrow steam chamber, pipe opening communications between said steam chamber and a pipe leading from the water space and steam chamber in said tank to the boiler, substantially as described. 4th. In combination, the tank having double side walls forming a steam chamber, a steam exhaust pipe communicating therewith, flanges extending along the edges of said tank, a semi-cylindrical chamber supported above said tank in communication with the first chamber and having its longitudinal edges within the plane of said flanges, a perforated feed pipe supported on said second chamber and a feed pipe leading from said tank and steam chambers to the boiler, substantially as described. 5th. In combination, a water tank having double walls forming a steam chamber, an exhaust pipe communicating therewith, a trap opening into said chamber, a semi-cylindrical steam chamber supported above said tank whereby an open space is left between the same pipe forming a communication between said steam chamber, a perforated feed pipe above said upper chamber, a pipe leading from the tank to the boiler and a branch pipe leading from the trap to said pipes, substantially as described.

No. 66,992. Valve for Fluid Pressure Engines.
(Soupape pour machines à pression hydraulique.)

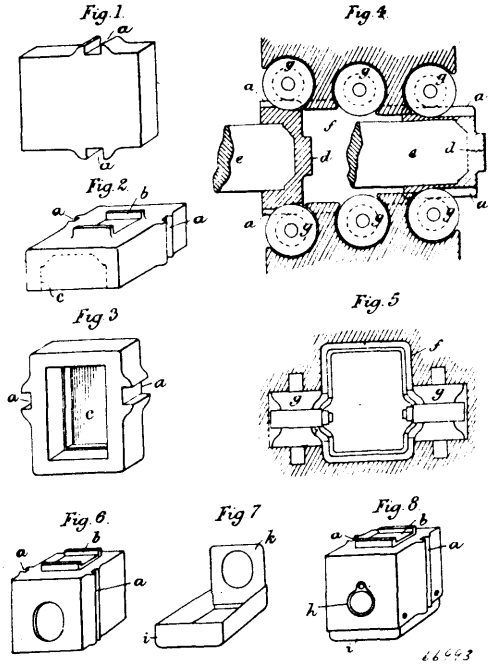
William Vivian, Basset Road, Camborne, Cornwall, England, 12th April, 1900; 6 years. (Filed 27th March, 1900.)

Claim.—1st. The combination with the valve box, of the end covers having, respectively, the annular groove and the space in their inner faces and the inlet and outlet, the partially rotating valve arranged in the valve box and having a longitudinal bolt hole, and the bolt passing through said valve and end covers securing the latter in place, substantially as described. 2nd. The combination with a valve box having a longitudinal channel q, lateral channels r, s, leading from the latter, and ports t, u, to lead to the engine cylinder, of the end covers c, d, having, respectively, the inlet f, and outlet g, and the annular groove h and space i, communicating with said longitudinal channel, the partially rotating valve k arranged in the valve box and having a longitudinal passage e^1, lateral port l leading from the latter and recesses m, n, communicating with said



lateral channels, and means for securing said end covers in position, substantially as described. 3rd. The combination with a valve box, having a longitudinal channel q, lateral channels r, s, leading from the latter and ports t, u, to lead to the engine cylinder, of the end covers c, d, having, respectively, the inlet f, and outlet g, and the annular groove h and space i, communicating with said longitudinal channel, the partially rotating valve k, having the longitudinal passage e^1, lateral port l and recesses m, n, and the bolt e passing through said valve and the end covers, substantially as described. 4th. The combination with the valve box having the channel w, port v and small hole o, of the partially rotating valve k, having the radial wing p located between said channel and port and working over said hole, substantially as described. 5th. The combination with a valve box, having a longitudinal channel q, lateral channels r, s, leading from the latter, ports t, u, to lead to the engine cylinder, the channel w, the port v and small hole o, of the end covers c, d, having, respectively, the inlet f and the outlet g, and the annular groove h and the space i, the partially rotating valve k, having the radial wing p, longitudinal passage e^1, lateral port l and recesses m, n, and means for securing the end covers in position, substantially as described.

No. 66,993. Axle Box. *(Boîte d'essieu.)*

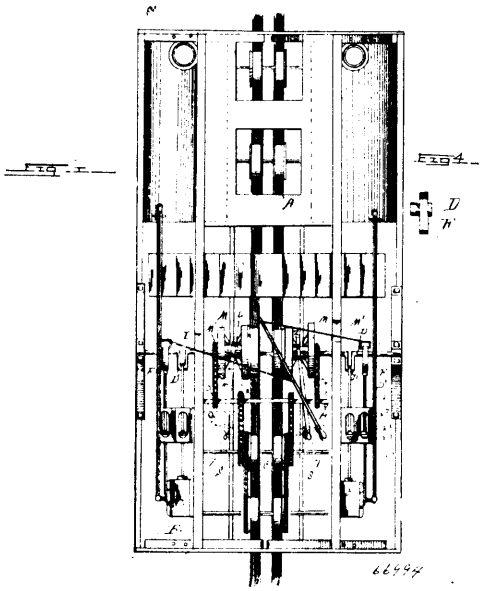


Edward William Mackenzie Hughes, Westminster, Middlesex, England, 12th April, 1900; 6 years. (Filed 27th March, 1900.)

Claim.—1st. An axle box for vehicles, the main body of which comprising the top with the spring seat upon it, the front and rear ends and the two sides with the axle guard grooves extending down

them is formed in one piece of wrought metal without join, substantially as described. 2nd. The herein before described process of forming such an axle box body consisting in first moulding projections for the axle guard grooves on two opposite sides of a rectangular block of wrought metal, next squeezing such block when heated between dies to form a hollow in the bottom of the block and a spring seat on top, then heating such block and chilling the spring seat after it has been heated, and finally forcing the block through a die by which it is drawn down on all four sides and brought to the required shape.

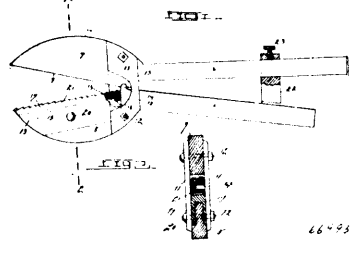
No. 66,994. Locomotive. *(Locomotive.)*



Mathias A. Patton, Livingston, Montana, U.S.A., 12th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—A locomotive for elevated railways comprising in combination the truck having downwardly and outwardly extending beams, the truck wheels, the braces on the sides of the truck frame, the operating shaft mounted in said braces, the driving wheel loosely mounted on said shaft and the clutch turned with the shaft and designed to engage said drive wheel, the sprocket wheel turning with the drive wheel, the counter shafts Q and T, the sprocket wheel turning the latter and chain connection with said sprocket wheels, the eccentric movable longitudinally on the operating shaft, the steam chest, piston stem and connection between same and a crank on the operating shaft, the slide valve to the steam chest, the rod F^5 secured to the slide valve, and a rod F^1 having at one end jointed connection with said rod F^1, and its other end connected to the eccentric, and means for shifting the latter, as set forth.

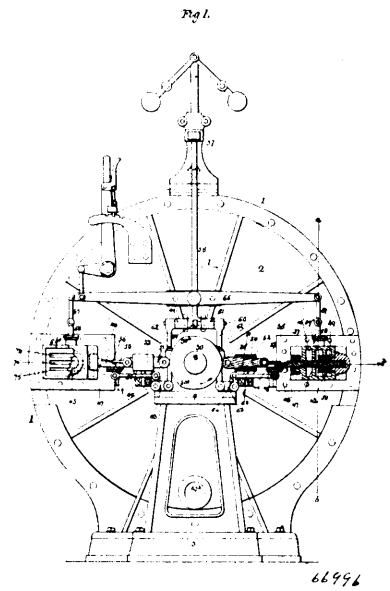
No. 66,995. Pipe Wrench. *(Clé à écrou.)*



Joseph Henry Condy, Stockton, California, U.S.A., 12th April, 1900; 6 years. (Filed 14th March, 1900.)

Claim.—1st. A wrench of the class described, comprising two handles, each of which is provided with a jaw, said jaws being connected at their heels by transverse plates bolted thereto, one of said jaws being provided in line with said bolts with a notch or recess, and the other with a corresponding lug or projection which enters said notch or recess, substantially as shown and described. 2nd. A wrench of the class described, comprising two handles, each of which is provided with a jaw, said jaws being connected at their heels by transverse plates bolted thereto, one of said jaws being provided in line with said bolts with a notch or recess, and the other with a corresponding lug or projection which enters said notch or recess, and one of said jaws being also provided with a removable supplemental jaw, substantially as shown and described. 3rd. A wrench of the class described, comprising two handles, each of which is provided with a jaw, said jaws being connected at their heels by transverse plates bolted thereto, one of said jaws being provided in line with said bolts with a notch or recess, and the other with a corresponding lug or projection which enters said notch or recess, and one of said jaws also being provided with a removable supplemental jaw, and means for limiting the inward movement of the handle, substantially as shown and described. 4th. A wrench of the class described, comprising two handles, each of which is provided with a jaw, said jaws being connected by means of a transverse plate pivotally secured to each, said jaws engaging each other pivotally adjacent said plate, substantially as shown and described. 5th. A wrench of the class described, comprising two handles, each of which is provided with a jaw, said jaws being connected by means of a transverse plate pivotally secured to each, said jaws being provided respectively with a notch or recess and a lug projection which operates in connection therewith, substantially as shown and described.

No. 66,996. Rotary Engine. *(Machine rotatoire.)*



Richard Smith, Sherbrooke, Quebec, Canada, 12th April, 1900; 6 years. (Filed 27th March, 1900.)

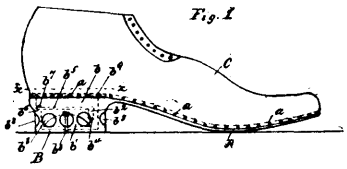
Claim.—1st. The cut-off mechanism herein described, consisting of the inclined walls of the head of the bracket in the groove of which the head of the steam valve plays, in combination with the tripper carried by the spring-impelled spindle which acts as an intermediary to communicate the motion of the wiper cam to the steam valve, the cylinder and the piston operating therein through the stem of the latter, substantially as shown and described. 2nd. The mechanism herein described for operating each main steam valve, consisting of the three-part wiper cam carried by the driving shaft and wiping against the inner end of the stem of the valve through the agency of the intermediary spring impelled spindle carrying upon its outer part the pivotal tripper which operates in conjunction with the step upon the outer part or end of the valve stem, the cylinder and piston operating therein, essentially as explained. 3rd. The mechanism herein described for operating each shifting gate or cylinder head, consisting of the spur gear secured to the horizontal rock shaft journalled within the gate chest, and engaging a toothed rack formed upon the gate, the rock shaft having affixed to its outer end a rocker arm which carries a truck to engage the cam groove that actuates it in combination with the cylinder and the piston operating therein, substantially as explained. 4th. The herein described construction of the truck carried by the rocker arm of the gate operating mechanism, the same consisting of the tapering spindle, carrying upon its outer end the anti-friction roller for engaging the cam groove or path which actuates such rocker arm, said spindle being contained within the corresponding bore of the sleeve secured to said rocker arm, a nut being screwed upon the end of the spindle and bearing upon the rocker arm and serving to maintain a tight joint between the spindle and sleeve in combination with the cylinder and the piston operating therein, substantially as explained. 5th. In combination with the piston chamber and the enclosure that contains the body of the piston carrier, the two annular packing cups, one of which is inserted

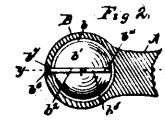
mouth inward within the other, thus providing a box which contains a spring to crowd one cup against the face of the piston carrier, essentially as and for the purpose explained. 6th. The mechanism herein described for regulating the movements of the cut-off mechanism through the medium of a governor, the same consisting of the horizontal rocker arm secured at its base to the horizontal rock shaft which is journalled in brackets secured to the front of the engine, and has pivoted to each of its ends the vertical connecting rod, the lower end of each of these rods being in turn pivoted to the tail of the horizontal rocker arm, which arm in its turn is pivoted to the top of the front standard of the main shaft, the outer end of said rocker arm terminating in the upright arm, the top of which is pivoted to the end of the horizontal rod which connects such arm with the spring impelled spindle, that constitute an intermediary to transmit the motions of the wiper cam to the valve stem, substantially as explained. 7th. In combination with a cylinder, a rotary piston carrier and pistons operating therein, gates and gate operating mechanism controlling the passage of steam through said cylinder, steam chest and inlet valves operating therein, cams operating the said valves, movable intermediate devices governing the action of the same, and a governor and its connections automatically shifting the said devices toward or from the axis of the said cam to vary the point at which the steam shall be cut-off from the cylinder, substantially as set forth. 8th. In combination with a cylinder, a rotary piston carrier and pistons operating therein, gates and gate operating mechanism controlling the passage of steam through said cylinder, steam chests and inlet valves operating therein, steps on the rods of the said valves, trippers arranged for contact with the said steps, movable inclined planes adapted to be shifted into or out of position to lift the said trippers into such contact, and a governor and connections for automatically shifting the said inclined planes, substantially as and for the purpose set forth. 9th. In combination with the cylinder and rotary piston carrier and pistons of a rotary engine, a series of gates and a cam grooved disc and connections for determining the time of the closing and opening of the said gates, and a auxiliary engine for driving the said gates and devices engaging a second cam groove or path in the said disc for operating the valve of the said auxiliary engine, substantially as set forth. 10th. In combination with the cylinder, rotary piston carrier and pistons of a steam engine, steam inlet valves having steps on their stems, trippers arranged for contact with said steps, movable inclined planes for controlling the duration of the contact of the said trippers with the said steps, sectional connecting rods provided with nuts for regulating the movements of the said inclined planes, and the necessary connecting mechanism, substantially as set forth. 11th. In engine of the class herein first premised, the device for actuating the shifting gates consisting of the toothed rack, (upon each gate) which engages the spur gear carried by the rocker shaft journalled within the gate chest and actuated by a rocker arm having a truck which engages the cam groove or path that imparts vibratory motions to said rocker arm, essentially as described. 12th. A cam having two paths or grooves in combination with an engine cylinder, a piston carrier and pistons rotating therein, gates operating to open and close the steam space of said cylinder, a connecting rod engaging one of the said path, a rock shaft provided with a rocker arm and having the said connecting rod pivoted on it, a valve connected to said rocker arm, an auxiliary engine controlled by the said valve, connections between the said auxiliary engine and the said gates for operating them by steam directly, applied and devices making connection between the other cam path of said disc and the said gates for regulating their time of action, substantially as described.

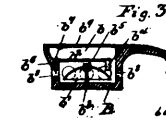
No. 66,997. Shoe. *(Chaussure.)*

John Azzimonti, New York City, New York, U.S.A., 12th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—1st. In a shoe, the combination with the sole, of a chambered heel piece and a bell or sounder therein, together with a striker carried by a spring arm adapted to hold said striker, in normal position, from contact with, and to vibrate the same to said bell or sounder, whereby, when a movement of the shoe, as in dancing is abruptly begun or stopped, the striker may be vibrated to strike a blow upon said bell or sounder. 2nd. In a shoe, the combination with the sole, of a chambered heel piece provided with apertures in its walls, a bell or sounder in said heel piece, and a striker carried by a spring arm adapted to hold said striker in normal position from contact with, and to vibrate the same to, said bell or sounder, whereby, when the striker is vibrated to strike a blow upon said bell or sounder, by a movement of the shoe, as in dancing, the sound vibrations may be freely communicated to the outside air. 3rd. In a shoe, the combination with the upper, of a sole and chambered heel piece integrally formed of a single piece of rigid material, such as wood, a bell or sounder in said heel piece and a striker carried by a spring arm adapted to hold said striker in normal position from contact with and to vibrate the same towards said bell or sounder, substantially as and for the purpose specified. 4th. In a shoe, the combination with the sole, of a chambered heel piece, a bell or sounder mounted at the bottom of said chamber, a spring arm fixed at one end in the chamber wall and reaching over said bell or sounder, and a striker carried by said arm and thereby held in normal position from contact with said bell or sounder, substantially as and for the purpose specified. 5th. A sole for a dancing clog, composed of a single piece of wood or analagous material and having integral with it a chambered heel piece provided

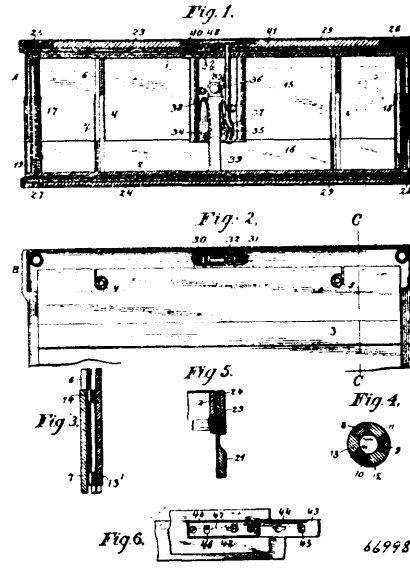






with lateral apertures in its side walls, together with a bell supported on the heel chamber bottom; a striker carried above the bell by a spring arm seated to the chamber on the upward side of the heel piece substantially as and for the purpose specified.

No. 66,998. Temporary Binder. *(Reliure temporaire.*

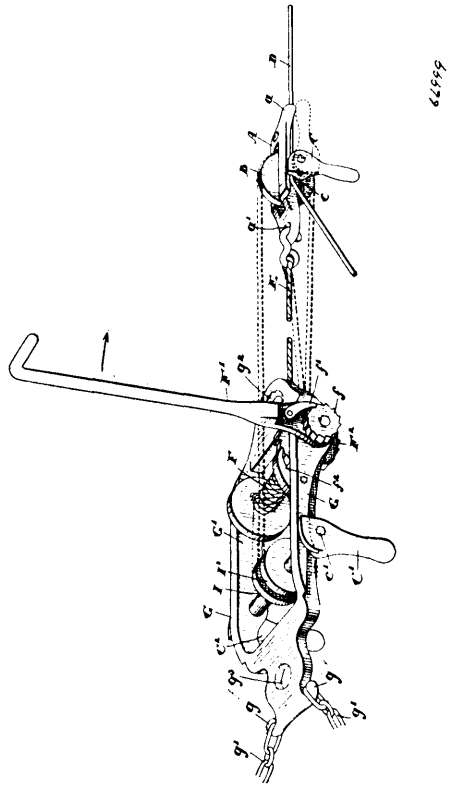


Robert James Copeland and Albert Edwy. Chatterson, both of Toronto, Ontario, Canada, 12th April, 1900; 6 years. (Filed 15th July, 1899.)

Claim.—1st. An extensible sheet post for a binder, comprising two sections slidably connected together and being of uniform circumference throughout its length. 2nd. An extensible sheet post for a binder, comprising two sections slidably connected together and being of uniform circumference throughout its length, each section comprising a plurality of longitudinal members arranged to dovetail with the members of the other section of the post. 3rd. In a binder, the combination of two strips movable to and from each other, with one or more extensible posts extending between the strips, said post or posts comprising two members slidably connected together and being of a uniform circumference throughout the length thereof. 4th. In a binder, the combination of two strips movable to and from each other, with one or more extensible posts extending between the strips, said post or posts comprising two sections slidably connected together and being of uniform circumference throughout the length thereof, the sections of a post comprising each a plurality of longitudinal members arranged to dovetail with the members of the other section of the post. 5th. In a binder, the combination of two strips movable to and from each other, with one or more extensible posts extending between the

strips, said post or posts comprising two members slidably connected together and being of a uniform circumference throughout the length thereof, and means for locking the strips together at various points of their separation. 6th. In a binder, the combination of two strips movable to and from each other, with one or more extensible posts extending between the strips, said post or posts comprising two sections slidably connected together and being of uniform circumference throughout the length thereof, the sections of a post comprising each a plurality of longitudinal members arranged to dovetail with the members of the other section of the post, and means for locking the strips together at various points of their saparation, the combination of two strips movable to and from each other, with one or more extensible sheet posts extending between the strips, said post or posts comprising two members slidably connected together and being of a uniform circumference throughout the length thereof, means for locking the strips together at various points of their separation, and a pair of extensible posts connecting the strips together. 8th. In a binder, the combination of two strips movable to and from each other, with one or more extensible sheet posts extending between the strips, said post or posts comprising two members slidably connected together and being of a uniform circumference throughout the length thereof, means for locking the strips together at various points of their separation, and a pair of extensible spring posts connecting the strips together. 9th. In a binder, the combination of two strips movable to and from each other, with one or more extensible sheet posts extending between the strips, said post or posts comprising two sections slidably connected together and being of uniform circumference throughout the length thereof, the sections of a post comprising each a plurality of longitudinal members arranged to dovetail with the members of the other section of the post, and means for locking the strips together at various points of their separation, and a pair of extensible posts connecting the strips together. 10th. In a binder, the combination of two strips movable to and from each other and connected together, said strips being adapted and designed to hold sheets between them, and covers arranged for ready attachment to and detachment from said strips. 11th. In a binder, the combustion of two strips movable to and from each other and connected together, said strips being provided with sheet posts, and covers arranged for ready attachment to and detachment from said strips. 12th. In a binder, the combination of two strips movable to and from each other and connected together, said strips being provided with sheet posts, and covers having hinged strips at their rear ends arranged for ready ' ttachment to and detachment from said strips. 13th. In a binder, the combination of two strips movable to and from each other and connected together, said strips being provided with sheet posts, and covers having hinged strips at their rear ends arranged for ready attachment to and detachment from said strips, and means for locking the strips together at various points of their separation. 14th. In a binder, the combination of two strips movable to and from each other and adapted to hold sheets between them, a lock for fastening the strips at various points of their separation, said lock being provided with a seat, whereby when the binder is unlocked a seal in its seat will be defaced. 15th. In a binder, the combination of two strips movable to and from each other and adapted to hold sheets between them, a key operated lock for fastening the strips at various points of their separation, said lock being provided beneath its key hole with a seal seat, whereby when the key is inserted to unlock the binder a seal in its seat will be defaced. 16th. In a binder, the combination of two strips movable to and from each other and adapted to hold sheets between them, a lock for fastening the strips at various points of their separation, said lock being provided with a seal seat, whereby when the binder is unlocked a seal in its seat will be defaced, said seal seat being arranged to be locked and unlocked when the binder is locked and unlocked. 16th. In a binder, the combination of two strips movable to and from each other and adapted to hold sheets between them, a key operated lock for fastening the strip at various points of their separation, said lock being provided beneath its key hole with a seal seat, whereby when the key is inserted to unlock the binder, a seal in its seat will be defaced, said seal being arranged to be locked and unlocked when the binder is locked and unlocked. 18th. In a binder the combination of two strips movable to and from each other and adapted to hold sheets between them, a lock for fastening the strips at various points of their separation, said lock being provided with a seal seat, whereby when the binder is unlocked a seal in its seat will be defaced, said seal seat having a cover provided with a lock arranged for operation independently of the unlocking of the binder lock. 19th. In a binder, the combination of two strips movable to and from each other and adapted to hold sheets between them, a key operated lock for fastening the strips at various points of their separation, said lock being provided beneath its key hole with a seal seat, whereby when the key is inserted to unlock the binder a seal in its seat will be defaced, said seal seat having a cover provided with a lock arranged for operation independent of the unlocking of the binder lock. 20th. In a binder, the combination of two strips movable to and from each other and adapted to hold sheets between them, a key operated lock for fastening the strips at various points of their separation, said lock being provided beneath its key hole with a seal seat, whereby when the key is inserted to unlock the binder a seal in its seat will be defaced, said seal seat having a cover provided with a lock arranged for operation independent of the unlocking of the binder lock and by means of the key of said binder lock. 21st. In a binder, the combination of two strips movable to and from each other and designed to hold sheets between them, a toothed arm carried by one of said strips, and a lock carried by the other strip, said lock comprising a pawl to engage the toothed arm and a rotatable piece adapted to be engaged by a key inserted in the keyhole of the lock and arranged to operate the pawl. 22nd. In a binder, the combination of two strips moving to and from each other and designed to hold sheets between them, a toothed arm carried by one of said strips, and a lock carried by the other strip, said lock comprising a pawl to engage the toothed arm and a rotatable piece adapted to be engaged by a key inserted in the key hole of the lock and arranged to operate the pawl, a seal chamber located on the upper side of the strip which carries the lock and having therein the key hole for said lock, said seal chamber having a cover provided with a lock. 23rd. In a binder, the combination of two strips movable to and from each other and designed to hold sheets between them, a toothed arm carried by one of said strips, and a lock carried by the other strip, said lock comprising a pawl to engage the toothed arm and a rotatable piece adapted to be engaged by a key inserted in the key hole of the lock and arranged to operate the pawl, a steel chamber located on the upper side of the strip which carries the lock and having therein the key hole for said lock, said steel chamber having a cover provided with a lock arranged to be operated by the key for the binder lock but independent of the unlocking of the binder lock. 24th. In a binder, the combination of two metal strips designed to hold sheets between them, covers hinged to said strips, and rubber pieces fitting over the ends of said strips beneath the leather or other binding material therefor to protect said leather or other binding material from wear. 25th. An extensible sheet post for a binder comprising two sections slidably connected together and being of uniform circumference throughout the length, and removable sheets having apertures engaged by said posts. 26th. In a binder, the combination of two strips movable to and from each other and connected together, said strips being provided with sheet posts, and covers having hinged strips at their rear ends arranged for ready attachment to and detachment from said strips, and removable sheets secured in place between said strips.

No. 66,999. Wire Tightener. (*Tendeur de fil de fer.*)

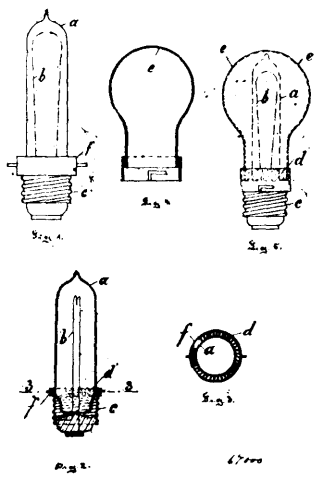


William James Earl, Tyrone, Ontario, Canada, 12th April, 1900; 6 years. (Filed 1st March, 1899.)

Claim.—1st. The combination with a block and pulley located therein, and the arm pivoted eccentrically on the block to one side of the pulley, so as to grasp and securely hold the wire, the guiding lip situated at the side of the block on a line with the operative portion of the gripping arm, of the tightening block, the supplemental

drum suitably held therein and forming a guide for the rope from the eye of the gripping block, which passes forward over the pulley on the gripping arm and back to the tightening block and means for drawing upon such rope, as and for the purpose specified. 2nd. The combination with a block provided with a pulley and arm pivoted eccentrically on the block, so as to grasp and hold the wire securely, and the guiding lip for such wire, and the eye, of the tightening block and winding spindle or drum and arm and ratchet gear on such spindle, the supplemental spindle and supplemental pulleys on same and the rope connected at one end of the eye of the gripping block and passing around the supplemental pulleys and the pulley in the gripping block and having the other end fastened to the winding spindle as shown and for the purposes specified.

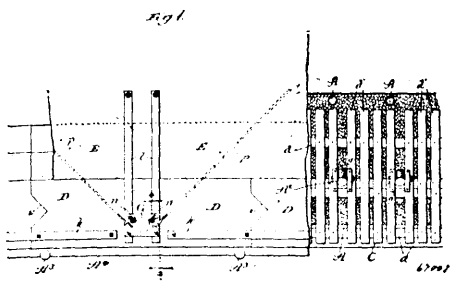
No. 67,000. Incandescent Electric Lamp.
(*Lamp électrique incandescente.*)



Joseph Plechati, Berlin, Germany, 12th April, 1900; 6 years. (Filed 29th May, 1899.)

Claim.—1st. An incandescent electric lamp in which the glass filament tube is supported in the plug by means of a helical spring of closely wound convolutions, which extends circumferentially around the filament tube and which is interposed in the space between the tube and rim of the plug, in frictional engagement with both, so as to retain the tube in proper position in the plug, substantially as set forth. 2nd. An incandescent electric lamp in which the filament is surrounded by a hermetically sealed cylindrical glass tube, supported in the plug by means of a helical spring of closely wound convolutions, which extends circumferentially around the filament tube and which is interposed in the space between the tube and rim of the plug, in frictional engagement with both, and an ordinary bulb surrounding the glass filament tube and connected by a suitable joint with the plug so as to be easily separated therefrom, substantially as set forth.

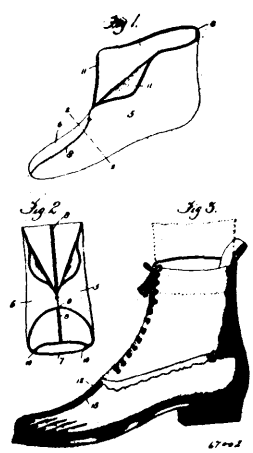
No. 67,001. Dock Construction. (*Construction de bassin.*)



Victor Windett, Chicago, Illinois, U.S.A., 12th April, 1900; 6 years. (Filed 25th September, 1899.)

Claim.—1st. In a dock structure, the combination with a pile foundation, of open work grillage surmounting and fastened thereto, and a concrete top surmounting and fastened on said grillage and covering the front ends of the cross timbers thereof, substantially as described. 2nd. In a dock structure, the combination with the concrete topped pile foundation surmounted by open work grillage, of concrete built around and bonded to the piles and sheeting, substantially as described. 3rd. In a dock structure, the combination with a pile foundation, of grillage surmounted and fastened thereto, and a concrete top surmounting and fastened on said grillage, said top being formed in longitudinal sections connected by tongue and groove joints at there ends, substantially as described. 4th. In a dock structure, the combination with a pile foundation, of grillage, comprising longitudinal timbers and transverse timbers on the upper ends of the piles and fastened together and to the piles by bolts passing through said timbers at their intersections into the piles and protruding at their upper expanded ends beyond the upper surface of the grillage, and a concrete top on said grillage and embedding the said protruding bolt ends, substantially as described. 5th. In a dock structure, the combination with the pile foundation, of grillage, comprising longitudinal timbers and transverse timbers on the upper ends of the piles and fastened together and to the piles by bolts passing through said timbers at their intersections into the piles and protruding at their upper expanded ends beyond the upper surface of the grillage, a concrete top on said grillage and embedding the said protruding bolt ends, anchor piling, and anchor rods embedded in said top and extending and fastened to said anchor piling, substantially as described. 6th. In combination with a dock structure, comprising a pile foundation surmounted by grillage carrying a concrete top, a mooring post on said top and anchored to the grillage, substantially as and for the purpose set forth. 7th. In combination with a dock structure, comprising a pile foundation surmounted by grillage carrying a concrete top, a mooring post fastened to timbers secured on said top, and vertical and diagonal anchor rods connecting said post with the grillage and passing through said top, substantially as described. 8th. In combination with a dock structure, comprising a pile foundation surmounted by grillage carrying a concrete top anchored to anchor piling, a mooring post fastened to timbers secured on said top, vertical and diagonal anchor rods connecting said post with the grillage and passing through said top, and anchor rods connecting said post with the anchor piling, substantially as and for the purpose set forth. 9th. In combination with a dock structure, comprising a pile foundation surmounted by grillage carrying a concrete top, a mooring post fastened to timbers secured on said top, blocks m^2 and n^1 embedded in the concrete on said grillage, a rod m extending from the mooring post through said top and terminating in a plate m^1 confined against the under side of said block m^2, and a rod n extending from said post diagonally through said top and block n^1, and fastened at its inner end by a nut o^1 bearing against a metal shoe o with which the corner of the block is bound, substantially as described.

No. 67,002. Chamois Sock. (*Chaussette de chamois.*)



Joseph Wilfrid Gravel, Montreal, Quebec, Canada, 12th April, 1900 6 years. (Filed 28th March, 1900.)

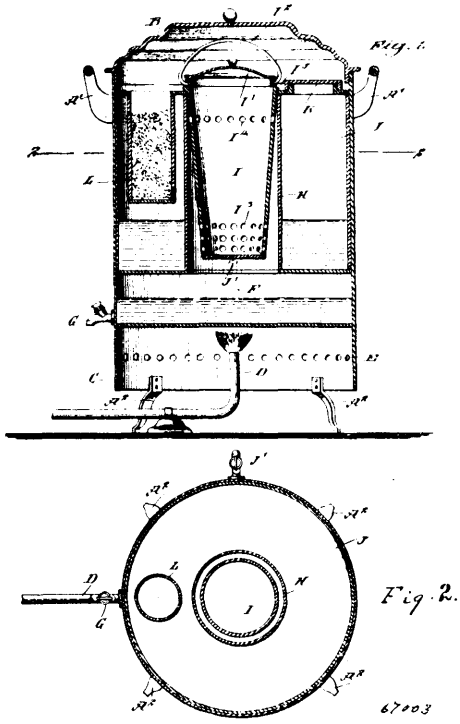
Claim.—1st. As a new article of manufacture, the chamois sock substantially as herein shown and described. 2nd. As a new article of foot wear, the improved sock made three pieces and comprising the sole, and the vamp and quarter sections united one to the other by the back, vamp and sole seams, substantially as set forth.

No. 67,003. Sterilizer and Heater. (*Chauffeur et stériliseur.*)

James A. Cronkhite, Los Angeles, California, U.S.A., 12th April, 1900; 6 years. (Filed 28th March, 1900.)

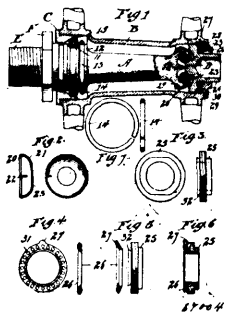
Claim.—1st. A sterilizer and heater, comprising a casing formed with a heating chamber in its bottom, a solution tank above the top of the heating chamber, a vapour chamber rising from the centre of the solution tank and having an open upper end and a water chamber above the solution tank and surrounding the vapour chamber, and an instrument receptacle fitting in the vapour chamber and closing the upper end of the same, said receptacle being provided with

openings in its sides, and arranged to form a space between it and the vapour chamber, substantially as described. 2nd. A sterilizer



and heater, comprising a casing formed with a heating chamber in its bottom, a solution tank above the heating chamber, a vapour chamber rising from the centre of the solution tank and having an open top, an annular water chamber above the solution tank and surrounding the vapour chamber, and a conical instrument receptacle having a cover for its top and provided with a bead at its upper end for suspending it in the vapour chamber and with opening in its sides, substantially as described. 3rd. A sterilizer and heater, comprising a casing provided with a solution tank, a vapour chamber rising from the centre of the solution tank and having an open upper end, and an annular water chamber above the solution tank and surrounding the vapour chamber, and a conical perforated instrument receptacle projecting into the vapour chamber and closing the upper end of the same, substantially as described. 4th. A sterilizer and heater, comprising a casing provided with a solution tank, a vapour chamber rising from the centre of the solution tank, and having an open upper end, and an annular water chamber above the solution tank and surrounding the vapour chamber, a perforated receptacle suspended in the vapour chamber and closing the same, and a sand vessel secured, substantially as described.

No. 66,004. Ball Bearing. (*Coussinet à boule.*)

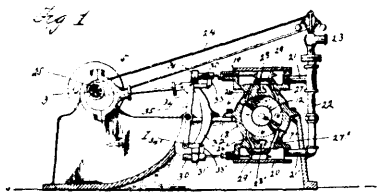


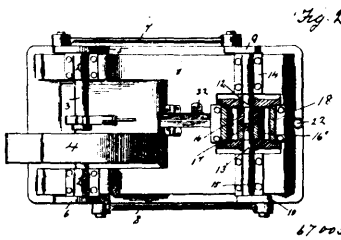
Charles Hiram Ferguson, Chicago, Illinois, U.S.A., 12th April, 1900; 6 years. (Filed 28th November, 1899.)

Claim.—1st. A spindle provided with a ball holding cup within the end thereof, balls within said cup, and a removable retainer secured to said spindle and serving to retain balls in said cup. 2nd. A spindle provided with a ball holding cup cut within the end thereof and having an axial projection located at the centre of said cup, balls between said cup and cone, and a retainer removably secured to the body of said cup. 3rd. In combination with the shell or hub of a ball bearing, a spindle having an exterior ball race near one end, an interior ball race near the other end, balls within said race, and devices located near each race for retaining said balls within their respective races when the said shell or hub is removed. 4th. A hub or enclosing shell, a spindle therefor having a cup formed within the end thereof, a cone screwed into said shell adjacent to said cup, balls within the completed race formed by said cup and cone, and a retainer adapted to retain said balls within said cup when said cup and cone are separated. 5th. In combination with a spindle provided with a cup-shaped ball race cut within the end thereof and having an axial projection at the centre of said cup, and a retainer secured to the outer surface of said cup and extending around the end thereof to a point which leaves less space between said retainer and said axial projection than the diameters of said balls. 6th. A ball race consisting of a fixed member and an adjustable member, a shell enclosing both, a lock nut adapted to secure said adjustable member to said shell, a washer, means for preventing said washer from partaking of the rotary movement of said nut, and means for retaining and compelling said washer to partake of the axial movement of said nut. 7th. A shell, a cone screwed therein, a lock nut, a washer secured thereto and rotatable thereon, a seat on said cone for the reception of said washer, a pin on said seat, a series of openings in said washer for the reception of said pin, and means for preventing said washer from turning in said shell. 8th. A spindle and an enclosing shell therefor, said spindle constituting at its end the fixed member of a ball race, an adjustable member movable towards and from said spindle and completing the ball race, and a locking device for securing said adjustable member from displacement. 9th. In combination with a cone and a shell into which said cone is screwed, a washer provided with a projection extending into a groove in said shell, an interlocking device between said washer and said cone, and a lock nut screwed into said shell against said washer and serving to hold it in engagement with said cone. 10th. In combination with a spindle providing the fixed member of a ball bearing and an enclosing shell therefor, an adjustable member for said bearing screwed into said shell, balls within the race formed by said members, a washer provided with means for preventing it turning in said shell, means whereby said washer will keep said adjustable member from turning when in engagement therewith, and a nut for keeping said washer and said adjustable member in engagement. 11th. The combination with the fixed and adjustable members of a ball race and balls therein, of a shell into which the adjustable member is screwed, a washer having a seat on the adjustable member and provided with a projection on its periphery, a groove in said shell for the reception of said projection, a nut secured to said washer and rotatable thereon, and a locking device between said washer and said adjustable member. 12th. The combination with the fixed and adjustable members of a ball race and balls therein, of an enclosing shell into which the adjustable member is screwed, a lock nut and a washer for said adjustable member, an axial groove, and means for causing said washer to partake of the axial movement of said nut. 13th. In combination with a shell and a cone screwed therein, a locking nut provided with a circular dovetail projection, and a solid washer provided with an inner bevelled edge adapted to engage and be retained by said dovetail. 14th. A spindle having a groove cut in its cylindrical surface, said groove serving as the fixed member of a ball race, a shell, a cup screwed into said shell and serving as the adjustable member of said ball race, balls within the completed race thus formed, a stop for limiting the movement of said cup from said balls, and a removable ring secured to said spindle and serving to retain said balls within their race. 15th. A ball race consisting of a fixed member as 10 and a movable member as C, balls within the race thus formed, a shell surrounding said race and into which the movable member is screwed, a stop for limiting the movement of said movable member from said balls and a retainer adapted to prevent said balls from falling out of their race when said movable member is in contact with said stop. 16th. In combination with a spindle provided with ball bearings at each end, each bearing being provided with one fixed and one movable member, balls within each bearing, a shell into which the movable members are screwed, means for adjusting the position of both movable members by the axial movement of one member, and means for permitting the removal of balls from both bearings by unscrewing the other movable member. 17th. In a ball bearing, provided with a ball race at or near each end of the spindle thereof, means for adjusting the member of both races, and means for permitting the removal and return of the balls from either or both races without disturbing such adjustment. 18th. In a bearing provided with a ball race at or near each end of the spindle thereof, means for adjusting the members of both races, a locking device for retaining such adjustment when made, means for permitting the withdrawal and return of the spindle without disturbing such ajustment, and devices for retaining the balls in both races when the spindle is so removed. 19th. In a bearing provided with a ball race at or near each end, means for adjusting the members of both races simultaneously from one point, a locking device for securing such adjustment when made, and means for opening said bearings for inspection without disturbing said adjustment. 20th. In combination with a spindle provided with a ball race at or near each end, balls within

said races, means for adjusting the members for both races, a locking device for securing such adjustment when made, and means for permitting the balls to be removed from and returned to their respective races without disturbing such adjustment.

No. 67,005. Steam Engine. *(Machine à vapeur)*

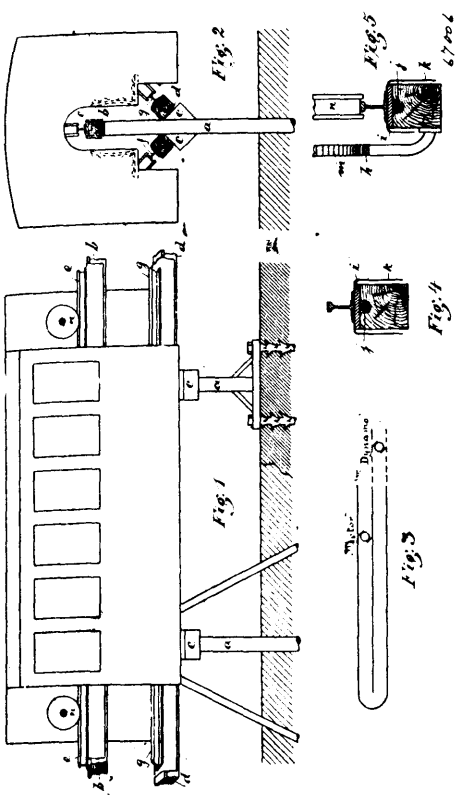




John A. Hyter, Fostoria, Ohio, U.S.A., 12th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—In a double acting vibrator engine, the main driving shaft 3, the crank discs 5 and 6, and the connecting rods 7 and 8, in combination with their oscillating shafts 12, 13, and their cranks 9 and 10, the cylinder 18 provided with a duplicate inlet and exhaust ports and co-acting slide valves, their stems, the rocking lever 35 connecting said stems, a single eccentric mounted on the main driving shaft and operatively connected to said lever and adapted to simultaneously reciprocate said valves in opposite directions and the overlapping piston blades fixed to the contiguous end of said oscillating shafts, substantially as and for the purpose set forth.

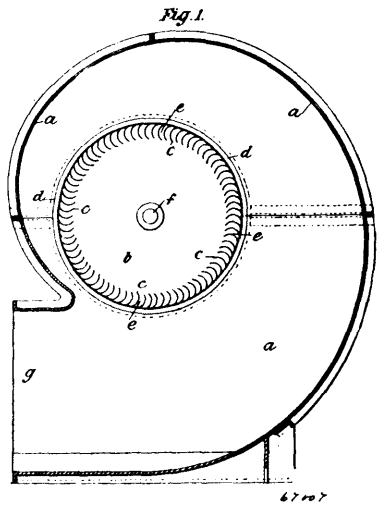
No. 67, 006. Electrical Overhead Railway.
(Chemin de fer électrique aerien.)



Louis John Bruns and Hans Realf Ottesen, both of Hanover, German Empire, 12th April, 1900; 6 years. (Filed 11th September, 1899.

Claim.—In electric overland railways, the combination of the posts, cables *j* located in grooves therein, insulating plates *i* covering the grooves, the projecting hoods or caps *k* arranged on the plates and the rails resting on the caps and in conducting contact with the same, essentially as described.

No 67,007. Centrifugal Fan and Pump.
(Pompe et éventail centrifuges.)

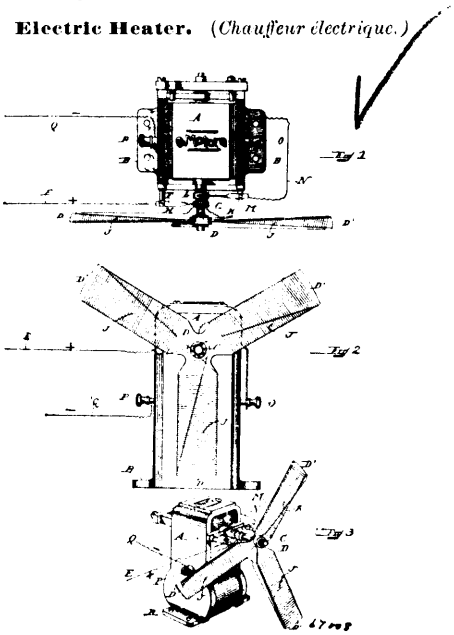


Samuel Cleland Davidson, Sirocco Engineering Works, Belfast, Ireland, 12th April, 1900; 6 years. (Filed 6th October, 1899.)

Claim.—1st. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, being extended approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of an axial length equal to at least three times the radial depth of said blades, substantially as set forth. 2nd. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, being extended approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of an axial length equal to at least three times the radial depth of said blades, and the ends of the intermediate spaces or ports between said blades being open to admit the inflowing fluid from the eye to said blades, substantially as set forth. 3rd. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, said blades being mounted on a disc, arms or their equivalent and extended therefrom in a direction approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of an axial length equal to at least three times the radial depth of said blades, substantially as set forth. 4th. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, said blades being connected together at their intake ends and being mounted at their opposite ends on a disc, arms or their equivalent and extended therefrom in a direction approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of an axial length equal to at least three times the radial depth of said blades, substantially as set forth. 5th. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, being extended approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of an axial length equal to at least three times the radial depth of said blades, and said blades being mounted at a pitch or distance apart at their inner edges not greater than their radial depth, substantially as set forth. 6th. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, being extended approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or

intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of axial length equal to at least three times the radial depth of said blades, and said blades being in part curved through a plane at right angles to the axis, substantially as set forth. 7th. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, being extended approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of axial length equal to at least three times the radial depth of said blades, and the intake ends of said blades being spoon shaped, the concavity being in the direction of rotation, substantially as set forth. 8th. A centrifugal fan or pump, the rotary member of which comprises essentially numerous thin blades arranged in drum form, being extended approximately parallel to the axis of rotation so as to enclose within them an approximately cylindrical supply or intake chamber practically unobstructed by blades or other parts, said intake chamber being of a diameter equal to at least four times the radial depth of the individual blades and of an axial length equal to at least three times the radial depth of said blades, and the outer edges of said blades having relative to their inner edges a forward lead in the direction of rotation whereby the outer or discharging area of the ports is less than their interior or inlet area, substantially as set forth.

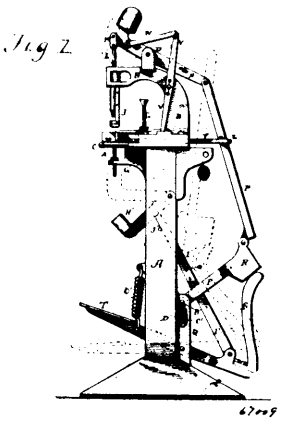
No. 67,008. Electric Heater. (*Chauffeur électrique.*)



The State Electric Heat and Light Company, Jersey City, New Jersey, U.S.A., assignee of Edwin F. Porter, Boston, Massachusetts, U.S.A., 17th April, 1900; 6 years. (Filed 16th January, 1899.)

Claim.—1st. In an apparatus of the character specified, one or more heat developing electric conductors forming an electric heater, movable means as a fan for removing or displacing the heat from said heater, a motor for operating said movable means, and an electric conductor constantly in series with both heater and motor while the circuit is closed through the motor and adapted to energize both the heater and motor coincidentally. 2nd. In an apparatus of the character specified, a fan, one or more heat developing electric conductors forming an electric heater and mounted on said fan, a motor for operating the fan, and an electric conductor constantly in series with both heater and motor coincidentally. 2nd. In an apparatus of the character specified, one or more heat developing electric conductors forming an electric heater, a fan mounted on the same support as the heater for removing or displacing the heat from said heater, a motor for operating said fan, and an electric conductor constantly in series with both heater and motor while the circuit is closed through the motor and adapted to energize both the heater and motor coincidently. 4th. In an apparatus of the character specified, a movable electric heater consisting of one or more heat developing electric conductors, a motor for moving said heater to remove or displace the heated air therefrom, and an electric conductor constantly in series with both heater and motor while the circuit is closed through the motor and adapted to energize both the heater and motor coincidentally. 5th. In an apparatus of the character specified, a fan, one or more heat developing electric conductors forming an electric heater and mounted on the blades of said fan, a motor for operating said fan for removing or displacing the heated air from said heater, and an electric conductor constantly in series with both heater and motor while the circuit is closed through the motor and adapted to energise both the heater and motor coincidentally. 6th. In an apparatus of the character specified, an electric motor, one or more heat developing electric conductors forming an electric heater which offers a greater resistance to the current than the motor whereby the motor is relieved from the stress of the current, a fan operated by said motor for removing or displacing the heated air from said heater, and an electric conductor constantly in series with both heater and motor while the circuit is closed through the motor and adapted to energize both the heater and motor coincidentally.

No. 66,009. Riveting Machine. (*Machine à river.*)



Robert H. Love and George P. Gadberry, both of Allen, Texas, U.S.A., 17th April, 1900; 6 years. (Filed 13th March, 1899.)

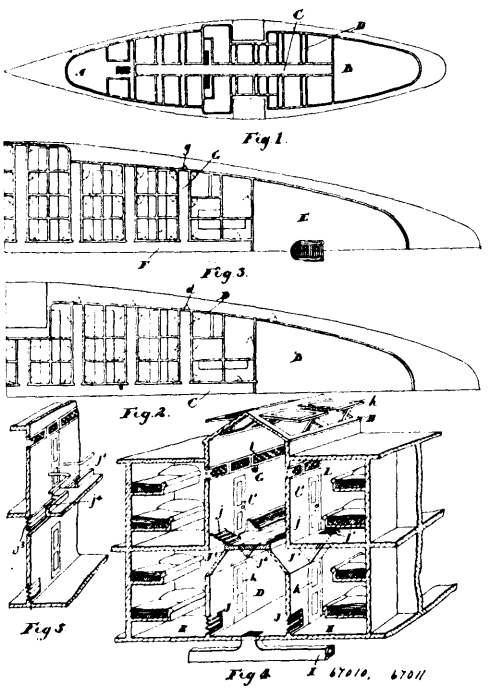
Claim.—1st. In a riveting machine, an operating treadle, a mechanism connected thereto for driving the rivets, a cutter which is operated by the same mechanism for cutting off the ends of the rivets and means, connected to the mechanism for driving the rivets, for feeding the burs into position, the parts being combined, substantially as described. 2nd. In a riveting machine, an operating treadle, and a mechanism connected thereto for driving the rivets, combined with a cutter for cutting-off the ends of the rivets, and means for feeding the burs into position, the cutter and feeder for the burs being operated by the rivet driving mechanism, substantially as set forth. 3rd. In a riveting machine, an operating treadle, a mechanism connected thereto for driving the rivets, a cutter which is operated by the same mechanism for cutting off the ends of the rivets and a mechanism connected to the treadle for clenching the rivets after they have been driven, substantially as specified. 4th. In a riveting machine, an operating treadle, a mechanism connected thereto for driving the rivets, and a separate mechanism also connected to the treadle for clenching the rivets, combined with a mechanism for cutting off the ends of the rivets, and a mechanism for feeding the burs, substantially as shown. 5th. In a riveting machine, an operating treadle, a mechanism connected thereto for driving the rivets, and a separate mechanism, also connected to the treadle, for clenching the points of the rivets, combined with a cutter for cutting off the ends of the rivets, and a feeding mechanism for the burs, the cutter, and the feeding mechanism for the burs being operated by the mechanism for driving the rivets, substantially as described. 6th. In a riveting machine, an operating treadle provided with a rod or lever S, a jointed rod P provided with an enlargement R against which the rod or lever catches for forcing the rod P into an upright position, and the pivoted lever N, combined with the connecting rod, the rod L for driving the rivets, a perforated anvil upon which the articles to be secured together, are placed, and through which the rivet is forced, and a setting device for the rivets, substantially as shown. 7th. In a riveting machine, an operating treadle provided with the rod or lever S, the slotted bearing and a spring placed therein, combined with the jointed rod P provided with an enlargement R against which the rod or lever S catches, and a mechanism connected to the upper end of the rod P for driving the rivets, the lower end of the rod P being supported upon the spring placed in the slotted bearing, whereby the mechanism is adapted to drive rivets into materials of different thicknesses, substantially as described.

No. 67,010. Passenger Steamer and Steamship.
(*Navire à vapeur pour passagers.*)

Arendt Angstrom and Frank Eugene Kirby, both of Detroit, Michigan, U.S.A., 17th April, 1900; 6 years. (Filed 10th October, 1899.)

Claim.—1st. In a steamer or steamship, the state room deck, passageways extending therethrough, at right angles one above the

other, and to the outer wall of the upper works, an air register located at the bottom of each state room, an air conducting



and light transmitting duct at the top and a skylight for the top of the passageway, as and for the purpose specified. 2nd. In a steamer or steamship, the state room decks located one above the other, passageways extending therethrough, at right angles one above the other, and to the outer wall of the upper works, an air register located at the bottom of each state room and communicating with the passageway, a duct leading from the top of the wall of the state room above the register into the passageway, a suitable light transmitting and ventilating cover therefor and a skylight for the top of the passageway, as and for the purpose specified. 3rd. In a steamer or steamship, the state room decks located one above the other, passageways extending therethrough, at right angles one above the other, and to the outer wall of the upper works, an air register located at the bottom of each state room and communicating with the passageway, a duct leading from the top of the wall of the state room above the register into the passageway, a suitable light transmitting and ventilating cover therefor, a skylight for the top of the passageway and an air duct leading into the lower passageway, as and for the purpose specified.

No. 67,011. Process of Manufacturing Soluble Barium Compounds. *(Procédé pour la fabrication d'un compose de barium.)*

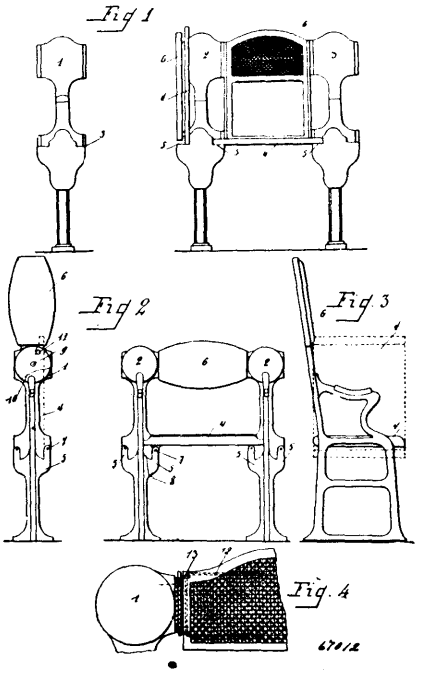
The Ampere Electro-Chemical Company, New Jersey, assignee of C. S. Bradley and Charles B. Jacobs, both of East Orange, New Jersey, all in the U.S.A., 17th April, 1900; 6 years. (Filed 4th April, 1899.)

Claim.—1st. The process of making an oxide from a sulphate, consisting in heating a mixture of sulphate and sufficient carbon to extract part only of the oxygen of the sulphate thereby producing in the first instance a mixture of the sulphide and sulphate, and then continuing the heating in an electric furnace until the sulphur dioxide ceases to escape. 2nd. The process of making an oxide from a sulphate, consisting of heating in an electric furnace a mixture of sulphide and sulphate in such proportions that the oxide of the metal will result, until the sulphur dioxide ceases to escape. 3rd. The process of making barium oxide from barytes, consisting in heating in an electric furnace a mixture of barytes with carbon in sufficient quantity to extract a part only of the oxygen from the barytes.

No. 67,012. Arm Chair. *(Fauteuil.)*

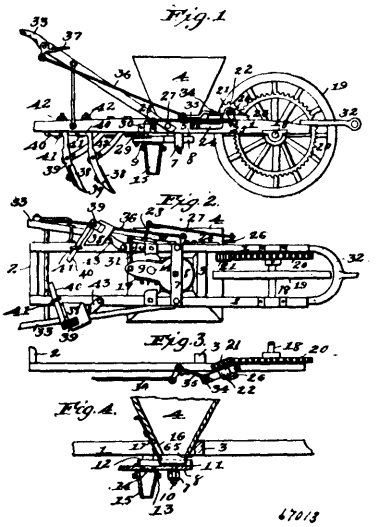
Marius Horst, Paris, France, 17th April, 1900; 6 years. (Filed 27th February, 1900.)

Claim.—1st. An improved folding arm chair, having two side uprights, a movable seat and a movable back adapted to be folded so as to leave free passages between the uprights if the arm chair is not in use, substantially as described. 2nd. An improved folding arm chair, having two side uprights, a seat and back adapted to be automatically folded so as to leave free passages between the uprights



if the arm chair is not in use, substantially as set forth. 3rd. An improved folding arm chair having two lateral uprights, a seat and back pivoted to one of said uprights and adapted to be automatically folded against said upright by means of suitable devices, so as to leave free passages between the uprights, if the arm chair is not in use, substantially as set forth. 4th. An improved folding arm chair, having two lateral uprights, a seat pivoted or hinged to one of said uprights and adapted to be automatically folded against said upright, and back also pivoted or hinged to one of said uprights and adapted to be automatically brought in line with said upright so as to leave free passages between the uprights if the arm chair is not in use, substantially as set forth. 5th. An improved folding arm chair, having two lateral uprights, a seat and back pivoted or hinged into stirrups provided with springs and pivotally attached to one of said uprights, said stirrups being adapted to bring the seat and back against said upright, so as to leave free passages between the uprights if the arm chair is not in use, substantially as set forth.

No. 67,013. Fertilizer Distributor.
(Distributeur d'engrais.)



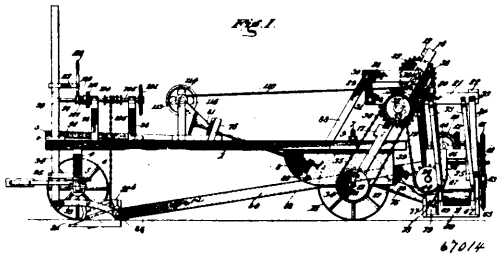
Archelus Waddell and William Andrew Waddell, both of Hyatt, North Carolina, U.S.A., 17th April, 1900; 6 years. (Filed 12th March, 1900.)

Claim.—1st. In a fertilizer distributor, the combination with a hopper, of an oscillating distributor disc arranged beneath the hopper and provided with a rearwardly extending arm, said arm having a longitudinal groove or channel formed in its upper side and terminating at its rear end in a feed aperture extending through the arm, a spout or shoe arranged beneath the feed aperture in the arm, and means for oscillating said arm and disc, substantially as described. 2nd. In a fertilizer distributor, the combination with a hopper, of an oscillating distributing disc arranged beneath the hopper and provided with a rearwardly extending arm, said arm having a longitudinal groove or channel formed in its upper side and terminating at its rear end in a feed aperture extending through the arm, a vertical flange extending around the disc and edges of the arm, a spout or shoe arranged beneath the feed aperture in the arm, and means for oscillating said arm and disc, substantially as described. 3rd. In a fertilizer distributor, the combination with a hopper, of an annular depending flange attached to the bottom of the hopper and provided with an opening at its rear side, an oscillating distributing disc arranged beneath said flange and provided with a rearwardly extending arm, said arm having a longitudinal groove or channel formed in its upper side and terminating at its rear end in a feed aperture extending through the arm, a vertical flange extending around the disc and edges of the arm, a spout or shoe arranged beneath the feed aperture in the arm, and means for oscillating the arm and disc, substantially as described. 4th. In a fertilizer distributor, the combination with a hopper, of an oscillating distributing disc arranged beneath the hopper and provided with a rearwardly extending arm, said arm having a longitudinal groove or channel formed in its upper side and terminating at its rear end in the feed aperture, a feed discharge opening formed in the rear side of the hopper above said arm, a sliding gate arranged over said opening, a spout or shoe arranged beneath the aperture in the arm, and means for oscillating said arm and disc, substantially as described. 5th. In a fertilizer distributor, the combination with a frame, of a hopper arranged thereon, an oscillating distributing disc arranged beneath the hopper and provided with a rearwardly extending arm, a ground wheel mounted in the forward end of the frame, a gear wheel arranged to rotate therewith, a pinion driven by said gear wheel, means operated by said pinion for oscillating the arm on the distributing disc, and mechanism controlled by the operator for throwing the pinion into and out of gear with the gear wheel, substantially as described. 6th. In a fertilizer distributor, the combination with a frame, of a hopper arranged thereon, an oscillating distributing disc arranged beneath the hopper and provided with a rearwardly extending arm, a ground wheel mounted in the forward end of the frame, a gear wheel arranged to rotate therewith, a journal box pivotally mounted on the frame, a pinion journalled in said box and adapted to gear with the gear wheel, means operated by said pinion for oscillating the arm on the distributing disc, a spring bearing against the pivoted journal box and normally holding the pinion in gear with the gear wheel, and mechanism controlled by the operator for swinging said journal box to draw the pinion out of gear with the gear wheel, substantially as described. 7th. In a fertilizer distributor, the combination with a frame and the guide handles thereon, of a hopper supported on the frame, an oscillating distributing disc arranged beneath the hopper and provided with a rearwardly extending arm, a ground wheel mounted in the forward end of the frame, a gear wheel arranged to rotate therewith, a journal box pivotally mounted on the frame, a pinion journalled in said box and adapted to gear with the gear wheel, a spring bearing against the pivoted journal box and normally holding the pinion in gear with the gear wheel, a bell crank lever pivoted to the frame and loosely engaging at one end the free end of the pivoted journal box, a rod connected at one end with the other end of the bell crank lever, and a crank handle pivoted to one of the guide handles and connected with the rear end of the rod, substantially as described and for the purpose specified. 8th. In a fertilizer distributor, the combination with a frame, of a hopper arranged thereon, an oscillating distributing disc arranged beneath the hopper and provided with a rearwardly extending arm, a ground wheel mounted in the forward end of the frame, a gear wheel arranged to rotate therewith, a pinion driven by said gear wheel and provided with a crank arm, a bell crank lever journalled in a bearing on the frame, a connecting rod connecting one end of said bell crank lever with the crank arm on the pinion, and a link connecting the other end of said bell crank lever with the arm on the disc, substantially as described. 9th. In a fertilizer distributor, the combination with the frame comprising two parallel beams suitably braced together, and the fertilizing distributing mechanism carried by the frame, of eye bolts vertically arranged in the rear ends of the beams, and provided on their upper ends with nuts, plow standards bent laterally at right angles at their upper ends and arranged in said eye bolts, and brace arms, each pivotally connected at one end to one of the plough standards, and at its opposite end to the adjacent beam, substantially as described.

No. 67,014. Excavator. *(Excavateur.)*

Alvin Flavin Nims, Philadelphia, New York, U.S.A., 17th April, 1900; 6 years. (Filed 20th March, 1900.)

Claim.—1st. The combination with a frame, as of a vehicle, and a vertically adjustable vertical draft beam incapable of lateral movement, of a plough rigidly secured to the lower extremity of said draft beam, and a main conveyer extending between said plough and a moving part of the frame, and operatively connected with the former,



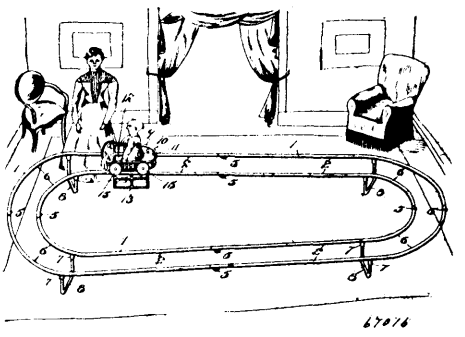
whereby the adjustment of the draft beam effects the angular adjustment of the main conveyer without permitting other vertical movement of the plough, substantially as specified. 2nd. The combination with a frame, as of a vehicle of vertically adjustable draft beam, a plough connected to the lower extremity thereof, and a derrick comprising swinging standards or uprights and swinging pendents operatively connected thereto and a main conveyer operatively connected at its opposite ends to the plough and to the pendants of the derrick, substantially as specified. 3rd. The combination with a frame as of a vehicle, of a vertically adjustable draft beam, a plough connected to the lower extremity of said beam, a derrick located at the rear extremity of the frame and comprising swinging uprights and swinging pendants operatively connected thereto, a main conveyer pulley journalled to the lower ends of the derrick pendants, a main conveyer passing around the pulley and around an idler located adjacent to the rear end of the plough, a terminal conveyer frame carried by the derrick pendants, a terminal conveyer within the frame, and means for effecting the vertical adjustment of the draft beam whereby the angular adjustment of the main conveyor is effected by the adjustment of the plough and and the vertical and horizontal adjustment of the terminal conveyer to cause it to maintain proper relation with the rear end of the main conveyer is simultaneously effected, substantially as specified. 4th. The combination with a frame, as of a vehicle, of a vertically adjustable draft beam, a plough connected to the lower end thereof, a derrick comprising swinging uprights and pendants opperatively connected thereto, a main conveyer pulley journalled adjacent to the lower ends of the pendants, an idler pulley adjacent to the rear ends of the plough, a main conveyer belt passing around said pulleys, a terminal conveyer frame carried by the said pendants, a terminal conveyer located within the frame, means for effecting the vertical adjustment of the draft beam, and independent means for swinging the derrick, substantially as specified. 5th. The combination with a frame, as of a vehicle, of a vertically adjustable plough, located adjacent to the front end of the frame, a derrick at the rear end of the frame, and comprising swinging uprights and swinging pendants, a main conveyer extending between the ploughs and the lower ends of the pendants, a terminal conveyer frame carried by said pendants, and a terminal conveyer within the conveyer frame and supported by other pendants whereby said terminal conveyer is capable lateral adjustment with respect to the conveyer frame, means for swinging the derrick to accomplish the proper vertical adjustment of the rear end of the conveyer and of the terminal conveyer frame, and means for effecting the adjustment of the terminal conveyer within its frame, substantially as specified. 6th. The combination with a frame, as of a vehicle, of a vertically adjustable plough, a derrick comprising swinging uprights and swinging pendants operatively connected thereto, a main conveyer extending between the plough and the swinging pendants of the derrick, a terminal conveyor frame supported by the pendants, an oscillatory terminal conveyer within the conveyor frame and having an adjustment independent thereof, means for vertically adjusting the plough to effect a corresponding co-operative adjustment of the main conveyer and terminal conveyer frame, and independent mechanism for swinging the derrick to accomplish the adjustment of the main conveyer and terminal conveyer, and means for accomplishing the adjustment of the terminal conveyer within the terminal conveyer frame, substantially as specified. 7th. The combination with a frame, as of a vehicle, of an adjustable plough, a derrick comprising swinging uprights and swinging pendants connected operatively thereto, a main conveyer extending between the plough and the lower ends of the pendants of the derrick, a terminal conveyer frame carried by the pendants, a terminal conveyer within the conveyer frame and having an adjustment independent thereof, actuating mechanism common to the main and terminal conveyers, plough adjusting mechanism, derrick adjusting mechanism, and terminal conveyer adjusting mechanism, substantially as specified. 8th. The combination with a frame, as of a vehicle, of a plough, a main conveyer extending rearwardly from the plough, and a horizontally and vertically movable conveyer frame movable in unison with the rear end of the main conveyer, a terminal conveyer within the terminal conveyer frame adjustable therewith and having an adjustment independent thereof, mechanism carried by the terminal conveyer frame for actuating the terminal conveyer, and means for reversing the

operation of said actuating mechanism, substantially as specified. 9th. The combination with a frame, as of a vehicle, of a vertically adjustable draft beam, a plough secured to the lower end of said beam, a supporting part carried by the frame capable of vertical and longitudinal movement, as for instance, a derrick, a terminal conveyer carried by said part, and a main conveyer operatively connected with the plough and to said vertical and longitudinal movable supporting part whereby when the plough is elevated by the adjustment of the draft beam, the supporting part referred to will permit the rear end of the main conveyer to move rearwardly and downwardly and will cause the terminal conveyer to move in unison with the rear end of the main conveyer, substantially as specified. 10th. The combination with a frame, as of a vehicle, of a plough, a vertically adjustable draft beam, operatively connected therewith, draft beam actuating mechanism, auxiliary plough elevating mechanism, and means for connecting or disconnecting the auxiliary plough elevating mechanism to or from the draft beam adjusting mechanism, substantially as specified. 11th. The combination with a frame, draft beam secured within rigid bearings upon the frame, and a plough, of a brace plate rigidly uniting the draft beam and the plough, and a conveyer, operatively connecting the plough and the frame, substantially as set forth. 12th. The combination with a frame, as of a vehicle, plough, and main conveyer, of a swinging derrick frame upon the vehicle frame, a pair of pendant supports pivoted to the opposite sides of the derrick frame, a main conveyer pulley pivoted to said pendant supports, cross pieces pivoted to the pendant supports, and extending upon opposite sides thereof, a terminal conveyer frame, movably secured to said pendant supports, a second pair of pendant supports pivoted to the cross pieces, and to the terminal conveyer frame, respectively, parallel arms pivoted to the derrick frame at one end, and extending parallel with the cross pieces, links pivotally united to the parallel arms and to cross pieces, respectively, and compelling parallel movement between the cross pieces and said arms, and connecting arms pivoted at one end to the parallel arms respectively, and at the other end to the vehicle frame, whereby the swinging movement of the derrick frame produces vertical adjustment of the terminal conveyer frame and correlative movement of the main conveyer pulley, substantially as and for the purpose specified. 13th. The combination with a frame, as of a vehicle, of a plough, auxiliary and main conveyers, a terminal conveyer located beyond and below the rear end of the main conveyer, and mecharism operatively connecting the main and terminal conveyers in a manner to permit angular adjustment of the main conveyer and to compel the terminal conveyer to assume at all times a horizontal lateral position in juxtaposition to the rear end of the main conveyer, substantially as specified. 14th. The combination with a frame, as of a vehicle, of a plough, a derrick, a terminal conveyer frame, and a main conveyer pulley carried on the derrick, a main conveyer extending between the main conveyer pulley and the plough, mechanism operatively connected with the main conveyer, and the terminal conveyer frame, adapted to compel the terminal conveyer frame to retain a constantly horizontal position in its vertical adjustments, an independently adjustable terminal conveyer within the terminal conveyer frame, means for adjusting the derrick, and means for adjusting the terminal conveyer within its frame, and actuating mechanism for the several conveyers, substantially as specified. 15th. The combination with a frame, as of a vehicle, of a vertically and horizontally adjustable conveyer frame, an oscillatory terminal conveyer within the terminal conveyer frame, mechanism for adjusting the terminal conveyer frame, and mechanism for accomplishing the adjustment of the terminal conveyer, substantially as specified. 16th. The combination with a frame, as of a vehicle, of a vertically and horizontally movable supporting part, a terminal conveyer frame, suspended from said supporting part, and independently adjustable conveyer within the terminal conveyer frame, and mechanism for operating the terminal conveyer in either direction, substantially as specified.

No. 67,015. Baby Walker and Track. (*Escarpolette.*)

Edward Theodore George Firnhaber, Worms, Nebraska, U.S.A., 17th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—1st. In a baby walker adapted to be suspended upon a track, a carriage having a depending frame with an opening therethrough and also provided with opposite pairs of rollers, the said rollers being circumferentially grooved and adapted for free movement of the track, and gaskets surrounding the rollers completely within the grooves and bearing upon the hub portions of the rollers. 2nd. In a baby walker adapted to be suspended upon a track, a carriage, comprising an upper surrounding railing, a depending frame and a rear seat, an opening being formed through the depending frame in advance of the seat, and rollers on the opposite sides of the carriage to engage the track. 3rd. In a baby walker adapted to be suspended in an elevated position so that the lower extremity thereof will be free of an adjacent surface, a carriage having a depending frame with an opening therethrough, and pairs of rollers on opposite sides of the carriage at such an elevation as to permit the depending frame to be located between the suspending devices on which the rollers are adapted to freely and removably bear. 4th. A continuous track made up of separable rail sections, one extremity of each rail section being curved and the opposite extremities of all the sections in alternation being provided with sockets and stems, means for securing the joined ends of the rail sections, depending sockets in transverse alignment at regular



intervals on the rail sections, and supports for the track having free ends removably fitted in said transverse aligned sockets. 5th. A continuous track made up of sections composed of parallel tubular rails of different lengths, having depending sockets and each curved at one end in the same arc as the curve of the adjacent end of the other, means for joining the meeting ends of the several rails, and U-shaped legs having their terminals removably fitted in said sockets. 6th. A continuous track made of separable sections having depending sockets at regular intervals, and U-shaped legs having their terminals removably fitted in said sockets.

No. 67,016. Hat Pouncing Machine.

(Machine à poncer les chapeaux.)

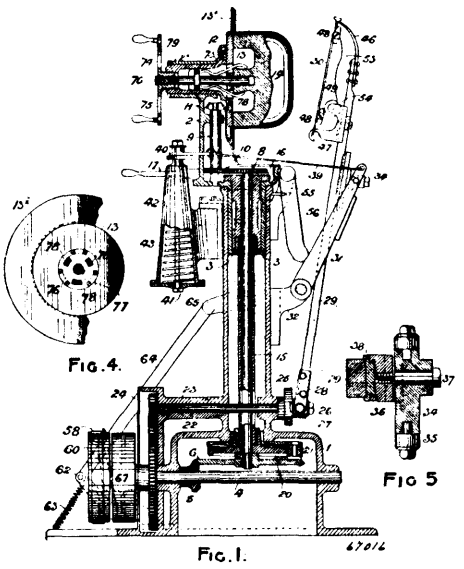


FIG. 4.

FIG 5

FIG. 1.

Henry Herbert Turner, Denton, England, 17th April, 1900; 6 years. (Filed 24th April, 1899.)

Claim.—1st. In a hat pouncing machine, the combination of mechanism for holding and rotating the hat about the axis of its crown and mechanism for simultaneously turning the hat about an axis substantially at right angles to the axis of its crown, a pouncing pad, automatic means for keeping said pad pressed up to the hat with a yielding pressure, and mechanism for imparting motion to said pad, substantially as set forth. 2nd. In a hat pouncing machine, the combination of mechanism for holding the hat and rotating it under the pouncing pad, the rotating crank shaft 23 provided with a crank, the arm 29 pivotally connected to the pin of the crank, the pouncing pad mounted on the free end of said arm, the hinged frame 31, the rocker 34 pivoted to said frame, the grooved guide block 36 pivoted to said rocker, in which block the arm 29 is guided and automatic means, substantially as described for holding the pouncing pad up to the hat with a yielding pressure, as set forth. 3rd. In a hat pouncing machine the combination of mechanism for holding the hat and rotating it under the pouncing pad, the said pad, the arm carrying the pad, and mechanism substantially as described for imparting motion to the pad, the conical spring 43, the rotatably mounted shaft 41 in said spring and connected with one end thereof, the arm 40 carried by said shaft, and the link coupling said arm to the support for the pouncing pad, substantially as set forth. 4th.

In a hat pouncing machine, the employment of the pedestal 1 the head 2 pivotally mounted on the same, the block carrier mounted rotatively, mechanism for rotating said hat holder and head the swinging frame carrying the pouncing pad, the said pad, means for pressing the pad up in a yielding manner to the hat, a pusher carried by the head and a lever between the pad carrying frame and said pusher, whereby at the termination of the pouncing operation the pouncing pad is pushed out of contact with the hat, substantially as set forth. 5th. In a hat pouncing machine the combination of the pedestal 1 the head 2 mounted rotatively on the same, the block carrier mounted rotatively in the said head, the main driving shaft, driving mechanism intermediate said shaft, the rotating head 2 and the block carrier, a shifter for starting and stopping the machine, and its spring, the elbow lever 65 the link coupling the shorter arm of said lever to the shifter the setting stud 66 on the head and adapted to actuate said lever 65 and operate the shifter when the head is turned back, the elbow link 68, the link 70 connecting one arm of the link 68 with the lever 65 said links 68 and 70 forming a toggle to hold the lever 65 against movement the tripping lever 72 adapted to break the toggle when the pouncing operation is completed and the pendant stud 57 on the head 2 adapted to operate said tripping lever, substantially as set forth. 6th. In a pouncing machine the combination with the arm carrying the pouncing pad of the upper hook 46 on said arm the lower hook 47 mounted adjustably on said arm, the pouncing pad coupled at its ends to said hooks with or without reel 54 a strip of sand paper, and means for clamping the strip of sand paper on the pad, substantially as set forth. 7th. In a pouncing machine, the combination with the arm carrying the pouncing pad provided with hooks to hold said pad, and the reel for the strip of sand paper, of the end plates 48 each having in it a slot for the passage of the strip of paper and provided with flat faced clamping rollers for said strip, and the flexible strip 49 secured at its ends to said end plates, substantially as set forth. 8th. In a pouncing machine, the combination with the head 2 and shaft 82 of mechanism for imparting to the hat an oval or elliptic rotary movement, said mechanism comprising the rocking bearing piece 86 mounted on the head, the shaft 85 for carrying the hat mounted in said bearing piece, gearing between the shafts 82 and 85 whereby the former drives the latter, and mechanism substantially as described for imparting an oscillatory movement to the said bearing piece 86 during each half revolution of the shaft 85, substantially as set forth. 9th. In a pouncing machine, the combination with the head 2 the rocking shaft bearing piece 86 mounted thereon, and the shaft 85 rotatably mounted in the latter of the rotating shaft 82 mounted in the head parallel with the shaft 85 gearing between the said shafts whereby the former drives the latter, an eccentric on the shaft 82, the fixed fulcrum arm 87 on the head the lever 88 fulcrumed adjustably on the arm 89 a connecting rod which couples the upper arm of the lever 89 with the shaft 85, and a connecting rod coupling the said eccentric with a lower arm of the said lever, substantially as set forth. 10th. In a pouncing machine, the combination with the head 2 and the rotating shaft 82 mounted rotatively in bearings therein, of the rocking bearing piece 86 mounted at its foot as shown, the shaft 85, which carries the hat, mounted rotatively in said bearing piece and parallel with the shaft 82, the gear wheels 83 and 84 on the respective shafts 82 and 85, mechanism for rotating the shaft 82 and through it driving the shaft 85, a lever 89 fulcrumed on the head, an eccentric on the shaft 82, a connecting rod coupling said eccentric with one arm of the lever 89, and a connecting rod coupling the other arm of said lever with the shaft 85, substantially as set forth. 11th. In a pouncing machine, the combination with the arm 29 which carries the pouncing pad, and mechanism for imparting motion to said arm and pad, of the said pad provided with collared journals 96 at its respective ends and in its longitudinal axis, said journals having bearings in supports on the arm, whereby the pad is permitted to rock about its longitudinal axis and thus permit it to adapt itself to the surface of the hat, substantially as set forth. 12th. The pivotally mounted arm 29 and pad separate or in combination with one or other of the several parts of a pouncing machine, as set forth. 13th. In a pouncing machine, the hinged frame 31 separate or in combination with conical spring 43, and means for varying its tension, as set forth. 14th. In a pouncing machine, the levers 65 and 57 and links 64 and 70, as and for the purpose set forth. 15th. In a pouncing machine, the combination of mechanism for locking the head, with its driving mechanism, as set forth. 16th. In a pouncing machine, the combination of casing 42, conical spring 43, shaft 41, ratchet disc 45, arm 40 and click 44, as and for the purposes set forth. 17th. In a pouncing machine, the combination of gearing wheels and shafts for rotating the hat on the axle of the crown, as set forth. 18th. In a pouncing machine, the combination of gearing wheels and shafts for rotating the hat in a plane at right angles to the axis of its crown, as set forth. 19th. In a pouncing machine, the combination with a block carrier or jaw chucks operating by wheel, and screw through contracting orifices, as and for the purposes set forth. 20th. In a pouncing machine the hinged frame 31, link lever 98, with the lever 99, lever 65, and toggle link in combination with means for making and breaking the toggle, as set forth. 21st. In a hat pouncing machine, the combination with a head 2, of mechanism for imparting to the hat an oval or elliptic rotary movement, said mechanism comprising a solid shaft 102 mounted eccentrically in hollow shaft 101 within casing 100, bevel wheels 106 and 107, fixed pinion 104, and internally toothed wheel 103 and mechanism, as described, for imparting movement to said bevel wheels, as set forth. 22nd. In a hat pouncing machine, the combination with mechanism for rotating the hat beneath the pouncing pad, an arm for holding said pad yieldingly against said hat, links 110 and 111, rod 102 connected to eccentric 113, as and for the purposes set forth. 23rd. In a hat pouncing pad, the combination with head 2, of a face plate 105, with scroll 108, jaws or chucks 109 carried on radial supports from the axis of hat block and face plate, as set forth. 24th. In a hat pouncing machine, an arm carrying a pouncing pad and operated by a cam or eccentric working at right angles to the driving shaft or parallel with the said arm, as set forth.

No. 67,017. Chain. (*Chaine.*)

Fig. 1.

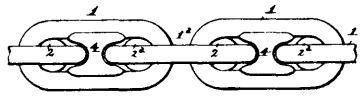


Fig. 2.

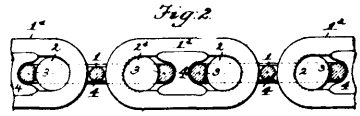


Fig. 3

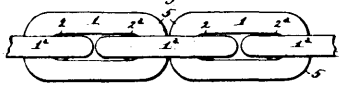
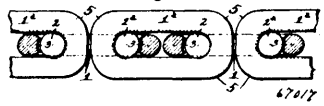


Fig. 4

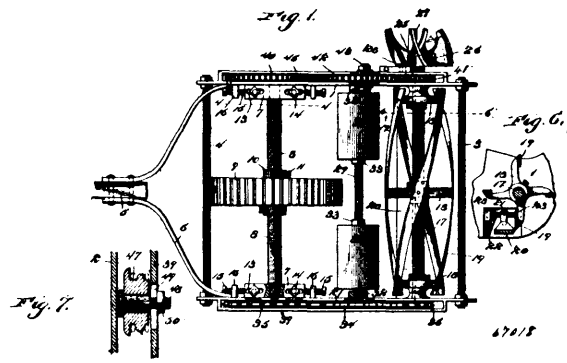


Robert A. Carter, Pittsburg, Pennsylvania, U.S.A., 17th April, 1900; 6 years. (Filed 26th March, 1900.)

Claim.—1st. In a chain the combination of closed engaging or interlocking links of uniform size and shape provided with internal concave grooves or seats for holding the balls within the links, and balls interposed between the ends of such links, substantially as set forth. 2nd. The combination of a chain consisting of closed links of uniform size and shape, balls interposed between the ends of the engaging or interlocking links and means for retaining the balls in operative positions, substantially as set forth. 3rd. The combination in a chain of series of engaging links, each provided with a concave seat at one end and shoulders or abutments at the ends of the seat, and balls located in said seats and forming antifriction bearings between the links, substantially as set forth.

No. 67,018. Lawn Mower. (*Faucheuse de pelouse.*)

Fig. 1.



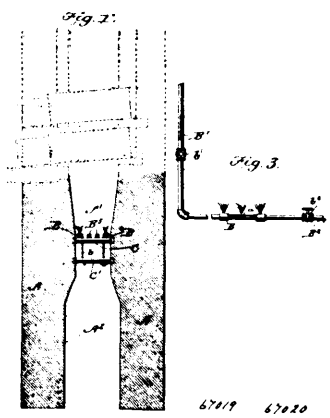
Aaron M. Cornelius, Elmhurst, California, U.S.A., 17th April, 1900; 6 years. (Filed 26th March, 1900.)

Claim.—1st. In a lawn mower, the combination with a supporting frame having side plates, of a main rotary cutter head arranged between the side plates and having its spindle mounted in bearings in the side plates, one end of said spindle projecting beyond the adjacent side plate to form a terminally unsupported extension, operating mechanism for said cutter head, an auxiliary cutter head having its hub detachably secured to said spindle extension, and an auxiliary cutter bar for co-operation with the auxiliary cutter head, detachably secured to that side plate of the frame beyond which the main cutter head spindle is extended, substantially as specified.

2nd. In a lawn mower, the combination of a supporting frame having side plates, a main rotary cutter head arranged between said side plates and having its spindle mounted in bearings in the plates, one end of the spindle being carried beyond one of the side plates to form a terminally unsupported extension, driving mechanism for said cutter head, an auxiliary cutter head having a hub removably mounted for axial movement upon said spindle extension, means for securing the hub in a fixed position on the spindle extension, the blades of the auxiliary cutter head being extended outwardly beyond the outer end of the hub, an adjustable cutter bar removably attached to the frame for co-operating with the auxiliary cutter head, and means for securing said auxiliary cutter bar at the desired adjustment, substantially as specified. 3rd. In a lawn mower, the combination with a supporting frame having side plates, of a rotary main cutter head, a driving shaft having an attached driving wheel, a permanent gearing mounted contiguous to one of the side plates and connecting the driving shaft with the cutter head spindle, a supplemental gearing mounted contiguous to the opposite side plate and connecting the driving shaft with cutter head spindle, a supplemental gearing mounted contiguous to the opposite side plate, and connecting the driving shaft and cutter head spindle, said supplemental gearing having an intermediate adjustable gear, and an auxiliary cutter head detachably secured to the main cutter head spindle, substantially as specified. 4th. In a lawn mower, the combination with a supporting frame, of a rotary main cutter head, a driving shaft having an attached driving wheel, a drive, chain connecting said driving shaft with the spindle of the cutter head, longitudinally adjustable bearings for the driving shaft, and means for securing said bearings at the desired adjustment, an auxiliary cutter head detachably secured to the main cutter head spindle and a supplemental gearing connecting the driving shaft and cutter head spindle at a point near the auxiliary cutter head, and having an intermediate adjustable gear, substantially as specified. 5th. In a lawn mower, the combination with a supporting frame having side plates, of a cutter head, a driving shaft having a driving wheel fixed thereto, longitudinally adjustable bearing boxes for the driving shaft, and means for securing said boxes at the desired adjustment, a permanent gearing connecting the driving shaft with the cutter head spindle, and including a sprocket chain traversing chain wheels on said shaft and spindle, driving and driven gears fixed to the extremities of the driving shaft and cutter head spindle contiguous to the opposite side of the cutter head frame, an intermediate or transmitting gear for communicating motion from the driving to the driven gear and having a shaft mounted for adjustment perpendicular to a line connecting the axis of said driving shaft and cutter head spindle, and means for securing said shaft to the intermediate gear at the desired adjustment, substantially as specified. 6th. In a lawn mower, the combination with a supporting frame, a main cutter head, and a driving shaft parallel with the axis of said cutter head, and connections between the extremities of the driving shaft and the cutter head spindle, of an auxiliary cutter head arranged beyond one side of the supporting frame and detachably secured to an extension of the main cutter head spindle, a driving roller or wheel fitted upon the driving shaft for axial adjustment, and means for securing said driving roller or wheel at the desired adjustment, to enable the machine to be balanced irrespective of the use of the auxiliary cutter head, substantially as specified.

No. 67,019. Grate for Zinc Furnaces.

(Grille pour fourneaux à zinc.)



John Daniel James, Pulaski, Virginia, U.S.A., 17th April, 1900; 6 years. (Filed 31st March, 1900.)

Claim.—1st. A grate for a furnace, having a portion of its bars formed of hollow water pipes and provided with perforations on their upper sides discharging upwardly into the fire box, and valves regulating the flow of water into and discharge from said pipe, substantially as and for the purpose described. 2nd. A grate for a furnace, having hollow grate bars with perforations on the upper surfaces discharging into the fire box, and means for passing water through the same to form a constantly suffused or superficially overflowing film of water on the surfaces of the grate bars to reduce their temperature by dissipating the heat units in surface evaporation, substantially as and for the purpose described. 3rd. The combination with the zinc furnace, having a long and narrow fire box and a deep ash pit, of a grate interposed between the fire box and ash pit and consisting of cross bars supported at their ends by the walls of the furnace, and grate bars arranged longitudinally on said cross bars, part of said grate bars being constructed in the form of hollow perforated water pipes, and valves for controlling the flow of water therethrough, substantially as and for the purpose described. 4th. The combination with a zinc surface having a long narrow fire box and a deep ash pit, of a grate consisting of two sets of cross bars supported by walls of the furnace at their ends, a set of grate bars arranged upon the upper set of cross bars, part of which grate bars are made of hollow perforated water pipes and provided with valves for regulating the flow of water therethrough, and the lower set of cross bars serving to support the cleaning tools, substantially as and for the purpose described. 5th. The combination with a zinc furnace, having a long narrow fire box and a deep ash pit, of a grate consisting of two sets of cross bars supported by the walls of the furnace at their ends, a set of grate bars arranged upon the upper set of cross bars, hollow perforated water pipes arranged in the plane of the grate bars, and hooked bolts hooking over said water pipes, and anchored to the lower cross bars, substantially as and for the purpose described. 6th. The combination with a furnace grate, of water pipes arranged in the plane of the grate bars between the grate bars and side walls of the fire box, said water pipes having perforations on their upper sides to discharge upwardly into the fire box to reduce the clinkers, and valves for controlling the flow of water through said pipes, substantially as and for the purpose described.

No. 67,020. Process of Producing Oxide of Zinc and Carbonate of Zinc. *(Procédé pour la production d'oxyde et carbonate de zinc.)*

Gilbert Rigg, Bryn Road, Swansea, Glamorgan, Wales, Great Britain, 17th April, 1900; 6 years. (Filed 23rd May, 1899.)

Claim.—1st. The process herein described for producing or separating oxide of zinc and carbonate of zinc or either from ores or other materials containing metallic zinc or oxide of zinc or carbonate of zinc or all or two of these substances which consists in dissolving the metallic zinc oxide of zinc and carbonate of zinc or such as may be present by leaching the material or materials containing same with a solution of ammonium carbonate or ammonium carbonate and ammonium hydrate and subsequently separating from the solution oxide of zinc or carbonate of zinc or both contained therein by altering the proportion of or partially counteracting or absorbing the proportion of or partially counteracting or absorbing the carbon dioxide contained in said solution. 2nd. The process of producing oxide of zinc and carbonate of zinc or either from ores or other materials containing metallic zinc or oxide of zinc or carbonate of zinc or all or two of these substances, which consists in dissolving the metallic zinc, oxide of zinc and carbonate of zinc or such as may be present by leaching the material or materials containing same with a solution of ammonium, carbonate or of ammonium, carbonate and ammonium, hydrate containing carbon dioxide in such proportion to the percentage of ammonia in the solution as to impart to the latter a maximum zinc dissolving capacity, as herein set forth, and subsequently separating from the solution oxide of zinc or carbonate of zinc or both contained therein by altering the amount of or partially counteracting or absorbing the carbon dioxide cotained in said solution whilst keeping constant the quantity of ammonia, substantially as described. 3rd. The process herein described for producing or separating oxide of zinc and carbonate of zinc or either from ores or other materials containing metallic zinc or oxide of zinc or carbonate of zinc or all or two of these substances which consists in disolving the metallic zinc oxide of zinc and carbonate of zinc or such as may be present by leaching the material or materials containing same with a solution os ammonium, carbonate or ammonium, carbonate and ammonium hydrate, and subsequently separating from the solution oxide of zinc or carbonate of zinc or both contained therein by altering the proportion of or partially counteracting or absorbing the carbon dioxide contained in said solution, removing the oxide of zinc and carbonate of zinc or either so separated, and rendering the solution fit for leaching again by again establishing the proper proportion of carbon dioxide. 4th. The process herein described for separating oxide of zinc and carbonate of zinc or either contained in a solution of ammonium carbonate or ammonium carbonate, and ammonium hydrate, which consists in altering the proportion of carbon dioxide in said solution by addition or substraction or partial absorption of carbon dioxide as set forth.

No. 67,021. Pulley. *(Poulie.)*

Arnold Stroud, Winterford View, Cranleigh, Surrey, England, 17th April, 1900; 6 years. (Filed 5th June, 1899.)

Claim.—Expandible pullies having rims formed by segmenta plates free to slide over one another, spokes or arms slotted at thei

inner ends, wedges to enter the slots and render the arms outwardly moveable, a vertically divided and bolt held boss having

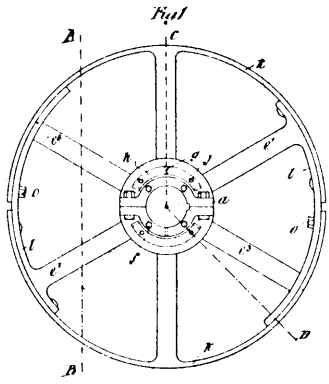
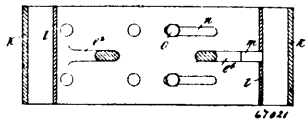
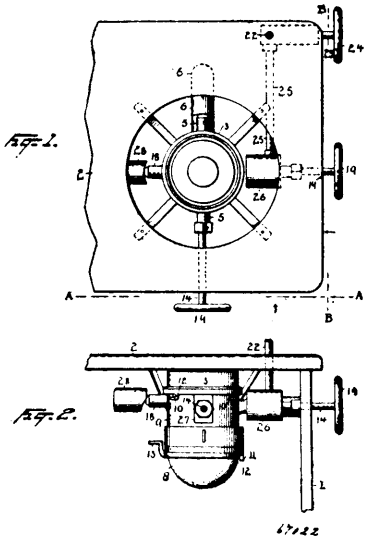


Fig. 2.



holes to receive the said slotted ends, segments or rings to carry the wedges, studs and nuts to retain the segments or rings in any longitudinal position on the boss, the whole substantially as described in the above specification and exemplified by the accompanying drawings.

No. 67,022. Vapourizer. *(Appareil à vaporiser.)*



Thomas A. Mack, New York City, New York, U.S.A., 17th April, 1900; 6 years. (Filed 26th April, 1899.)

Claim.—1st. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a needle bar running through the vapourizing tube and having a cutting surface or surfaces snugly fitting the same, passageways between the needle bar and the inner walls of the vapourizing tube for the passage of oil or gas, means for supplying oil to the vapourizing tube, and means for heating the retort whereby oil it will be vapourized in the vapourizing tube and carbonizing in the tube may be prevented. 2nd. In a vapourizer, the combination of a retort,. a vapourizing tube passing through the retort and having a discharge orifice, a needle bar running through the vapourizing tube and having a cutting surface or surfaces snugly fitting the same and provided with a valve adapted to seat upon a valve seat to close the said discharge orifice, passageways between the needle bar and the inner walls of the vapourizing tube for the passage of oil or gas, means for supplying oil to the vapourizing tube, and means for heating the retort whereby oil will be vapourized in the vapourizing tube and carbonizing in the tube may be prevented. 3rd. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a spiral needle bar running through the vapourizing tube and having the cutting edges of the spiral snugly fitting the same, means for supplying oil to the vapourizing tube, and means for heating the retort whereby the oil will be vapourized in the spirals of the needle bar, the oil and gas will be retarded in their flow through the vapourizing tube and carbonizing in the vapourizing tube will be prevented. 4th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a spiral needle bar running through the vapourizing tube and having the cutting edges of the spiral snugly fitting the same, provided with a valve adapted to seat upon a valve seat to close the said discharge orifice, means for supplying oil to the vapourizing tube, and means for heating the retort whereby the oil be vapourized in the spirals of the needle bar, the oil and gas will be retarded in their flow through the vapourizing tube and carbonizing in the vapourizing tube will be prevented. 5th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a spiral needle bar running through the vapourizing tube and having the cutting edges of the spiral snugly fitting the same, a pin at the end of the needle bar adapted to enter into said discharge orifice to clean the same, means for supplying oil to the vapourizing tube, and means for heating the retort whereby the oil will be vapourized in the spirals of the needle bar, the oil and gas will be retarded in their flow through the vapourizing tube and carbonizing in the vapourizing tube will be prevented. 6th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a spiral needle bar running through the vapourizing tube and having the cutting edges of the spiral snugly fitting the same and provided with a valve adapted to seat upon a valve seat to close the said discharge orifice, a pin at the end of the needle bar adapted to enter into said discharge orifice to clean the same, means for supplying oil to the vapourizing tube, and means for heating the retort whereby the oil will be vapourised in the spirals of the needle bar, the oil and gas will be retarded in their flow through the vapourizing tube and carbonizing in the vapourizing tube will be prevented. 7th. In a vapourizer, the combination of a retort a vapourizing tube passing through the retort and having a discharge orifice, a reservoir for oil in line with the vapourizing tube, a needle bar running through the reservoir and the vapourizing tube and having a cutting surface or surfaces snugly fitting the latter, passageways between the needle bar and the inner wall of the vapourizing tube and leading from the reservoir for the passage of oil or gas, means for supplying oil to the reservoir, and means for heating the retort whereby oil will be vapourized in the vapourizing tube, carbonizing in said tube will be prevented and the flow of oil and gas through the tube will be retarded. 8th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a reservoir for oil in line with the vapourizing tube, a needle bar running through the reservoir and the vapourizing tube and having a cutting surface or surfaces snugly fitting the latter, and provided with a valve adhpted to seat upon a valve seat to clase the said discharge orifice, passageways between the needle bar and the inner wall of the vapourizing tube and leading from the reservoir for the passage of oil or gas, means for supplying oil to the reservoir and means for heating the retort, whereby oil will be vapourized in the vapourizing tube, carbonizing in said tube will be prevented and the flow of oil and gas through the tube will be retarded. 9th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a reservoir for oil in line with the vapourizing tube, a spiral needle bar running through the reservoir and the vapourizing tube and having the cutting edges of the spiral snugly fitting the latter, means for supplying oil to the reservoir and means for heating the retort whereby oil will be vapourized in the vapourizing tube, carbonizing in said tube will be prevented, and the flow of oil and gas through the tube will be retarded. 10th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a reservoir for oil in line with the vapourizing tube, a spiral needle bar running through the reservoir and the vapourizing tube and having the cutting edges of the spiral snugly fitting the latter, and provided with a valve adapted to seat upon a valve seat to close the said discharge orifice, means for supplying oil to the reservoir and means for heating the retort whereby oil will be vapourized in the vapourizing tube, carbonizing in said tube will be prevented, and the flow of oil and gas through the tube will be retarded. 11th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a reservoir for oil in line with the vapourizing tube, a spiral needle bar running through the reservoir and the vapourizing tube and having the cutting edges of the spiral snugly fitting the latter, a pin at the end of the needle bar adapted to enter into said discharge orifice to clean the same, means for supplying oil to the reservoir and means for heating the retort whereby oil will be vapourized in the vapourizing tube, carbonizing in said tube will be prevented, and the flow

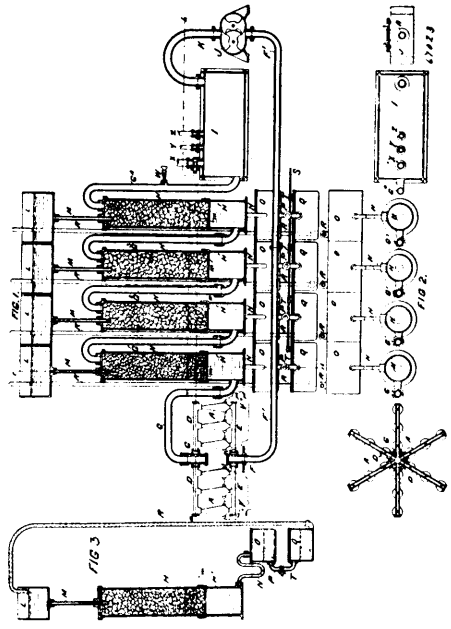
of oil and gas through the tube will be retarded. 12th. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a reservoir for oil in line with the vapourizing tube, a spiral needle bar running through the reservoir and the vapourizing tube and having the cutting edges of the spiral snugly fitting the latter, and provided with a valve adapted to seat upon a valve seat, to close the said discharge orifice, a pin at the end of the needle bar adapted to enter into said discharge orifice to clean the same, means for supplying oil to the reservoir and means for heating the retort, whereby oil will be vapourized in the vapourizing tube, carbonizing in said tube will be prevented, and the flow of oil and gas through the tube will be retarded. 13th. In a vapourizer, the combination of a retort having on outer wall or shell, means for heating the retort, a vapourizing tube passing through the retort, means for supplying oil thereto, a support for said tube secured thereto and fitting yieldingly into the wall of the retort whereby fracture of the parts due to expansion or contraction thereof will be avoided. 14th. In a vapourizer, the combination of a retort having an outer wall or shell, means for heating the retort, two or more vapourizing tubes secured together and passing through the retort, means for supplying oil thereto, supports for said vapourizing tubes secured thereto and fitting yieldingly in the wall of the retort, whereby oil will be vapourized in the vapourizing tube, and whereby fracture of the parts due to expansion or contraction thereof will be avoided. 15th. In a vapourizer, the combination of a retort having an outer wall or shell, means for heating the retort, a vapourizing tube passing through the retort, a needle bar running through said vapourizing tube and having a valve at its ends to control the discharge of gas therefrom, means for supplying oil to the vapourizing tube, a support for said tube secured thereto and fitting yieldingly in the wall of the retort, whereby oil will be vapourized in the vapourizing tube, and whereby fracture of the parts due to expansion or contraction thereof will be avoided. 16th. In a vapourizer, the combination of a retort having an outer wall or shell, means for heating the retort, two or more vapourizing tubes secured together and passing through the retort, needle bars running through said vapourizing tubes and having valves at their ends to control the discharge of gas therefrom, means for supplying oil to said vapourizing tubes, supports for said tubes secured thereto and fitting yieldingly in the wall of the retort, whereby oil will be vapourized in the vapourizing chamber, and whereby fracture of the parts due to expansion or contraction thereof will be avoided. 17th. In a retort, the combination of a vapourizing tube having a discharge orifice at one end, a needle bar adapted to fit therein and having a valve at its end adapted to close the said orifice, a support for said needle bar at each end of the vapourizing tube, whereby the needle bar will be prevented from getting out of alignment, and the valve will always be in alignment with its valve seat and the orifice. 18th. In a vapourizer, the combination of a retort having lugs thereon, a frame carrying a pipe for bringing gas into the retort to continue vapourization, and lugs upon the frame whereby the frame and its connecting pipe may readily be placed upon the retort and be locked thereto, or may be readily removed therefrom. 19th. In a vapourizer, the combination of a retort having lugs thereon, a frame carrying a burner and also a pipe for bringing gas into the retort to continue vapourization, and lugs upon the frame and a handle connected thereto whereby the frame and its connecting pipe may be readily placed upon the retort and be locked thereto or may be readily removed therefrom. 20th. In a vapourizer, the combination of a retort having an outer wall or shell, means for heating the retort, one or more vapourizing tubes passing through the retort and yieldingly fitted into the wall of the same, and means for supplying oil to said tube or tubes, whereby fracture of the parts due to expansion or contraction thereof will be avoided. 21st. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a pipe for supplying oil to the vapourizing tube discharging oil directly into the vapourizing tube, a needle bar running through the vapourizing tube having a valve to open or close the discharge orifice of the vapourizing tube, and means for heating the retort whereby oil will be vapourized in the vapourizing tube. 22nd. In a vapourizer, the combination of a retort, a vapourizing tube passing through the retort and having a discharge orifice, a pipe for supplying oil to the vapourizing tube discharging directly into that tube, a needle bar running through the vapourizing tube and having a cutting surface or surfaces snugly fitting the latter, passageways between the needle bar and the inner wall of the vapourizing tube and means for heating the retort, whereby oil will be vapourized in the vapourizing tube and carbonizing in said tube will be prevented.

No. 66,023. Manufacture of Nitric Acid.

(*Fabrication d'acide nitrique.*)

Arthur McDougall, Egerton Road Fallowfield, Lancaster, England, 17th April, 1900; 6 years. (Filed 29th May, 1899.)

Claim.—1st. A process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air, consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage, the resulting products being afterwards collected and condensed in any suitable manner. 2nd. In a process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage, placing the said terminals a regulated distance apart so that a nitrogen flame starts burning insuring the combustion of the air. 3rd. In a process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air, consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage, causing the resulting products to circulate through a suitable condensing apparatus to trap the acids and oxides the remaining air being sent by an air main back to the generator. 4th. In a process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage, adding oxygen to the air previous to its passage to the generator to enrich the same and increase the yield of acids and nitrogen oxides. 5th. In a process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air, consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage, supplying air rich in oxygen to the generator produced by the solution and subsequent extraction of the latter portion thereof in and from water. 6th. In a process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air, consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage supplying air rich in oxygen to the generator produced by allowing liquid air to partially evaporate and trapping the last portion thereof. 7th. In a process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air, consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage, utilising the resulting products in the manufacture of sulphuric acid by the direct employment of the same to mix with the burner gases or in the towers of the sulpuric acid plant. 8th. In a process for producing nitric and nitrous acids and oxides of nitrogen by the combustion of air, consisting in passing the air through a suitable vessel or generator in which are placed the terminals of an electric circuit conducting alternating currents of high voltage, absorbing, collecting and condensing the resulting products with sulphuric acid for the direct production of a nitro-sulphuric acid adapted for use in the manufacture of nitro-compounds.

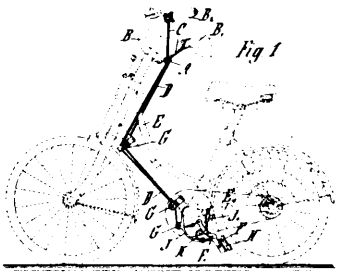


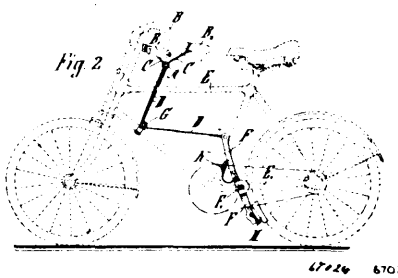
No. 67,024. Velocipede Brake. (*Frein de vélocipede.*)

Victor Rehm, Baden-Baden, Baden, Germany, 17th April, 1900; 6 years. (Filed 29th June, 1899.)

Claim.—1st. A bicycle having the grip on one its handle bars made to rotate, a loose cord connecting said rotatable grip with the opposite handle bar, a ring slidable on said cord, another cord led through said ring down to and operatively connected with a brake mechanism comprising a spring pressed lever pivoted near the hind wheel and carrying a brake shoe, whereby when said grip is turned the brake is applied, substantially as set forth. 2nd. The combination in a bicycle of a handle bar provided with a rotatable grip having a

flange and a ring, said grip, a loose cord fastened to said ring and looped over ths opposite handle bar, a ring slidable on said cord, a





stationary support, a downwardly extended lever fulcrumed upon said support, a brake shoe pivoted to its lower arm, a spring normally holding said brake shoe out of contact with the wheel, and a cord operatively connecting the upper arm of said lever with said slidable ring, whereby when the grip is turned the brake will be applied, substantially as set forth.

No. 67,025. Method of Preparing Paper for Conveying Secret Communications. *(Méthode de preparation du papier pour communications sécrétes.)*

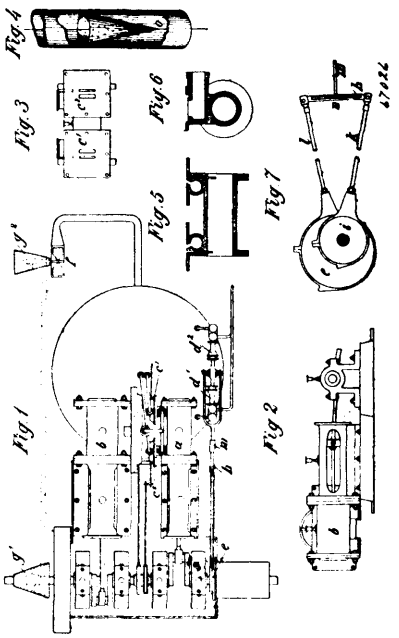
Dr. Ernest Kretschmann, Gross Lafferde, Hanover, Prussia, Germany, 17th April, 1900; 6 years. (Filed 22nd April, 1899.)

Claim.—1st. A method for preparing paper for the purpose of secret communication by means of a simple solution of common table salt, consisting in completely soaking unglaced paper in a solution of one part of choride or any other haloid salts of the cobalt, 12 parts of glycerine and 2 parts of gum arabic in 90 parts of water, then drying the paper and glacing it in the ordinary way, substantially as hereinbefore described. 2nd. A method for preparing printing ink, which gives prints ordinarily invisible, but which are temporarily rendered visible by heating the paper, consisting in incorporating chloride or any other haloid salt of cobalt by finely grinding it with varnish, substantially as, and for the purpose described. 3rd. A method for stating, whether the hereinbefore described writings have already been developed or not, consisting in arranging visible or invisible marks on the surface of the paper, said marks being rendered permanently visible or their colour being permanently changed by the temporarily developing of the communication, the ink for these marks being produced by dissolving a knife's point full of resorcine and the same quantity of paratoluidine in 8 drops of water and 6 drops of sulphuric acid, substantially as described.

No. 67,026. Steam Motor. *(Moteur à vapeur.)*

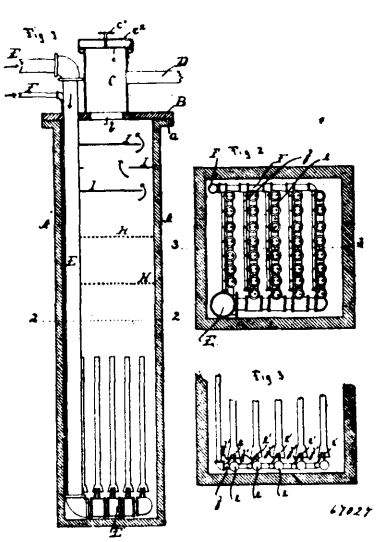
Guilio Reibaldi and Carlo Mazza, both of Rome, Italy, 17th April, 1900; 6 years. (Filed 11th December, 1899.)

Claim.—1st. In a motor of the class described, the combination with the high pressure cylinder, and a steam generator comprising a casing, a double conical coil within the casing and connected to the cylinder, means for regulating the combustion within the generator and the supply of water to the conical tubical spiral thereof, as and for the purpose specified. 2nd. In a motor of the class described, the combination with the high pressure cylinder, of a steam generator comprising a casing, a double coil of tubing within the casing, and means for regulating the combustion of fuel therein, a double acting pump connected to said coils operated from the crank shaft of the motor and designed to supply a predetermined quantity of water into each of said tubes once in every stroke of the motor piston, and means for separately admitting and exhausting each charge of steam to and from the cylinder, as and for the purpose specified. 3rd. In a motor of the class described, the combination with a high pressure cylinder, of a steam generator comprising a casing, a double conical coil therein, a pipe connecting the interior of the generator with the atmosphere, a fan within the same, operated from the crank shaft of the motor, means for regulating the speed of the said fan, mechanism operated from the crank shaft of the motor for injecting a predetermined quantity of water into each coil at predetermined intervals, and means for admitting and exhausting the



steam formed in the said generator separately to and from said cylinder, as and for the purpose specified. 4th. In a motor of the class described, the combination with a high pressure cylinder, of a generator comprising a casing, a double conical coil located in said casing and connected to said cylinder, mechanism for injecting a predetermined quantity of water into each of said coils at predetermined intervals, perforated hollow cones supported centrally therein in such a way that the axis thereof is parallel with the central line of the tubing composing the coil, as and for the purpose specified.

No. 67,027. Method of Subjecting Liquids to the action of Re-agents. *(Méthode de soumettre les liquides à l'action des réactifs.)*

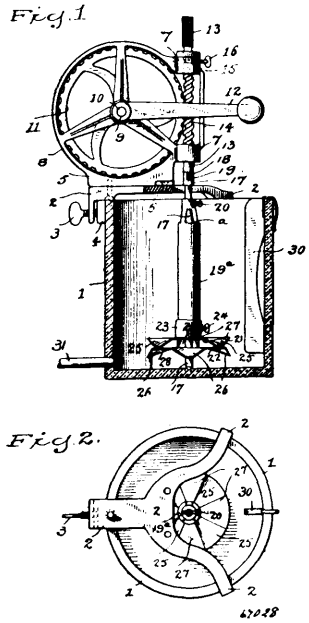


Ernest Boyce Stuart and Frank Billings Felt, both of Chicago, Illinois, U.S.A., 17th April, 1900; 6 years. (Filed 20th February, 1899.)

Claim.—1st. In a retort the combination of a plurality of pipes suspended therein and one or more jet pipes discharging into one end of said pipes, if diaphragms arranged between the opposite ends of said pipes and forming a tortuous passage in the retort and one or more plates or screens arranged between said diaphragms and pipes, substantially as set forth. 2nd. The method of chemically treating a liquid manganate in bulk and simultaneously main-

taining separated the treated matter from the untreated portions thereof, the same consisting in circulating said liquid in a closed vessel in a continuous defined current and simultaneously injecting a re-agent into said current and discharging the resulting gases therefrom, substantially as set forth. 3rd. The method of chemically treating a liquid manganate in bulk and simultaneously maintaining separated, the treated matter from the untreated portions thereof, the same consisting in circulating said liquid in a continuous defined current or currents and simultaneously injecting steam into said current and discharging the resulting oxygen therefrom, substantially as set forth. 4th. The herein described method of subjecting every molecule of a mass of liquid manganate to the action of steam, the same consisting in successively conducting portions of the liquid mass through an open duct or ducts within the main body of said liquid mass and discharging a re-agent into said duct or ducts during the circulation of the liquid manganate therethrough, substantially as set forth. 5th. The herein described method of producing oxygen from a liquid manganate, the same consisting in conducting every portion of the liquid mass to an open duct or ducts in a retort, alternately discharging air or steam into said duct or ducts during the flow of the liquid mass therethrough and simultaneously discharging from the retort the gases released from the maganate during said discharge, substantially as set forth. 6th. The combination of a retort having a series of tubes *f*, air and steam nipples discharging into said tubes, leaders from which said nipples project, headers and air and steam supply pipes connected therewith and posts *g*, said posts and supply pipes, etc., being arranged and secured together substantially as described whereby they are bodily removable from the retort without disarrangement, substantially as and for the purpose set forth. 7th. The method of treating a liquid manganate with a fluid re-agent which consists in atomizing the manganate in the presence of such re-agent, substantially as set forth. 8th. The method of treating a liquid manganate with a fluid re-agent which consists in forcing the re-agent upwardly into space through the surface of and thereby atomizing the manganate, substantially as set forth.

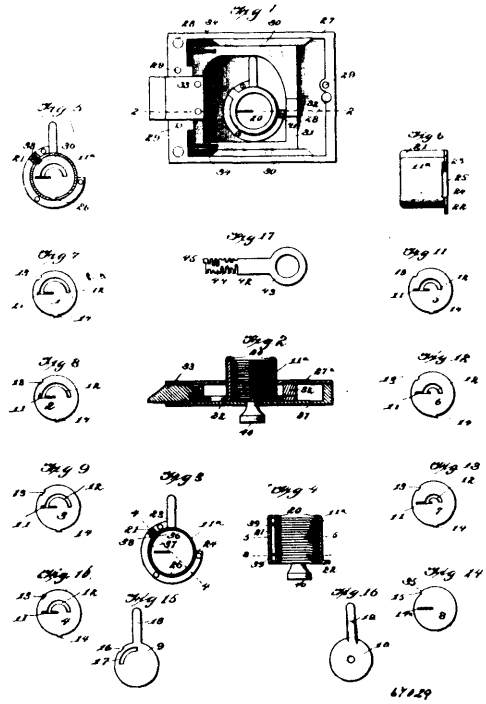
No. 67,028. Churn and Dasher. *(Baratte et éclabousseur.)*



George Avery Norcross, Evansville, Indiana, U.S.A., 18th April, 1900; 6 years. (Filed 3rd April, 1900.)

Claim.—1st. In a churn, the combination of a suitable jar, a tripod clamped over the mouth of said jar and embracing the circumference of the latter, a set screw driven through one of the feet of said clamp and carrying at its inner end a shoe, the frame secured upon said clamp and having integral therewith the circular housing and the vertical and horizontal boxes, the shaft journalled within the horizontal box and carrying a worm wheel, the crank attached to said shaft, the vertical shaft within said vertical boxes and having an annular groove near its upper end and a feather at its lower end and carrying a worm which latter is in engagement with said wheel, the thumb screw extending within said groove, the dasher shaft stepped within the bottom of the jar and provided at its upper end with a notch in which said feather extends, the tubular dasher hub secured around said dasher shaft and provided with openings at the top and having the dasher secured to its lower end, substantially as set forth. 2nd. In a churn, the combination of the jar, the rotary dasher shaft stepped at its lower end within said jar, the tubular hub secured to said shaft and provided at its upper end with openings, and the two similar discs one above the other carried by said hub at its lower end, each disc, having corresponding horizontal and depressed surfaces, the horizontal surfaces of the upper disc being directly above the depressed portions of the lower disc, while the depressed portions of the upper disc abut against the hub portions of the lower disc, substantially as set forth. 3rd. In a churn, the combination of the jar, the dasher shaft having its lower end stepped within the bottom of said jar, the tubular hub secured around said shaft and having openings at the top, the lower disc secured to the bottom of said hub and having alternately arranged horizontal and depressed surfaces, and the upper disc around said hub and capable of adjustment lengthwise of said hub and around the same, said upper disc also having horizontal and depressed surfaces corresponding with the similar surfaces of the lower disc, substantially as set forth. 4th. In a churn, the combination of the jar, the clamp attached to the mouth thereof, the frame rising from said clamp and having integral therewith the vertical and horizontal boxes, the shaft journalled within the horizontal box and carrying a worm wheel, the vertical shaft within said vertical boxes and carrying a worm which is in engagement with said wheel, the dasher shaft having its lower end stepped within the bottom of said jar and connected at its upper end with said vertical shaft, the tubular hub secured around the dasher shaft and having openings at the top end bottom, and the dasher secured to the bottom of said hub and having radially disposed openings which communicate with the openings in the bottom of the hub, substantially as set forth.

No. 67,029. Door Lock. *(Serrure de porte.)*



Edward Augustus Schmertz, Pittsburg, Pennsylvania, U.S.A., 18th April, 1900; 6 years. Filed 2nd April, 1900.

Claim.—1st. In a permutation lock, the combination with a tube, of a series of piled or starched discs, each provided a slot consisting of a straight radial portion, and a concentric curved portion leading therefrom, the curved portions being at different distances from the centre in the several discs, substantially as described. 2nd. In a permutation lock, the combination with a tube, of a series of discs stacked or piled, each disc provided with a slot consisting of a straight radial portion, and a concentric curved portion leading therefrom, the curved portions being at different distances from the centre in the several discs, and means for locking the discs against turning in the tube, substantially as described. 3rd. In a permutation lock, the combination with a tube, of a series of piled or stacked discs, each provided with a slot consisting of a straight radial portion, and a concentric curved portion leading therefrom, the curved portions being at different distances from the centre of the several discs, means for locking the discs in the tube, and freely rotatable discs alternating with the locked discs and provided with radial slots adapted to register with the radial portions of the slots of the locked discs, substantially as described. 4th. In a permutation lock, the combination with a tube, of a series of piled or stacked discs, each provided with a slot consisting of a straight radial portion, and a concentric curved portion leading therefrom, the curved portions being at different distances from the centre in the several

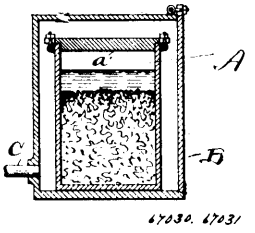
discs, means for locking the discs in the tube, rotatable discs alternating with the locked discs, and provided with radial slots, and a radially projecting arm, substantially as described. 6th. The combination in a permutation lock, of a tube, a series of slotted discs locked therein against turning, an alternating series of rotatable discs, a disc having a bolt operating radial arm, and devices normally locking the bolt operating disc but operated by the rotation of the alternating discs to release the disc, substantially as described. 6th. The combination in a permutation lock of a tube, a series of slotted discs therein locked against turning, a bolt operating disc provided with a peripheral notch, a spring pressed bar normally held in said notch and locking the disc against turning, and a series of discs alternating with the locked discs and provided with eccentric edges to release the bar from such engagement, substantially as described. 7th. The combination in a permutation lock, of a tube, provided with a longitudinal hollow rib on its outer surface, and an inner longitudinal groove, a series of slotted discs stacked in the tube provided with registering peripheral teeth seated in said groove, and with a registering series of peripheral notches opposite the inside of said rib having a bolt operating disc having a notch also opposite said rib, a series of rotatable discs alternating with the locked discs and provided with cam or eccentric edges opposite said rib, a bar in said rib, and springs in said rib normally pressing the bar into the registering notches of the locked disc and the bolt operating disc, and against the cam surfaces of the rotatable discs, substantially as described.

No. 67,030. Process of Reclaiming Rubber.
(*Procédé pour la traitement du caoutchouc.*)

Arthur Hudson Marks, Akron, Ohio, U.S.A., 18th April, 1900; 6 years. (Filed 31st May, 1899.)

Claim.—The process of treating vulcanized rubber waste which consists in submerging the finely ground rubber waste in a dilute alkaline solution in a sealed vessel, and in heating the contents of that vessel to a temperature approximately equal to the temperature of steam at 125 pounds pressure, more or less, and in maintaining the heat for twenty hours, more or less, substantially as set forth.

No. 67,031. Process of Disvulcanizing Caoutchouc, India Rubber, Gum Elastic, Etc. (*Procédé pour dévulcaniser le caoutchouc gomme élastique, etc.*)



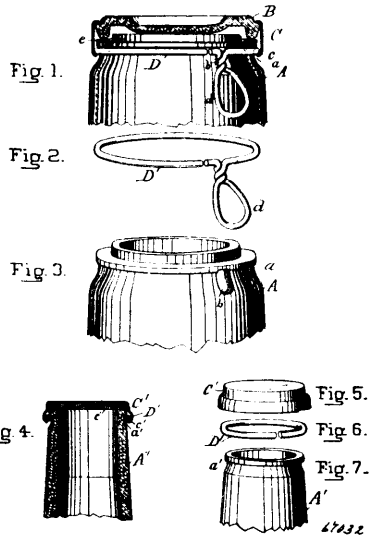
Albert E. J. V. J. Theilgaard, 30 Wiedeweltsgade, Copenhagen, Denmark, 18th April, 1900; 6 years. (Filed 29th April, 1900.)

Claim.—The process of disvulcanizing caoutchouc, india rubber, gum elastic and similar materials, characterised by subjecting the vulcanized material to a treatment with sulphites.

No. 67,032. Bottle Cap. (*Capuchon de bouteille.*)

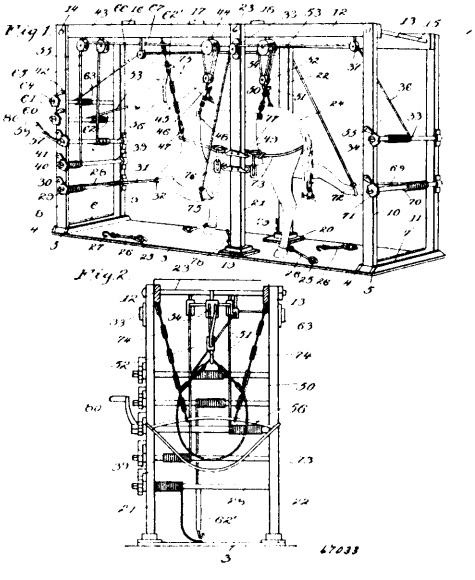
Frederick Recht, 671 Putnam Avenue, Brooklyn, New York, U.S.A., 18th April, 1900; 6 years. (Filed 31st March, 1899.)

Claim.—1st. The combination with a glass bottle, of a flanged cap for the mouth thereof, the neck of the bottle and the flange of the cap being provided with matching annular grooves adjacent to the edge of the flange, and a wire intermediate between the neck and cap and locking the cap to the bottle by engaging in the grooves in both, a portion of the wire projecting, whereby it may be seized and the cap released and removed by dislodging the locking wire from the bottle neck upon a slight yielding of one of the parts in relation to the other, substantially as described. 2nd. The combination with a glass bottle, of a flanged cap for the mouth thereof, the neck of the bottle and flange of the cap being provided with matching annular grooves, and a wire intermediate between the neck and cap, and locking the cap to the bottle by engaging the grooves in both, the edge of the flange of the cap being separated from the wall of the bottle neck by a space through which the wire can be withdrawn from the grooves upon a slight yielding of one of the parts in relation to the other, substantially as described. 3rd. The combination with a glass bottle, of a flanged cap for the mouth thereof, the neck of the bottle and the flange of the cap being provided with matching annular grooves adjacent to the edge of the flange, the parts being so formed as to leave an annular space between the edge of the flange and the neck of the bottle, and a wire intermediate between the neck and cap and locking the cap to the bottle by engaging in the grooves in both, the wire being provided with a loop whereby it can be seized and withdrawn from between the grooves through the annular space upon a slight yielding of one of the parts in relation to the other, substantially as described. 4th. The combination with a bottle, of a cap for the mouth thereof, the neck of the bottle and flange of the cap being provided with matching annular grooves,



a pocket intersecting the grooves in the neck, and a wire intermediate between the neck and cap and engaging the grooves in both, ssubstantially as described. 5th. The combination with a bottle, of a cap for the mouth thereof, the neck of the bottle and flange of the cap being provided with matching annular grooves, a pocket intersecting the groove in the neck, and a wire intermediate between the neck and cap and engaging the grooves in both, the wire being provided with a loop leading through the pocket by which it can be withdrawn from its engagement with the grooves, substantially as described.

No. 67,033. Horse Shoeing Rack.
(*Ratelier à ferrer les chevaux.*)



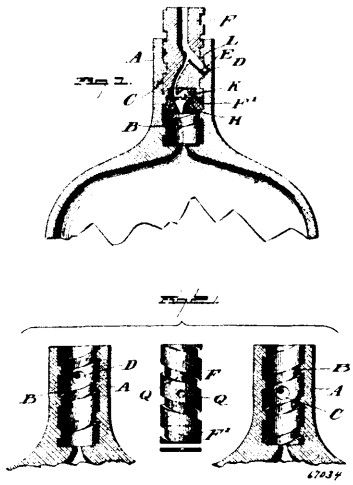
John Cea, Grundy Centre, Iowa, U.S.A., 18th April, 1900; 6 years. (Filed 2nd April, 1900.)

Claim.—1st. In a horse shoeing rack, the combination with a frame provided with longitudinal top bars, and middle uprights, of a rope adapted to embrace the body of the horse longitudinally and transversely, chains depending from the top bars and secured to said rope, hooks secured to the middle uprights, and chains connecting the rope to said hooks, substantially as described. 2nd. In a horse shoeing rack, the combination with a frame, provided with end uprights, of a windlass journalled in the uprights at one end, a rope extending therefrom to the knee of a front leg of the horse, a windlass journalled in the uprights at the other end, and a rope leading therefrom to the ankle of said front leg, substantially as described. 3rd. In a horse shoeing rack, the combination with a swing or hammock, of bars in the ends thereof, chains secured to the front and rear ends of said bars, two windlasses journalled in the

frame, ropes leading therefrom through single and double pulley blocks and carrying single pulley blocks, and hooks on the last-named blocks engaging said chains, substantially as described. 4th. The combination, in a horse shoeing rack, of a base, end uprights erected thereon, longitudinal top bars connecting the end uprights sockets on the base, middle uprights pivoted to the top bars and stopped in said sockets, and bolts to secure them in place therein, substantially as described.

No. 67,034. Non-Refillable Bottle.

(Bouteille non-réemplissable.)



John L. Taylor, Bozeman, Montana, U.S.A., 18th April, 1900; 6 years. (Filed 31st March, 1900.)

Claim.—1st. A non-refillable bottle, comprising a neck having an internal thread, a stopper with duct through the same and having a threaded circumference, balls adapted to be seated in pockets in the inner wall of the neck while the stopper is being screwed into place, said balls being adapted to roll into retaining pockets in the circumference of the stopper and prevent the latter from unscrewing, as set forth. 2nd. A non-refillable bottle, comprising an internally threaded neck having a integral apertured disc at its lower end, a stopper with valve therein, a duct leading through said stopper, pockets with flaring walls in the inner wall of the threaded neck designed to temporarily hold locking balls, the stopper having retaining pockets into which said balls are designed to roll when the pockets come together on opposite sides, as described and for the purpose set forth. 3rd. In combination with a bottle having internally threaded neck, the locking balls, the sectional and threaded stopper, pockets in the inner circumference of the neck and in the outer face of the stopper, the lower section of the stopper having threaded connection with the upper section, the adjacent ends of the stopper sections being recessed out to form a valve chamber, a valve seated therein and a ball resting on said valve and duct, as described.

No. 67,035. Track Cleaner. *(Nettoyeur de voies.)*

George W. Ruggles, Charlotte, New York, U.S.A., 18th April, 1900; 6 years. (Filed 31st March, 1900.)

Claim.—1st. The combination, in a track cleaner, of a series of blade wheels and co-acting bucket wheels held upon parallel horizontal revolving shafts, and a scoop inclosing the said wheels, having cylindrical lower corners concentric with the said respective shafts, substantially as set forth. 2nd. In combination with the scoop of a track cleaner, a pair of blade wheels, a pair of bucket wheels co-acting with the blade wheels, and an inclosure for the bucket wheels, with means for moving the parts in vertical directions, substantially as shown and described. 3rd. The bucket wheel of a track cleaner, having a hub provided with projections, and radially disposed leaves secured to said projections in pairs, said leaves being alike and each pair constituting a bucket, substantially as set forth. 4th. The bucket wheel of a track cleaner, having a hub provided with flanged radial projections equally spaced around the axis, and a series of similar leaves or plates secured to projections in pairs, the leaves of each pair facing each other and curved together at their outer ends, substantially as and for the purpose specified. 5th. The bucket wheel of a track cleaner, formed of a series of similar hubs each having flanged radial projections equally spaced, and a series of similar leaves or plates secured to said projections in pairs forming buckets, the buckets of each hub being offset from or in advance of the buckets of the adjacent hub, substantially as and for the purpose specified. 6th. A scoop for a track cleaner composed of a single piece and made straight without flare at the corners which latter are cylindrical, with three straight parts two of which extend upward from the said corners and the other connecting said corners, combined with two parallel shafts journalled lengthwise of the scoop each with the

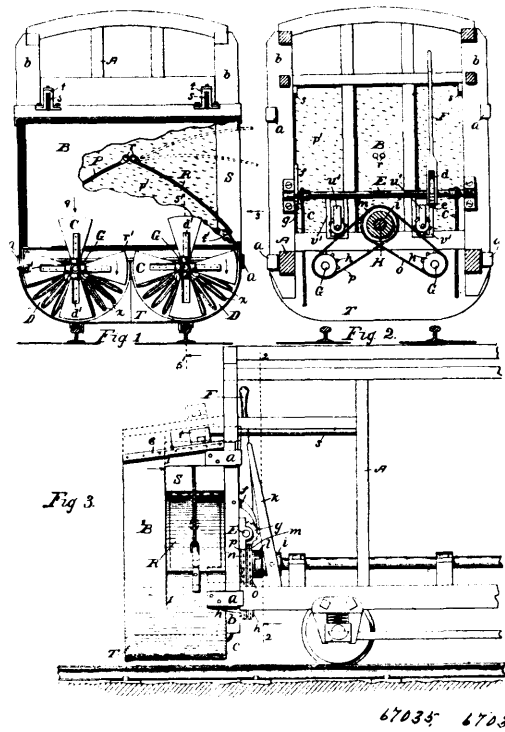


Fig 1. Fig 2.

Fig 3.

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blades of its wheels mounted to revolve concentric with and adjacent to one of said corners, substantially as and for the purpose specified. 7th. The combination in a track cleaner, of a pair of snow controlling shafts and sprocket wheels thereon, and a driving shaft with sliding clutch, a co-acting non-sliding clutch formed with sprockets, and chains for said sprockets, substantially as shown and set forth. 8th The bucket wheel of a track cleaner, having a hub, and radially disposed leaves or plates secured to the hub in pairs, the leaves of each pair together constituting a bucket. 9th. The bucket wheel of a track cleaner, having a series of hubs, and leaves secured in pairs to the peripheries of said hubs, each pair constituting a bucket, the buckets of one hub being in advance of the buckets of the adjacent hub. 10th. The combination, in a track cleaner, of a scoop and a wheel house composed of a single piece and made straight without flare at the corners which latter are cylindrical, with three straight parts two of which extend upward from the corners to form the sides of the scoop and portions of the wheel house and the other connecting said corners, all substantially as described.

No. 67,036. Manufacture of Nitrogen Compounds.

(Fabrication de composé de nitrogène.)

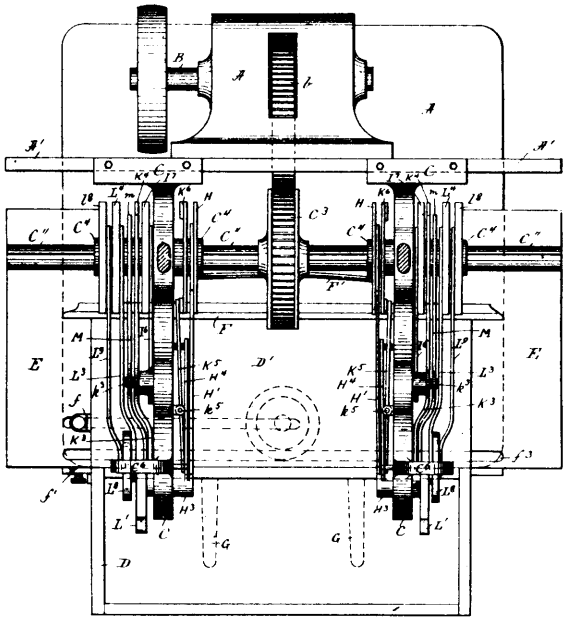
Dr. Adolf Frank, Charlottenburg, and Dr. Nikoden Caro, 1 Roonstrasse, Berlin, both in Germany, 18th April, 1900; 6 years. (Filed 19th April, 1899.)

Claim.—1st. The manufacture of cyanide simultaneously with cyanamide and with paracyanogen by allowing nitrogen to act on carbide at dark red heat up to white heat, substantially as described. 2nd. The manufacture of cyanide by a process, wherein masses resulting from the described action of nitrogen on carbide at an elevated temperature (dark red heat up to white heat) are melted in the presence of sufficient carbon, as described. 3rd. The manufacture of cyanides by a process, wherein masses resulting from the described action of nitrogen on carbide at an elevated temperature (from dark red heat up to white heat) are melted in the presence of sufficient carbon and of an additional substance, as described. 4th. In the manufacture of cyanides, the method of improving the formation of cyanamide due to the action of nitrogen on carbide by giving to the carbide a large surface and allowing the nitrogen to act at a temperature between the dark red heat up to white heat on such carbide spread out in a thin layer. 5th. In the method of forming cyanamide by the action of nitrogen on carbide at a temperature from dark red heat up to white heat, the extraction of the cyanamide from the resulting mass by leaching the same with water and adding an acid to the solution so as to drive out hydrocyanic acid and set free the amidocyanide, substantially as described.

No. 67,037. Box Hinging Machine.

(Machine à fixer des couplets aux boîtes.)

Fig 1



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David H. Saunders, Gloucester, Massachusetts, U.S.A., 18th April, 1900; 6 years. (Filed 6th April, 1899.)

Claim.—1st. In a box hinging machine, in combination, one or more intermittently actuated staple forming devices, and intermittently oscillating staple driving devices, an intermittent wire feeding, straightening, pointing and cutting device, substantially as and for the purpose set forth. 2nd. In a box hinging machine, in combination, one or more intermittently actuated staple forming devices and intermittently oscillating staple driving devices and means for automatically feeding the staple blank to the forming and driving device, substantially as and for the purpose set forth. 3rd. In a box hinging device, in combination, an intermittent wire feeding device, a wire cutting, pointing, and straightening device, an intermittently actuated staple forming device and a staple driving device which by its oscillation presents as well as drives the successive staples in different directions, substantially as described. 4th. In a box hinging machine, in combination, an intermittent combined wire feeding, straightening, cutting and pointing device, staple forming and driving device, and an automatically actuated box and cover support or table adapted to be automatically moved to and from the staple driving device and means for turning one staple at right angles to its fellow, substantially as and for the purpose set forth. 5th. In a box hinging machine, in combination, an intermittent combined wire feeding, straightening, cutting and pointing device, a staple forming and driving device, means for turning one staple at right angles to its fellow, an automatically operated box and cover table or support, means for automatically moving the same to and from the staple driving device and automatic means for clamping and holding the box and cover in position during the driving and clenching operation, substantially as and for the purpose set forth. 6th. In a box hinging machine, in combination, an intermittent wire feeding, cutting and pointing mechanism, a staple forming mechanism and an oscillating staple driving mechanism adapted to intermittently drive the staples at about a right angle respectively through the box and through the cover and clench said staples, substantially as and for the purpose set forth. 7th. In a box hinging machine, in combination, a staple forming and an intermittently oscillating driving device which by its oscillation presents as well as drives the successive staples in different directions, a wire feeding, pointing and cutting device, consisting of a reciprocating slide, having pivotally connected thereto a pair of feed cutting and pointing levers adjustably devices for regulating the amount of feed and place of cut off, and an automatic brake device adapted to hold the wire stationary during the return motion of the wire feed device, substantially as and for the purpose set forth. 8th. In a box hunting machine, in combination, an intermittent wire feeding, cutting off and pointing device, a staple forming device and an oscillating staple driving device adapted to intermittently drive the staples through the box and cover at substantially right angles to each other as and for the purpose set forth. 9th. In a box hinging machine, in combination, a staple forming and driving device and an automatic, vertically movable table or box and cover support and spring pressed and adjustable gauges thereon for placing the box and cover in proper position relative to the staple driving device and clamping devices having a positive action counter to that of the spring gages to bring the work into its proper position, substantially as specified. 10th. In a box hinging machine, a rotary driving shaft, a pair of sleeves splined on said shaft and longitudinally adjustable thereon, a pair of laterally adjustably arms each having connected to it a wire feed straightening, pointing and cutting device, a staple forming and intermitently oscillating driving device, which by its oscillation presents as well as drives the successive staples in different directions through the box and cover an automatic clamping device for clamping the box and cover in position for receiving the staples, and an intermediate devices between the said sleeves and the said wire feed, straightening, pointing and cutting device, and between said sleeves and the staple forming the driving devices, as set forth. 11th. In a box hinging machine, in combination, an intermittent wire feeding, straightening, cutting and pointing device, a staple forming and driving device, an automatically vertically movable box and cover support having a clenching die on its upper portion, and an automatic clamping device having a similar clenching die, substantially as and for the purpose set forth. 12th. In a box hinging machine, in combination, a staple forming device consisting of a male and female former and an oscillating staple receiver located beneath the driving device and mounted to oscillate around its axis, and means for frictionally holding the staple within said female former and receiver, substantially as specified. 13th. In a box hinging machine, in combination, a staple forming device, an oscillating driver yoke mounted to oscillate around its own axis, and a driver bar actuated by the yoke for driving the staples alternately through the box and cover, and a receiver mounted to oscillate around its axis, substantially as and for the purpose set forth. 14th. In a box hinging machine, in combination, a staple forming device, an oscillating driver yoke, a driver actuated by the latter, and an automatically actuated oscillating staple receiver mounted to oscillate upon its own axis for the purpose of alternately driving the staples at right angles respectively through the box and cover, substantially as specified. 15th. In a box hinging machine, in combination, a staple forming device, an oscillating driver yoke adapted to actuate the driver bar, and an oscillating driver carrier for the purpose of alternately driving the staples through the box and cover, substantially as specified. 16th. In a box hinging machine, in combination, a staple forming device, mechanism for automatically placing the formed staple below the driver bar, a receiver mounted to oscillate on its own axis below the driving device, mechanism for locating the formed staple into the receiver and for driving said staple out of the receiver into the box and cover, substantially as and for the purpose set forth. 17th. In a box hinging machine, the herein described staple forming and placing mechanism, consisting of a vertically and horizontally movable female former, and a horizontally movable male former, and automatic mechanism as described for causing the female former to descend relative to the male former for forming the staple, mechanism for automatically moving the female former laterally relative to the male former so as to release the staple from the latter, and automatic mechanism for moving the male and female formers in a lateral direction for the purpose of causing the staple to be located below the driver bar, substantially as and for the purpose set forth. 18th. In a box hinging machine, in combination, the following automatically actuated elements, viz:—an intermittent wire feeding and straightening device, a wire cutting off device, a staple forming device, a rocking driver carrier adapted to alternately drive the staples at right angles through the box and cover support, a box and cover and a driving device, substantially as and for the purpose set forth. 19th. In a box hinging machine, in combination, the following automatically actuated elements, viz:—an intermittent wire feeding, cutting, pointing and staple forming device, a driver device for alternately driving the staples interlocking through the box and cover, a vertically movable box and cover support, and a clamping device for securing the box and cover in driving positions, substantially as and for the purpose set forth. 20th. In a box hinging machine, the following combined automatically actuated elements, viz:—a wire staple forming device, a placing device for locating the staple in position for driving, a rocking carrier for alternately placing the staples to be driven through the box and cover, an oscillating receiver for turning one staple at right angles to its fellow, a driving device and a clamping device, substantially as and for the purpose set forth. 21st. In a box hinging device, in combination, an intermittent wire feeding device, a wire cutting, pointing and straightening device, an intermittently actuated staple forming device, and a staple driving device which by its oscillation presents as well as drives the successive staples in different directions, and automatic mechanism for holding the box and the cover in position for driving and clenching the staples, substantially as described.

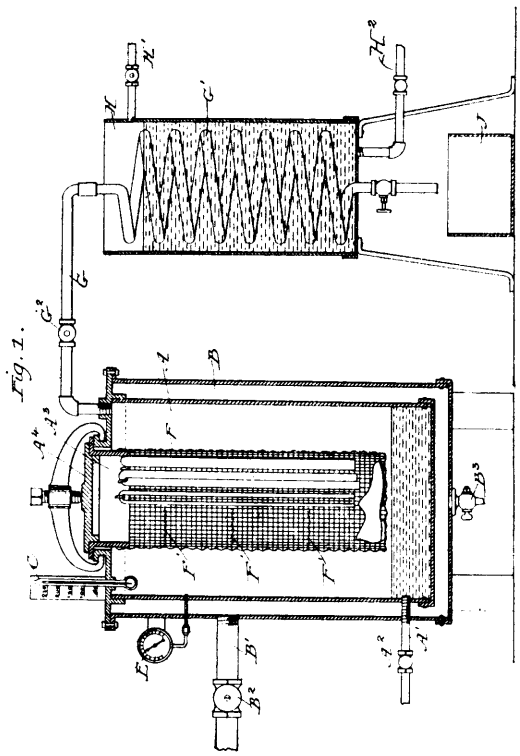
No. 67,038. Method of Reclaiming Rubber.

(Méthode de dévulcaniser le caoutchouc.)

Percy Lemon Clark, Chicago, Illinois, U.S.A., 18th April, 1500; 6 years. (Filed 22nd March, 1899.)

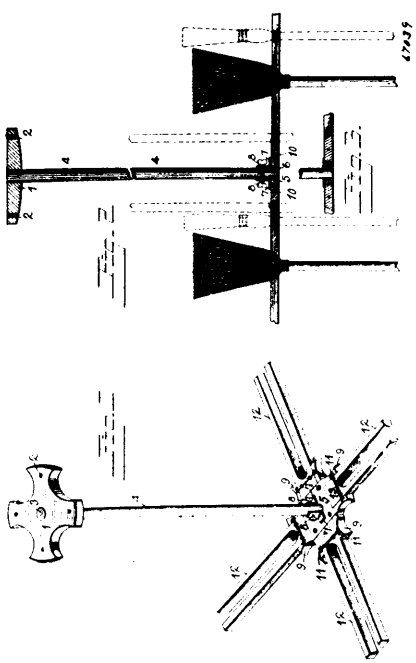
Claim.—1st. The process of devulcanizing rubber, which consists in first thoroughly soaking the rubber with a solvent of rubber and

sulphur whose vapourizing point is below the melting or disorganizing point of rubber, and maintaining it in such saturated condition



while heating it in a vapour of such solvent, to a temperature adequate to vapourize the saturating solvent, but lower than the melting or disorganizing point of rubber, until the rubber is devulcanized. 2nd. The process of devulcanizing rubber, which consists in saturating it with a solvent of rubber and sulphur adapted to vapourize at a temperature below the melting or disorganizing point of rubber, and maintaining it in such saturated condition by the pressure of vapour of such solvent while heating it in such vapour, to a temperature adequate to maintain the pressure therein, but lower than the melting or disorganizing point of rubber, until devulcanization is effected and the rubber is in condition to be massed.

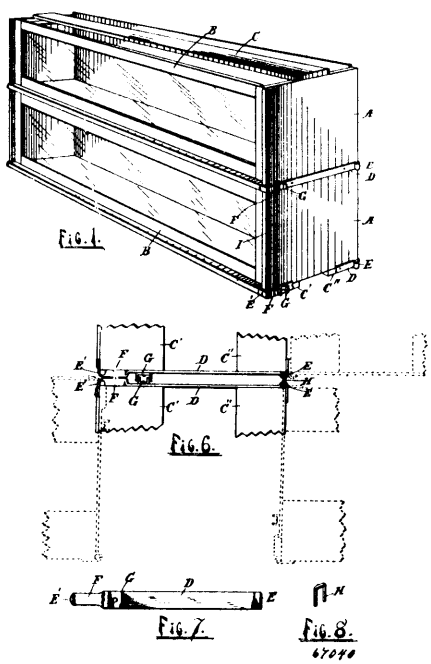
No. 67,039. Broom Rack. *(Ratelier à balai.)*



Robert L. Edwards, Itta Bena, Mississippi, U.S.A., 18th April, 1900; 6 years. (Filed 31st March, 1900.)

Claim.—1st. A mercantile broom holder, consisting of a bracket I, having screw holes 2, and a central perforation 3, a pendent rod 4, its upper end secured in the perforation 3, an arm holder 5, having a central perforation 6, brackets 7, secured on its upper face, their vertical ends grasping the lower end of the rod 4, thumb screws 8, securing said brackets to the rod, and bifurcated arms 12, hinged into said arm holder 5, substantially as shown and described and for the purposes set forth. 2nd. A mercantile broom holder, consisting of a bracket I, having means to secure it to the ceiling, and a central perforation 3, a pendant 4, depending from said bracket, an arm holder 5, having a central perforation 6, and means for adjustably securing said arm holder to the pendant 4, said arm holder having extensions 9, each extension provided with a slot, a sloping wall and recesses, bifurcated arms 12, their solid ends having sloping walls, said arms provided with rods 13, and hinged in the extensions 9, by said rods, substantially as shown and described and for the purposes set forth.

No. 67,040. Book Case. *(Bois de bibliothèque.)*

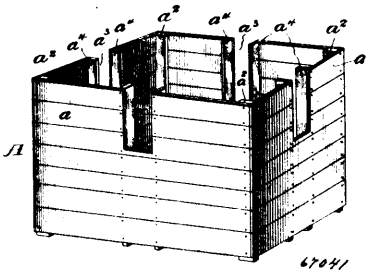


Frank Macey, Grand Rapids, Michigan, U.S.A., 18th April, 1900; 6 years. (Filed 30th March, 1900.)

Claim.—1st. The combination of a case having horizontal grooves in its ends, a rod having its ends in said grooves and traversing the same, a front pivotally supported on said rod and adapted to turn thereon from vertical to horizontal planes, and means on said casing and co-operating means on said rod for limiting and equalizing the movement of the respective ends of the front. 2nd. The combination of a case having horizontal grooves in its ends, racks attached to the ends of the case parallel with the grooves, rolls in the grooves and adapted to traverse the same, a rod journalled in said rolls, a front, journal bearings on the front and engaging the rod, and pinions fixed on the rod and engaging the racks, substantially as described. 3rd. In combination with a sectional book case, a joint strip consisting of a strip of metal having a perforated vertical portion at one edge, a middle portion at right angles thereto, and an inclined portion at the other edge, substantially as described. 4th. In combination with a sectional book case, coupling strips having tubular portions, and coupling staples having round parallel prongs to engage and rotative in the tubular portions, substantially as described. 5th. In combination with a sectional book case, coupling strips having embracing flanges and tubular portions, and coupling staples having round parallel prongs to engage said tubular portions, substantially as described. 6th. In combination with a sectional book case, coupling strips having offset portions with inwardly turned flanges and tubular portions near each end, and coupling staples having round parallel prongs to engage said tubular portions, substantially as described. 7th. In combination with a sectional book case, strips having parallel embracing flanges, offset portions having inwardly turned flanges and tubular portions near the ends, and coupling staples having round parallel prongs to engage said tubular portions, substantially as described. 8th. The combination of a case having grooves in its respective ends, a rod adapted to traverse said grooves, a front having a groove in its inner surface engaging the rod, bearings for the rods, pinions fixed on the rod, and racks fixed on the casing engaging the pistons, substantially as described. 9th. The combination of a case having

horizontal grooves in its ends, and rolls near the front ends of the grooves, a rod having rolls at its respective ends adapted to traverse the groove in the case, pinions on the rod, racks on the case engaging the pinions, a front pivotally supported upon the rod and having a groove engaging the rod, and bearings engaging the rod, and a spring surrounding the rod and attached at one end thereto, and attached to the front at the other end, substantially as described.

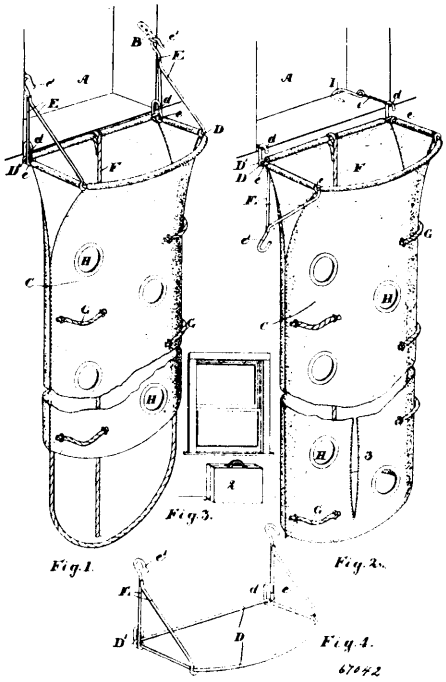
No. 67,041. Feed Box. (*Mangeoire.*)



Frank Galloway, Central Point, Oregon, U.S.A., 18th April, 1900; 6 years. (Filed 31st March, 1900.)

Claim.—1st. A waste proof feed box having its sides and ends provided with permanently open ended recesses, the transverse or lower wall of each recess being located at a height above the bottom of the box to allow the animal feeding readily to reach provender placed on such bottom, and each recess being of a width to permit the animal freely to move its neck, but to prevent it from withdrawing its head from, the box by a backward movement, whereby waste of provender is effectively obviated, substantially as described. 2nd. A waste proof feed box having its sides and ends provided with permanently open ended recesses, the transverse or lower wall of each recess being located at a height above the bottom of the box to allow the animal feeding readily to reach provender placed on such bottom, and each recess being of a width to permit the animal freely to move its neck, but to prevent it from withdrawing its head from the box by a backward movement, whereby waste of provender is effectively obviated, and inward extending braces on the inner surfaces of the sides and ends of the box, and extending parallel with and contiguous to the walls of the recesses, substantially as described.

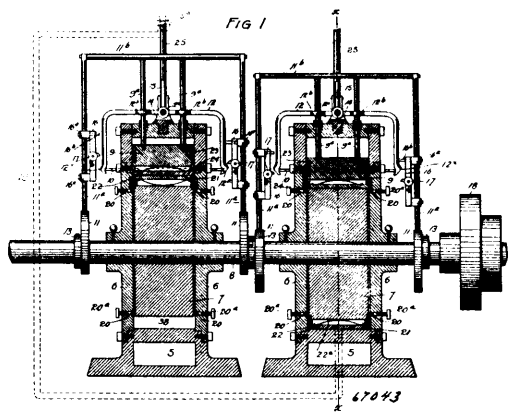
No. 67,042. Fire Escape. (*Extincteur d'incendie.*)



Frank Nutter Barnett, Toronto, Ontario, Canada, 18th April, 1900; 6 years. (Filed 30th March, 1900.)

Claim.—1st. The combination with the substantially cylindrical casing, of the substantially rectangular frame at the top to which the upper edge of the casing is secured, the swivelled braces swung on eyes on the sides of the frame and provided at their upper end with hooks, as and for the purpose specified. 2nd. The combination with the substantially cylindrical casing, of the substantially rectangular frame at the top to which the upper edge of the casing is secured, the swivelled braces swung on eyes on the sides of the frame and provided at their upper end with hooks and a central holding rope fastened to the top of the frame and extending down through the casing, as and for the purpose specified. 3rd. The combination with the substantially cylindrical casing, of the substantially rectangular frame at the top to which the upper edge of the casing is secured, the swivelled braces swung on eyes on the sides of the frame and provided at their upper end with hooks and the loops arranged on the outside of the bag, as and for the purpose specified. 4th. The combination with the substantially cylindrical casing, of the substantially rectangular frame at the top to which the upper of the casing is secured, the swivelled braces swung on eyes on the sides of the frame and provided at their upper end with hooks and the holes arranged on the outside of the bag, as and for the purpose specified. 5th. The combination with the casing and the upper rectangular frame and the braces swivelled on the sides of the frame and hooks formed on the rear end of the sides, the back cross bar of the frame provided with eyes fitting over the hooks and the grappling hooks provided with chains having the ends thereof fitting over the hooks of the frame, the said grappling hooks being designed to grasp upon the inner side of the sill of the window, as and for the purpose specified. 6th. The combination with the casing and the rectangular front portion of the frame having the rear hooks, of the cross bar fastened at the ends forward of such hooks and forming with the front portion of the frame, means for connecting the casing, so as to leave the back portions thereof forward of the hooks, as and for the purpose specified. 7th. The combination with the casing open at the top and suitably supported and closed at the bottom, of a slit in the side of the casing near the bottom, as and for the purpose specified.

No. 67,043. Rotary Engine. (*Machine rotatoire.*)

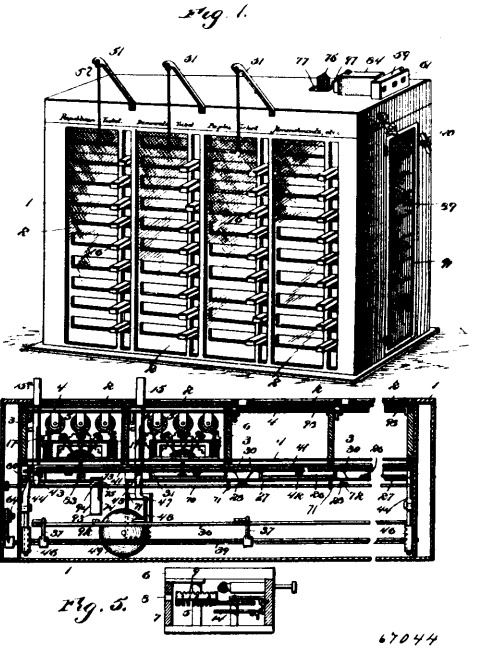


David M. Dearing, Sandstone, Michigan, U.S.A., 18th April, 1900; 6 years. (Filed 30th March, 1900.)

Claim.—1st. In a rotary engine, the combination with a casing, a reciprocating cylinder head at the top thereof, and an inlet on one side and an exhaust on the other side of such head, of a shaft journalled through the casing, a substantially eccentric core fast on the shaft within the casing, and having an exterior active face co-acting with the cylinder head and a piston head at its point of greatest radius co-acting with the interior of the casing, discs on said shaft exterior to the casing, and having faces truly parallel with the active face of the core, and connections between such disc faces and said cylinder head, as and for the purpose set forth. 2nd. In a rotary engine, the combination with a casing having a circular inner face, a reciprocating cylinder head standing radial thereto, and an inlet at one side, and an exhaust at the other side of said head, of a shaft journalled axially through the casing, a truly cylindrical core mounted eccentrically thereon with a piston head terminating at its point of greatest radius and near said inner face, twin eccentrics on the shaft at the ends of the core, a frame leading from their bands and connected by a cross bar, and rods leading from such bar to the cylinder head, the operative faces of said twin eccentrics standing truly parallel with the exterior active face of the core, as and for the purpose set forth. 3rd. In a rotary engine, the combination with a casing, a cylinder head therein, an inlet at one side and an exhaust at the other side of said head, a core journalled within the casing and off centre, a piston head at its point of greatest radius, and means for causing the cylinder head to constantly co-act with the active face of the core, of a cut-off valve across the inlet, a yoke engaging the extremities of the valve plate, and adjustable means for causing the reciprocation of the yoke, as and for the purpose set forth. 4th. In a rotary engine, the combination with a casing, a cylinder head, a core, a piston head, and inlet and exhaust ducts, of a cut-off plate sliding across the inlet and having a port, a yoke engaging the plate and having rounded portions, reciprocating sup-

ports, each having a pivot pin and stud, and a dog pivoted on each pin with its tail engaging said stud and its nose projecting into position to engage said rounded portion, as and for the purpose set forth. 5th. In a rotary engine, the combination with a casing, a core therein off centre and having a piston head at its point of greatest radius, a cylinder head co-acting with the active face of the core and a frame for reciprocating the said cylinder head, of inlet and exhaust ducts at opposite sides of the cylinder head, a cut-off plate sliding across the inlet and having a port double the width of such duct, connections between the frame and plate for reciprocating the latter, and means for setting the plate with respect to the position its port occupies with reference to the duct, as and for the purpose set forth. 6th. In a rotary engine, the combination with a casing, a cylinder head, a core, a piston head, and inlet and exhaust ducts, of a cut-off plate across the inlet duct and having a port twice the width thereof, a yoke for reciprocating said plate through predetermined distances, cams on the arms of the yoke engaging the extremities of the plate, such cams standing oblique to the length of the plate, but parallel with each other, and means for moving the yoke laterally, as and for the purpose set forth. 7th. In a rotary engine, the combination with a casing, a cylinder head, a core, a piston head, and inlet and exhaust ducts, of a cut-off plate across the inlet duct, and having a port twice the width thereof, a bracket having a rod, a yoke having a slotted eye engaging said rod and provided with arms with cam-shaped inner faces engaging the extremities of the cut-off plate, a lever on the bracket with its tip engaging the slot in the yoke eye for the purpose set forth, and means for reciprocating the yoke longitudinally of the plate, substantially as described. 8th. In a rotary engine, the combination with a casing, a cylinder head, a core, a piston head, and inlet and exhaust ducts, of a cut-off plate across the inlet duct and having a port twice the width thereof, a bracket having a fixed rod at right angles to the length of the plate, a yoke having an eye journalled on said rod, and depending arms with parallel oblique inner faces engaging the extremities of the plate and rounded outer faces opposite, reciprocating dogs engaging said rounded portions as set forth, and an adjusting lever on the bracket for sliding the yoke eye longitudinally on said rod therein, substantially as described. 9th. In a rotary engine, the combination with a casing, a cylinder head, a core, a piston head, and inlet and exhaust ducts, of a cut-off plate sliding across the inlet and having a port larger than the size of the duct, a pivoted yoke having parallel oblique inner faces at the ends of its arms engaging the extremities of said plate and rounded portions opposite thereto, means for moving the yoke laterally, as set forth, loops in its body, an eccentric connected with the core shaft, a frame operated thereby and having a double bar and rods extending through the yoke loops to the cylinder head, a support adjustably bolted to said double bar, and a pivoted dog carried by the support and engaging the rounded back of the yoke arm in one direction only, substantially as described. 10th. In a rotary engine, the combination with a casing, a cylinder head therein, a core having a piston head, connections between the core shaft and cylinder head, and an inlet and exhaust duct leading into the casing at each side of the cylinder head, of a pair of cut-off plates sliding across the inlet ducts and having ports extending from opposite sides of a transverse line across both plates and hence out of alignment with each other, so that when one is open the other is closed, a valve for each outlet, and means for reciprocating said plates through predetermined distances at either side of said transverse line, as and for the purposes set forth. 11th. In a rotary engine, the combination with a casing, a cylinder head therein, a core having a piston head, means for reciprocating the cylinder head, and a single inlet and single outlet, each branched into ducts at opposite sides of said cylinder head, of valves at their branches, a pair of cut-off plates sliding across the inlet ducts and having ports out of alignment with each other, a yoke for moving said cut-off a predetermined distance, and connections between the yoke and core shaft, as and for the purpose set forth. 12th. In a rotary engine system, the combination with two engines, each comprising a casing with inlet and exhaust openings, a core, and piston cylinder heads, substantially as described, of a pipe connecting the exhaust of one ene engine with the inlet of the second, a valve in this pipe, a valve in the inlet of the second engine beyond its point of connection with said pipe, a main lever, and connections between said lever and both valves for causing them to operate simultaneously and oppositely, as and for the purpose set forth. 13th. In a rotary engine, the combination with a casing having a radial chamber, a cylinder head reciprocating in said chamber, a rotary core within the casing having a piston head, and and an inlet and exhaust, of two air pipes leading from the cylinder head chamber, and indwardly closing and outwardly closing check valves in said pipes respectively, as and for the purpose set forth. 14th. In a rotary engine, the combinatiou with a substantially circular casing, a reciprocating cylinder head at one point therein, a steam inlet on one side of said head, and an exhaust, of a core rotating within the casing and whose active face co-acts with the cylinder head, a piston head in the core at its point of greatest radius, an air pipe entering the casing near the steam inlet pipe and provided with an outwardly closing check valve, and means for admitting and cutting off the flow of steam at predetermined moments, as and for the purpose set forth. 15th. In a rotary engine, the combination with a substantially circular casing, a reciprocating cylinder head at the top theref, a branched steam inlet entering the casing at opposite sides of said head, and an exhaust, of a core rotating within the casing and whose active face co-acts with the cylinder head, a piston head in the core at its point of greatest radius, air pipes entering the casing at points near said inlets and having outwardly closing check valves in ther bodies, a cut-off valve across said inlets and provided with suitable ports, means for setting this valve to close either inlet, and mechanism for simultaneously reciprocating said valve to open and close the other inlet at predetermined moments, as and for the purpose set forth. 16th. In a rotary engine, the combination with a substantially circular casing having an open exhaust at the bottom, a reciprocating cylinder head at its top, a branched inlet communicating with the interior of the casing at opposite sides of said head, a truly circular core mounted within the casing eccentricaily to the main shaft, and a piston head terminating at its point of greatest radius, of air pipes communicating with the steam space at points adjacent the inlets and having outwardly closing check valves in their bodies, and means, substantially as described, for closing one inlet according to the direction of rotation desired and opening and closing the other meanwhile at predetermined moments, as and for the purpose set forth.

No. 67,044. Voting Machine. *(Machine à voter.)*

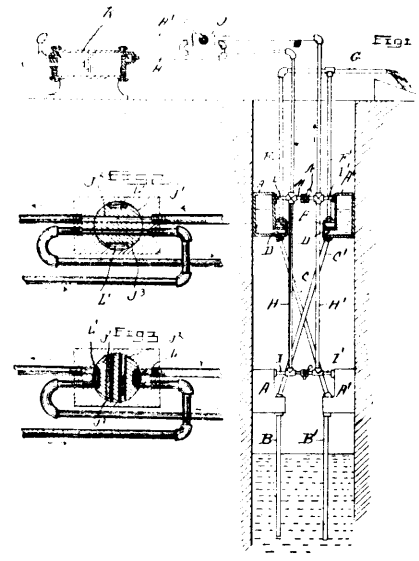


Lenna R. Winslow, Kansas, City, Missouri, U.S.A., 19th April, 1900; 6 years. (Filed 9th February, 1900.)

Claim.—1st. In a voting machine, the combination with series of movable parts, and tally mechanisms operatively connected with said movable parts, of a vote indicating sign or display plate, and rock shafts arranged respectively contiguous to the series of movable parts and having connection with the vote indicating sign or display plate, said rock shafts having projections arranged in the paths, respectively, of said movable parts, substantially as specified. 2nd. In a voting machine, the combination with series of movable parts, and tally mechanisms operatively connected with said movable parts of a vote indicating sign or display plate reciprocably mounted in the casing for extension through an opening therein, wherey it may be exposed exteriorly of the casing, and rock shafts arranged respectively contiguous to the series of movable parts and having connection with the vote indicating sign or display plate, said rock shafts having projections arranged in paths, respectively, of said movable parts, substantially as specified. 3rd. In a voting machine, the combination with series of movable parts, and tally mechanisms operatively connected with said movable parts, of a vote indicating sign or display plate, a plunger operatively connected with the display plate, and rock shafts arranged respectively contiguous to the series of movable parts and having connection with the plunger, said rock shafts being provided with projections arranged in the paths respectively, of said movable parts, substantially as specified. 4th. In a voting machine, the combination with series of movable parts, and tally mechanisms operatively connected therewith, of a vote indicating sign or display plate normally arranged within the casing of the machine in registration with a slot in the same, a plunger operatively connected with said sign or display plate and provided with projections, rock shafts arranged respectively parallel with the series of movable parts and provided with projections in the paths of the latter, and crank arm on the rock shafts for engagement with the

projections on the plunger, substantially as specified. 5th. In a voting machine, the combination with series of movable parts, and tally mechanisms operatively connected therewith, of indicating devices consisting of dial traversing pointers respectively connected with each series of movable parts for showing the offices for which votes have been cast, substantially as specified. 6th. In a voting machine, the combination with series of movable parts and co-operating tally mechanisms, each series being devoted to indicating the votes cast for the different candidates for the same office, of indicating devices including a series of pointers and the names of said offices, and connections between each pointer and the movable parts in one of said series, substantially as specified. 7th. In a voting machine, the combination with series of movable parts and co-operating tally mechanisms, each series being devoted to registering the votes cast for the different candidates for the same office, of indicating devices consisting of pointers and the names of the several offices for which votes are to be cast, and rock shafts respectively carrying said pointers, and each arranged contiguous to one of said series of movable parts and provided with projections, respectively, the paths of said movable parts, substantially as specified. 8th. In a voting machine, the combination with series of movable parts and co-operating tally mechanisms, of a voter counting tally mechanism, a plunger operatively connected with said voter counting tally mechanism, rock shafts carrying pointers for indicating the offices for which votes are cast and operatively connected with said plunger, each rock shaft being arranged contiguous to one of said series of movable parts, and projections on the rock shaft for engagement by the movable parts, substantially as specified. 9th. In a voting machine, the combination with vote counting tally mechanisms and movable parts for respectively actuating said tally mechanisms and capable of successive operation, and replacing devices for simultaneously returning the movable parts to their normal positions, of a voter counting device, consisting of a second tally mechanism, and operating means also actuated by either of said movable parts of the vote counting devices, and remaining, after actuation by one of said movable parts, in its adjusted position during the subsequent operation of other movable parts, and until after the operation of said replacing devices, whereby the voter counting device is actuated only by the first movable part which is operated after the return of all the movable parts to their normal positions, substantially as specified. 10th. In a voting machine, the combination with grouped movable parts, co-operating vote counting tally mechanisms, locking devices for each movable part, means actuated by the movable parts for preventing the simultaneous or successive movement of two or more movable parts in the same group, and releasing and replacing mechanism in operative relation with the movable parts, of a voter counting tally mechanism having operating means common to all of the groups of movable parts, and arranged in operative relation with each for actuation by either of said movable parts, and adapted to be held by an actuated movable part in its adjusted position without interfering with or being affected by, the subsequent actuation of movable parts in other groups, substantially as specified. 11th. In a voting machine, the combination with grouped movable parts, and co-operating vote counting tally mechanisms, of a voter counting tally mechanism having operating means arranged in operative relation with each, for actuation by either of said movable parts, means actuated by each movable part for preventing simultaneous movement of two movable parts in the same group, locking devices for maintaining the operating means of the voter counting tally mechanism in its adjusted position after actuation by a movable part, and releasing devices simultaneously liberating the movable parts and said operating means. 12th. In a voting machine, the combination with series of movable parts and co-operating tally mechanisms, of voter counting devices including a second tally mechanism, a plunger operatively connected with said second tally mechanism, means arranged in the paths of said movable parts for actuating the plunger, a replacing device for returning the movable parts to their normal positions, means for holding the plunger in its adjusted position after being actuated by one of said movable parts, and connections between said replacing device and the plunger, whereby the latter is returned to its normal position when the replacing device is actuated to return the movable parts to their normal positions, substantially as specified. 13th. In a voting machine, the combination with series of movable parts and co-operating tally mechanisms, of voter counting devices including a second tally mechanism, a plunger operatively connected with said second tally mechanism, means actuated by the movable parts for operating the plunger, a replacing frame for returning the movable parts to their normal positions, a foot foldably mounted upon the plunger and normally arranged in the path of the replacing frame, and means for folding said foot to remove it from the path of the replacing frame, substantially as specified. 14th. In a voting machine, the combination with series of movable parts and co-operating tally mechanisms, of voter counting devices including a second series mechanism, a plunger operatively connected with said second tally mechanism, means actuated by said movable parts for communicating motion to the plunger, and a replacing frame for returning the movable parts to their normal positions, a foot foldably mounted upon the plunger and normally arranged in the path of the replacing frame, a trip arm connected with the foot, and exposed means for operating the trip arm to fold the foot and thereby remove it from the path of the replacing frame, substantially as specified. 15th. In a voting machine, the combination of a casing having parallel supporting rods arranged contiguous to its open front side to support tally mechanisms, and guards fitted in spaces in the front wall of the casing which are unoccupied by tally mechanisms, said guards having perforated ears engaged by said supporting rods, substantially as specified.

No. 67,045. Pumping System. *(Système de pompe.)*



Charles Wright, Ironton, Ohio, U.S.A., 19th April, 1900; 6 years. (Filed 7th February, 1900.)

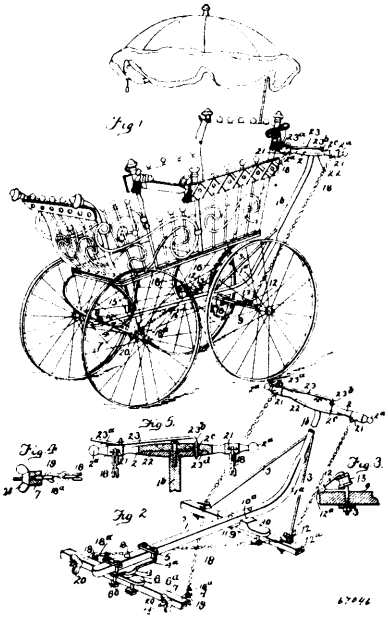
Claim.—1st. In combination, a pump adapted to create an air pressure and a partial vacuum, pipes leading from said pump, one for conveying the compressed air and the other for conveying air to the suction portion of the pump, a reversing valve for changing the connection of the pipes with the pump, a series of cylinders arranged in pairs to which the air pipes are connected, short pipes connecting the air pipes, a valve located in each of the short pipes, water pipes leading to the lower reservoirs, valves located within said reservoirs and adapted to open inward, pipes leading from the lower reservoirs to the reservoirs next above, said pipes being crossed, valves arranged within the resevoirs and adapted to open outward, and a discharge pipe connected with the upper reservoirs, as and for the purpose set forth. 2nd. In combination, a series of reservoirs, a pump adapted to create an air pressure and a vacuum, pipes connected to each end of the pump and suitable valved connections from the pump to the reservoirs, short pipes connecting the air pipes and a valve in each short pipe and connections whereby the water, through suction, is drawn into the reservoir, and through a combined suction and pressure expelled therefrom, substantially as described.

No. 67,046. Baby Carriage. *(Voiture d'enfant.)*

Sylvester McGaughey, Randville, Michigan, U.S.A., 19th April, 1900; 6 years. (Filed 9th February, 1900.)

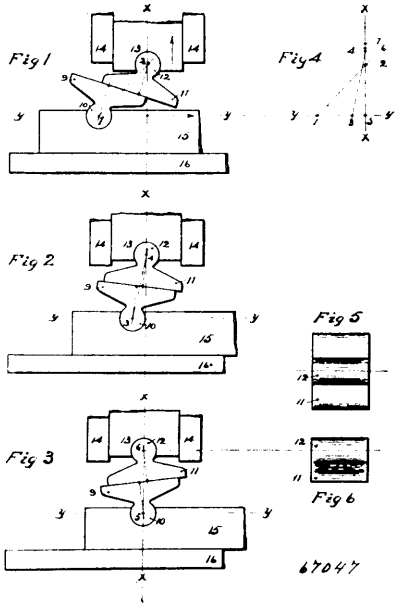
Claim.—1st. As an improvement in manually pushed vehicles, a running gear, comprising a central reach bar, the rear end of which bends upward and forms a handle post, a front axle pivotally secured to the said reach bar, and a rear axle fixedly secured upon the said reach bar, a body bearing spring pivotally mounted transversely on the forward end of the reach, a longitudinally extending body bearing spring mounted on each end of the rear axle, a pusher bar pivotally mounted upon the upper end of the reach and cable or chain connections between said pusher bar and the front axle, said connections extending forwardly in the plane below the spring bearings. 2nd. In a child's carriage, the combination with the centre reach bar, the rear end of which terminates in an upwardly projecting handle post, of a forward axle pivotally secured on the reach, the rear axle fixedly secured on said reach, a guide on each end of the rear axle, the cables or chains, one of said cables being secured to each end of the front axle, said cables being crossed at a point between the front and rear axles and passed over the guides on the rear axle, the pusher bar pivotally mounted on the reach handle post, locking devices holding the pusher bar normally locked to the handle post, said bar having its ends mounted on the rear ends of the cables, all being arranged substantially as shown and described. 3rd. In a vehicle of the class described, a centre reach bar, said bar extending rearward and upward to form a handle post, the front axle, said axle and reach bar having fifth wheel connections, and an adjusting eye bolt on each end of the front axle, a rear side pivotally mounted on the reach, a slotted

bearing upon each end of the rear axle carrying a guide pulley, a pusher bar axially mounted upon the upper end of the reach handle



post, and locking means for holding said bar from turning the cable or chain secured to each end of the said bar, each cable projecting forward parallel with the reach bar and over the guide pulley on its corresponding side, said cables crassing at a point between the front and rear axles, said cables having their ends detachably conducted with the adjustable eye bolts upon the front axle, all being arranged substantially as shown and described.

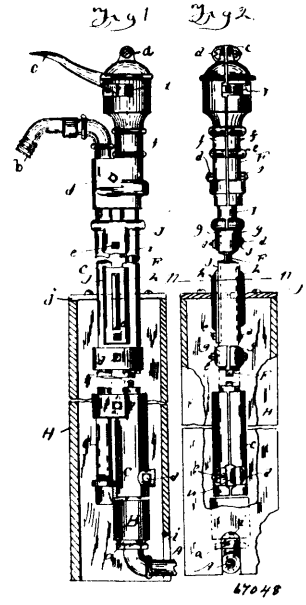
No. 67,047. Toggle. *(Cabillot.)*



Mark A. Replogle, Akron, Ohio, U.S.A., 19th April, 1900; 6 years. (Filed 12th February, 1900.)

Claim.—1st. The herein described toggle comprising two similarly constructed members having polls or flat surfaces adapted to slide each upon each and the opposite ends of said members adapted to be pivotally joined respectively to impelling and impelled moving members, in combination with means for controlling the direction of motion of said moving members, substantially as set forth. 2nd. In a toggle joint the combination with an impelling member and an impelled member of two members similar to each other consisting each of a journal or pivoting portion by which they are respectively attached to the impelling and impelled members and having flat poles or sliding surfaces adapted to mutually engage with each other for the purpose set forth.

No. 67,048. Hydrant. *(Borne-fontaine.)*



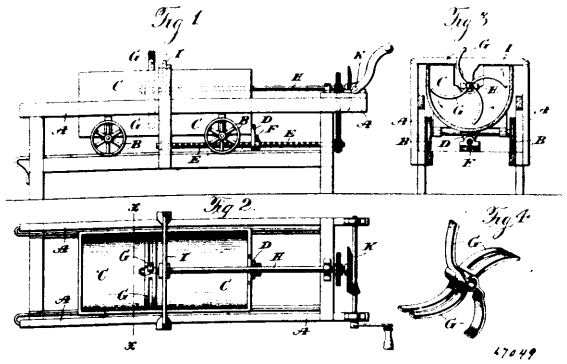
Daniel F. Luse, Central Hall, Pennsylvania, U.S.A., 19th April, 1900; 6 years. (Filed 8th November, 1899.)

Claim.—1st. A hydrant having, in combination, a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, a water channel leading from said tubular chamber and communicating with the water discharge, and a countersunk valve seat at the end of said tubular chamber remote from said valve chamber, a valve plunger located in said tubular chamber having a cut off valve located within said valve chamber, a lateral port, a longitudinal waste channel, and a waste valve co-operating with said countersunk valve seat, said plunger normally occupying such position that the cut off valve is closed, the waste valve is open, the lateral port is out of registration both with the valve chamber and water channel, and the waste channel is open and in communication with the water channel, the hydrant top having at its front a horizontal slot and a vertical slot communicating therewith, and at its rear a horizontal slot, a connecting rod connected with the valve plunger and extending therefrom into the hydrant top, a operating lever pivotally connected to the head of said connecting rod, the rear end of said operating lever extending into said rear slot, the upper margin of which serves as a fulcrum for said lever, and the front or handle end of said lever normally occupying said vertical slot, but when depressed registering with said front horizontal slot, whereby said lever is capable both of a vertical and rotary movement, the vertical movement of said lever opening said cut off valve, moving said waste valve into said counter sunk seat thereby closing the waste outlet and establishing communication between said lateral port and the valve chamber, and the rotary movement of said lever imparting rotation to said plunger whereby communication between the waste and water channels is destroyed and the lateral port and water channel are brought into registration, the relation between the operating lever and said front horizontal slot being such that the handle lever when located therein is maintained in position to keep the cut off valve open, and a closing spring interposed between the head of the connecting rod and a flange on the hydrant top for facilitating the closing of the cut off valve, substantially as set forth. 2nd. A hydrant having, in combination, a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, a water channel leading from said tubular chamber and communicating with the water discharge, and a countersunk valve seat at the end of said tubular chamber remote from said valve chamber, a valve plunger located in said tubular chamber having a cut off valve located within said valve chamber, a lateral port, a longitudinal waste channel, and a waste valve co-operating with said counter sunk valve seat, said plunger normally occupying such position that the cut off valve is closed, the waste valve is open, the lateral port is out of registration both with the valve chamber and water channel, and the waste channel is open and in communication with the water channel, the hydrant top having at its front a horizontal slot and a vertical slot communicating therewith, and at its rear a horizontal slot, a connecting rod connected with the valve plunger and extending therefrom into the hydrant top, an operating lever pivotally connected to the head of said connecting rod, the rear end of said operating lever extending into said rear slot, the upper margin of which serves as a fulcrum for said lever, and the front or handle end of said lever normally occupying said vertical slot, but when depressed registering with said front hor-

izontal slot, whereby said lever is capable both of a vertical and rotary movement, the vertical movement of said lever opening said cut-off valve, moving said waste valve into said countersunk seat thereby closing the waste-outlet and establishing communication between said lateral port and the valve chamber, and the rotary movement of said lever imparting rotation to said plunger whereby communication between the waste and water channels is destroyed and the lateral port and water channel and brought into registration, and the relation between the operating lever and said front horizontal slot being such that the handle lever, when located therein, is maintained in position to keep the cut-off valve open, substantially as set forth. 3rd. A hydrant having in combination, a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, a water channel leading from said tubular chamber and communicating with the water charge, and a countersunk valve seat at the end of said tubular chamber remote from said valve chamber, a valve plunger located in said tubular chamber having a cut-off valve located within said valve chamber, a lateral port, a longitudinal waste channel, and a waste valve co-operating with said countersunk valve seat, said plunger normally occupying such position that the cut-off valve is closed, the waste valve is open, the lateral port is out of registration both with the valve chamber and water channel, and the waste channel is open and in communication with the water channel, the hydrant top having a fulcrum, a connecting rod connected with the valve plunger and extending therefrom to the hydrant top, and an operating lever pivotally connected to the head of said connecting rod, the rear end of said operating lever co-operating with said fulcrum, said lever being capable both of a vertical and rotary movement, the vertical movement of said lever opening said cut-off valve, moving said waste valve into said countersunk seat thereby closing the waste outlet and establishing communication between said lateral port and the valve chamber, and the rotary movement of said lever imparting rotation to said plunger whereby communication between the waste and water channels is destroyed and the lateral port and water channel are brought into registration, substantially as set forth. 4th. A hydrant, having in combination, a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, a water channel leading from said tubular chamber and communicating with the water discharge, and a countersunk vavle seat at the end of said tubular chamber remote from said valve chamber, a valve plunger located in said tubular chamber having a cut-off valve located within said valve chamber, a lateral port, a longitudinal waste channel, and a waste valve co-operating with said countersunk valve seat, said plunger normally occupying such position that the cut-off valve is closed, the waste valve is open, the lateral port is out of registration both with the valve chamber and water channel, and the waste channel is open and in communication with the water channel, a connecting rod connected with the valve plunger, and an operator connected to said connecting rod and capable of both a linear and rotary movement, the linear movement opening said cut-off valve, moving said waste valve into said countersunk seat thereby closing the waste outlet and establishing communication between said lateral port and the valve chamber, and the rotary movement imparting rotation to said plunger whereby communication between the waste and water channels is destroyed and the lateral port and water channel and brought into registration, substantially as described. 5th. A hydrant having, in combination, a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, a water channel leading from said tubular chamber and communicating with the water discharge, and a waste valve seat at the end of said tubular chamber remote from said valve chamber, a valve plunger located in said tubular chamber having a cut-off valve located within said valve chamber, a lateral port, a longitudinal waste channel, and a waste valve co-operating with said waste valve seat, said plunger normally occupying such position that the cut-off valve is closed, the waste valve is open, the lateral port is out of registration both with the valve chamber and water channel, and the waste channel is open and in communication with the water channel, a connecting rod connected with the valve plunger and extending therefrom, and an operator connected to said connecting rod and capable of both a linear and rotary movement, the linear movement opening said cut-off valve, moving said waste valve onto said waste valve seat thereby closing the waste outlet and establishing communication between said lateral port and the valve chamber, and a rotary movement imparting rotation to said plunger whereby communication between the waste and water channels is destroyed and the lateral port and water channel are brought into registration, substantially as set forth. 6th. A hydrant having, in combination, a water box having a valve chamber communication with the water supply, a tubular chamber communicating with said valve chamber and a water channel leading from said tubular chamber and communicating with the water discharge, a valve plunger located in said tubular chamber having a cut-off valve located within said valve chamber, a lateral port, and a longitudinal waste channel, said plunger normally occupying such position that the cut-off valve is closed, the lateral port is out of registration both with the valve chamber and water channel, and the waste channel is open and in communication with the water channel, a connecting rod connected with the valve plunger and extending therefrom, and an operator connected to said connecting rod and capable of both a linear and rotary movement, the linear movement opening said cut-off valve and establishing communication between said lateral port and the valve chamber, and the rotary movement imparting rotation to said plunger whereby communication between the waste and water channels is destroyed and the lateral port and water channel are brought into registration, substantially as set forth. 7th. A hydrant having, in combination, a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, and a water channel leading from said tubular chamber and communicating with the water discharge, a valve plunger located in said tubular chamber having a cut-off valve located within said valve chamber and a lateral port, said plunger normally occupying such position that the cut-off valve is closed and the lateral port is out of registration both with the valve chamber and water channel, a connecting rod connected with the valve plunger, and an operator connected to said connecting rod and capable both of a linear and rotary movement, the linear movement opening said cut-off valve and establishing communication between said lateral port and the valve chamber, and the rotary movement of said lever imparting rotation to said plunger whereby communication between the lateral port and water channel is established, substantially as set forth. 8th. A hydrant having, in combination, a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, and a water channel leading from said tubular chamber and communicating with the water discharge, a valve plunger located in said tubular chamber having a cut-off valve located within said valve chamber and a lateral port, said plunger normally occupying such position that the cut-off valve is closed and the lateral port is out of registration both with the valve chamber and water channel, the hydrant top, a connecting rod connected with the valve plunger and extending therefrom to the hydrant top, an operator connected to said connecting rod and and capable both of a linear and rotary movement, the linear movement opening said cut-off valve and establishing communication between caid lateral port and the valve chamber, and the rotary movement imparting rotation to said plunger whereby the lateral port and water channel are brought into registration, and means on said hydrant top co-operating with said operator so as to maintain it in position to keep the cut-off valve open, substantially as set forth. 9th. A hydrant having, in combination a water box having a valve chamber communicating with the water supply, a tubular chamber communicating with said valve chamber, a water channel leading from said tubular chamber and communicating with the water discharge, and a countersunk valve seat at the end of said tubular chamber remote from said valve chamber, a valve plunger located in said tubular chamber having a cut-off valve located within said valve chamber, a longitudinal waste channel and a compressible waste valve co-operating with said countersunk valve seat, said plunger normally occupying such position that the cut-off valve is closed, the waste valve is open, and in communication with the water channel, a connecting rod connected with the valve plunger and extending therefrom, and an operator connected to said connecting rod and capable of linear movement thereby opening said cut-off valve, moving said waste valve into said countersunk seat and compressing it therein so as to close the water outlet, substantially as set forth. 10th. A hydrant having, in combination, a water box with a water supply, a water discharge, a cut-off valve seat, and a waste valve seat, a vertically movable and rotary plunger having a cut-off valve, a waste valve, a lateral water port, and a waste channel, and means for moving said plunger vertically whereby the cut-off valve is opened, the waste valve is closed, and the water port is put into communication with the water supply, and for then rotating said plunger, whereby the water port is put into communication with the water discharge and the communication between the waste channel and the water discharge is destroyed, subscantially as set forth. 11th. A hydrant having, in combination, a water box with a water supply, a water discharge, a cut-off valve seat, and a waste valve seat, a vertically movable and rotary plunger having a cut-off valve, a lateral water port, and a waste channel, and means for moving said plunger vertically whereby the cut-off valve is opened, and the water port is put into communication with the water supply, and for then rotating said plunger, whereby water port is put into communication with the water discharge and the communication between the waste channel and the water discharge, is destroyed, substantially as set forth. 12th. A hydrant having in combination a water box with a water supply, water discharge, and a cut-off valve seat, a vertically movable and rotary plunger having a cut-off valve and a lateral water port, and means for moving said plunger vertically, whereby the cut-off valve is opened, and the water port is put into communication with the water supply, and for then rotating said plunger, whereby the water port is put into communication with the water discharge, substantially as set forth. 13th. A buried water supply pipe, and a hydrant connected therewith, said hydrant having longitudinally extending and longitudinally adjustable guide plates with longitudinal guide ribs thereon, in combination with a buried frost casing surrounding said hydrant, having at its bottom an open mouthed slot straddling said water supply pipe, and a two part removable cover embracing the hydrant and slidingly connected with said guide ribs, substantially as set forth. 14th. A buried water supply pipe, and a hydrant connected therewith, in combination with a buried frost casing surrounding said hydrant, having at its bottom an open mouthed slot straddling said water supply pipe,

and a two part removable cover embracing the hydrant and slidingly connected therewith, substantially as set forth. 15th. A hydrant having, in combination, a water box, a valve therein, a dischage pipe leading from said water box, a connecting rod connected with the stem of said valve, a longitudinal sheath surrounding said connecting rod, a two part hydrant top clamping the top of said sheath to said discharge pipe, and a two part bottom casing connected with the water box and clamping the lower end of said sheath to said discharge pipe, substantially as set forth. 16th. A hydrant having, in combination, a water box, a valve therein, a discharge pipe leading from said water box, a connecting rod connected with the stem of said valve, a longitudinal sheath surrounding said connecting rod, a two part hydrant top clamping the top of said sheath to said discharge pipe, and a two part bottom casing clamping the lower end of said sheath to said discharge pipe, substantially as set forth.

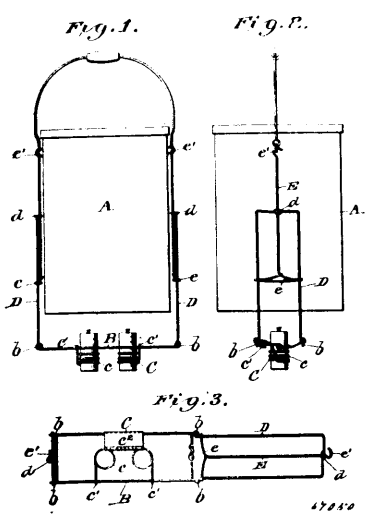
No. 67,049. Kneading Dough. (*Pétrin.*)



John Peter Schmitz, Aurora, Illinois, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. In a kneading machine, the combination of a travelling trough, a worm shaft journalled beneath the trough, a bracket on the trough, through which said shaft passes, a part projecting from the bracket into the thread of the shaft, kneading arms, a shaft carrying them, means to rotate said shaft, and gearing between said shaft and the worm shaft, substantially as and for the purpose described. 2nd. In a kneading machine, the combination of kneading devices, a trough movable to and fro, a shaft having right and left threads, beneath the trough, and a part on the trough to engage such threads, substantially as and for the purpose set forth. 3rd. In a kneading machine, the combination of a dough receptacle and kneading devices consisting of revolving arms having surfaces bent or curved in the plane of their revolution, alternate arms being slotted, with the slots in line with the other arms, substantially as and for the purpose shown. 4th. In a kneading machine, the combination of a dough receptacle, and kneading devices consisting of a circular series of revolving arms, alternate ones being longitudinally slotted, with the slots in line with the other arms, substantially as and for the purpose described.

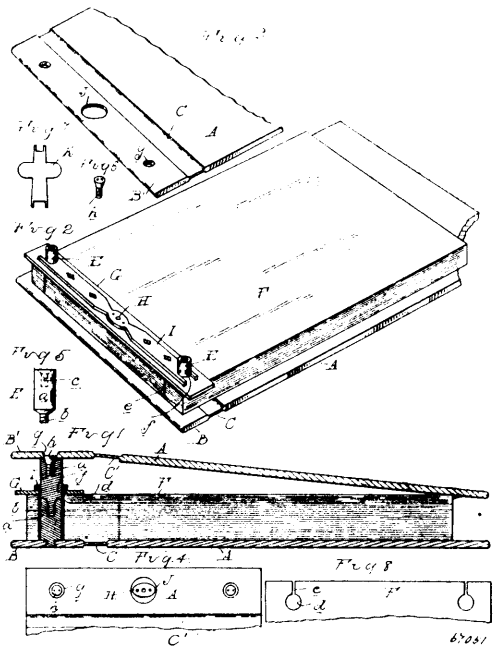
No. 67,050. Heater. (*Chauffeur.*)



Johan Richard Froberg, Grass Valley, California, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. In a lunch bucket heater, a rectangular base formed of a single wire with eyes turned in at each corner, rectangular wire arms hooked in said eyes and having an eye in the centre of the closed upper end, wire arms passing through the eyes in the ends of said rectangular arms, and having loops at their lower ends adapted to slide on said rectangular arms and hooks at their upper ends adapted to engage the handle of said bucket, substantially as shown and described. 2nd. In a lunch bucket heater provided with a base having a longitudinal opening in its centre, a double candlestick formed of a wire coiled to form sockets and having its ends hooked over one side of the base and provided with a plate hooked over the other side of the base, substantially as shown and described. 3rd. A lunch bucket heater, consisting of a rectangular base formed of a single wire with eyes turned in it at each corner, rectangular wire arms hooked in said eyes and having an eye in the centre of the closed upper end, wire arms passing through the eyes in the ends of said rectangular arms, and having loops at their lower ends adapted to slide on said rectangular arms and hooks at their upper ends adapted to engage the handle of said bucket, and a double candlestick formed of a wire coiled to form the sockets and having its ends hooked over one side of the base and provided with a plate hooked over the other side of the base, substantially as shown and described.

No. 67,051. Transfer Ledger. (*Grande-livre.*)



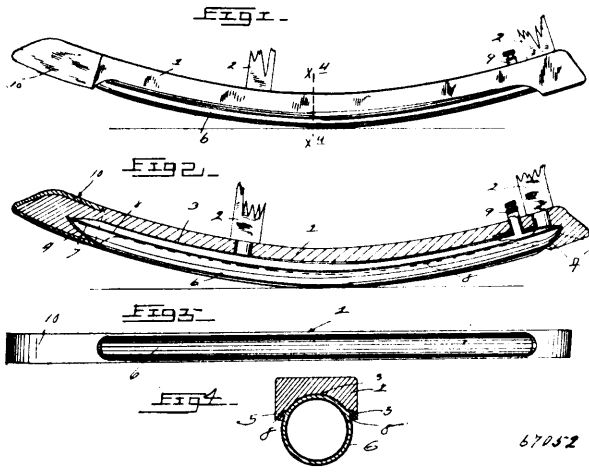
James Barker, Detroit, Michigan, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. A binder, comprising a top and bottom cover, each having a flexibly hinged rigid strip at its rear edge, two upright posts between the covers fixedly secured at their ends to the upper and lower strips, said ends being flush with the covers, an independent clamping plate intermediate the covers and slidingly engaging the posts, and means for locking said plate to said posts at different distances from one of the covers. 2nd. A binder, comprising top and bottom covers, each having a flexibly hinged rigid strip at its rear edge, two upright sectional posts secured at their lower ends to the strip of the bottom cover and at their upper ends to the upper strip, said posts having their ends flush with the covers, an independent clamping plate upon the posts intermediate the covers, said plate being perforated to permit the posts to pass loosely therethrough, and means for locking the plate to the posts at different distances from one of the covers. 3rd. A binder, comprising independent top and bottom covers, each having a flexibly hinged rigid strip at its rear edge, two upright sectional posts secured at their lower ends to the strip of the bottom cover and terminating at the upper end in recessed bearing surfaces adapted to receive extension members of the posts, clamping screws detachably securing the strip of the top, cover to the top of the posts, recesses in said strip to receive the heads of said clamping screws, an independent locking plate between the strips of the top and bottom covers and provided with holes through which the posts loosely pass, locking mechanism carried by said plate and adapted to be operated by a key, and a key way in the strip of the top cover for inserting the key therethrough into the locking plate. 4th. The combination in a binder having top and bottom covers with upright posts extending between, with which the leaves of the ledger are adapted to be engaged, said posts forming the connection between the covers, of an independent clamping or locking plate adapted

to be adjusted freely upon said posts between said covers by having holes through which the posts loosely pass, of two clamping bars slidably secured to said locking plate between the posts and having abutments against the posts at their outer ends, a cam pivotally secured between the inner ends of said clamping bar sand adapted to be operated by a key, to turn the cam and force the clamping bars endwise into clamping contact with the posts.

No. 67,052. Pneumatic Rocker.

(Bascule pneumatique de berceau.)

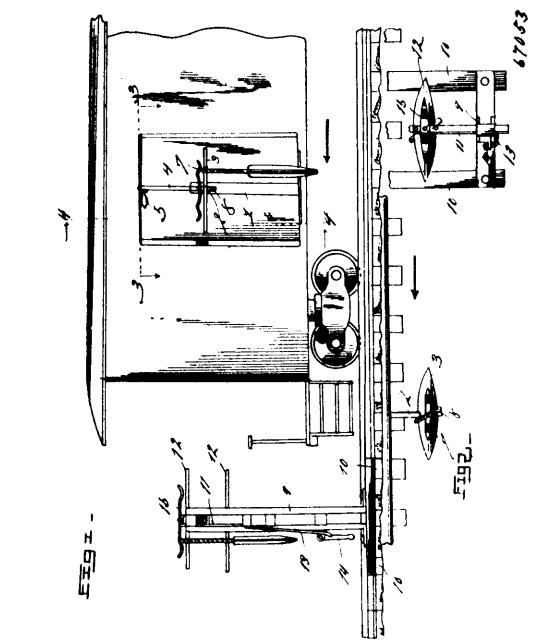


Otto Anderson and Andrew W. Anderson, Lake Elmo, Minnesota, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. A rocker, provided in its under surface with a recess or groove 3 extending less than from end to end of said rocker and terminating in the conical end sockets 4, of the tube 6 pointed at its ends at 7, and engageable with said recess or seat 3, 4, and held in position when inflated, substantially as described. 2nd. A rocker formed in its under surface with the longitudinal recess or seat 3 terminating in the end sockets 4 and provided with detent grooves 5 in its sides, in combination with the pneumatic tube 6 terminating at its ends in the conical points 7 and provided at its sides with the detent flanges 8, which tire is held in position when inflated, substantially as described.

No. 67,053. Mail Bag Catcher and Deliverer.

(Attrappe-sac pour char postals.)

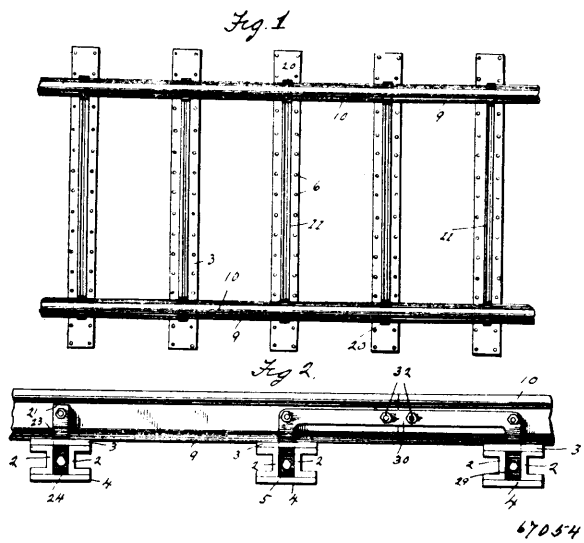


Edwin G. Booth and John P. Spangle, both of Hopewell, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—In mail bag catching and delivering apparatus, the combination of a mail car having a passsage through its side, a rigid or fixed pillar arranged in the passage, a holder attached to said pillar through horizontal pivots so as to swing in a vertical plane, a keeper attached to the holder, and an arm jointed to the holder so as to swing laterally when not in use, substantially as described.

No. 67,054. Railway Tie and Fastener.

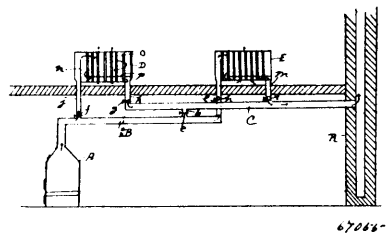
(Traverse et attache de chemin de fer.)



F. C. Weiss and Henry G. Burkhart, both of Altoona, Pennsylvania, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. A hollow railroad tie having U-shaped sides and top and bottom plates, the sides extending partially inward in reverse position and providing the opening through the tie, and a two part re-inforcing block in the tie each part having inwardly extending portions and vertical sides and horizontal bolts passed through said vertical sides, as set forth. 2nd. A railroad tie composed of opposite sides and top and bottom plates, the sides having a space between them to form an opening from end to end of tie and the top plate provided with centrally located longitudinally extending flanges and opposite pairs of slots, and re-inforce blocks within the tie having vertical sides and inwardly extending portions, and bolts passed horizontally through said sides, substantially as and for the purpose specified. 3rd. The combination of a hollow tie having pairs of slots adjacent the opposite ends, re-inforce blocks in the ties under the portions thereof between the slots, railroad rails resting on the upper portions of the ties between the slots, and fastening irons having parts thereof attached to the rails and depending portions extending through the slots and secured to the blocks. 4th. The combination with ties having slots adjacent their ends and railroad rails resting thereon between the slots of fastening irons adapted to extend across the joint of the rails and having legs depending through the slots of adjacent ties.

No. 67,055. Heating Apparatus. *(Appareil de chauffage.)*



Charles H. Crocker, Portland, Maine, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim .1st. A smoke flue radiator consisting of a chamber having a series of vertical tubes passing therethrough, an inlet in the lower portion at one end of the chamber, a vertical wall extending from the inner edge of the opening to a point adjacent the top of the chamber, an outlet opening in the lower portion of the chamber opposite the inlet opening, a horizontal partition extending from the wall of the chamber immediately above the outlet opening forward to a point adjacent to the vertical wall, and dampered pipes communicating with the openings, substantially as described. 2nd. In a heating apparatus, the combination with a stove of two radiators, a smoke pipe having direct independent connections with the

radiators, at one end and having valves at or near the radiators, an independent escape pipe leading from the opposite ends of the radiators, into the chimney, valves in the escape pipe at or near the radiators, a connection between the smoke pipe and escape pipe and a cut off valve in the connection, substantially as described.

No. 67,056. Coin Operated Gas Meter.

(Compteur à gaz actionné par une pièce de monnaie.)

Fig. 1.

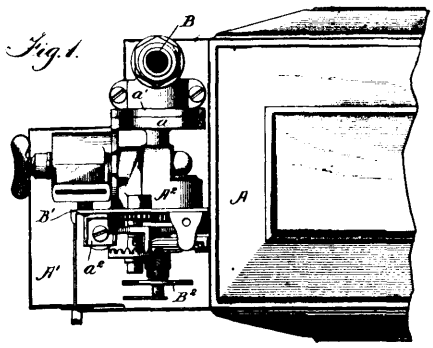
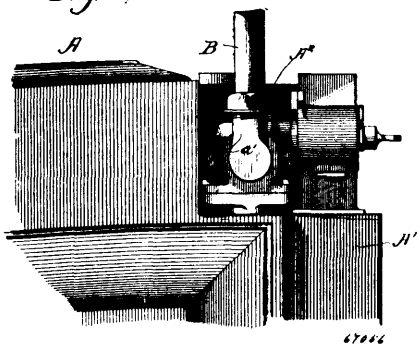


Fig. 2.



Joseph Nasmith, Manchester, England, 19th April, 1900; 6 years. (Filed 19th December, 1899.)

Claim.—1st. A coin operated gas meter, comprising a meter, a coin receptacle connected therewith, and a coin operated mechanism detachably secured thereto, substantially as described. 2nd. A coin operated gas meter, comprising a meter, a coin receptacle connected therewith, a detachable coin operated mechanism, a plate carried by said mechanism having threaded openings, whereby it is adapted to be secured to the gas pipe, and a lug secured upon the lower edge of the dial frame having a threaded opening, whereby it is adapted to be secured to the coin receptacle, substantially as described.

No. 67,057. Mud Guard for Vehicles.

(Garde crotte pour véhicules.)

Victor Julius Erdmann Gottwald, Hamburg, Germany, 19th April, 1900; 6 years. (Filed 5th February, 1900.)

Claim.—1st. A mud guard for cycles and the like, characterised by several dirt catching parts *m*, *n*, *o*, *p*, being arranged one over the other and suitably cut out to correspond with the sectional shape of the pneumatic tire, one of which parts *m* is composed of hard material, another *n* of soft material, and the other two *o*, *p* of brush like material, with the object (whilst sparing the pneumatic tire as much as possible) of catching the coarser dirt and mud by means of the first insertion *m* which stands at a short distance from the tire, and then subsequently removing the finer dirt and also moisture from the other parts which lie closer to the pneumatic tire, and thus entirely preventing the spurting up of mud or moisture to the height of the rider, constructed and arranged, substantially as hereinbefore described. 2nd. A mud guard such as described, adapted to be attached to the vehicle by means of two bolts *g*, *h* and a slot *i* in such a way that by means of a nut *k* the mud guard may

Fig. 1.

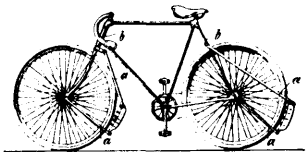


Fig. 2.

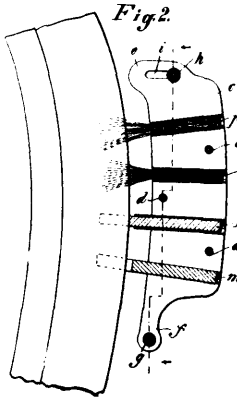
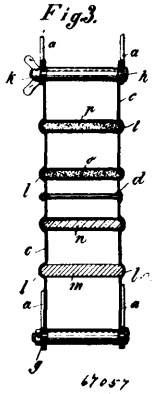


Fig. 3.



be thrown into or out of action as desired, constructed and arranged, substantially as hereinbefore described.

No. 67,058. Potato Digger and Sacker.

(Arrache et empoche patates.)

Fig. 1.

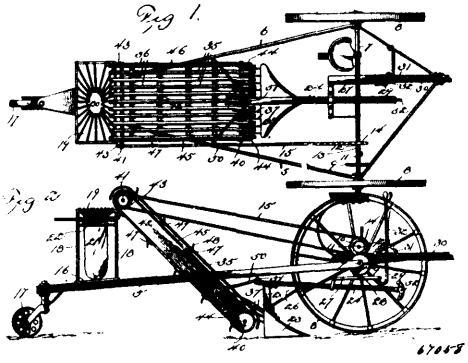
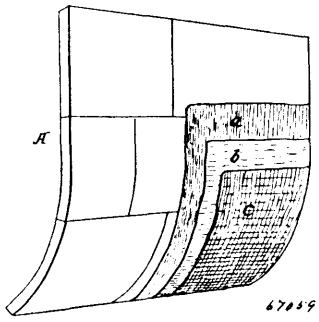


Fig. 2.

Walter Kretger, Halfway, Oregon, U.S.A., 19th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. A potato harvester, comprising a frame having supporting wheels, a hopper mounted upon the frame, a conveyer adapted to discharge to the hopper, a rock lever pivoted to the frame, a clevis bar pivoted to the lever, a link pivoted to the clevis bar and to the conveyer, a lister fitted to the clevis bar and adapted to discharge to the conveyer, and means for locking the lever to simultaneously adjust the lever and the conveyer. 2nd. A potato harvester, comprising a frame, a conveyer mounted upon the frame, a hopper adapted to receive from the conveyer, said conveyer comprising a plurality of slats separated by interspaces, a lister adapted to discharge to the conveyer and comprising bars passing between the slats of the conveyer, and conveyer chains located below the slats, said chains having cross slats fixed thereto provided with fingers arranged in pairs and adapted to project between and above the slats of the conveyer and upon opposite sides of the bars in their respective interspaces. 3rd. In a potato harvester, a conveyer comprising a plurality of spaced slats, a lister adapted to discharge to the conveyer and comprising bars entering the spaces between the slats, and fingers projecting in pairs upwardly between and above the slats and adapted for movement longitudinally thereof upon opposite sides of the bars in the respective spaces between the slats.

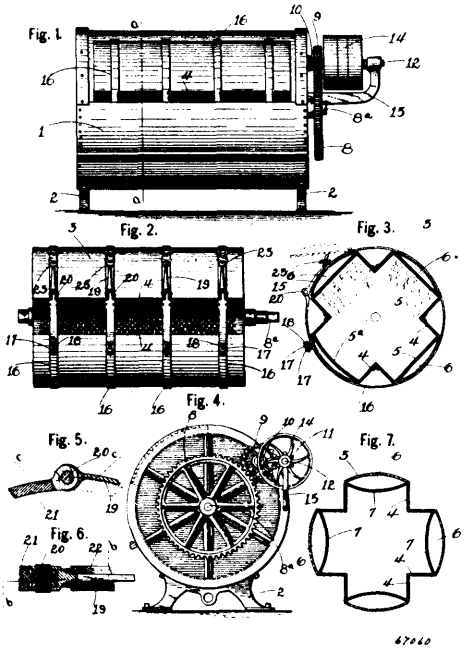
No. 67,059. Protection for Metallic Structures.
(*Protection de construction métallique.*)



Robert Kopp, Washington, District of Columbia, U.S.A., 19th April, 1900; 6 years. (Filed 4th April, 1900.)

Claim.—1st. The within described improvement in protecting metallic structures, the same consisting in first coating the surface with a film of coal oil and then applying a paint upon said film, substantially as set forth. 2nd. The combination with a metallic structure, of a protective coating, consisting of a thin coal oil layer and a paint superposed on said layer, substantially as set forth.

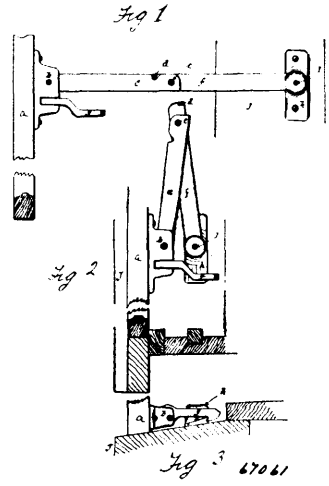
No. 67,060. Washing Machine. (*Machine à laver.*)



Henry Jay Skinner, Buffalo, New York, U.S.A., 19th April 1900; 6 years. (Filed 3rd April, 1900.)

Claim.—1st. In a washing machine, a supporting case, and a rotating washing cylinder mounted in said case, and having interiorly extending ribs provided with perforations, and a series of compartments having communication with the interior of said cylinder only, located between said ribs. 2nd. A washing machine, comprising a supporting case, and a hollow washing device mounted in said case and having a series of compartments arranged at intervals upon its interior, and communicating with the interior of said device only, the portion of the shell of the device between the compartments being perforated to provide water passages, as set forth. 3rd. A washing machine, comprising a supporting case, and a rotating washing cylinder mounted in said case and having interiorly extending ribs provided with perforations which afford communication between the interior of the cylinder and the case, and interior perforated compartments interposed between said ribs, one of said compartments being hinged to the cylinder to provide a door or cover for the insertion and removal of the clothes. 4th. A washing machine, comprising a supporting case, and a rotating washing cylinder mounted in said case and having interiorly extending ribs provided with perforations. 5th. A washing machine, comprising a supporting case, and a rotating washing cylinder mounted in said case and having interior extending perforated portions forming ribs, and perforated plates extending between said ribs and forming compartments between themselves and the interior of the washing cylinder. 6th. A washing machine, comprising a supporting case, and a rotating cylinder mounted in said case and provided with a series of compartments arranged around the interior of its cylindrical shell, and having perforated inner walls which afford access to the interior of the washing cylinder only. 7th. In a washing machine, a hollow washing receptacle having a series of interiorly extending perforated ribs. 8th. In a washing machine, a hollow washing receptacle having a series of interiorly extending perforated V-shaped ribs.

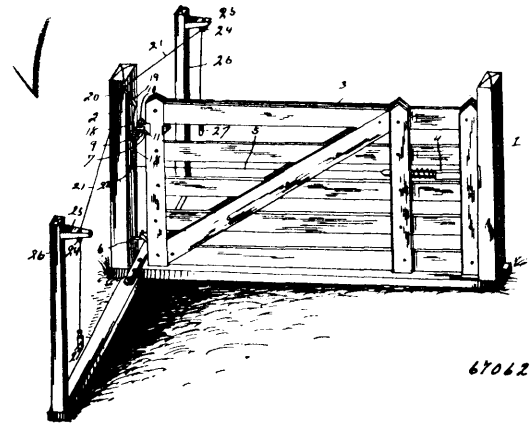
No, 67,061. Window Brace and Fastener.
(*Tirand et attache de fenêtre.*)



Oren J. Jenks and Thomas M. Himes, both of Merrill, Wisconsin, U.S.A., 20th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—In a window or other fastener, a bar formed of two or more sections pivotally connected together, a bracket to which the free end of one of said sections is pivoted, a latch pivoted to said bracket, a bracket to which the free end of another of said sections is pivoted a portion of said bracket formed as a keeper to be engaged by said latch, substantially as shown and described.

No. 67,062. Gate. (*Barrière.*)

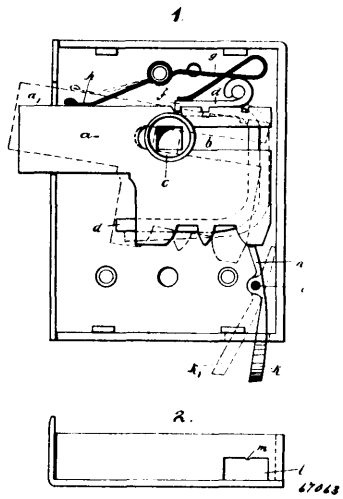


John T. Argo, and John Wiglesworth, both of Pomdexter, Kentucky, U.S.A., 20th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—1st. In a device of the character set forth, the combination with a gate, of a lower hinge connection for said gate, an upper hinge connection comprising a rod extending through the rear post and having an outer upturned portion, a vertically arranged bevel gear on the horizontal portion of said rod, a horizontally disposed bevel gear on the upturned portion of the rod having a clamping extension firmly secured to the rear end of the gate and held continuously in mesh with said vertical gear, an arm secured to the vertical gear, an operating lever pivoted to the free end of said arm, cords attached to one end of said lever and extending in opposite directions, another cord connected to the opposite end of said lever, and a spring actuated latch supported by the gate and having the letter cord secured to the rear end thereof. 2nd. In a device of the character set forth, the combination with a gate provided with a spring actuated latch, of a lower hinge connection of ordinary form,

an upper hinge connection comprising a rod and two meshing gears disposed in reverse planes on said rod, one of said gears having a clamp extension fastened to the rear end of the gate, and devices connected to the other gear for operating the latch and gate. 3rd. In a device of the character set forth, the combination with a gate provided with a spring actuated latch, of a lower hinge connection of ordinary form, an upper hinge connection comprising a rod secured in the rear post and having an outer upturned portion and an intermediate tubular guide, a vertically arranged bevel gear on the horizontal part of the said rod, a horizontally disposed gear having a clamp extension and bolt secured to the rear end of the gate and also engaging the upturned portion of said rod, both gears being held in continuous mesh, a collar on the vertical gear provided with an extension, an arm secured to said extension, an operating lever pivoted intermediate of its ends to said arm, cords attached to one end of said lever and extending away therefrom in opposite directions, and a cord connected to the other end of said lever and passed downwardly through said tubular guide and through the gate to the latch.

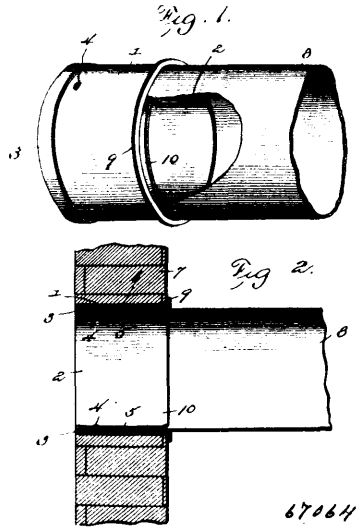
No. 67,063. Lock. (*Serrure.*)



Rudolf Alexander Dieterle, and Wilhelm Hugo Dielitzsch, both of Chemnitz, Saxony, Germany, 20th April, 1900; 6 years. (Filed 27th March, 1900.)

Claim.—In an improved lock the arrangement of only one lock bolt for raising and shooting catches, which bolt can be moved forward and backward as well as turned, the same being only operated by one spring and ensured against turning by a single lever which latter is kept in its locking position by the friction of a projection against which the same is moved.

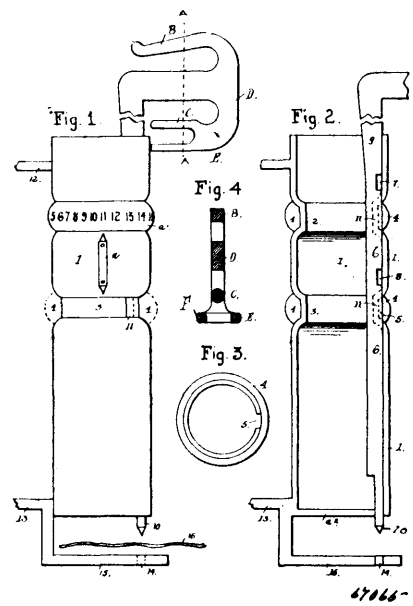
No. 67,064. Flue Thimble. (*Dé de tuyau de cheminée.*)



Benjamin F. Logan and Charles Alex Smith, both of Ottumwa, Iowa, U.S.A., 20th April, 1900; 6 years. (Filed 26th March, 1900.)

Claim.—A stovepipe thimble comprising an inner cylindrical section having its outer end contracted or tapered and having its inner end folded back on itself to provide an exterior annular flange, and to fit against the interior of the stovepipe opening of a chimney, the outer cylindrical section provided at its outer end with an annular flange to abut against the outer face of the chimney and having its inner end fitting within the annular groove of the inner section, the outer section being arranged at an angle to the inner section, and forming a tapering space between them for the reception of a stovepipe, and the outer section being adapted to be forced into engagement with such chimney, by the stovepipe, and fastening devices connecting the inner ends of the sections and arranged adjacent to the annular groove, and having their heads lying within the plane of the bent or folded end of the inner section, substantially as and for the purpose described.

No. 67,065. Whip Holder. (*Porte-fouet.*)



Samuel C. Carroll, assignee of Fountain O. Reeves, Dallas, Texas, U.S.A., 20th April, 1900; 6 years. (Filed 8th February, 1898.)

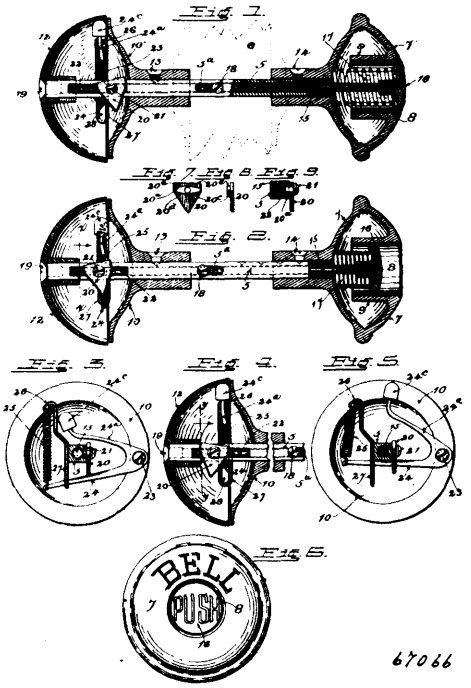
Claim.—1st. In a whip holder, the combination with a socket, of a notched locking bar vertically movable therein, and a rotary band on said socket arranged to rotate in said notch when the locking bar is suitably depressed, and having a notch in which said bar can reciprocate when said band is suitably rotated, substantially as described. 2nd. In a whip holder, the combination with the socket 1, of the locking bar 6, having the notch 7, the rotary band 4, having the notch 5, and suitable distinguishing marks a^1, and the pointer a, substantially as described. 3rd. In a whip holder, the combination, with the socket 1, of the locking bar 6, having the notches 7, 8, the bands 4, with the notches 5 and marks a^1, and the pointers a, substantially as described. 4th. In the combination with a whip holder, of a locking bar 6, having a wedge-shaped head 9, the notches 7 and 8, and the foot 10, combined with the adjusting bands 4, having the notches 5, and the figures a^1, on the outer surface thereof, which are pointed out by a pointer a, combined with an extension from the lower support 15, having the hole 14 therein, all for the purpose as heretofore, substantially as set forth.

No. 67,066. Bell Door Knob. (*Bouton de porte.*)

Benjamin F. Flowers, Fort Collins, Colorado, U.S.A., and Sardie W. Flowers, Mitchells, British Columbia, Canada, 20th April, 1900; 6 years. (Filed 7th March, 1900.)

Claim.—1st. The combination of a hollow spindle, two knobs mounted thereon, a suitable clapper device located in one of said knobs, and a push rod passing through the hollow spindle and adapted to operate the clapper device, one extremity of the push rod being exposed through an opening formed in the other knob. 2nd. The combination of a hollow revoluble spindle, two knobs mounted thereon, a clapper device located in one of said knobs, a reciprocating push rod located in the spindle and adapted to operate the clapper device, and a push button atached to the rod and located in an opening formed in the other knob. 2nd. The combination of a hollow revoluble spindle, angular in cross section, whereby it is adapted to operate lock mechanism, two knobs mounted on said spindle, a bell ringing device located in one knob, a movable rod passing through said spindle and adapted to operate the bell ringing device, the other knob being provided with an opening to permit access to the operating rod. 4th. The combination of a hollow spindle, a hollow bell knob mounted on one end of the spindle, means located therein for ringing the bell, a rod located in the spindle and

adapted to operate the bell ringing means, and a knob attached to the spindle remote from the bell knob and provided with



an opening to permit access to the operating rod. 5th. The combination of a revoluble spindle adapted to operate lock mechanism, said spindle being provided with a longitudinal opening, a bell knob attached to one end of the spindle, a suitable bell ringing device located therein, a movable rod passing through an opening in the spindle and adapted to operate said device, and a knob attached to the opposite extremity of the spindle and provided with an opening to permit access to the bell operating rod, which projects thereinto. 6th. A combination door knob and bell comprising a revoluble hollow spindle adapted to pass through a lock, and knobs attached thereto, one of which is provided with a gong, a clapper device located within the said knob and adapted to act on the gong portion thereof, a rod located in said spindle and adapted to operate the clapper device, the knob remote from the bell knob having an opening, and a push button attached to said rod and located in said opening. 7th. The combination of a spindle, a bell knob attached to one end of the spindle, an apertured knob attached to the other end of the spindle, a clapper device located in the bell knob, a push rod carried by the spindle and adapted to operate the clapper device, said rod projecting into the opening of the other knob. 8th. A combination door knob and bell comprising a revoluble lock operating spindle provided with a longitudinal opening, a bell knob attached to one extremity of the spindle, an apertured knob attached to the other extremity of the spindle, a clapper device located in the bell knob, and a rod passing through the apertured knob and located in the spindle opening, and adapted to operate the clapper device. 9th. The combination with the hollow spindle, the knobs and the spring held reciprocating rod operating in the spindle, of a cam mounted on the rod and located outside the spindle which is slotted to permit the required movement, a spring held lever arm suitably fulcrumed and located in the path of the cam as the said rod is actuated, and a hammer arm carried by the said lever arm. 10th. The combination with the hollow spindle, the knobs and a spring held reciprocating rod working within the spindle, of a cam mounted on the rod and located outside the spindle, which is slotted to permit the required movement, a spring held lever arm suitably fulcrumed and located in the path of the cam which is allowed a limited movement to permit the quick action of the lever arm, and a hammer arm carried by the lever arm. 11th. The combination with the hollow spindle, the knobs and the reciprocating rod working within the spindle, of a cam, a suitable fastening screw connecting the cam with the rod and passing through a slot in the spindle, the cam being allowed to turn on its fastening device, the cam being provided with a diamond shaped tongue, engaging the slotted way of the spindle and limiting the movement of the cam, a lever arm located in the path of the cam and a hammer carried by the lever arm. 12th. The combination with the hollow spindle, the bell knob and a suitable clapper located therein, of the outer knob having an opening and an interiorly extending guide sleeve, a push button located in said opening and adapted to enter said sleeve, said button being provided with a threaded socket, and a reciprocating rod adapted to operate the clapper, said rod being threaded to enter the socket of the push button. 13th. The combination with the hollow spindle, the bell knob and a suitable clapper, of the inner knob having an opening and an interiorly projecting sleeve surrounding said opening, a push button located in said opening and adapted to enter said sleeve, a reciprocating rod adapted to operate the clapper, said rod being suitably connected with the push button.

No. 67,067. Process of Producing Photographic Films.

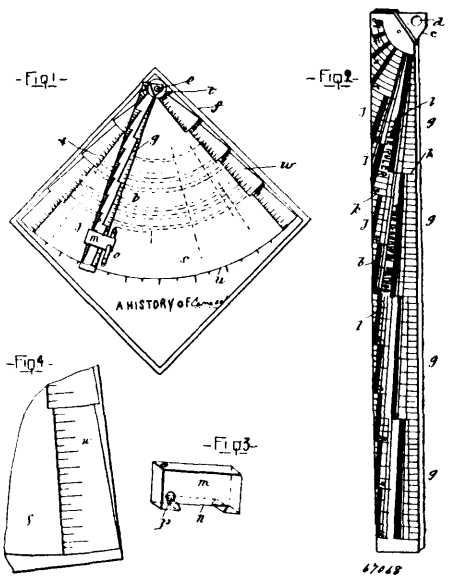
(*Procédé pour la production de pellicules photographiques.*)

Johannes Meyer and Gottfried Piel, both of New York City, New York, U.S.A., 20th April, 1900; 6 years. (Filed 14th August, 1899.)

Claim.—1st. The process herein described of producing photographic films, which consists in preparing a compound of silver phosphate and an organic acid, and then applying said compound to the surface to be sensitized, substantially as set forth. 2nd. The process herein described of producing photographic films, which consists in preparing an emulsion of silver phosphate and tartaric acid, and then applying this emulsion to the surface to be printed, substantially as set forth. 3rd. A compound for photographic films, consisting of a solution of silver phosphate in an organic acid, substantially as set forth. 4th. A compound for photographic films, consisting of an emulsion of silver phosphate and tartaric acid, substantially as set forth. 5th. A compound for photographic films, consisting of an emulsion of silver phosphate and tartaric acid and citric acid, substantially as set forth.

No. 67,068. Chart Drawing Instrument.

(*Instrument pour dessiner des cartes.*)

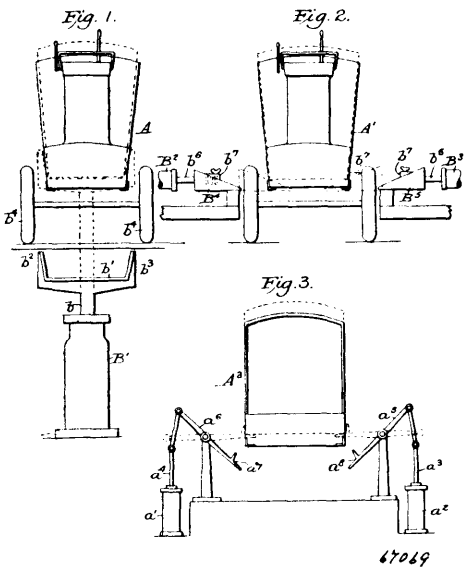


Eli Nash Moyer, Ethel Jean Goodwin, Hewitt Bostock, all of Toronto, Ontario, Canada, 20th April, 1900; 6 years. (Filed 28th March, 1899.)

Claim.—1st. An arm for chronological chart drawing instruments having a pivot point at one end, a series of equal divisions *g*, radiating from said pivot point and extending one beyond the other and offset from one another, and a series of equal divisions concentric of said pivot point and sub-dividing said radial division, substantially as described and for the purpose set forth. 2nd. An arm for chronological chart drawing instruments having a pivot pont at one end in line with one side edge thereof, a series of divisions *g*, radiating from said pivot point, and extending one beyond the other along both side edges of said arm and offset from one another, the radial divisions at one side edge being of greater length than the division at the other side edge and a series of equal divisions concentric of said pivot point and sub dividing correspondingly said radial divisions, substantially as described and for the purpose set forth. 3rd. An arm for chronological chart drawing instruments having a pivot point at one end and a scale at each edge of one side thereof, each of said scales comprising large divisions sub-divided by smaller divisions, the smaller divisions of said scales being equal and the larger divisions of one scale differing from the larger divisions of the other scale, substantially as described and for the purpose set forth. 4th. A chronological chart drawing instrument comprising a base, a detachable rigid arm pivotally connected to said base so as to allow of the introduction of a chart blank between the arm and base and suitably divided and sub-divided, a flexible India rubber block gripping and movable longitudinally of said arm, and a marker carried by said block, substantially as and for the purpose set forth. 5th. A chronological chart drawing instrument comprising a base, an arm pivotally connected to said base and suitably

divided and sub-divided by radial and concentric lines, a flexible India rubber block gripping and movable longitudinally of said arm, and a marker carried by said block, substantially as described and for the purpose set forth. 6th. A chronological chart drawing instrument comprising a base, an arm pivotally connected to said base and suitably divided and sub-divided by radial and concentric lines, a flexible India rubber block gripping and movable longitudinally of said arm, and a marker carried by said block, the base adapted to support a chart blank having one or more radial scales, said scales comprising divisions and sub-divisions corresponding to those upon the arm, substantially as described and for the purpose set forth.

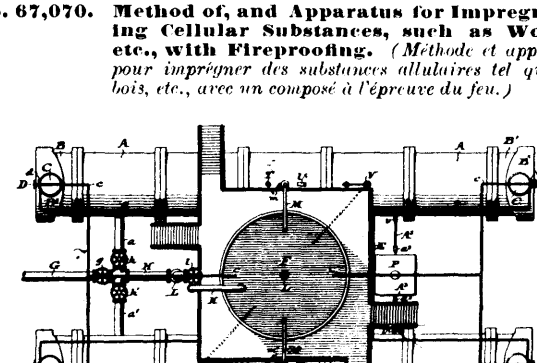
No. 67,069. Method of and Apparatus for Loading, Unloading and Handling Storage Batteries. (*Méthode et appareil pour charger et décharger les batteries.*)



George Herbert Condict, New York City, New York, U.S.A., 20th April, 1900; 6 years. (Filed 13th February, 1899.)

Claim.—1st. The method of placing the vehicle in position with respect to the apparatus for mechanically removing or inserting the load. 2nd. The means substantially as described for centering or placing the vehicle to be loaded or unloaded into a predetermined position. 3rd. The combination with a vehicle to be loaded and with loading apparatus, of mechanism for acting mechanically against the vehicle to force it into desired position with respect to the loading apparatus. 4th. The transfer table for receiving the load when withdrawn from the vehicle and for moving the same away from and bringing another load into position to be loaded on to the vehicle. 5th. The combination with the movable loading table, the centering or placing apparatus for moving the vehicle and table into predetermined position. 6th. The combination with a vehicle to be loaded, of mechanism for placing the same in desired position, and a transfer table provided with moving carriers adapted to receive and move the object to be placed upon the vehicle into the desired relation thereto. 7th. The combination with a vehicle to be loaded, of a laterally movable loading table adapted to receive and support the vehicle and means for moving the vehicle and table together laterally to a predetermined position for loading the vehicle. 8th. The combination with a vehicle to be loaded, of a laterally movable loading table adapted to receive the vehicle, and means adjacent to the loading table arranged to engage the vehicle to move it together with the table into the predetermined position with respect to the positioning devices. 9th. The combination with a vehicle to be loaded, of a laterally movable loading table adapted to receive the same and sub-divided to separately sustain the separate sets of wheels of the vehicle. 10th. The combination with a vehicle to be loaded, of a laterally movable loading table and means for automatically returning said table to a predetermined position. 11th. The conveyer for picking up, conveying and depositing the trays of batteries in combination with the transfer table for placing them in position with respect to the vehicle. 12th. A storage battery loading and unloading apparatus, comprising a vehicle to be loaded and means for moving the vehicle into a predetermined position, a transfer table arranged to support and move the load into juxta-position to the positioned vehicle, and a ram or the like, arranged to engage the load and to push it into or draw it from the vehicle. 13th. The combination with a loading table adapted to receive a vehicle to be loaded, of a transfer table arranged at right angles thereto and provided with laterally moving carriers adapted to receive and to move the object to be placed upon the vehicle into the desired relation thereto. 14th. The combination with a loading table, a transfer table adapted to sustain the load, an elevator ram arranged to engage the portion of the vehicle furthest from the transfer table and located below the same, an opening in the table above the ram and a plurality of hinged metallic or weighted covers for closing said opening, whereby the elevating device is adapted to pass upward through the loading table raising the covers above it. 15th. The combination with an overhead travelling crane, of a fixed vertically moving elevator depending therefrom, and means carried by the crane for operating the elevator and a pair of laterally moving grappling arms connected to and moving with the elevator. 16th. The combination with a row of tables or supports, of a travelling elevating device adapted to be moved along said row and provided with grappling arms, a battery trap adapted to be grappeled by the arms and to be sustained upon the support within reach thereof, and means for actuating the grappling and elevating devices and for moving the elevator and its load. 17th. The combination of the charging stand having automatic contacts, the transfer table for placing the trays of batteries in the desired position, the conveyer for picking up, tran porting and depositing the trays of battery between the transfer table and the charging stands, and the loading and unloading appliance for moving the trays of batteries to and from the vehicle. 18th. The combination with the movable loading table, the centreing or placing apparatus for moving the vehicle and table into predetermined position, the transfer table for transferring the batteries into desired position with respect to the vehicle after the latter has been centered or placed in proper position with respect thereto, and the ram for loading and unloading the trays of battery between the transfer table and the vehicle. 19th. The charging stand provided with automatic contacts by which the charging circuit is closed upon the tray of the batteries when said tray is placed in position and opened when the same is removed. 20th. The combination with a suitable support, of moving contact carrying levers connected to a charging circuit and normally out of operative position, a tray adapted to contain storage batteries to be charged and provided with fixed contact pieces in the path of the moving contacts and means operated by the weight of the tray for moving the said levers and bringing their contact pieces against the contact plates on the tray and for releasing the tray when the same is removed. 21st. The combination with a unit of electric battery cells, of a tray adapted to contain the same, said tray having an exterior dimension narrower at one end than at the other and provided with one or more fixed electrical contact pieces at the narrow end and at the wider end. 22nd. The combination with a vehicle having an opening at its end and provided with two or more sets of stationary contact pieces secured in the interior thereof, of a battery containing tray also provided with fixed contact pieces arranged on oblique line and adapted when said tray is inserted endwise into the vehicle to engage the corresponding contacts therein when the tray is in operative position. 23rd. A battery tray adapted to contain storage batteries, constructed in tapering or wedge-like form and provided with fixed contacts upon its tapering portion, in combination with a receptacle therefor, said receptacle provided with stationary contacts, arranged to engage those on the tray when the latter is in operative position.

No. 67,070. Method of, and Apparatus for Impregnating Cellular Substances, such as Wood, etc., with Fireproofing. (*Méthode et appareil pour imprégner des substances alluluires tel que le bois, etc., avec un composé à l'épreuve du feu.*)

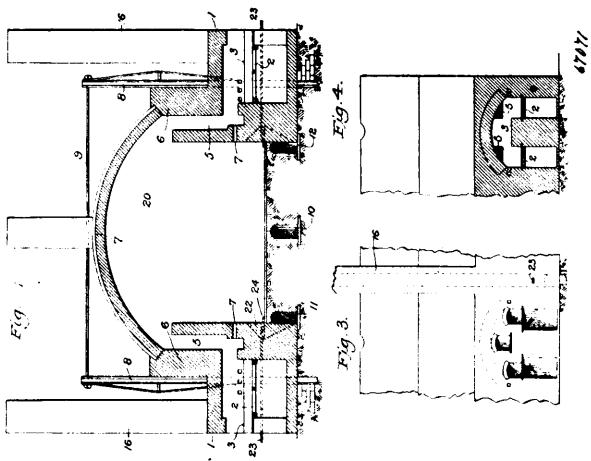


Joseph Lybrand Ferrell, Philadelphia, Pennsylvania, U.S.A., 20th April, 1900; 6 years. (Filed 6th March, 1899.)

Claim.—1st. The hereinbefore described process of impregnating cellular substances, which consists in completely inclosing said substances in a receptacle and directly submitting the entire surface of such substances to the action of an impregnating liquid, gradually heating the solution until a high degree of pressure is quietly attained within said receptacle, quietly maintaining a supply of liquid at such high degree of pressure until the desired degree of impregnation has been attained, and finally, withdrawing the substance and drying the same, substantially as described. 2nd. The combination of an impregnating receptacle, having means for opening and closing the same, and capable of completely inclosing the substance to be

treated, a reservoir of liquid communicating with said receptacle, a supplying device as a pump, and appliances, such as an accumulator between the supplying device and receptacle for maintaining a continuous supply of liquid to the impregnating receptacle without shock to the contents of the receptacle, substantially as described. 3rd. The combination of an impregnating receptacle having means for opening and closing the same, a heating apparatus for said receptacle, a reservoir of liquid communicating with said receptacle, an hydraulic accumulator also communicating with said reservoir and with said receptacle, and a supplying device, such as a pump, intermediate between said reservoir and said accumulator, whereby a supply of liquid to the receptacle may be maintained through said accumulator under a definite pressure and without substantial shock to the contents of the receptacle, substantially as described. 4th. The combination of an impregnating receptacle having means for opening and closing the same, a heating apparatus for said receptacle, a reservoir of liquid communicating with said receptacle, an hydraulic accumulator, also communicating with said reservoir and with said receptacle, a supplying device, intermediate between said reservoir and said accumulator, whereby a supply of liquid to the receptacle may be quietly maintained through an accumulator under a definite pressure, a steam supply for said pump, controlling mechanism for said supply, and a tripping device, substantially as set forth, operatively engaging with the moving member of the hydraulic accumulator, whereby upon the rise or fall of said moving member the supply of steam to the actuating device of the pump may be automatically closed or opened, substantially as described. 5th. The combination with the impregnating receptacle of an externally projecting chamber arranged at the end thereof, a circumferential inwardly facing seat arranged around the end of said receptacle, a sliding head adapted to close against said seat and to be withdrawn into said chamber, and means substantially as set forth connected with said head, whereby it may be withdrawn into said chamber, or permitted to move into position upon said seat, substantially as described. 6th. The combination with a pair of impregnating receptacles and means for closing the same, of a reservoir arranged above the level thereof, supply pipes leading from the bottom of said reservoir into said receptacle, valves controlling said supply pipes, heating apparatus for said receptacles, an hydraulic accumulator communicating with said receptacles, valves for controlling said last mentioned communication, including a check valve interposed between said accumulator and said receptacles, a supply pump having its intake in communication with said reservoir and its discharge in communication with said accumulator, a discharge pump having its intake in communication with said receptacles and its discharge in communication with said reservoir, and actuating mechanism for said pumps, substantially as described. 7th. The combination of an impregnating receptacle, having means for opening and closing the same, a heating apparatus for said receptacle, a reservoir communicating with said receptacle, an hydraulic accumulator also communicating with said reservoir and with said receptacle, a check valve interposed between said receptacle and said accumulator, and a supply device, intermediate between said reservoir and said accumulator, whereby a supply of liquid to the receptacle may be automatically and quietly maintained through said accumulator in accordance with any dimunition of pressure within the receptacle, substantially as described. 8th. The combination with an impregnating receptacle of a track arranged upon the bottom thereof, comprising a rail with overhanging flanges, a truck adapted to run upon said track and provided with underhanging rollers adapted to engage with said overhanging flanges, and spring bands connected with said car and adapted to embrace and secure the contents thereof, substantially as described.

No. 67,071. Brick Kiln. (*Four à brique.*)



Francis Edward Swift, Washington, District of Columbia, U.S.A., 20th April, 1900; 6 years. (Filed 7th April, 1899.)

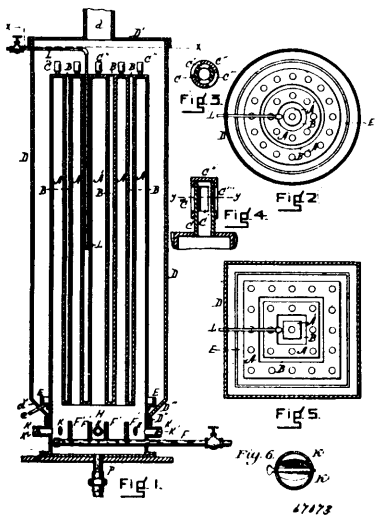
Claim.—1st. A brick kiln consisting in the combination with a furnace for heating and burning purposes having grates and an intermediate roasting table, of the kiln chamber having a dome covering, and flues leading from the furnace, and delivering into the kiln chamber beneath the dome. 2nd. In a brick kiln, the combination of the kiln chamber and its roof, the lateral series of furnaces having roasting tables, the flues leading from said furnaces to the upper part of the kiln, the central draft passage beneath the kiln floor having a series of openings, and the side damper controlled flues likewise under the kiln floor, substantially as described.

No. 67,072. Treatment of Phenyllic Bodies.
(*Traitement de corps phényliques.*)

Jules Brissonnet, Paris, France, 20th April, 1900; 6 years. (Filed 15th April, 1899.)

Claim.—1st. The hereinbefore described process for deodorizing and deflavouring phenyllic bodies, their homologues and mixtures, by methylic aldehyde and acidulation. 2nd. The hereinbefore described process for deodorizing and deflavouring phenyllic bodies, their homologues and mixtures, consisting in treating with methylic aldehyde, addition of hydrochloric acid, and separation of the precipitate. 3rd. As a new article of manufacture, a solid precipitated phenyllic or homologous body free from taste or smell, substantially as described.

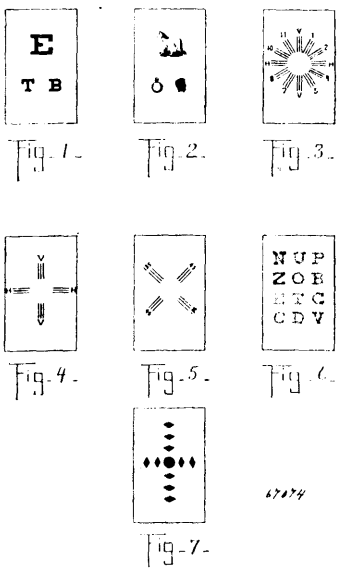
No. 67,073. Still. (*Alambic.*)



William Herbert Jones, Cambridge, Massachusetts, U.S.A., 20th April, 1900; 6 years. (Filed 2nd May, 1899.)

Claim.—1st. In a still of the character described, the series of concentrically arranged steam or condensing chambers A, A^1, closed at their upper ends and provided at said ends with means for allowing and regulating the escape of steam and air, said condensing chambers opening at their lower ends into the chamber H, the concentrically arranged water chambers B arranged alternately with the condensing chambers and open at their upper and closed at their lower ends, the walls between said condensing and water chambers being common to both, the case D enclosing the said chambers, the steam inlet tube F opening into the chamber H, the air ducts K opening into said chamber H near the lever of the steam tube, and provided with suitable regulators, and means for admitting water into and circulating it within the water chambers B, substantially as described. 2nd. In a still of the character described, the series of concentrically arranged steam or condensing chambers A, A^1 closed at their upper ends and provided at said ends with means for allowing and regulating the escape of steam and air, said condensing chambers opening at their lower ends into the chamber H, the concentrically arranged water chambers B arranged alternately with the condensing chambers and open at their upper and closed at their lower ends, the walls between said condensing and water chambers being common to both, the case D enclosing the said chambers, the steam inlet tube F opening into the chamber H, the branch pipes F^1 extending from the tube F toward the lower ends of the condensing chambers and dividing and directing the blast of steam, the air ducts K opening into said chamber H near the level of the steam tube, and provided with regulators, and means for admitting water into and circulating it within the water chambers B, substantially as set forth.

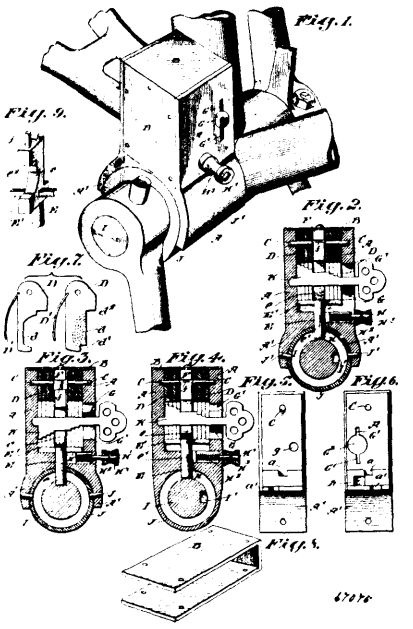
No. 67,071. Method of and Apparatus for Testing Eyes.
(*Méthode et appareil pour faire l'épreuve des yeux.*)



George Henry Brown and Wilfred Ernest Burpee, both of Manchester, New Hampshire, U.S.A., 20th April, 1900; 6 years. (Filed June 7th, 1899.)

Claim.—1st. The method of testing eyes, which consists in ascertaining the unaided quality of vision, then attempting to improve the same with spherical lenses, then presenting to the eye lines disposed at many different angles and selecting the lines most plainly observed, and then presenting lines disposed at an angle corresponding to said plainly observed lines and also lines at right angles thereto, substantially as described. 2nd. The method of testing eyes which consists in ascertaining the unaided quality of vision, then attempting to improve the same with spherical lenses, then presenting to the eye lines disposed at many different angles, and selecting the lines most plainly observed, and then presenting lines disposed at an angle corresponding to said plainly observed lines, and also lines at right angles thereto, and then presenting lines disposed in substantially as many different angles as at first presented but differently arranged, substantially as described. 3rd. The method of testing eyes, which consists in ascertaining the unaided quality of vision, then attempting to improve the same with spherical lenses, then presenting to the eye lines disposed at many different angles, but arranged in sequence as described, and select ingthe lines most plainly observed, and then presenting lines disposed at an angle corresponding to said plainly observed lines, and also lines at right angles thereto, and then presenting lines disposed in substantially as many different angles as at first presented but arranged in successive pairs, the lines of each pair being disposed at right angles to each other, substantially as described. 4th. The method of testing eyes, which consists in ascertaining the unaided quality of vision, then attempting to improve the same with spherical lenses, then presenting to the eye a special object to be observed, disposed relatively to a vertical and a horizontal row of indications, whereby said inco-ordination of the motor muscles of the eye may be detected, indications being located at predetermined distances apart, whereby the degree of muscular inco-ordination may be ascertained, substantially as described. 5th. In a device for detecting and measuring muscular inco-ordination of the eye, a chart having thereon a special object to be observed by which inco-ordination of the motor muscles may be detected, and also having indications above and belowit, and also at each side of it, located at predetermined distances apart, by which the degree of inco-ordination may be ascertained, substantially as described. 6th. The combination of a box or case open at one end, a number of cards contained therein, and means operated from a distant point for bringing said cards separately to view through the open end of said box or case, substantially as described. 7th. The combination of the box or case *a*, made open at one end, a number of cards contained therein, cords to which said cards are attached adapted to be engaged and operated separately from a distant point, substantially as described. 8th. The combination of the box or case *a*, made open at one end, a number of cards contained therein, a corresponding number of cords to which said cards are attached, a corresponding number of guide eyes for said cords, a ring attached to the end of each cord and a hook for each ring, substantially as described.

No. 67,075. Bicycle Lock. (*Cadenas de bicyclettes.*)



Otto von Nordhausen, Galveston, Texas, U.S.A., 20th April, 1900; 6 years. (Filed 15th February, 1900.)

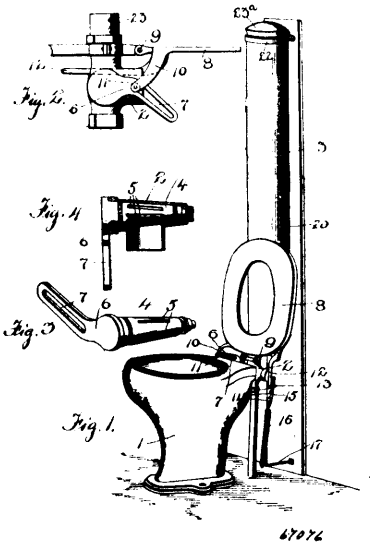
Claim.—1st. A bicycle lock, comprising a casing mounted upon the crank hanger, a gravity bolt slidable in said casing and adapted to engage the crank or pedal shaft to lock it against turning, a series of keepers pivoted to opposite sides of the casing and between which the bolt slides, said keepers being adapted to engage the bolt to hold it in locked position, a key adapted to operate said keepers and to slide the bolt, and a sliding and spring held bolt holder having an external knob and adapted to engage and hold the bolt in unlocked position, substantially as described. 2nd. A lock, comprising a case having two pins projectlng toward each other from opposite sides of the case and terminating short of the centre thereof, keepers pivoted on said pins, and a bolt adapted to be engaged by a key to operate it, said bolt lying between the keepers and the ends of the pins and holding the keepers on said pins, substantially as described. 3rd. A lock, comprising a case having two pins projecting toward each other from opposite sides and terminating short of the centre of the case, keepers pivoted on the said pins, a bolt lying between the keepers and the ends of said pins and adapted to be engaged by the key to throw it, the bolt having a locking recess, a guide projecting from the top of the case between the keepers and upon which the bolt slides, and a locking pin mounted to slide in the casing and adapted to enter said recess, the said pin being spring held and extending to the exterior of the case, whereby it may be hand operated, substantially as described. 4th. A lock, comprising a case having pins projecting from opposite sides of the case and terminating short of the centre thereof, keepers pivoted on the pins and having recessed lower ends, and a gravity sliding bolt between the keepers and the ends of the pins, and provided with a cross pin adapted to be engaged by the recessed ends of the keepers to hold the bolt projected, the bolt and keepers being adapted to be engaged by a key to disengage the keepers from the bolt and raise the latter, substantially as described. 5th. A lock, comprising a case having pins projecting from opposite sides of the case and terminating short of the centre thereof, keepers pivoted on the pins and having recessed lower ends, a gravity sliding bolt between the keepers, said bolt having a recess in its lower end and provided with a cross pin adapted to be engaged by the recessed ends of the keepers to hold the bolt projected, the bolt and keepers being adapted to be engaged by a key to disengage the keepers from the bolt and raise the latter, and a sliding and spring pressed locking bolt adapted to engage the recess of the bolt to hold the same withdrawn, substantially as described.

No. 67,076. Closet System. (*Système de latrines.*)

Joseph Roy-Odie and Anselme Leroux, both of Montreal, Quebec, Canada, 20th April, 1900; 6 years. (Filed 16th February, 1899.)

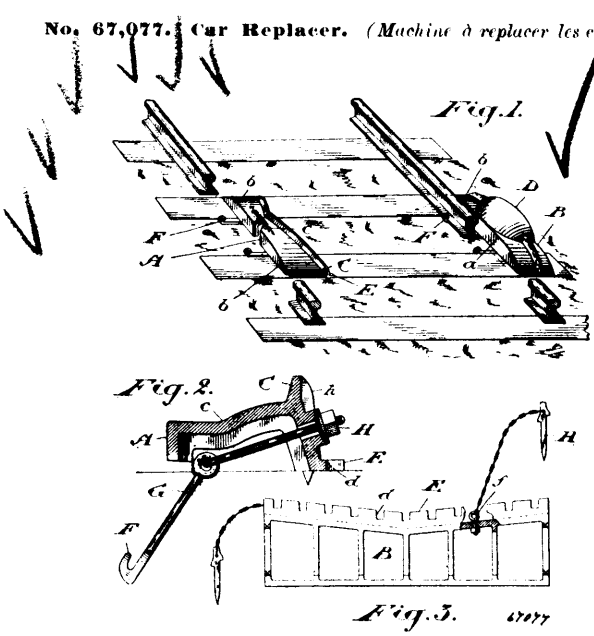
Claim.—A water closet comprising a bowl, an elevated tank, a feed pipe, a tank supply pipe entering the bottom of said tank, a three-way valve provided with the series of communicating ports, connected to the bowl and to the feed and tank supply pipes, and provided at one end with a depending slotted arm 6, a hinged seat provided at one side thereof with a roller arm 10, arranged to have slidable engagement with the slotted valve arm, a locking arm

12, secured fast to the seat on the other side thereof from the roller arm and having at its free end a stud 13 a rack 15 connected



adjustably to the stud of said locking arm, and a spring attached to the rack and to a fixed point, whereby the rack may be lengthened or shortened between the stud and the spring to vary the tension of the latter, substantially as described.

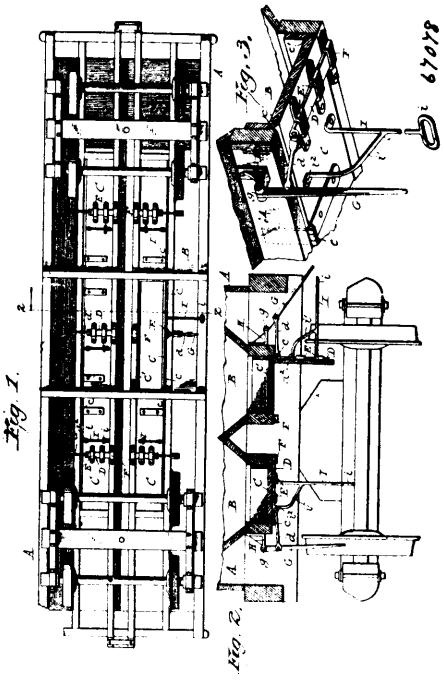
No. 67,077. Car Replacer. *(Machine à replacer les chars.)*



Edward Best, Albert R. Pingel, George Taylor, William S. B. Barkwell and George Burness, all of London, Ontario, Canada. 20th April, 1900; 6 years. (Filed 28th March, 1900.)

Claim.—1st. A car replacer having each end shaped as an inclined plane, having a flange extending from the outer edge of each end running in diagonally from each end towards the rail side at the centre, and having the middle portion next the rail cut down to clear the flanges of wheels passing on the rail, substantially as and for the purpose specified. 2nd. A car replacer having each end shaped as an inclined plane, having a flange shaped to the bevel of a car wheel flange extending from the outer edge of each end running in diagonally from each end towards the rail side at the centre, and having the middle portion against the rail cut down to guide the flanges of wheels unto the rail, substantially as and for the purpose specified. 3rd. An outside car replacer having each end shaped as an inclined plane, a middle portion high enough to reach substantially to the level of a rail top, and a double wedge on the middle portion inclined downwards towards each end and towards the rail side of the replacer, substantially as and for the purpose specified. 4th. A car replacer provided at the bottom of its outer side with a notched flange, substantially as and for the purpose specified. 5th. A hollow car replacer in combination with a clip adapted to engage the base of a rail and provided with a stem passing through the outer wall of the replacer from the inside outward and means engaging the said stem and the replacer to draw on the former to clamp the replacer to the rail, substantially as and for the purpose specified. 6th. A hollow car replacer in combination with a clip adapted to engage the base of a rail and provided with a stem passing through the outer wall of the replacer from the inside outward and a nut screwed on the clip stem outside the replacer, substantially as and for the purpose specified. 7th. A hollow car replacer in combination with a clip adapted to engage the base of a rail and provided with a jointed stem passing through the outer wall of the replacer from the inside outward and a nut screwed on the clip stem outside the replacer, substantially as and for the purpose specified. 8th. A hollow car replacer provided at its outer lower edge with a flange, and notches in said flange adapted to receive spikes, in combination with a clip adapted to engage the base of a rail and provided with a stem passing through the outer wall of the replacer, and a nut screwed on the clip stem outside of the replacer, substantially as and for the purpose specified. 9th. A car replacer having a body portion the upper surface of which when the replacer is in use is above the level of the flange of a wheel on the rail, but is cut away at the rail below that level, in combination with an end shaped as an inclined plane, and a flange starting from the outer side of the end and running in diagonally towards the rail to a point on the higher portion of the upper surface of the body portion, substantially as and for the purpose specified. 10th. An outside car replacer having each end shaped as an inclined plane, a middle portion high enough to reach substantially to the level of the rail top, a double wedge on the middle portion inclined downwards toward each end and towards the rail side of the replacer, and a rib on one or both of the ends adapted to engage the tread of a wheel while the flange is in contact with the surface of the replacer, the body of the replacer being recessed to fit over the base of the rail, substantially as and for the purpose specified.

No. 67,078. Dumping Car. *(Char à bascule.)*

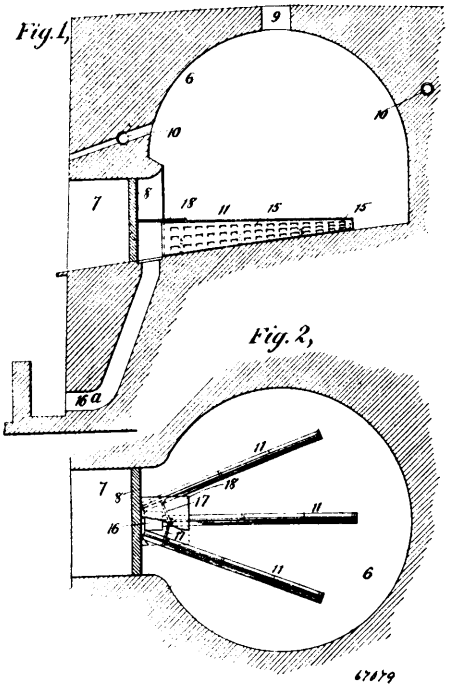


Robert E. Broyles, Judson, Georgia, and Drew A. Landress, Chattanooga, Tennessee, both in the U.S.A., 20th April, 1900; 6 years. (Filed 29th March, 1900.)

Claim.—1st. A dumping bar provided with a hinged door, a sliding bolt carried by the door, a hand lever pivoted to the car body, and movable about a pivot parallel with the axis of the hinge of the

door, and a link jointed to the bolt and jointed to the hand lever between its pivot and its outer end. 2nd. The combination of a car body provided with a hopper, a door hinged at the mouth of the hopper, a sliding bolt, guide straps on the door in which the bolt moves, a locking strap into which the bolt moves, a hand lever hinged to the car body and movable about a pivot parallel with the axis of the hinge of the door, a link jointed to the end of the bolt next to the hinge and jointed to the operating lever between its hinge and its outer end. 3rd. The combination of a car body provided with a hopper or pocket, a door hinged thereto, a bolt for locking the door, a lever for moving the bolt, and a foot lever attached to the door near its inner end and projecting at right angles therefrom to an extent sufficient to enable the attendant to close the door by his foot. 4th. The combination of a car body provided with a hopper or pocket, having a hinged door, a sliding bolt carried by the door, straps on the door in which the bolt moves, a locking strap secured to the frame surrounding the mouth of the hopper into which the bolt is shot to lock the door, a hand lever hinged to the car body, a link connecting the end of the bolt next to the hinge with the lever, a foot lever secured to the door near its inner end and a branching arm extending from the foot lever to the door, and secured thereto, near the hinged end thereof.

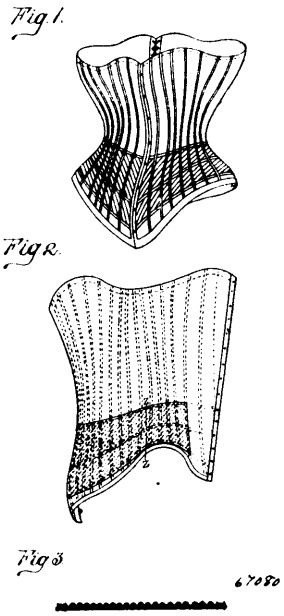
No. 67,079. Coke Oven. (*Fourneau à coke.*)



F. J. Chambers, Belmont, near Sheffield, J. A. P. H. Chambers, Newcastle upon Tyne, and P. S. Haggie, Whitburn, near Sunderland, all in England, executors of the last Will and Testament of A. M. Chambers, 20th April, 1900; 6 years. (Filed 17th February, 1900.)

Claim.—1st. A coke oven, provided with a discharge outlet and having one or more channels or chambers within the mass of coal to be treated, communicating with said discharge outlet and with the mass of coal, substantially as specified. 2nd. The combination with a coke oven having a discharge outlet for the products of combustion and other evolved gases, of a channel or chamber provided with orifices through to the interior thereof, said channel or chamber being in communication with the said discharge outlet, substantially as specified. 3rd. The combination with a coke oven having a discharge outlet for the products of combustion and other evolved gases, of a channel or chamber provided with orifices through to the interior thereof, such orifices being so protected as to exclude the passage of solid material, but to permit the passage of gases, said chambers being in communication at one end with the said discharge outlet, substantially as specified. 4th The combination with a coke oven having a discharge outlet for the products of combustion and other evolved gases, of a channel or chamber, said channel or chamber being of substantially an inverted V-shape in cross section and provided with orifices through the sides thereof for the passage of gases, one end of said channel or chamber being in communication with the said discharge outlet, substantially as specified.

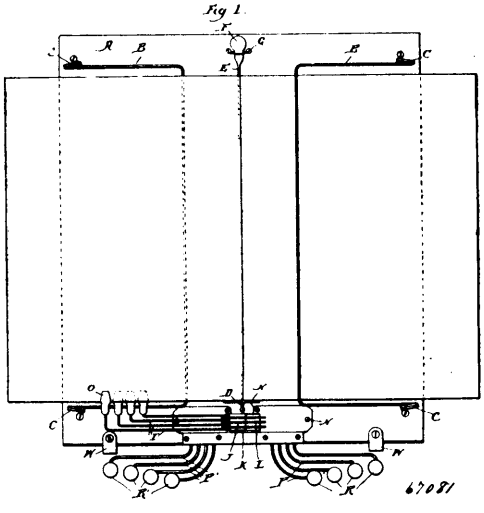
No. 67,080. Corset. (*Corset.*)



The Ever Ready Dress Stay Company, Windsor, Ontario, Canada, 20th April, 1900; 6 years. (Filed 15th March, 1900.)

Claim.—The insertion of the elastic webbed gore diagonally in each section on the waist line of the corset and extending over the hips, as shown in Fig. 2, substantially as and for the purpose set forth.

No. 67,081. Music Leaf Turner. (*Tourne-feuille de musique.*)



Alexander McRae, Athena, Oregon, U.S.A., 21st April, 1900; 6 years. (Filed 1st December, 1899.)

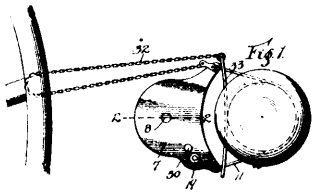
Claim.—A leaf turner, consisting of a suitable base, two series of levers, each bent in the form of a crank and journalled within the base with their approaching ends separated, a vertical shaft arranged in the base at right angles to the ends of the levers, a series of rectangular blocks mounted on the shaft and separated from one another, said blocks being mounted on the shaft eccentrically and so positioned with relation to the ends of the levers that their ends will be alternately engaged by said levers, an arm connected to each of said blocks, and means on the ends of the arms for engaging the leaves, as and for the purpose set forth.

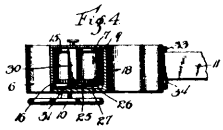
No. 67,082. Umbrella. (*Parapluie.*)

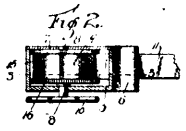
Ernest L. Appleby, Bradford, Pennsylvania, U.S.A., 21st April, 1900; 6 years. (Filed 9th April, 1900.)

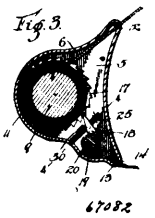
Claim.—1st. A lock, comprising a casing having a drum mounted therein, and a flexible strap having one end attached to the casing and its opposite end attached to the drum. 2nd. A lock, comprising a casing, having a drum mounted therein, a flexible strap having

one end attached to the casing and the other end attached to the drum, said strap lying with its intermediate portion exteriorly of



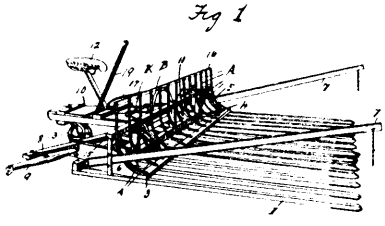


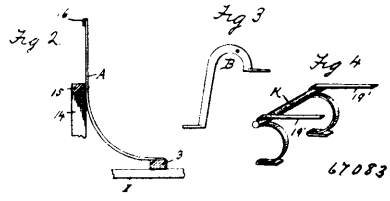




the casing and adapted to be wound upon the drum to reduce the exteriorly locked portion. 3rd. A lock, comprising a casing having a drum mounted therein, and provided with a ratchet, said drum being provided with an operating handle, a flexible strap attached to one end of the casing and at its opposite end to the drum, said strap being adapted to be wound upon the drum, a pawl adapted for engagement with a ratchet, means for moving the pawl into or out of engagement with the ratchet, and means for releasing the holding means. 4th. A lock, comprising a casing having a drum mounted therein, means for rotating the drum, a flexible strap having one end attached to the casing and its opposite end attached to the drum, and adapted to be wound upon the drum, a ratchet carried by the drum, a pawl adapted for movement into and out of engagement with the ratchet, a spring catch adapted to engage and hold the pawl from engagement with the ratchet, and means for moving the spring catch out of engagement with the pawl.

No. 67,083. Hay Rake. *(Rateau à foin.)*



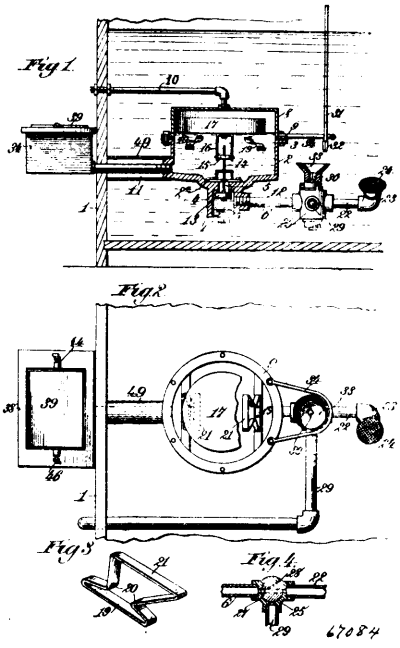


Leonidas William Wilson, Climax, Ohio, U.S.A., 21st April, 1900; 6 years. (Filed 9th April, 1900.)

Claim.—1st. A hay rake, consisting of a number of forwardly extending teeth, cross bar securing said teeth together, an axle mounted on wheels, said axle being secured to the teeth, a cross bar located above the axle and connected to the same, a foot rest supported by said cross bar, a platform pivotally connected at its forward edge to the axle, a wheel supporting the rear end of said platform, and a rod connected to said lever and to the cross bar located above the axle, 2nd A rake, consisting of a number of teeth, an axle carrying wheels and being secured at intermediate points to said teeth, a cross bar secured at the rear ends of the teeth, a cross bar located above the axle and supported thereby, an inverted U-shaped iron secured at one end to the cross bar above the axle and at the other end to the cross bar at the rear ends of the teeth, a foot rest, consisting of a horizontal bar, iron secured at their upper forward ends to the cross bar above the axle and extending to the rear and passing under the horizontal bar, said irons being secured at their outer ends to the cross bar at the rear ends of the teeth, a platform supported at its rear end by a wheel and connected at its forward end to the axle, a lever fulcrumed on said platform, and a rod connecting the said lever with the said inverted U-shaped iron. 3rd. A rake, consisting of a number of teeth, an axle carrying suitable wheels and supporting said teeth, a cross bar located above said axle and supported thereby, a cross bar loctated in front of the axle and connecting the upper faces of the teeth together, spring rods secured at their lower forward ends to the cross bar in front of the axle and at intermediate points to the cross bar above the axle, and a cross rod connecting the upper ends of said spring rods. 4th. In a device of the character described, a hay rake, comprising a number of forwardly extending teeth secured together and mounted on wheels, a cross bar above the teeth and rigidly securd therewith, a lever adapted to operate the cross bar and a foot rest extending from said cross bar, substantially as described.

No. 67,084. Stock Watering Trough.

(Auge pour abreuver le bétail.)



John Hans Hanson, Oakland, Nebraska, U.S.A., 21st April, 1900; 6 years. (Filed 2nd April, 1900.)

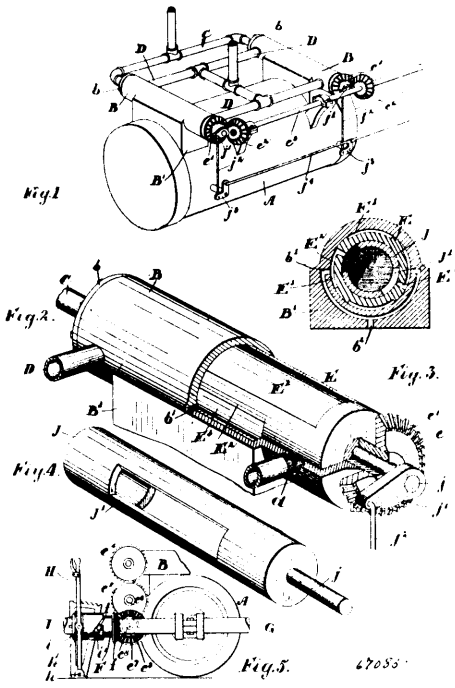
Claim.—1st. In an apparatus for watering stock, the combination with a water supply pipe, of a trough supplied with water from said pipe, means controlled by the water for automatically regulating the flow of the latter to the trough, a drain pipe communicating with the water supply pipe, and a three way cock located at the point of connection between the drain pipe and water supply pipe, substantially as and for the purpose described. 2nd. In a stock watering system, the combination with a main supply pipe, of a three way cock controlling the flow of water through said pipe, a drain pipe leading from said cock, a water chamber communicating by a pipe with the cock, a float valve controlling the entrance of water into said chamber, a service pipe leading from the chamber, a watering trough or troughs communicating with the service pipe, and a sediment vessel at the end of the service pipe, substantially as described. 3rd. In an apparatus for watering stock, the combination with a water supply pipe, of a water chamber, a valve chamber formed below the water chamber, and having communication with the latter and with the supply pipe, a sharp edged valve seat in the valve chamber, a watering trough communicating with the water chamber, an upwardly seating valve in the valve chamber, arranged to co-act with said sharp edged valve seat, a float in the water chamber, and a stem adjustably connecting said valve and float to control the water level in the trough, substantially as described. 4th. In an apparatus for watering stock, the combination with a water supply pipe, of a water chamber, a valve chamber, a watering trough communicating with said water chamber, a valve in the valve chamber, a float in the water chamber, a stem connecting said valve and float, and an extensible support for the float, substantially as described. 5th. In an apparatus

for watering stock, the combination with a water supply pipe, of a water chamber, a water trough supplied from said water chamber, a valve controlling the flow of water into the said water chamber, a drain pipe communicating with the water supply pipe, and a three way cock located at the point of connection of the drain pipe with the water supply pipe, substantially as described. 6th. In an apparatus for watering stock, the combination with a water supply pipe, of a water chamber, a watering trough supplied from said water chamber, a valve controlling the flow of water into said chamber, a drain pipe communicating with the water supply pipe, a threeway cock being located at the point of connection of the drain and water supply pipe and serving to alternately direct the flow of water through these pipes, a socket in the head of the cock to receive an operating rod, and a flaring mouth surrounding said socket, substantially as described. 7th. In an apparatus for watering stock, the combination with a tank, of a water supply pipe located therein and having an open flaring end disposed at an angle of about 45 degrees, a screen covering the open end of said pipe, a water chamber, a watering trough supplied from said water chamber, and a valve controlling the flow of water to said chamber, substantially as described. 8th. A watering trough comprising a main vessel, and supplemental vessel having a bottom, side and end walls, said supplemental vessel being hinged to one side of the main vessel and normally nesting therein, but adapted to be swung out to an inverted position, and provided with water inlet openings to receive water from the main vessel, substantially as described. 9th. In a watering trough, the combination with a main vessel, of a supplemental vessel hinged thereto and adapted to nest therein, said supplemental vessel being provided with water inlet openings, and a cover hinged to the supplemental vessel and adapted to be depressed within the same, substantially as described. 10th. In a watering trough, the combination with a main vessel, of a supplemental vessel hinged thereto and normally resting within the same, said supplemental vessel being provided with water inlet openings, and a yieldingly supported cover carried by the supplemental vessel and adapted to be depressed therein, substantially as described. 11th. In a watering trough, the combination with a main vessel, of a supplemental vessel hinged thereto and normally resting within the same, said supplemental vessel being provided with water inlet openings, a cover hinged to the supplemental vessel and adapted to be depressed within the latter, and a spring acting upon the underside of the cover to normally hold the same in a horizontal position, substantially as described. 12th. In a watering trough, the combination with a main vessel, of a supplemental vessel hinged to the main vessel and provided around its edges with depending flanges which lie over the edges of the main vessel when the parts are in position, said supplemental vessel being provided with water inlet openings, substantially as described. 13th. In a watering trough having a movable cover adapted to be depressed within the trough, and means for locking the cover depressed, substantially as described. 14th. A watering trough having a cover hinged thereto and adapted to be depressed within the trough, and means for locking the cover depressed, substantially as described. 15th. A watering trough having a yielding cover hinged thereto and adapted to be depressed within the trough, and a bolt for locking the cover depressed, substantially as described. 16th. A watering trough having a depressable cover normally lying in a horizontal plane within the trough and means for locking the cover against movement when in its depressed and horizontal positions, substantially as described. 17th. A watering trough having a yielding cover hinged thereto and adapted to be depressed within the trough, said cover normally lying in a horizontal plane, and means for locking said cover against movement, substantially as described. 18th. In a watering trough, the combination with a main vessel, of a supplemental vessel hinged thereto and normally lying within the same, a yielding cover hinged to said supplemental vessel and adapted to be depressed therein, and bolts for locking the cover, substantially as described. 19th. In a watering trough, the combination with a main vessel, of a supplemental vessel hinged thereto at one end and normally resting within the same, said supplemental vessel being provided with water inlet openings, a yielding cover hinged at one end to the last-named vessel, a spring for normally hold the cover in a horizontal position, and locking bolts for the cover, substantially as described.

No. 67,085. Rotary Valve. (*Soupape rotatoire.*)

James H. K. McCollum, Toronto, Ontario, Canada, 21st April, 1900; 6 years. (Filed 7th April, 1900.)

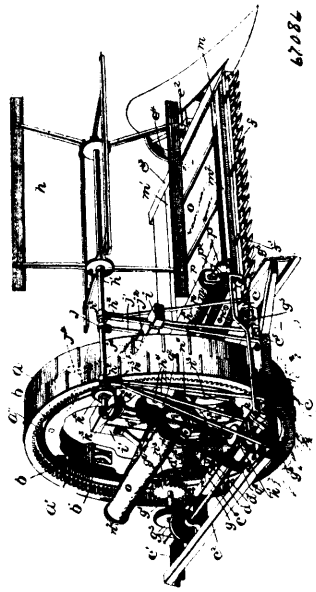
Claim.—1st. In a rotary valve for steam engines, the combination with the piston and cylinder, of the cylindrical casing at each end of the cylinder, the elongated port extending from the interior of the casing into the cylinder, the cylindrical valve open at one end for the admission of steam provided with an elongated port extending into the interior thereof, and having an elongated concentric extension, the exhaust concentric elongated recess in the periphery communicating with the exhaust pipe, and means for rotating the valve and a suitable cut-off valve in the interior of the cylindrical valve, as and for the purpose specified. 2nd. In a rotary valve for steam engines, the combination with a piston and cylinder, of the cylindrical casings at each end of the cylinder, the ports extending into the interior of the valve casing diametrically opposite each other and communicating with the interior of the cylinder, the cylindrical valve provided with two diametrically arranged elongated inlet ports extending through the valve and provided with concentric extensions



or recesses in the periphery of the valve, the two diametrically opposite concentric exhaust recesses in the periphery of the valve, the annular grooves in the casing designed to communicate with the exhaust recesses and exhaust pipes, and a suitable cut-off valve for controlling the period which the inlet ports in the valve remain open, as and for the purpose specified. 3rd. In a rotary valve for steam engines, the combination with the piston and cylinder, of the cylindrical casings at each end of the cylinder, the ports extending into the interior of the valve casing diametrically opposite each other and communicating with the interior of the cylinder, the cylindrical valve provided with two diametrically arranged elongated inlet ports extending through the valve and provided with concentric extensions or recesses on the periphery of the valve, the two diametrically opposite concentric exhaust recesses in the periphery of the valve, the annular grooves in the casing designed to communicate with the exhaust recesses and exhaust pipes, and a cylindrical cut-off valve provided with two diametrically arranged openings designed to co-act with the two inlet ports in the rotary valve, as and for the purpose specified. 4th. In a rotary valve for steam engines, the combination with the piston and cylinder, of the cylindrical casings at each end of the piston, each closed at each end, and having the inlet pipes leading into one end, the ports extending into the interior of the valve casing diametrically opposite each other, and communicating with the interior of the cylinder, the cylindrical valve provided with two diametrically arranged elongated inlet ports extending through the valve and provided with concentric extensions on the periphery of the valve, the two concentric exhaust recesses in the periphery of the valve, the annular grooves in the casing designed to communicate with the exhaust recesses and exhaust pipes, and a suitable cut-off valve for controlling the period which the inlet ports in the valve remain open, as and for the purpose specified. 5th. In a rotary valve for steam engines, the combination with the piston and cylinder, of the cylindrical casings at each end of the piston having the inlet pipes extending into the ends of the casings, the ports extending into the interior of the valve casing diametrically opposite each and communicating with the interior of the cylinder, the cylindrical valve having one end open and the opposite end provided with a hollow trunnion journalled in the end of the casing, the said valve being provided with two diametrically arranged elongated inlet ports extending through the valve and provided with concentric extensions on the periphery of the valve the two concentric exhaust recesses in the periphery of the valve, the annular grooves in the casing designed to communicate with the exhaust recesses, and a cylinder cut-off valve fitting within the rotary valve having one end open and the opposite closed, and provided with a pin extending through the end trunnion of the rotary valve and the crank on the end of the pin of each valve operatively connected to the governor, as and for the purpose specified. 6th. In a rotary valve for steam engines, a cylindrical valve located within a suitable casing provided with diametrically arranged ports communicating with the interior of the cylinder, said valve having two diametrically arranged elongated inlet ports extending through the valve and provided with concentric extensions or recesses on the

periphery of the valve, and two diametrically opposite concentric exhaust recesses in the periphery of the valve, an exhaust pipe communicating with the exhaust recesses and a suitable cut-off valve for controlling the admission of the steam, as and for the purpose specified. 7th. In a rotary valve for steam engines, a cylindrical valve located within a suitable casing provided with diametrically arranged ports communicating with the interior of the cylinder, said valve having two diametrically arranged elongated inlet ports extending through the valve and provided with concentric extensions or recesses diametrically opposite on the periphery of the valve, suitable exhaust ports communicating with the valve, and a suitable cut-off valve for controlling the admission of the steam, as and for the purpose specified.

No. 67,086. Harvester. *(Moissonneuse.)*



Reuben C. Brubaker, Eldorado, Ohio, U.S.A., 21st April, 1900; 6 years. (Filed 6th April, 1900.)

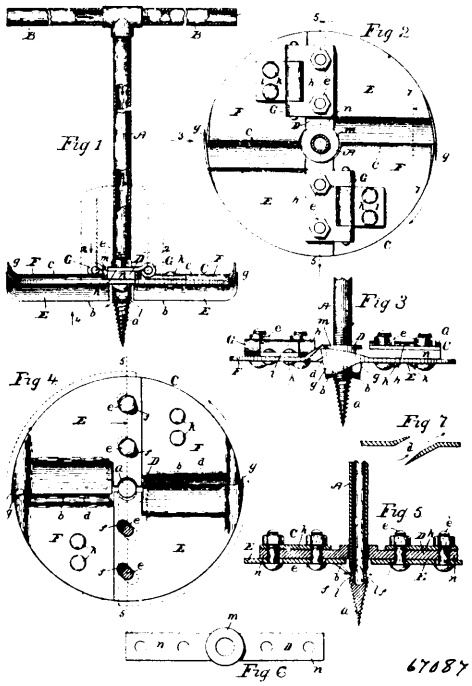
Claim.—1st. In a harvester, a master wheel rim, a bearing therefor provided with a curved slot, a frame vertically adjustable on said bearing, a driving mechanism upon said frame, a power transmitting member also on said frame and having connection with the said driving mechanism and including a rotatable member contacting with the said master wheel rim, and a member upon the frame extending into the said slot in the wheel bearing, whereby in the adjustment of the said frame the said rotatable member remains in contact with the said master wheel rim, substantially as described. 2nd. In a harvester, a master wheel rim, a bearing therefor provided with a curved slot, a curved rack upon said bearing in proximity to said slot, a frame vertically adjustable on said bearing, a driving mechanism upon said frame, a power transmitting member also on said frame and having connection with the said driving mechanism and including a rotatable member contacting with the said master wheel rim, a shaft journalled upon said frame and extending through said curved slot in the said wheel rim bearing, a gear upon said shaft and engaging the said rack, and means for rotating the said shaft to cause adjustment of the frame upon the bearing, the said slot and shaft serving to maintain the said rotatable power transmitting member in engagement with the wheel rim in the various adjustments of the frame, substantially as described. 3rd. In a harvester, a master wheel rim, a ring bearing therefor, a frame, an elevator apron having its support pivotally connected at one end to said frame and extending therefrom through said ring bearing, a cutter, mechanism for imparting motion from said master wheel rim to said cutter and elevator apron, and a toggle connecting the elevator apron support with said frame adapted to maintain the driving gearing for said apron in operative position at different adjustments of the frame and means for adjusting said frame vertically upon the said bearing and for maintaining the same in its adjusted position, and a link pivotally connected to said bearing and to said frame, substantially as described. 4th. In a harvester, a master wheel rim having an internal gear, a ring bearing therefor, a frame adjustably supported by said ring bearing, standards upon said frame, journal bearings having sliding connection upon said standards, a reel shaft in said bearings, and means for adjusting said reel shaft toward and away from the frame together with a shaft mounted on said frame in gear with said master wheel rim and with said reel shaft for imparting motion to the latter, substantially as described. 5th. In a harvester, a master wheel rim having an internal gear, a ring bearing therefor, a frame adjustably supported by said ring bearing, standards upon said frame, journal bearings having sliding connection upon said standards, a reel shaft in said bearings, a lever pivoted upon said frame, a collar loosely engaging said reel shaft, and a link connecting said collar and lever whereby said reel shaft can be adjusted toward and away from the frame by the movement of said lever, together with a shaft mounted on said frame in gear with said master wheel rim and with said reel shaft for imparting motion to the latter, substantially as described. 6th. In a harvester, a master wheel rim, a ring bearing therefor, a main frame adjustably supported by said ring bearing, in combination with an inclined elevator frame carrying an elevator apron extending through said ring bearing, means for vertically adjusting said main frame and simultaneously changing the inclination of the elevator apron frame, a line shaft journalled in bearings on the said main frame, gearing connecting said line shaft with the master wheel rim, chain gearing connecting said line shaft with the elevator apron, and a toggle connecting said main frame and the elevator apron frame, and adapted to automatically maintain said chain gearing in operative position in different adjustments of the main frame and elevator apron, substantially as described. 7th. In a harvester, a master wheel rim, a ring bearing therefor, a main frame supported by said ring bearing, an elevator frame or apron support carrying an elevator apron extending through said ring bearing, a frame and pivotally connected with said main frame, means for vertically adjusting the latter frame, a line shaft in bearings, said main frame gearing connecting said line shaft with the master wheel, chain gearing connecting said line shaft with the elevator apron, a swinging arm pivoted to the main frame and carrying a roller at one end in engagement with the chain to keep the same taut, and a link connecting said arm with the apron support whereby the chain is automatically adjusted according to the height of the frame. 8th. In a harvester, a master wheel rim, a ring bearing therefor, a frame supported at one side of the machine by said ring bearing, a grain wheel supporting said frame at the other side of the machine, means for adjusting the frame vertically, rollers in bearings on the portion of the frame between the two wheels, an inclined frame pivotally connected with the main frame and extending through and connected with the ring bearing of the master wheel, a roller supported by said inclined frame, an apron running over said roller and the rollers in the main frame, a line shaft on the main frame, gearing connecting said shaft with the master wheel, and gearing connecting said shaft with one of the apron rollers and means for automatically maintaining the elevator apron driving gearing in operative position in different adjustments of the main frame. 9th. In a harvester, a master wheel rim, a ring bearing therefor, a frame supported at one side of the machine by said ring bearing, a grain wheel supporting said frame at the other side of the machine, means for adjusting the frame vertically, rollers in bearings on the portion of the frame between the two wheels, an inclined frame pivotally connected with the main frame and extending through and connected with the ring bearing of the master wheel, a roller supported by said inclined frame, an apron running over said roller and the rollers in the main frame, a line shaft on the main frame, gearing connecting said shaft with the master wheel, chain gearing connecting said shaft with the upper apron roller, an arm pivoted at one end to the main frame and carrying a roller at its free end in engagement with the chain, and a link connecting said pivoted arm with the upper apron roller supporting frame, said pivoted arm and link forming a toggle for automatically keeping said chain taut at different adjustments of the main frame, substantially as and for the purpose described. 10th. In a harvester, a master wheel rim, a ring bearing therefor, a main frame supported by said ring bearing, in combination with an inclined elevator frame or apron support pivotally connected to said main frame and carrying an apron extending through said ring bearing a line shaft on said main frame geared to said master wheel rim, and gearing connecting said line shaft with the elevator apron, together with mechanism for vertically adjusting said main frame and simultaneously changing the inclination of the elevator frame or apron support, and a toggle pivotally connecting said main frame and inclined elevator frame, and adapted to keep the elevator apron driving gearing in operative connection with the line shaft at different adjustments of the main frame, substantially as described.

No. 67,087. Post Hole Auger. *(Sonde à trépan.)*

Charles L. Tuttle, Rochester, New York, U.S.A., 21st April, 1900; 6 years. (Filed 6th April, 1900.)

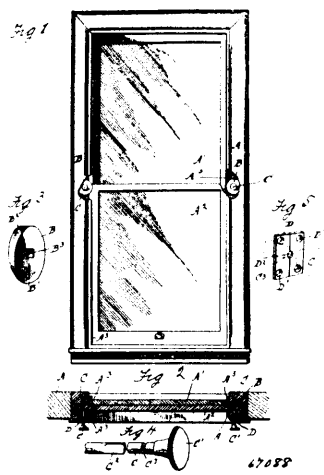
Claim.—1st. The combination in a post hole auger, of radially movable cutter sections alternated with hinged carrier sections to form a circular disc, substantially as set forth. 2nd. In a post hole auger, the combination of four quadrantal sections together forming a circular disc, with a shaft and rigid cross bar thereon, two of said sections being pivotally connected with said cross bar and the other two sections being laterally adjustable on the cross bar, substan-

tially as described. 3rd. In a post hole auger, the combination of the shaft A and perforated cross bar D with bolts *e*, *e*, and cutter



sections E, E, having inclined slots *f*, *f* to receive said bolts, substantially as shown, for the purpose specified.

No. 67,088. Sash Holder. (*Arrête-croisee.*)



Austin Z. Converse, Chattanooga, Tennessee, U.S.A., 21st April, 1900; 6 years. (Filed 9th April, 1900.)

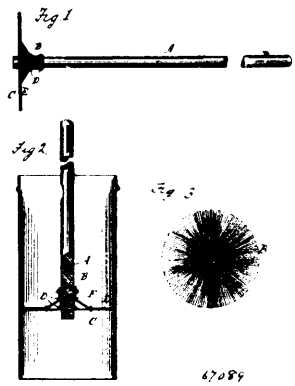
Claim.—The combination with a window frame and a sliding sash therein, of a rotatable wedge located in a recess parallel with a face of said sash, and an operating shaft journalled in said frame and adapted to rotate said wedge into frictional engagement with a face of said sash, substantially as specified.

No. 67,089. Flue Stovepipe Cleaner.

(*Nettoyeur de tuyau de poêle ou cheminée.*)

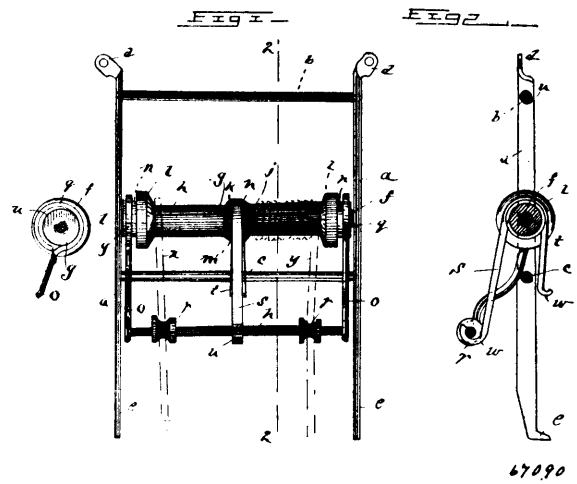
Andrew A. Fradenburg, Brooklyn, Ohio, U.S.A., 21st April, 1900; 6 years. (Filed 9th April, 1900.)

Claim.—1st. A pipe or flue cleaner consisting of a handle provided with a head comprising two layers of brushing or scraping material, which layers extend about and laterally of the handle and are secured together so as to support each other, substantially as set forth. 2nd. A pipe or flue cleaner consisting of a handle A, provided with a circular head B, formed of a lower layer of laterally projecting bristles C, encircling the handle, and an upper layer of laterally projecting bristles E, encircling the handle above the lower layer and having its central portion inclining or sloping from the lower layer inwardly and upwardly to where it is wired to the handle, and means for binding the said layers together at or near



the junction of the sloping portion of the upper layer with the lower layer, substantially as set forth.

No. 67,090. Fire Escape. (*Sauveteur d'incendie*)



John Spalding, Isle, Colorado, U.S.A., 21st April, 1900; 6 years. (Filed 9th April, 1900.)

Claim.—1st. The herein described apparatus, comprising a frame, a roller revolubly mounted therein, a brake frame frictionally supported by said roller and adapted to operate in connection with said frame and said roller, and a rope secured to said roller and adapted to operate in connection with said brake frame, substantially as shown and described. 2nd. The herein described apparatus, comprising a frame provided with a cross bar, a roller revolubly mounted therein, a brake frame provided with collars by which it is suspended from said roller and operating in connection with said cross bar, and a rope secured to said roller and adapted to operate in connection with said brake frame, substantially as shown and described. 3rd. The herein described apparatus, comprising a frame, a roller revolubly mounted in said frame, said frame being provided with a cross bar beneath said roller, a brake frame provided with collars which engage said roller and operate as brakes in connection therewith, a rope secured to said roller, a pulley mounted upon said cross bar and in connection with which said rope operates, and a brake bar connected with said brake frame and operating in connection with said roller, substantially as shown and described. 4th. In an apparatus of the class described, a frame consisting of side bars and an upper and lower cross bar, a roller journalled in said side bars between said cross bars, and provided with two drums upon each of which a rope is adapted to be wound, a brake frame connected with said roller and a brake bar consisting of an S-shaped bar of spring metal, one loop of which engages said brake frame and the outer loop of which engages said roller between said drums, substantially as shown and described. 5th. In an apparatus of the class described, a frame, a roller journalled therein, a brake frame frictionally supported by said roller, and an S-shaped brake bar one loop of which engages said brake frame and the other loop of which engages said roller, substantially as shown and described.

No. 67,091. Flushing Apparatus for Water Closets.

(Appareil a nettoyer les latrines à eau.)

Fig. 1.

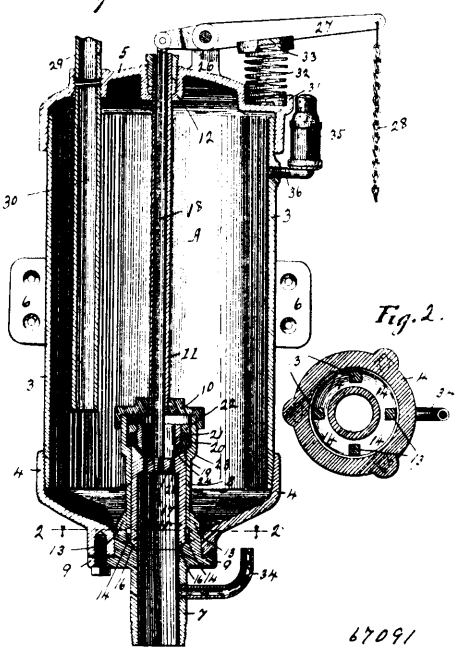


Fig. 2.

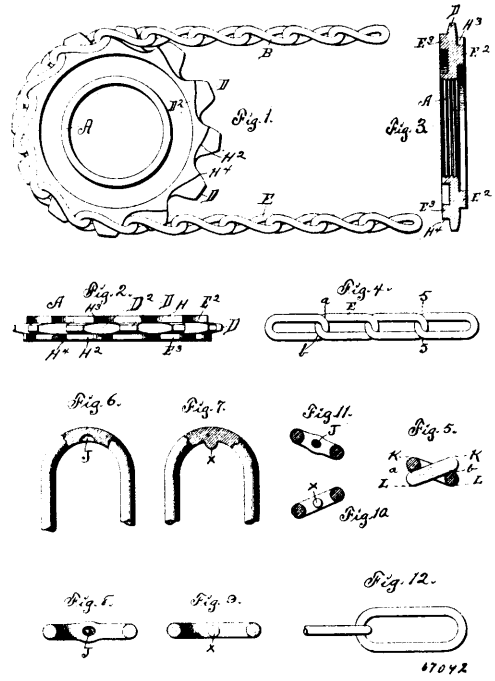
67091

James A. Woodbury, Boston, Massachusetts, U.S.A., 21st April 1900; 6 years. (Filed 14th March, 1900.)

Claim.—1st. In a flushing apparatus for water closets, the combination of a closed tank or reservoir, a water supply pipe communicating therewith, a discharge pipe inserted in its lower end and provided with a suitable valve seat, a valve casing connected to said discharge pipe above said seat and provided with suitable passages for the passage of water from said tank to said discharge pipe, a cylinder valve fitted to said casing and movable vertically therein, a tube extending from the upper end of said casing upward through the upper head of said tank with a liquid tight joint, a rod connected at its lower end to said valve and extending upward through said tube, means for raising said valve connected to the upper end of said rod, and a spring for closing said valve located exteriorly of said tank. 2nd. In a flushing apparatus for water closets, the combination with a closed tank and a supply pipe communicating therewith, and a discharge pipe provided with a valve seat, of a valve casing connected to said discharge pipe and having a closed upper end and provided with openings at its junction with said discharge pipe for the passage of water from said tank to said discharge pipe, a tube screwed into said casing and extending upward through the upper head of said tank with a liquid tight joint, a cylindrical valve fitted to and movable vertically in said casing, engaging said seat, a rod connected to said valve and extending upward through said tube, means connected to the upper end of said rod for raising said valve and a spring for closing said valve. 3rd. In a flushing apparatus, the combination with a closed tank and a supply pipe communicating therewith, and a discharge pipe provided with a valve seat surrounding the discharge passage, of a valve casing extending upward from said discharge pipe and provided with lateral openings above said seat, for the passage of water from said tank to the discharge pipe, a cylindrical valve fitted to said seat and to said casing and movable endwise therein, an annular shoulder formed upon the periphery of said valve near its upper end, a packing ring of elastic material resting upon said shoulder, and an adjustable compression ring fitted to said valve and arranged to compress said packing upon said shoulder. 4th. In a flushing apparatus, the combination with a closed tank, a supply tank communicating therewith and a discharge pipe opening therefrom and provided with an anular valve seat at its upper end, a valve casing extending upward from said discharge pipe, provided with lateral openings through its wall above said seat, and near its upper end with an outwardly inclined annular shoulder 23, a cylindrical valve fitted to said seat and casing, and movable vertically to open and close said valve, an inwardly inclined annular shoulder 19 formed on the periphery of said valve cylinder near its upper ends, a packing ring of elastic material surrounding said valve and resting upon said shoulder 19 at all times, and upon the shoulder 23 when the valve is closed an annular washer resting upon said packing ring, and an adjustable compression ring to press said packing ring upon said shoulders. 5th. In a flushing apparatus, the combination of a closed tank, a supply pipe, a discharge pipe provided with a valve seat, a tubular extension thereof projecting upward therefrom through the upper head of said tank with a tight joint, and provided just above said seat with lateral openings 14, the valve 15 fitted to said seat and closing said openings 14, the valve rod 18 extending upward from said valve through said tubular extension, the pivoted lever 27 connected at one end to the upper end of said rod 18, a spring interposed between the long arm of said lever and the tank head to close said valve, and any suitable pull attached to the other end of said lever for operating said valve. 6th. In a flushing apparatus, the combination with a closed tank provided with supply and discharge pipes, of a valve seat surrounding said discharge pipes, a case surrounding said valve seat and provided with openings for the passage of water from said tank to said discharge pipe with an interior annular shoulder near its upper end, a cylinder valve fitted to said casing and seat, a packing ring of elastic material firmly secured to the exterior of said valve near its upper end, and arranged to engage the shoulder in said casing when said valve is closed, and means for opening and closing said valve.

No. 67,092. Sprocket Wheel and Chain.

(Chaine et roue d' engrenage.)



67092

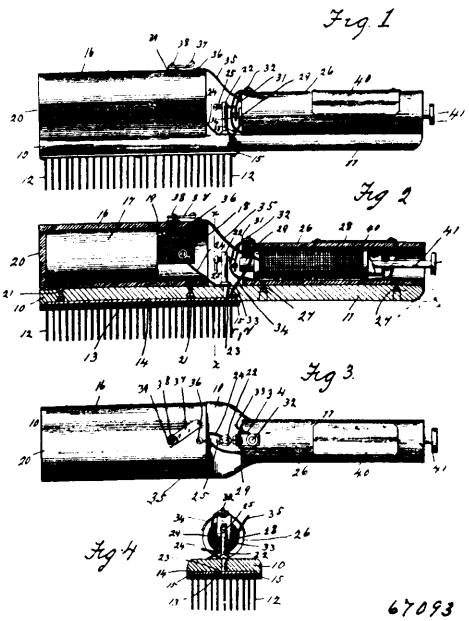
John Samuel Kidd, Des Moines, Iowa, U.S.A., 21st April, 1900; 6 years. (Filed 13th July, 1899.)

Claim.—1st. In an apparatus for transmitting power, a chain composed of like links twisted to such angles that the planes tangential to the extreme upper and lower points of said links and the plate determined by the extremities of the common lines of contact of adjacent links shall be parallel, in combination with a sprocket wheel, having teeth arranged on its periphery and so shaped as to successively engage within the successive links of the chain, the periphery of the wheel between the teeth being concaved to form seats for the engaging end portions of the chain links. 2nd. A sprocket wheel for conjunctive use with a twisted link chain, having teeth on its periphery, to enter the openings in the links of said chain, and having a periphery with depressions approximately to conform to the shape of said links and flanges on either side of said periphery and shoulders on said flanges on either side of said teeth. 3rd. A sprocket wheel for conjunctive use with a twisted link chain, having a periphery depressed at points to conform to the shape of the twisted links of the chain and shoulders at intervals on said periphery on each side of the sprocket wheel, the shoulders on one side of the teeth being in advance of the shoulders on the other side of the teeth. 4th. The combination with a sprocket wheel of a chain whose links are twisted relative to their longest diameters to such an angle that the planes tangential to the extreme upper and lower points of said links and the plane determined by the extremities of the common lines of contact of adjacent links shall be parallel. 5th. The combination with a sprocket wheel of a chain comprising a series of links, the ends of each link being at such angle to each other that when the extremities of the contacting lines of adjacent links, on opposite sides of the longitudinal axis of the links, are in the same plane, the chain will be flexible in one direction and inflexible in the other direction torsionally. 6th. In an apparatus for transmitting power, a sprocket wheel, sprocket teeth on said wheel, which teeth are arranged in a row on the central portion of the face of the wheel and

approximately equi-distant from the sides of said wheel, in combination with a chain composed of a series of twisted links, which links are each formed of a single loop and so twisted and shaped as to present an opening for the reception of successive teeth on the wheel. 7th. In an apparatus for transmitting power, a sprocket wheel and teeth on said wheel, which teeth are located in a row approximately at the centre of the face of the wheel and equi-distant from the sides of said wheel, the said wheel having its perimeter formed with depressions, in combination with a chain composed of a series of twisted links, which links are each formed of a single loop and so twisted and shaped as to present an opening for the reception of successive teeth on the wheel, the outer faces of the links resting at times within the depressions of the wheel. 8th. A sprocket wheel provided with teeth, the bases of which teeth are broadened in opposite directions at opposite ends to form shoulders for impact with the ends of chain links, in combination with a chain shaped for seating against said shoulders. 9th. A chain composed of like links, each constructed of a single loop of metal embracing the two adjacent links and formed with a depression on the inner face of one end thereof, and a projection on the inner face of the opposite end portion thereof. 10th. A chain composed of like links, each constructed of a single loop of metal embracing the two adjacent links and formed with a depression on the inner face of one end thereof and a projection on the inner face of the opposite end portion thereof, said links being twisted and arranged to cross each other at oblique angles and contacting on lines extending in opposite directions from said projection and depression.

No. 67,093. Electric Hair Brush.

(Brosse électrique à cheveux.)



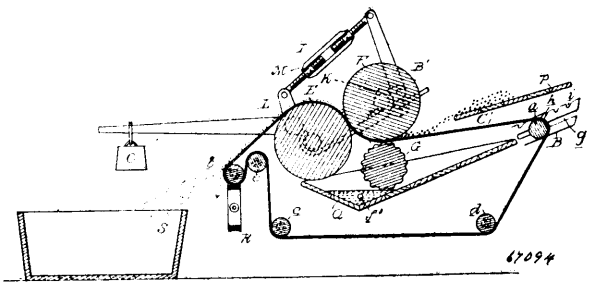
Walter J. Werntz, Annapolis, Maryland, U.S.A., 21st April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—1st. An electrical brush, comprising a back, two shells or jackets arranged longitudinally of the brush, substantially in alignment with each other and fastened respectively to the back and handle of the brush, a dry battery housed within one of said shells, an induction coil within the other shell, electrodes fastened respectively to the back and the jacket containing the induction coil, a make-and-brake device, and circuit connections including the battery, the coil and the make-and-break device, substantially as described. 2nd. An electrical brush, consisting of a back having one electrode in contact with a series of metallic pins or bristles, an induction coil housed within a jacket which is fastened to the brush handle and is provided with the other electrode, a dry battery contained within a jacket fastened to the brush back, a make-and-break device including a contact spring which is in circuit with the induction coil and also including a post in circuit with the electrode of the brush back, a switch contact mounted on the jacket which incloses the battery and in electrical connection with said induction coil, and a switch connected with one battery terminal and mounted on the jacket which houses the battery to make electrical connection with the switch contact, substantially as described.

No. 67,094. Wine Press. *(Presse à vin.)*

William H. Hommel, Sandusky, Ohio, U.S.A., 21st April, 1900; 6 years. (Filed 5th April, 1900.)

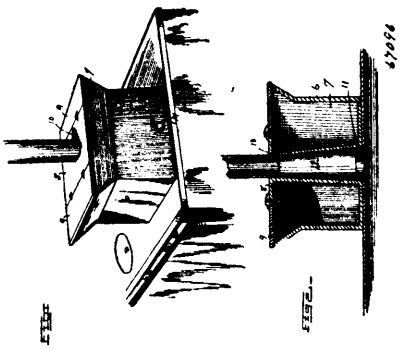
Claim.—1st. In a press, the combination of the pressing and crushing mechanism comprising two pressure rollers, and a grooved or corrugated roller arranged in operative relation with one of said pressure rollers, a tension mechanism for the pressure rollers com-



prising sliding bearings for the journals of one of said rollers, operating levers for the bearings, bell crank levers, adjustable connections between the bell crank and operating levers, an operating device for the bell crank levers, and an endless carrier passing between the rollers, substantially as and in the manner set forth. 2nd. In a press, the combination with the pressing and crushing mechanism comprising two pressure rollers and a grooved or corrugated roller, adjustable tension mechanism for the pressure rollers, comprising sliding bearings for the journals of one of said rollers, operating levers fulcrumed on the framework and connected to the bearings, weighted bell crank levers and adjustable links connecting the operating and bell crank levers and an endless carrier passing between the rollers, substantially as and for the purpose described.

No. 67,095. Water Reservoir for Stoves.

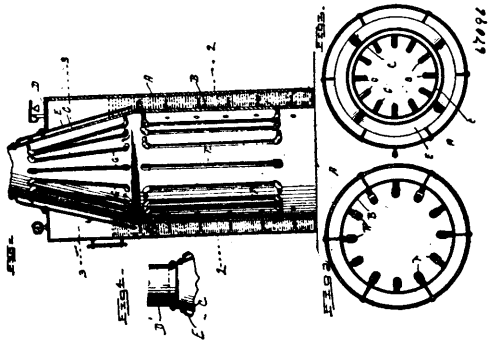
(Réservoir à eau pour poêles.)



Robert Lee Horsley and James H. Rountree, both of Whitney, Texas, U.S.A., 21st April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—A water reservoir, consisting of a vessel or receptacle, the lower portion of which is a parallelogram, two of the sides of which extend upwardly and parallel to the top of the vessel, the remaining sides of the upper portion of the vessel being flared outwardly and upwardly, and an upwardly tapering and vertical tubular passage passing through said receptacle and having its entire wall separated from the walls of said receptacle by an interspace.

No. 67,096. Steam Boiler. *(Chaudière à vapeur.)*

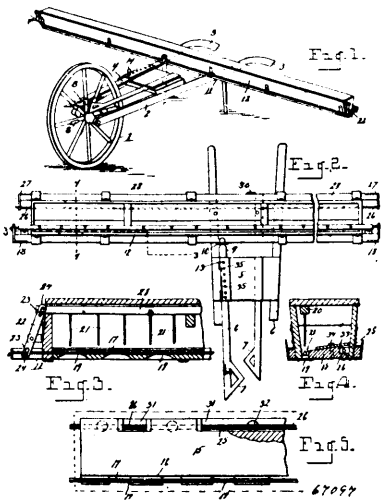


Lotom O. Morgan, Williamsport, Ohio, U.S.A., 21st April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—In a steam boiler, the combination with an outer shell, of an inner shell positioned therein and projecting through the head

thereof, an auxiliary shell secured about said inner shell at a point outside of the outer shell, and extending into the latter, a plurality of pipes arranged within the inner shell and communicating at their respective ends with the water chamber formed between said shells, and a second series of pipes arranged in said inner shell above the first series and communicating at their respective ends with the chamber formed between said inner shell and auxiliary shell, substantially as described.

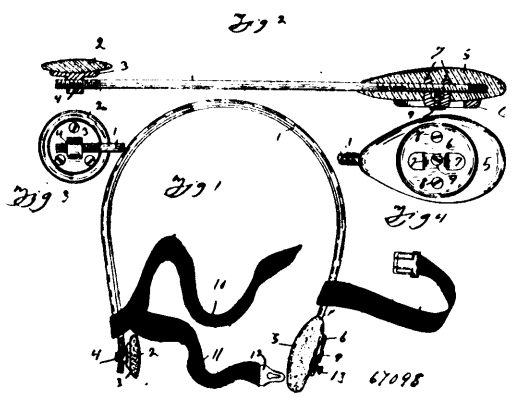
No. 67,097. Seeder. (*Semoir.*)



Oliver E. Thompson, Ypsilanti, Michigan, U.S.A., 21st April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. In a seeder, the combination with a transporting carriage, of a hopper mounted thereon, a channel in the bottom of said hopper, a reciprocatory strand lying in said channel, seed discharging openings through the bottom of the hopper communicating with said channel, means for causing said strand to reciprocate longitudinally, a bar adapted to reciprocate longitudinally in the hopper having teeth which depend over said seed openings, and means for reciprocating said bar. 2nd. In a seeder, the combination of a hopper, having seed discharge openings therein, a strand crossing said openings, a reciprocatory bar to the opposite ends of which the ends of said strands are attached, a second reciprocatory bar mounted in the hopper, and having teeth which depend adjacent to said strand, a pivoted lever connecting said bars, whereby they are caused to reciprocate in unison, and means for actuating said bars. 3rd. In a seeder, the combination of a reversible hopper having seed discharge openings on the opposite sides thereof, means for discharging the seeds through said openings, and a movable bottom adapted to be moved from side to side of the hopper to cover the seed openings on either side thereof. 4th. In a seeder, the combination with a transporting wheel and frame of a hopper having seed openings in the bottom thereof, a feeding strand crossing said openings and adapted to reciprocate longitudinally, a longitudinally movable bar mounted on the hopper and attached to the ends of said strand, a pivoted lever adapted to be engaged by the spokes of the transporting wheel and connected to said movable bar.

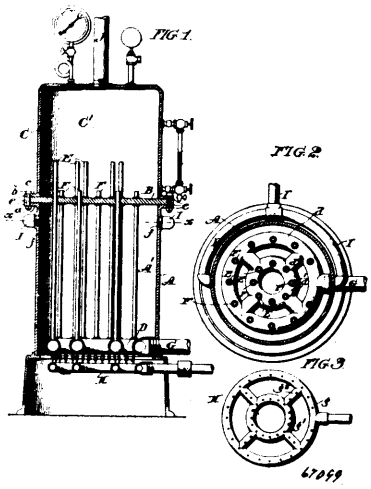
No. 67,098. Truss. (*Bandage herniaire.*)



Friedrich Fette, Collegeville, California, U.S.A., 23rd April, 1900; 6 years. (Filed 28th January, 1899.)

Claim.—1st. In a truss, the combination with a suitable wire having screw threads cut on either end thereof, a stay pad adjustably secured on one end of such wire, a supporting pad having the plate 6, rigidly attached to the back of the same, the lugs 7, rigidly attached to the said plate 6, and inserted in the supporting pad, such lugs 7, adapted to engage with the other end of the said wire, and the set screw 9, inserted in the plate 6, and adapted to impinge upon the said wire, all arranged and operating, substantially as shown and for the purpose specified. 2nd. A truss composed essentially of a wire which may be bent to any desired form, and having screw threads cut on one end on which an adaptable pad composed of the pad body 5, the plate 6, rigidly attached thereto, the lugs 7, rigidly attached to such plate 6, and inserted in recesses in the pad body, into which lugs the wire aforesaid, is inserted the set screw 9, inserted in the plate 6, and adapted to impinge upon the said wire, a stay pad flexibly inserted on the other end of the said wire, the supporting straps 10, the strap 11, and its fastenings, all arranged and operating substantially as shown and described.

No. 67,099. Steam and Hot Water Boiler.
(*Chaudière à vapeur et eau chaude.*)



William Kane, Philadelphia, Pennsylvania, U.S.A., 23rd April, 1900; 6 years. (Filed 21st February, 1899.)

Claim.—1st. In a steam and hot water boiler, the combination with the outer shell, of the detachable plate supported thereby, the series of circulating tubes carried by said plate and extending downward, and a water chamber carried by the lower ends of said tubes, substantially as and for the purpose described. 2nd. In a steam and hot water boiler, the combination with the outer shell, of the detachable plate supported thereby, the removable dome located above said plate, the series of circulating tubes carried by said plate and extending downward, and a water chamber carried by the lower ends of said tubes, substantially as and for the purpose described. 3rd. The combination with the removable circulating tubes, of the removable water chamber carried thereby and consisting of an horizontally disposed tubular structure, substantially as and for the purpose described. 4th. The combination with the removable circulating tubes, of the removable water chamber carried thereby and consisting of an horizontally disposed tubular structure formed of tubular rings d, d^1 and the connecting portions d^2, substantially as and for the purpose described. 5th. The combination with the outer shell divided into two compartments by the crown plate, of the circulating tubes connected with the crown plate at one end, and opening into the upper compartment, with part of said tubes projecting thereinto for a greater distance than others, and a water chamber connected with the lower ends of said tubes, substantially as and for the purpose described. 6th. The combination with the circulating tubes and the horizontally disposed tubular water chamber carried thereby, of the tubular gas burner located below the water chamber, substantially as and for the purpose described.

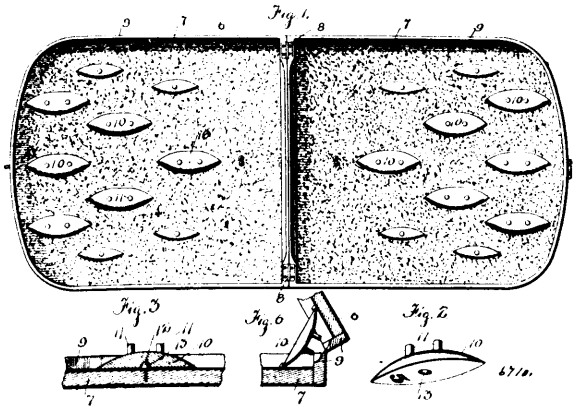
No. 67,100. Processes of Manufacturing Mineral Wool, also called Slag Wool and Silicate Cotton.
(*Procédé pour la fabrication de laine minérale, etc.*)

Alexander Daniel Elbers, Hoboken, New Jersey, U.S.A., 23rd April, 1900; 6 years. (Filed 25th May, 1899.)

Claim.—1st. The process of manufacturing mineral wool, consisting of remelting hardened blast furnace slag in a cupola furnace in admixture with sulphates of the alkaline earths and blowing the same into mineral wool. 2nd. The process of manufacturing mineral wool, consisting of remelting hardened blast furnace slag in a cupola furnace in admixture with gypsum, and blowing the same

into mineral wool. 3rd. The process of manufacturing mineral wool, consisting of melting silicious and calcareous substances in a cupola furnace in admixture with sulphates of the alkaline earths, and blowing the same into mineral wool. 4th. The process of manufacturing mineral wool, consisting of melting silicious and calcareous substances in a cupola furnace in admixture with gypsum, and blowing the same into mineral wool. 5th. The herein described process of manufacturing mineral wool, consisting in remelting hardened blast furnace slag with an admixture of granulated gypsum, and then blowing the same into mineral wool, as set forth. 6th. The process herein described of desulphurizing silicious and calcareous substances that are to be converted into mineral wool, consisting in melting said substances in a cupola furnace, and delivering gypsum into the melting mass in the furnace, as set forth.

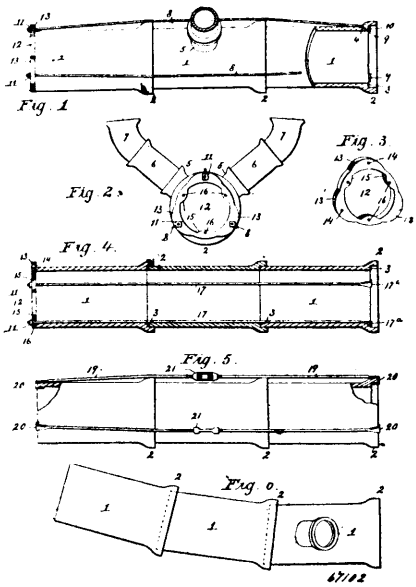
No. 67,101. Game Apparatus. *(Appareil de jeu.)*



Edwin E. Bell, Orangeville, Ontario, Canada, 23rd April, 1900; 6 years. (Filed 22nd March, 1899.)

Claim.—1st. A game apparatus comprising a game board, projections on the upper surface thereof, portions having a suitable configuration and removably located on said projections, whereby a sliding movement over the face of the board will be prevented, and an arrow or series of arrows adapted to be thrown into contact with said portions, whereby said portions may be overturned, substantially as described. 2nd. A game apparatus comprising a game board, projections located on the upper face thereof, portions having suitable openings or recesses to receive said projections, said portions being adapted to rest on the upper face of said board and over said projections, said portions also having a distinguishing character located on its under surface, said character being normally unexposed, and means for exposing said characters, substantially as described.

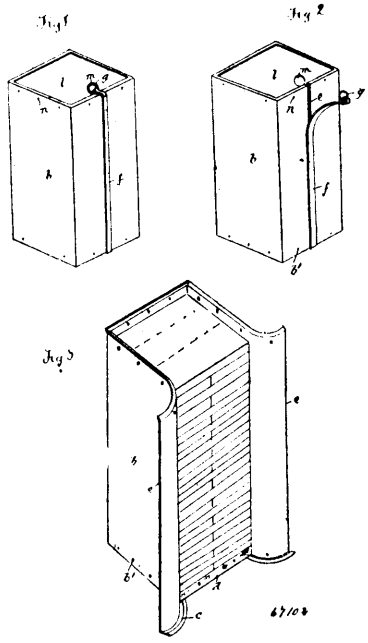
No. 67,102. Culvert. (*Ponceau.*)



Benjamin P. Saunders, Iatan, Missouri, U.S.A., 23rd April, 1900; 6 years. (Filed 10th July, 1899.)

Claim.—1st. A culvert, composed of a number of pipes, each having one end flanged and the other end unflanged, said pipes being arranged with their unflanged ends fitting in the flanged ends of the adjacent pipes, tie rods terminating in hooks which engage the opposite ends of the culvert, and a turn buckle connecting said tie rods and mounted on their threaded ends, substantially as described. 2nd. A culvert, composed of a series of pipes coupled together, one of said pipes having a series of holes, tie rods arranged externally of said pipes, extending through the holes at one end and provided with heads at said ends, plates mounted on said tie rods between said heads and the adjacent end of the culvert, a head ring at the opposite end of the culvert, provided with holes through which said rods extend, and clamping nuts engaging said rods, substantially as described. 3rd. A culvert, composed of a series of pipes coupled together and provided with recesses 18, rods arranged externally of said pipes, terminating in hooks engaging said recesses, a head ring at the opposite end of the culvert, provided with holes through which said rods extend, and clamping nuts engaging said rods, substantially as described. 4th. In a culvert, as a new article of manufacture, a pipe flanged at one end to form the seat or shoulder 3, and provided with recesses in said seat, and holes 4 extending diagonally from said seat through said pipe, substantially as described.

No. 67,103. Metal Tobacco Package.
(Paquet metallique pour tabac.)

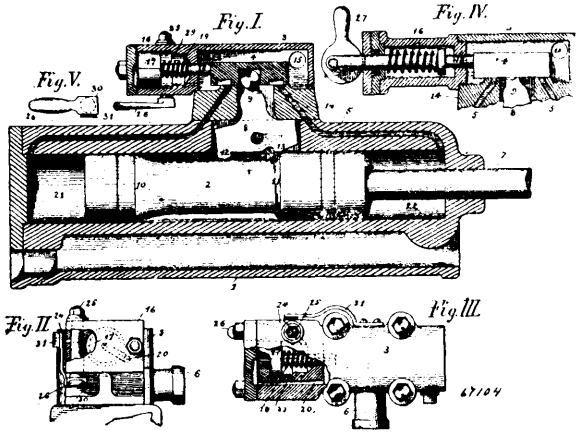


Jacob Goldstein, Montreal, Quebec, Canada, 23rd April, 1900; 6 years. (Filed 16th March, 1899.)

Claim.—1st. A tobacco package formed from sheet metal and divided, a detachable strip connecting the edges thereof, and means for affording a hold upon one end of said strip, for the purpose set forth. 2nd. A tobacco package formed from sheet metal and one side whereof is divided longitudinally, the edges thus formed meeting, a detachable strip connecting said meeting edges, and means for affording a hold upon one end of said strip, for the purpose set forth. 3rd. A tobacco package formed from sheet metal and one side whereof is divided longitudinally midway of its width, the edges thus formed meeting, a detachable strip connecting said meeting edges and means for affording a hold upon one end of said strip, for the purpose set forth. 4th. A rectangular package for plug tobacco, comprising a body portion formed from a single piece of sheet metal having its side edges meeting in a line extending longitudinally of the width of one side thereof, a detachable strip overlapping the full length of and secured to said meeting edges, and a finger ring connected to one end of said strip, as and for the purpose set forth. 5th. A rectangular package for plug tobacco, comprising a body portion *b*, having its lower end inwardly flanged, as at *c*, a detachable strip *f*, for connecting the edges *e* together, and a finger ring *g*, connected to the upper end of said strip, said upper end of the strip extending beyond the upper edge of the body portion, substantially as described and for the purpose set forth.

No. 67,104. Rock Drilling Machine.

(Machine à forer la roche.)

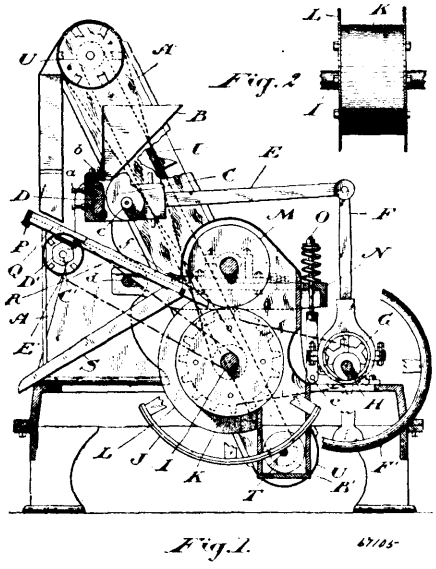


William Gleeson, San Francisco, California, U.S.A., 23rd April, 1900; 6 years. (Filed 14th April, 1899.)

Claim.—In a rock drilling machine impelled by air or steam, an elastic device adapted to press against one end of the distributing valve, causing an advance movement thereof in one direction, cushioning and reversing the main piston and producing partial or short strokes of the piston and of the drill attached thereto, substantially as herein described.

No. 67,105. Ore Reducer and Pulverizer.

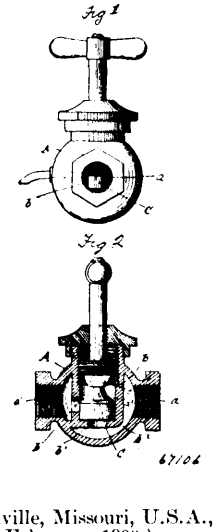
(Appareil à reduire et pulvériser le minerai.)



John Abel, Toronto, Ontario, Canada, 23rd April, 1900; 6 years. (Filed 17th June, 1899.)

Claim.—1st. In an ore reducer and pulverizer, a vertical bed die in combination with an oscillating crusher eccentrically journalled opposite thereto, and provided with one or more transverse ribs on its face above the journal, substantially as and for the purpose specified. 2nd. In an ore reducer and pulverizer, a vertical bed die with a slightly curved convex face, in combination with an oscillating crusher eccentrically journalled opposite thereto, substantially as and for the purpose specified. 3rd. In an ore reducer and pulverizer, a vertical bed die with a slightly curved convex face, in combination with an oscillating crusher eccentrically journalled opposite thereto, with one or more transverse ribs on its face above the journal, substantially as and for the purpose specified. 4th. In an ore reducer and pulverizer, a bed die, in combination with an oscillating crusher eccentrically journalled opposite thereto, in combination with a pair of pulverizing rolls suitably supported and journalled, and separating mechanism adapted to receive ore from the crusher and convey it to the rolls and to separate sufficiently reduced ore, and means for driving the different parts, substantially as and for the purpose specified. 5th. In an ore reducer and pulverizer, a bed die, in combination with an oscillating crusher eccentrically journalled opposite thereto, in combination with a pair of pulverizing rolls suitably supported and journalled, separating mechanism adapted to receive ore from the crusher and convey it to the rolls and to separate sufficiently reduced ore, mechanism adapted to convey pulverized ore from the rolls and deposit it on the separating mechanism, and means for driving the different parts, substantially as and for the purpose specified. 6th. In an ore reducer and pulverizer, a roll journalled on the frame of the machine, and a roll journalled vertically above the aforesaid roll on a swinging frame, in combination with driving mechanism for the lower roll, and means for conveying ore between the rolls, substantially as and for the purpose specified. 7th. In an ore reducer and pulverizer, a roll journalled on the frame of the machine, and a roll journalled vertically above the aforesaid roll on a swinging frame, in combination with an adjustable spring connection between the main frame and the swinging frame, whereby the pressure of the upper roll may be regulated, and means for conveying ore between the rolls, substantially as and for the purpose specified. 8th. In an ore reducer and pulverizer, a roll journalled on the frame of the machine and provided with flanges bolted thereon, one at each side, and a roll journalled vertically above the aforesaid roll on a swinging frame in combination with driving mechanism for the lower roll, and means for conveying ore between the rolls, substantially as and for the purpose specified. 9th. In an ore reducer and pulverizer, the combination of a roll journalled on the frame of the machine, a roll journalled vertically above the aforesaid roll on a swinging frame, mechanism adapted to convey pulverized ore from the rolls and elevate it, separating mechanism adapted to receive ore from the conveying and elevating mechanism, to separate pulverized ore, and to convey unpulverized ore between the rolls, and means for driving the different parts, substantially as and for the purpose specified. 10th. In an ore reducer and pulverizer, a pair of suitably driven pulverizing rolls, in combination with separating and conveying mechanism comprising a frame journalled upon the frame of the machine, means for agitating the said frame, a screen carried by the frame, a board located below the said frame extending between the rolls, and having a break therein below the lower end of the screen and a board or discharge spout extending from below the break to a suitable discharge point, substantially as and for the purpose specified. 11th. In an ore reducer and pulverizer, the combination of a bed die, an oscillating crusher eccentrically pivoted opposite thereto, an arm fast to the said crusher, a roll journalled on the frame of the machine, a suitably journalled roll held yieldingly in contact therewith, a sprocket wheel connected to the shaft of the said roll, a shaft journalled on the frame of the machine, a sprocket wheel fast on the said shaft, a sprocket chain connecting the said sprocket wheels, and an eccentric on said shaft, the eccentric rod of which is connected pivotally with the arm fast to the crusher, substantially as and for the purpose specified.

No. 67,106. Cock. *(Robinet.)*



James H. Lieber, Boonville, Missouri, U.S.A., 23rd April, 1900; 6 years. (Filed 17th February, 1900.)

Claim.—1st. A waste cock consisting of a shell provided with a supply pipe opening, an inner chamber provided intermediate the top and bottom at the sides with a drain pipe opening and a service pipe opening, both registering with like openings through said shell, a channel connecting said supply pipe opening and an opening in the bottom of said chamber, and means for operating the same, substantially as shown and described. 2nd. A waste cock consisting of a shell provided with a supply pipe opening, an inner cylindrical chamber provided intermediate the top and bottom at the sides with a drain pipe opening and a service pipe opening, both register-

ing with like openings through said shell, a channel connecting said supply pipe opening and an opening in the bottom of said chamber, and means for operating the same, substantially as described. 3rd. A waste cock consisting of a shell provided with a supply pipe opening, an inner cylindrical chamber provided intermediate the top and bottom at the sides with a drain pipe opening and a service pipe opening, both registering with like openings through said shell, a channel connecting said supply pipe opening and an opening in the bottom of said chamber, and a plug fitted in said cylinder in the usual way and adapted to close the opening at the bottom of said cylinder at the same time opening the drain opening, substantially as shown and described.

No. 67,107. Railway Signal. (*Signal de chemin de fer.*)

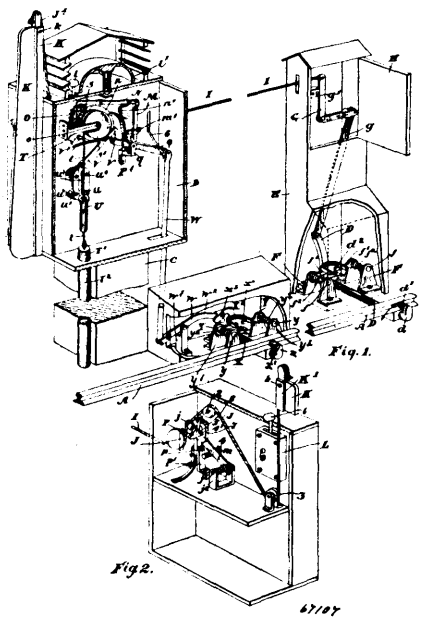


Fig. 1.

Fig. 2.

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George Aaron Vice and William James Gilpin, both of St. Mary's, Ontario, Canada, 23rd April, 1900; 6 years. (Filed 27th October, 1899.)

Claim.—1st. The combination with a suitable signal device located at the crossing, of a shaft extending underneath the rail and provided with a crank on the end thereof designed to be operated by the wheel of the car, the standards, the spring actuated arms held on the spindles in the standards, the arm on the end of the shaft provided with the arms overhanging the spring pressed arms, the bell crank suitably supported, the bar connecting the bell crank to the arm on the end of the shaft, and the cord connecting the opposite end of the bell crank to the operating mechanism of the signal apparatus at the crossing, as and for the purpose specified. 2nd. The combination with the shaft and the crank formed at the end thereof designed to be operated by the wheel, the cord extending to the signal apparatus, suitable intermediate mechanism between the cord and the shaft for pulling upon the cord upon the depression of the crank upon the end of the shaft, the spring held arm in the signal box or casing to which the operating cord is connected, the semaphore suitably pivoted in the casing and the cord operatively connecting the spring pressed arm to the semaphore, as and for the purpose specified. 3rd. The combination with the shaft and the crank formed at the end thereof designed to be operated by the wheel, the cord extending to the signal apparatus, suitable intermediate mechanism between the cord and the shaft for pulling upon the cord upon the depression of the crank upon the end of the shaft, the spring held arm in the signal box or casing to which the operating cord is connected, the spring catch designed to overhang the arm when it is brought down, the bar provided with a pin extending underneath the arm, the pawl lever pivotally connected to the top of the bar, the train of gear and hammer and bell, the ratchet wheel secured on the end of the main arbor of the train of gear and co-acting with the pawl, the drum and the cord and weight all arranged, as and for the purpose specified. 4th. The combination with the train of gear, hammer and bell and the spring pressed arm actuated through the operating cord, the pin and bar and pawl lever and the ratchet wheel secured on the arbor of the gear mechanism, the spring pressed catch designed to overhang the lever when the alarm is being operated, the drum, cord and weight on the arbor, and ratchet wheel connected to the drum, of a pawl designed to operate the ratchet wheel of the drum, the lever to which it is connected, the bell crank arm provided with a hooked end extending over a pin on the spring actuated catch co-acting with the spring actuated arm, means operated from the wheels of the passing train for throwing the lever upwardly, so as to operate the bell crank and release the spring arm from the spring actuated catch as and for the purpose specified. 5th. The combination with the train of gear, hammer and bell and the spring pressed arm actuated through the operating cord, the pin and bar and pawl lever and the ratchet wheel secured on the arbor of the gear mechanism, the spring pressed catch designed to overhang the lever when the alarm is being operated, the drum, cord and weight on the arbor, and ratch wheel connected to the drum, of a pawl designed to operate the ratch wheel of the drum and the lever to which it is connected, the bell crank provided with a hooked end extending over a pin on the spring actuated catch co-acting with the spring actuated arm, the shaft extending under the rail provided with an end arm located in proximity to the side of the top of the rail, the arm on the end of the shaft provided with a double arm, the standards and the spring held arms on the spindles on the standards exerting a normal upward pressure on the double arms on the arm on the end of the shaft, the lever extending under the end of the arm on the end of the shaft and the rod connecting such lever to the lever in the casing, as and for the purpose specified. 6th. The combination with the train of gear and hammer and bell and main arbor and the drum and ratchet wheel on the same, and the cord and weight and the lever Q and pawl R and means for operating them, of a spring held push arm, a vertically adjustable bar to which the same is connected at the top, and a tube connected to the vertically adjustable bar through which the cord of the weight extends, as and for the purpose specified.

No. 67,108. Land Roller. (*Rouleau d'agriculture.*)

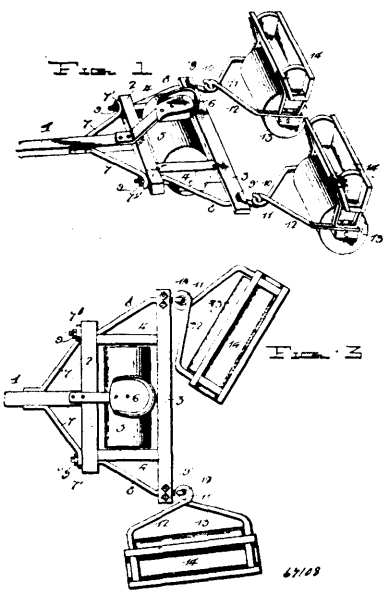


Fig. 1.

Fig. 3.

67/108

James William Newman and Edwin Clarence Roberts, both of Plainview, Oregon, U.S.A., 23rd April, 1900; 6 years. (Filed 2nd January, 1900.)

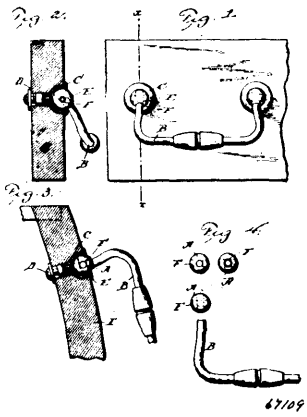
Claim.—1st. In a land roller, the combination with the main roller frame, of the draft rods fixed to said frame and terminating in the hook shaped ends, and the rear rollers pivoted to said draft rods, substantially as and for the purpose set forth. 2nd. A land roller, comprising the tongue 1 and beams 2 and 3, the diagonal braces 7-7 formed with the eyes 7^1, the draft rods 8-8 formed with the hooks 10-10, the yoke straps 12-12 formed with the eyes 11-11 and the rollers 13 mounted in said yoke straps, substantially as and for the purpose set forth.

No. 67,109. Drawer Pull. (*Poignée de commode.*)

The Grand Rapids Brass Company, assignee of Daniel W. Tower, all of Grand Rapids, Michigan, U.S.A., 23rd April, 1900; 6 years. (Filed 9th April, 1900.)

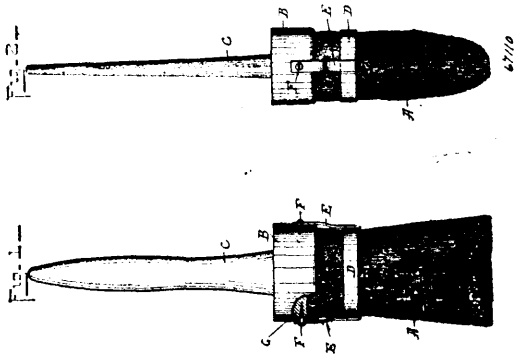
Claim.—1st. In a hinge for a drawer pull, the combination with a drawer front, of a socket sunk therein, a handle or pull provided with a bail fitting into said socket, the movement of the handle or pull being limited by the form of the socket, substantially as described. 2nd. The combination with a socket set into the front of the drawer, a ball secured to the drawer pull fitted into the said socket, said socket being provided with a cap adapted to retain the

ball in position, and the slot adapted to allow the pull to be raised and lowered for use, substantially as described. 3rd. The combina



tion with a drawer front, of a socket sunk therein, a ball provided with a double tapering hole, as shown, a handle or pull secured to the ball, and a pivot passing through the ball securing the same in position with the socket, substantially as described.

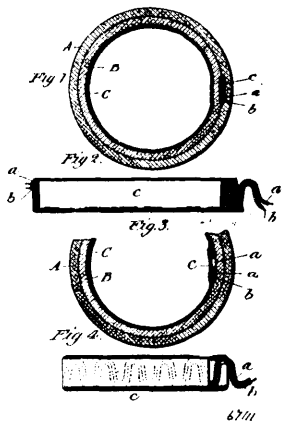
No. 67,110. Brush Bridle. *(Bride de brosse.)*



The John L. Whiting & Son Company, Boston, Massachusetts, assignee of Arthur Homer Wolcott, Wintrop, Massachusetts, U.S.A., 23rd April, 1900; 6 years. (Filed 6th April, 1900.)

Claim.—In combination with a brush, the herein described bridle for brushes, consisting of a metal ring or band D enclosing the bristles of the brush below the ferrule B, said band or ring having arms or projections E E pivotally connected to opposite sides of the said ferrule, substantially as and for the purpose set forth.

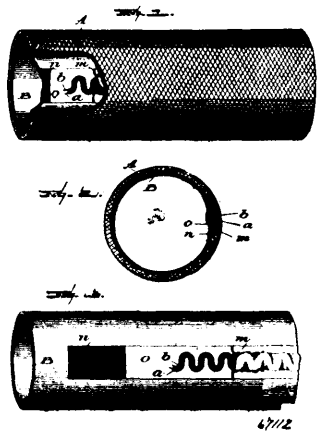
No. 67,111. Electric Signal for Hydraulic Fire Hose.
(Signal électrique pour boyaux hydrauliques à incendie.)



Benjamin Levi Stowe and John Jay Voorhees, both of Jersey City, New Jersey, U.S.A., 23rd April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—1st. In combination with a multiply hose, a pliable sleeve extending lengthwise of and interposed and held between two contiguous plies of said hose, and electrical conductors or line wires in crimped or bent form contained in and enclosed by said sleeve, substantially as and for the purposes hereinbefore set forth. 2nd. In combination with a multiply hose, a pliable sleeve extending lengthwise of and interposed and held between two contiguous plies of said hose and electrical conductors or line wires in crimped or bent form enclosed by and loosely contained in said sleeve, substantially as and for the purposes hereinbefore set forth.

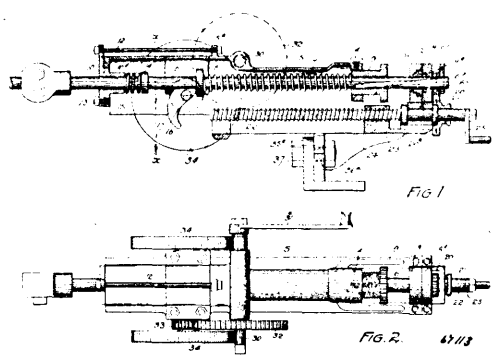
No. 67,112. Electric Signal for Hydraulic Fire Hose.
(Signal électrique pour boyaux hydrauliques à incendie.)



Benjamin Levi Stowe and John Jay Voorhees, both of Jersey City, New Jersey, U.S.A., 23rd April, 1900; 6 years. (Filed 24th May, 1900.)

Claim.—1st. Hydraulic hose consisting of a rubber lining, an exterior fabric body into which said lining is vulcanized and interposed insulated electric conductors or line wires laid upon and secured to the exterior of the rubber lining, substantially as hereinbefore set forth. 2nd. In combination with the exterior fabric hose body, a rubber lining vulcanized into place in said fabric body and having on its exterior conducting wires, a fabric strip or strips interposed between it and said wires, and a rubber covering strip or strips for said wires, substantially as and for the purposes hereinbefore set forth.. 3rd. Hydraulic hose having incorporated within its body longitudinal insulated conductors crimped or bent into conforming curves and nested together, substantially as and for the purposes hereinbefore set forth.

No. 67,113. Rock Drill. *(Machine à percer.)*



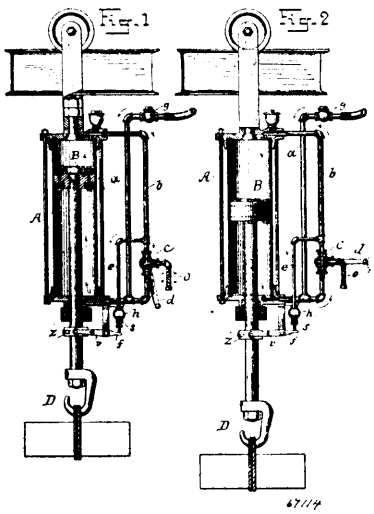
The Jackson Drill and Manufacturing Company, assignee of Manetho C. Jackson, all of Denver, Colorado, U.S.A., 23rd April, 1900: 6 years. (Filed 27th February, 1899.)

Claim.—1st. The combination with the drill casing, the reciprocating shaft and the power spring surrounding the shaft, of a crank shaft journalled in the casing, a gear fast on the crank shaft, another shaft journalled in the casing, a cam fast on the last-named shaft and adapted to engage a collar on the drill shaft, a pinion fast on the cam shaft and meshing with the gear on the crank shaft, and fly wheels mounted on the cam shaft. 2nd. The combination with the drill casing, the reciprocating drill shaft and the power spring surrounding the shaft, of a crank shaft journalled in the casing, a

gear fast on the crank shaft, another shaft journalled in the casing, a cam fast on the last-named shaft and adapted to engage a collar on the reciprocating shaft, a pinion fast on the cam shaft and meshing with the gear on the crank shaft, a pair of fly wheels mounted on the extremities of the cam shaft, a feed screw journalled in the casing, a guide track upon which the casing is mounted, the guide track being provided with a nut which the said screw engages, means for feeding the casing to keep pace with the movement of the drill into the rock, said means comprising a gear splined on the drill shaft, another gear splined on the feed screw and meshing with the gear on the drill shaft, the guide track being provided with a projection arranged to move the gear on the feed screw sufficiently to disengage it from the gear on the drill shaft by the time the said screw has reached its forward limit of movement. 3rd. The combination of the guide track, the casing movably mounted thereon, the drill shaft mounted on the casing, means for reciprocating the drill shaft, means for rotating said shaft, a feed screw journalled in the casing, the guide track being provided with a nut which the said screw engages, means for feeding the casing to keep pace with the movement of the drill into the rock, said means comprising a gear splined on the drill shaft, another gear splined on the feed screw and meshing with the gear on the drill shaft, the guide track being provided with a projection arranged to move the gear on the feed screw sufficiently to disengage it from the gear on the drill shaft, by the time said screw has reached its forward limit of movement. 4th. The combination with the guide track, the drill casing movably mounted thereon, the reciprocating shaft and the power spring surrounding the shaft, of a crank shaft journalled on the casing, a gear fast thereon, another shaft journalled in the casing, a cam fast thereon and adapted to engage a collar on the drill shaft, a pinion fast on the cam shaft and meshing with the gear on the crank shaft, the guide track being provided with an apertured depending shouldered projection, and an apertured bracket adapted to be bolted to said projection and provided with shoulders adapted to engage the shoulders of the projection, the shoulders of the two parts being separated on one side, as and for the purpose set forth. 5th. The combination of the guide track and the drill casing movably mounted thereon, the said track being provided with an apertured depending shouldered projection, and an apertured bracket adapted to be bolted to said projection, and provided with shoulders adapted to engage the shoulders thereof, the shoulders of the two parts being separated on one side, as and for the purpose set forth.

No. 67,114. Pneumatic Hoisting Apparatus.

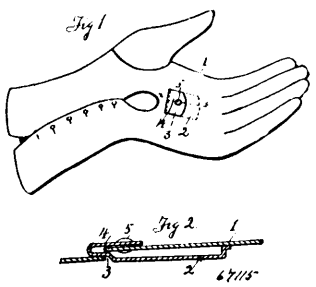
(Ascenseur pneumatique.)



The Pedrick & Ayer Company, assignee of Howard Ashley Pedrick, all of Philadelphia, Pennsylvania, U.S.A., 23rd April, 1900 6 years. (Filed 3rd April, 1900.)

Claim.—1st. The combination with a cylinder, piston and piston rod of a pneumatic hoist having a motive fluid supply pipe communicating with one end of the cylinder, and a branch pipe communicating with the opposite end of the cylinder, whereby the motive fluid is admitted to both sides of the piston and an equilibrium of pressure established, of a valve interposed in the passage between the respective ends of the cylinder for exhausting the fluid from the upper end of the cylinder to the atmosphere and from the lower end of the cylinder to its upper end, to operate the piston in either direction, substantially as described. 2nd. In a pneumatic hoist, consisting of a cylinder, piston, piston rod and motive fluid supply pipe, communicating directly with one end of the cylinder, and intermediately with its opposite end, and an interposed controlling valve adapted to admit the direct pressure to both sides of the piston simultaneously, and to release the same from either side alternately, substantially as described, and a relief valve opening communication with the atmosphere and the cylinder above the piston, operated automatically and coincidently with any downward movement of the piston from any position it may be held, as set forth.

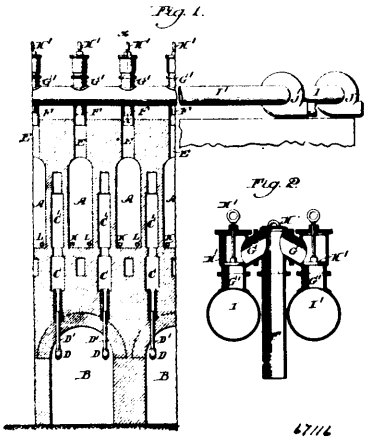
No. 67,115. Pocketed Glove. *(Gant porte-monnaie.)*



John Joshof Hendler and Edward King Reeves, both of Kansas City, Missouri, U.S.A., 23rd April, 1900; 6 years. (Filed 3rd April, 1900.)

Claim.—As an article of manufacture, a glove having a pocket formed in the palm thereof, and opening for obtaining access to said pocket, and a flap arranged to be fastened over and to cover said opening, substantially as set forth.

No. 67,116. Coke Oven. *(Fourneau à coke.)*

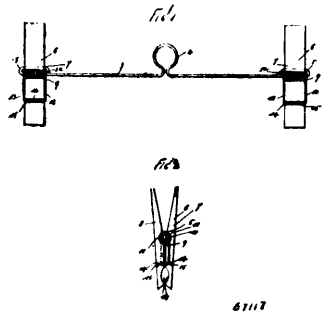


The United Coke and Gas Company, Philadelphia, Pennsylvania, U.S.A., 23rd April, 1900; 6 years. (Filed 15th June, 1899.)

Claim.—1st. The method of manufacturing coke and of likewise recovering separately, as auxiliary products, gases, differing in richness, driven off from the body of the coking coal, which consists in enclosing successive charges one at a time, in a closed oven, subjecting each successive charge to a coking heat applied from without purely by conduction through the walls of the oven and to all parts of the charge and distilling off thereby the volatile hydrocarbon gases, fractionally separating said gases by drawing off and collecting these generated at different stages of the coking of the charge into separate receptacles and thereby preventing the adulteration of the richer by the poorer gases, and finally drawing the coked charge from the oven preparatory to recharging the same. 2nd. The method of manufacturing coke and of likewise recovering separately, as auxiliary products, gases, differing in richness, driven off from the body of the coking coal, which consists in enclosing the coal charge within a closed oven, subjecting it to a coking heat by conduction through the walls of the oven from without, and distilling off thereby the volatile hydrocarbon gases, fractionally separating the said gases by drawing off and collecting them at various stages of the coking operation into separate receptacles and maintaining during the various stages of the coking operation a substantial equilibrium of pressure between the oven gases and the external heating gases thereby preventing the adulteration of the richer by the poorer gases and harmful variations of pressure in the oven. 3rd. The method of manufacturing coke and of likewise recovering, as an auxiliary product, gases driven off from the body of the coking coal, which consists in enclosing a coal charge within a closed oven, subjecting it to a coking heat by conduction through the walls of the oven from without and distilling off thereby the volatile hydrocarbon gases, then when the coal is

substantially coked quenching the igneous coke in the oven, cooling the walls of said oven and producing a further gas generation by injecting steam into the closed oven, then withdrawing the quenched coke, recharging the cooled oven with a fresh body of coking coal and continuing the treatment as above. 4th. The method of manufacturing coke and of likewise recovering as an auxiliary product gases driven off from the body of the coking coal, which consists in enclosing a coal charge within a closed oven, subjecting it to a coking heat by conduction through the walls of the oven from without and distilling off thereby the volatile hydrocarbon gases, then when the coal is substantially coked quenching the igneous coke in the oven, cooling the walls of said oven and producing a further gas generation by injecting steam and hydrocarbon oil into the closed oven, then withdrawing the quenched coke, recharging the cooled oven with a fresh body of coking coal and continuing the treatment as above. 5th. The method of manufacturing coke and of likewise recovering as an auxiliary product gases driven off from the body of the coking coal, which consists in enclosing a coal charge within a closed oven, subjecting it to a coking heat by conduction through the walls of the oven from without and distilling off thereby the volatile hydrocarbon gases, then when the coal is substantially coked quenching the igneous coke in the oven, cooling the walls of said oven and producing a further gas generation by injecting steam and hydrocarbon oil into the closed oven, maintaining during the various stages of the coking operation a substantial equilibrium of pressure between the oven gases and the external heating gases then withdrawing the quenched coke, recharging the cooled oven with a fresh body of coking coal and continuing the treatment as above. 6th. In combination with a closed externally heated coke oven, separated gas mains I and I^1, having valves as H^1, H^1, whereby they can be connected or disconnected from the oven and each having an independent exhaust device as J, J^1. 7th. In combination with a closed externally heated coke oven, separated gas mains I and I^1, having valves as H^1, H^1, whereby they can be connected or disconnected from the oven and each having an independent exhaust device as J, J^1, and a steam conduit opening into the oven. 8th. In combination with a closed externally heated coke oven, separate gas mains I and I^1, having valves as H^1, H^1, whereby they they can be connected or disconnected from the oven, and each having an independent exhaust device as J, J^1, and steam and oil conduits opening into the oven. 9th. The combination with a bank or plurality of closed exteriorly heated coke ovens, of separated gas mains I and I^1 communicating with said ovens, said gas mains having valves H^1, H^1, whereby any oven can be connected or disconnected from either main, each of the mains having an exhaust device, as J, J^1. 10th. The combination with a bank or plurality of closed exteriorly heated coke ovens, of separated gas mains I and I^1 communicating with said ovens, said gas mains having valves H^1, H^1, whereby any oven can be connected or disconnected from either main, each of the mains having an exhaust device, as J, J^1, and a steam conduit opening into it. 11th. The combination of a bank or plurality of closed exteriorly heated coke ovens, of separated gas mains I and I^1 communicating with said ovens, said gas mains having valves H^1, H^1, whereby any oven can be connected or disconnected from either main, each of the mains having an exhaust device, as J, J^1, and steam and oil conduits opening into it.

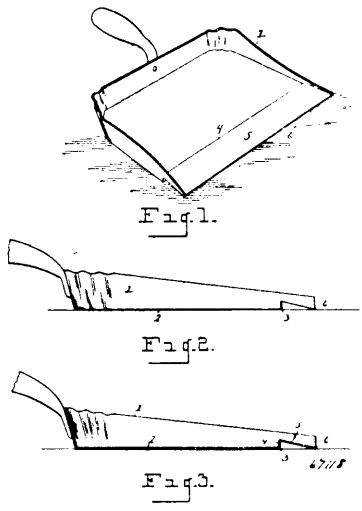
No. 67,117. Garment Hanger. *(Accroche-vêtement.)*



Edwin Bertram Pike, Pike Station, New Hampshire, and Henry Clay Brown, New York City, assignees of Oscar Carl Kawle, New York City, New York, U.S.A., 23rd April, 1900; 6 years. (Filed 4th April, 1900.)

Claim.—1st. The herein described garment hanger, comprising a transverse rod or wire formed centrally into a supporting means whereby the device may be suspended, spring clamps provided with central coiled springs through which the ends of the rod or wire are inserted, and extensions or arms turned upward from the ends of said rod or wire to form a hook connection therewith and directed inwardly above the coiled springs of the clamps, and the inner ends thereof, having a substantially closed connection with the said rod or wire whereby to retain the clamps thereon against detachment, against lateral shifting and against rotatory motion, substantially as and for the purpose set forth. 2nd. The herein described garment hanger, comprising a rod or wire 3 bent centrally into an upwardly ranging loop shaped portion by which the device is adapted to be suspended, spring clamps comprising members, and a coiled spring centrally within the same, the ends whereof project around and unite the clamp members in a pivotal relation, the ends of the said rod or wire 3 being inserted through the said spring coils and being upwardly turned to form inwardly directed arms or extensions 5 projecting above and around the coiled springs, and having their inner ends 5^a bent downwardly at a point inwardly of the coil to form a closed connection with said rod or wire 3, whereby to retain the clamps thereon against detachment, against lateral shifting and against rotary motion, substantially as and for the purpose set forth.

No. 67,118. Dust Pan. *(Porte-ordure.)*



Alexander W. Finlayson, Garret A. Clement and Edward A. Hall, 23rd April, 1900; 6 years. (Filed 9th April, 1900.)

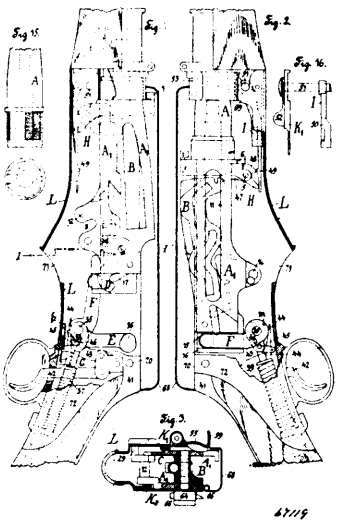
Claim.—1st. An article of manufacture, comprising a dust pan having a raised shoulder formed in the forward edge thereof, extending across the pan from side to side, and having an inclined bottom portion leading from the forward edge of the pan to the top of said shoulder. 2nd. A dust pan, comprising the pan proper having a flat bottom, said bottom having a right angle bend therein near its forward edge forming a vertical shoulder extending transversely of the pan and having a forward bottom section leading from the top of said shoulder downwardly at a decline to the forward edge of the pan and terminating at a point in horizontal alignment with the bottom of the pan in the rear of said shoulder. 3rd. A dust pan, provided near its forward edge with a raised shoulder extending transversely of the pan and standing above the plane of the bottom, and having a short incline portion leading from the front edge of the pan to the top of said shoulder.

No. 67,119. Recoil Mechanism for Small Arms and Machine Guns of Small Calibre. *(Mécanisme de recul pour armes à feu de petit calibre.)*

The Dansk Rekylriffel Syndicate, assignee of Julius A. N. Rasmussen, all of Copenhagen, Denmark, 23rd April, 1900; 6 years. (Filed 28th April, 1899.)

Claim.—1st. Recoil mechanism for small arms and machine guns of small calibre characterized by the employment of a rotary breech block arrangement, the movements of which are regulated by movable studs 63, entering grooves 19 and 20, substantially as set forth. 2nd. In combination with recoil mechanism of the kind described, the arrangement of a rotatable breech bolt B, which acting as a movable breech bolt, is characterized by the arrangement of two guide grooves 19 and 20, of different shape, which by the engagement of two movable guide studs effect an alternate up and down movement of the front end of the breech bolt around a pin penetrating its rear end and an opening with guide surface 23, at the lower side of the bolt for the purpose of conveying the empty cartridge ejected through, an opening 72, in the trigger guard, substantially as set forth. 3rd. In combination with recoil mechanism, of the kind described, the feeder arrangement comprising a three link cartridge feeder C, and a guide groove 57, characterized by a guide stud 29, secured to the bottom link 28, moving during the recoil in the lower horizontal portion of the groove 57, which partly enters a spring 58, pressed by the stud into a cavity in the lock cover from which it again issues as soon as the stud has passed the edge *d*, against which it pushes in the forward movement, and by which the stud is forced to follow the guide groove and to describe

a rotary movement which attains the lowest link 28, being turned forward, thereby causing the centre link 30, which grips by means



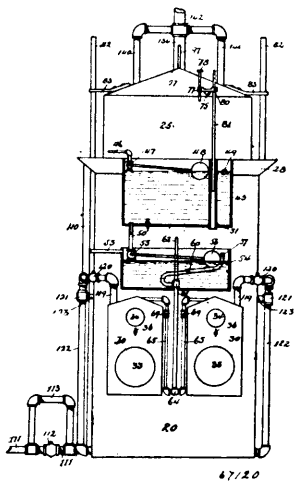
of a hook 32, around a plug 33, to turn around the latter and to move forward the head 31, of the cartridge feeder until the cartridge has completely entered the breech, whereupon the cartridge feeder returns to its former position, substantially as set forth. 4th. In combination with recoil mechanism of the kind described, the arrangement of a breech block A^1, provided in front with a screw nut 2, for the barrel, having the screw thread cut away in three of the six portions of the circumference for facilitating the connection, and provided at the right hand side with a slot 11, for the guide mechanism of the breech bolt, with a cocking surface 17, at the rear for the main lever, and with a wing 15, for guiding the recoil rod, substantially as set forth. 5th. In combination with recoil mechanism of the kind described, the arrangement of a guide device for the breech bolt consisting of a rod 61, movable around a pivot 62, studs 63, being arranged at the ends of the rod to slide in guide grooves 19 and 20, in the breech bolt, to control the movement of the latter by taking up alternately certain positions, either totally forward or backward, in consequence of a spring acting on the rod 61, and the special shape of the guide grooves, substantially as set forth. 6th. In combination with recoil mechanism of the kind described, the arrangement of a lever-shaped recoil rod F, the long arm of which is provided with a head, with a roller of the form of the main lever, which slides during the reciprocating movement in the wing 15, while the short arm acts on the recoil spring 39, and while further the tension piece 44, of the trigger mechanism enters an aperture *m*, as soon as the rifle is ready for firing, the tension piece being in all other positions of the rod pressed down by the spring, substantially as set forth. 7th. In combination with recoil mechanism of the kind described, the arrangement of a trigger mechanism 6, comprising a trigger 42, with its tension piece 44, on which a nose 45, and a rod 43, is arranged in such a manner, that a pressure on the trigger is transmitted by the tension piece, and its nose to the rod 43, resulting that a projection on the latter which is in engagement with the top beat of the main lever slides backwards and causes the disengagement from and the release of the top bent, substantially as set forth.

No. 67,120. Acetylene Gas Generator.

(Générateur de gaz acétylène.)

Roch Morin, Quebec City, Quebec, Canada, 24th April, 1900; 6 years. (Filed 3rd March, 1898.)

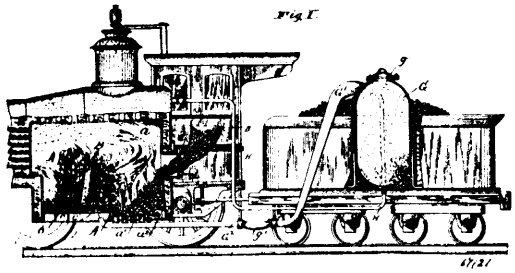
Claim.—1st. An apparatus for generating acetylene gas, consisting of a tank open at the top, a false bottom dividing the tank into two chambers, generators passing through the said tank and resting on the false bottom, baskets to contain calcium carbide in the said generator, hoppers constituting self feeders to the said baskets, means for shaking the said baskets, gas pipes or conduits from said generators united in the upper chamber of the tank and formed into condensing coil, the said coil terminating above the level of water in the said tank, a bell or gasometer inverted in said tank, a pipe from the said bell or gasometer conducting the gas to the mains, a safety valve or box interposed in the gas pipe from the gasometer, the said safety valve being operated by the rising and falling of the bell or gasometer, a water tank adapted to automatically supply the said main tank, upper and lower chamber, and safety valve tank with water, so as to submerge the generators and condensing coil, a water tank under the before mentioned water tank and supplied therefrom, adapted to supply water to the sprinkler in the generators, sprinkler adapted to supply automatically water to the calcium carbide, the said water tanks being operated by the rising and falling of the bell or gasometer, and drip pipes connected



to the lower chamber of the main tank, and a trap in the drainage pipe of the said lower chamber, adapted to maintain an efficient water seal to all the said drip pipes, substantially as set forth and described. 2nd. An apparatus for generating acetylene gas, consisting of a main tank, gas generators placed in the said tank, projecting at the front and rear thereof, hoppers connected to the said generators on the projecting rear portion, receptacles capable of being shaken placed in the said generators and supplied from the said hoppers, means for supplying water to the said receptacles, gas tight doors in apertures in the front of the said generators, gas tight feed doors near the top of said hoppers, escape pipes from the top of the said hoppers provided with cocks, gas pipes from the said generators into the tank, cocks interposed in the said gas pipes, a condensing coil in the said tank connected to the said pipes, an inverted bell or gasometer in said tank, an outlet gas pipe from said gasometer and means for supplying water to the said tank and submerging the said generators and condensing coil, substantially as set forth and described. 3rd. A safety valve for acetylene gas generators, consisting of a tank full of water, an inverted bell in said tank, a vertical partition in said bell, dividing it into two compartments or chambers, the said vertical partition having therein an aperture or opening near its lower edge, but not too near to destroy an efficient water seal, an inlet pipe passing up through the bottom of the said tank and finishing above the water line in one chamber, an outlet or waste pipe commencing above the water line in the other chamber and passing out through the bottom of the said tank, the said pipes being adapted to be in communication with each other when the orifice in the partition is, by the bell being raised, above the water line, substantially as set forth. 4th. In an apparatus for generating acetylene gas, the combination with the main tank having an inverted bell or gasometer 25, adapted to rise as the gas is supplied to it, a forked arm secured to the said bell or gasometer, of the tank 89 of the safety valve, a pipe 90 connecting the said main tank with the said tank 89, an inverted bell 93 in said tank 89, a vertical partition 95 having an aperture or orifice 96 near its lower edge, at the distance specified, pipes 129 and 130 passing into the said tank and entering the chambers 101 and 102, formed in the said bell, a vertical rod secured to the top of the bell 93, and an adjustable collar secured on said rod and adapted to be engaged by the forked arm on bell or gasometer 25, substantially as set forth. 5th. In an apparatus for generating acetylene gas, the combination with the main tank and bell or gasometer 25, a bracket or arm 75 secured to the top of the said bell or gasometer, a vertical rod 78 held adjustable in the said arm, of the water tank 45, a ball cock 47 supplying said tank, a ball 48 and a connection between the said water tank and the main tank, the said ball 48 being operated or depressed by the rod 78, substantially as set forth. 6th. In an apparatus for generating acetylene gas, the combination with the main tank, having a bell or gasometer 25, in said main tank, as described, a bracket 75 secured on said bell 25, vertical rods 78 and 81, in said bracket made adjustable therein, a water supply tank 45, secured to the said main tank and connected therewith, of a water tank 54, secured to the said main tank below the tank 45, a supply pipe 50, from the tank 45, a ball cock 55, and ball 56, the said ball being operated or depressed by the rod 81, the perforated end of a pipe supplying the sprinkler in the generators, secured to the ball 56, and an overflow 53, from the said tank 54, substantially as set forth. 7th. In an apparatus for generating acetylene gas, the combination with the tank 54, having supply pipe operated with a ball cock, the ball 56 of which is adapted to be depressed by the falling of the gasometer, of the perforated end of a pipe 57, secured to the ball 56, having an open end 59, and a series of perforations 58, being larger at the top and

diminishing as they descend, a flexible tube 60, secured to the said perforated end, vertical pipes 62 63, open at the top, the said flexible tube being connected to this tube, a T-coupling at the lower end of this pipe, two vertical pipes 65, running up from this T-coupling, adapted to be connected with the sprinklers 66, and valves 69, interposed in said pipes 65, substantially as set forth. 8th. In an apparatus for generating acetylene gas, the combination with a tube having perforations on its end, those at the uppper part being larger than those below, of a sprinkling pipe connected with the said upper end, and having a series of small perforations at its lower side and a series of nipples at either side of the said perforations, of larger bore, for the purposes described and set forth. 9th. A sprinkling pipe in an acetylene gas generator, having perforations in its lower edge and apertures above the level of the said perforations to admit the pressure of gas in the said generator to the said sprinkling pipe, substantially as set forth. 10th. In an apparatus for generating acetylene gas, the combination with a tank containing generators and condensing coil, of a water supply tank adapted to automatically supply a continuous stream of water to the said tank containing the generators and condensor, substantially by the means described when the gas is being generated, as set forth. 11th. In an apparatus for generating acetylene gas, the combination with the main tank, of the generator casings 30, the portions of the said casings passing through the said tank being entirely submerged in water, substantially as set forth. 12th. In an apparatus for generating acetylene gas, the combination with the generator casings 30, having ledges or brackets on the sides thereof, of the receptacle 38, constructed of open material as woven wire, resting and adapted to slide on the said ledges or brackets, a rod 36 secured to the front end of the said receptacle and passing through the front of the said casing, and a a stuffing box 37, in the said casing through which the said rod passes, substantially as set forth. 13th. In an apparatus for generating acetylene gas, the combination with the generator casing 30, of the hopper 41, communicating with the said casing, a feed door located near the top of the said hopper and an escape pipe connected to the top of the said hoppers, substantially as set forth. 14th. In an apparatus for generating acetylene gas, the combination with the hopper 41, of the casing 30, an inclined roof on said casing, the ridge or highest point of said roof running centrally and longitudinally of said casing, a sprinkling pipe running under the highest part of said roof, a receptacle adapted to be shaken resting on ledges or brackets, a block or step 43, at the rear of said receptacle, a door above the level of the said receptacle in the front of the said casing, a door below the said receptacle in the front of the said casing and a pipe 145, from the casing below the bottom of the receptacle and communicating with the drain, the said pipe being provided with a liquid seal, substantially as set forth. 15th. In an apparatus for generating acetylene gas, the combination with the main tank divided into two chambers by the false bottom 22, of the overflow pipe 110, connecting the top of the upper chamber 24 with the bottom of the lower one 23, a drain pipe 111, from the lower chamber to the drain, a trap 113, adapted to keep a certain level of water in the said lower chamber, and a cock interposed between the legs of the said trap, substantially as set forth. 16th. In an apparatus for generating acetylene gas, the combination with the pipe 126, supplying the service pipes, of the drip pipe 128, communicating with the chamber 23, substantially as set forth. 17th. In an apparatus for generating acetylene gas, the combination with the main tank of bell or gasometer 25, the top of said gasometer being of a depressed conical shape, guide rods 82, secured to the said tank, and forked arms secured to the top of said gasometer 25, and adapted to slide on the said vertical guide rods 82, substantially as set forth.

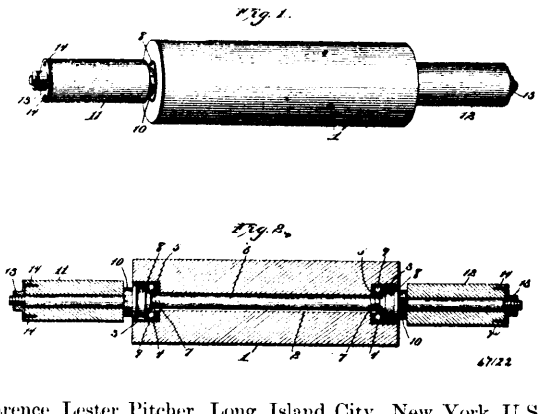
No. 67,121. Feeder or Stoker for Steam Boiler Furnaces.
(*Alimentateur pour fournaises de chaudières à vapeur.*)



Daniel Bradford Devore, Washington, District of Columbia, U.S.A., 24th April, 1900; 6 years. (Filed 23rd March, 1900.)

Claim.—1st. In a furnace for steam boilers and other like purposes, the combination of water tubes situated transversely in said furnace and connecting with the water legs of a fire box, and broken terra cotta piled between said tubes forming a transverse wall across said fire box for the passage of pulverized coal, and means for feeding said coal, substantially as described. 2nd. In a furnace for steam boilers and other like purposes, the combination of water tubes situated transversely in said furnace, and connecting with the water legs of a fire box, a water back located centrally between said tubes, and terra cotta surrounding said water back for the passage of atomized coal through the medium of an air blast, substantially as described. 3rd. The herein described method of forcing fine or powdered coal through a terra cotta pile or its equivalent in a furnace by means of an air blast or superheated steam, as described and specified. 4th. The herein described method or process of forcing pulverized coal through the interstices of broken terra cotta or its equivalent, piled transversely in a furnace or fire box between water tubes, by means of an air blast or superheated steam, as specified. 5th. The herein described process or method of utilizing a common fire for heating a pile of terra cotta arranged over a water back and held in position by transverse water tubes, and adapted to transform pulverized coal into a gaseous condition through the medium of an air blast for the purpose as described. 6th. The herein described process of utilizing an automatic feeding device for a fire for heating a transverse pile of terra cotta or its equivalent arranged between water tubes and adapted to volatilize fine coal or its equivalent through the action of an air or superheated steam blast, substantially as described. 7th. In a furnace for steam boilers and other like purposes, a stoker pivotally secured before a fire door and adapted to feed fuel to a furnace in combination with a terra cotta pile arranged between water tubes, and an air blast for feeding pulverized coal into and through said terra cotta pile, substantially as described. 8th. In a furnace for steam boilers and other like purposes, the combination of a fire box provided with an ordinary fire, a terra cotta wall or pile extending across said fire box, forming two compartments, a hollow box or chamber under said fire box, a fuel supply pipe communicating with said chamber, and an air pipe in an atomized coal reservoir for forcing said coal into the terra cotta pile, substantially as shown and described.

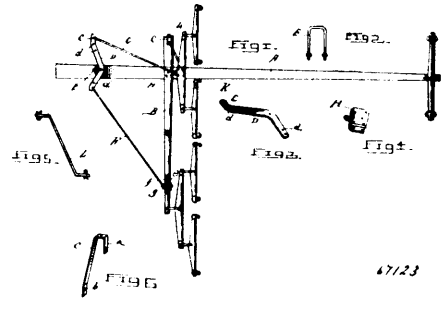
No. 67,122. Rolling Pin. (*Rouleau.*)



Clarence Lester Pitcher, Long Island City, New York, U.S.A., 24th April, 1900; 6 years. (Filed 6th November, 1899.)

Claim.—1st. A rolling pin, comprising a roller formed with a central longitudinal bore, and end recesses concentric with said bore, anti-friction rollers supported within said recesses, a shaft extending through the roller and projecting from the ends thereof, and handles fixed to the ends of the shaft. 2nd. A rolling pin, comprising a roller formed with a central longitudinal bore, and end recesses concentric with said bore, cup bearings secured within the recesses, a shaft extending through the roller, bearing cones on said shaft, anti-friction rollers supported within the recess and between the cup bearings and cones, handles on the ends of the shaft, and caps for securing the handles to the shaft.

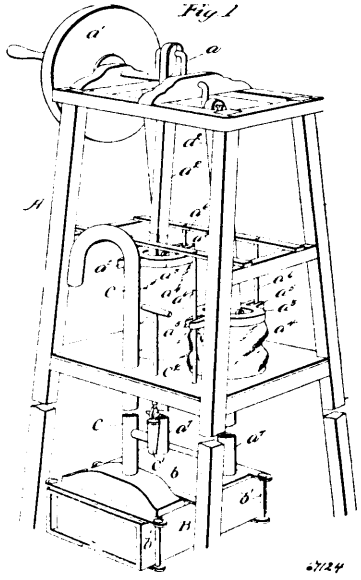
No. 67,123. Draft Equalizer. (*Régulateur du tirage.*)



John W. Miller, Bismarck, Illinois, U.S.A., 24th April, 1900; 6 years. (Filed 5th February, 1900.)

Claim.—1st. In a draft equalizer, the combination with a tongue or pole, of a lever pivoted to the pole near one end, a brace iron secured to the short arm of said lever and to the pivot pin or bolt thereof, a bow-shaped sway bar pivoted to the pole in rear of said lever, a rod connecting one end of said sway bar to the long end of said lever, a doubletree arranged in front of said lever, a link connecting the short arm of said lever to the centre of said doubletree, and a rod connecting one end of the sway bar and said doubletree. 2nd. In a draft equalizer, the combination with a tongue or pole, of a lever pivoted to the pole or tongue near one of its ends and having a series of vertical and transverse perforations formed in its long arm, a brace having one end bent over the short arm of said lever and its other end secured by the pivot pin or bolt of the lever, a bow-shaped sway bar pivoted to the pole or tongue in rear of the lever, a doubletree arranged in front of the lever, a link connecting the doubletree and the short end of the lever, a rod connecting the doubletree and one end of the sway bar, and a rod connecting the other end of the sway bar and the long arm of the lever.

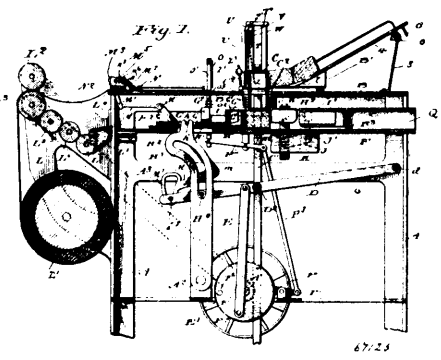
No. 67,124. Water Forcing Machine. (*Pompe.*)



Benjamin Eastman, Carsonby, Ontario, Canada, 24th April, 1900; 6 years. (Filed 29th September, 1899.)

Claim.—1st. A water forcing apparatus comprising the non-communicating chambers having individual valved inlets, a discharge chamber common to both of said chambers and having valved communication therewith, alternately operable air forcing mechanisms communicating individually with the respective inlet chambers, a single eduction pipe communicating at all times with the common discharge chamber, and means for alternately operating the air forcing mechanisms to expel the liquid contents of the liquid chambers alternately into the common discharge chamber, substantially as described. 2nd. In a liquid forcing apparatus, a valve box divided interiorly into the non-communicating inlet chambers and the common discharge chamber having individual valved communication with said inlet chambers, each inlet chamber having a valve controlled supply thereto, combined with separate air forcing mechanisms connected individually to the inlet chambers of the valve box, means for alternately operating said air forcing mechanisms, and a single education pipe communicating at all times with the common discharge chamber of the valve box, substantially as described. 3rd In a liquid forcing apparatus, the combination of a valve box divided interiorly into two non-communicating inlet chambers and the common discharge chamber having separate valved communication with said inlet chambers, each inlet chamber having a valve controlled supply thereto, the separate forcing bellows having pipe connections with the respective inlet chambers of the valve box, a crank shaft linked to said forcing bellows for positively and alternately operating the latter, and an eduction pipe communicating with the discharge chamber of the valve box, substantially as described. 4th. An apparatus for forcing water comprising a suitable frame, a power driven crank shaft journalled in the upper portion of said frame, crank rods connecting said crank shaft with two air forcing bellows, a valve box located in the reservoir, air pipes connecting said valve box with said bellows, a water pipe supported by said frame and communicating with said valve box, valved pa sages formed in said valve box, affording communication between said air pipes and said water pipe, and valved passages formed in said valve box leading to the exterior thereof, su bstanti ally as described.

No. 67,125. Wrapping Machine. (*Machine à envelopper.*)



John H. Fehnlee, Pittsburg, Pennsylvania, U.S.A., 24th April, 1900; 6 years. (Filed 30th March, 1899.)

Claim. 1st. A machine for wrapping articles, comprising in combination with the frame and top thereof, a feeding chute, the plunger, the table on which the articles are wrapped, the longitudinally movable plates, one of which is provided with folding blades, and the second one designed to assist in holding the article while being partially wrapped, to advance the article being wrapped and actuated by the first-mentioned plate, the trough to receive the articles when wrapped, the upper surface of said table forming the bottom of the receiving trough, as shown and described. 2nd. A machine for wrapping articles, comprising in combination with the frame, the chute, plunger and table on which the articles are wrapped, the horizontally disposed and longitudinally movable plates on said table top, one of said plates provided with side and end folding blades, and the second one designed to assist in holding the article while being partially wrapped, and to advance the article, vertically operating end folding blades, and connection between the latter and one of said longitudinally movable plates, and means for operating plates and plunger, as set forth. 3rd. In a wrapping machine, the said combination with the table, feeding trough and plunger, horizontally sliding plates, a spring flap secured to one of said plates and designed to assist in holding the partially wrapped article while being wrapped, the other plate having folding blades extending over the top and ends of said plate carrying the spring flap, and means for operating the plates, as set forth. 4th. In a wrapping machine, the table, the feeding chute, the plunger, the horizontally sliding angled plates mounted on the folding table, the upper one of said sliding plates carrying vertically and horizontally disposed folding blades, the pivoted operating lever for reciprocating said plate carrying the folding blades, pivoted hooked levers carried by said upper sliding plate, the vertically movable bars and folding blades carried thereby, the angled levers pivoted to the framework, and having pivotal connection with said bars and lugs carried at the other ends of said angle levers, adapted to be engaged by the hooked ends of said levers, whereby as the sliding folding blade carrying plate is reciprocated, said vertically operating blades will be raised and lowered, as set forth. 5th. In a wrapping machine, the table, the feeding chute, the plunger, the sliding angled plates, one of which is provided with folding blades as described, the lever having pivotal connection at its lower end with the frame, its upper end pivoted to the upper one of the two sliding plates, the hooked levers pivoted to the latter, the vertically movable bars and folding blades carried thereby, the angle levers pivoted at their angles to the frame, their lower ends having a loose pivotal connection with said bars, and lugs at their opposite ends, said lugs being adapted to be engaged by the hooked levers, to raise said vertically operating folding blades as the plates st rt forward, and when said blades reach their highest limit, the hooks in said levers being designed to disengage with the lugs on the angle levers and slide forward on said lugs, and in the return movement of the sliding plates to their starting position, said hooks being designed to engage with the lugs and draw the vertically operating folding blades down to their starting position, combined as set forth. 6th. In a wrapping machine, the combination with the table, the plunger, feeding chute, and horizontally sliding plates, one on top of the other, the upper of which carries folding blades, of the lever pivoted at its lower end to the frame of the machine, its upper end curved and having an elongated slot conforming to the upper curved end, a projecting portion at the upper end of said lever having pivotal connection with the plate carrying the folding blades, the operating lever and pitman connection with the driving pulley, and a rod carried by said lever to which the pitman is connected, said rod adapted to travel in the curved slot in the lever, having pivotal connection with the sliding plate, as shown and described. 7th. In a wrapping machine, the combination with the frame, the plunger, and means for operating the same, the horizontally sliding angled plates, one superimposed on the other, a lever for actuating the upper of said plates, the lower plate having a stop at its rear end against which the upper plate is adapted to strike to return the lower plate to its starting position, and a stop to limit

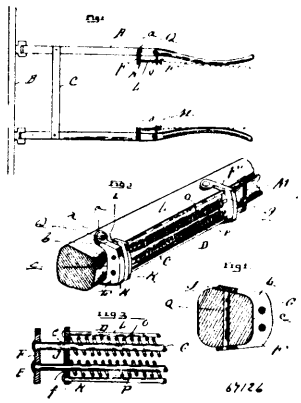
the outward throw of said under plate, and means for operating the plates, as shown and described. 8th. In a wrapping machine, the combination with the frame and top thereof, the plate working thereon, a rod N^1, mounted in lugs on said plate, a shoe carried by said rod, a second rod M^5, notched levers M^3, carried on the latter, and means for operating said levers, and members mounted at the ends of said rod N^1, and having each a tooth designed to engage in said notches, whereby the shoe may be held under pressure against wrapping paper on the table top and fed forward, as shown and described. 9th. In a wrapping machine, the combination with the frame and top thereof, of a sliding plate on said top, a shoe carried by the plate, said shoe being designed to be depressed against the table top to advance a wrapping paper carried thereon, and mechanism for operating the shoe and feeding the plate carrying the shoe forward, a cutting knife, and means for operating the same, and mechanism for causing the shoe to tarry at the limit of its inward throw while the knife severs the wrapping paper, as shown and described. 10th. In a wrapping machine, the combination with the table top, the sliding plate thereon, the angle lever pivoted to the side of the frame, the shoe and notched levers pivoted on said plate, said notch being engaged by a tooth on the arm of the shoe, to depress the shoe, the link connection between said notched and angled lever, and means for tilting the angle lever, whereby the shoe is depressed and fed forward, as shown and described. 11th. In combination with the frame of a folding machine, the angled lever pivoted to the frame, the shoe and connection between the same and said angled lever as shown, the lower end of said angled lever having an elongated slot as shown and described, and the pivoted lever carrying a rod adapted to engage in said elongated slot, whereby as the said lever carrying the rod engaging in said slot is raised or lowered, the shoe will be depressed on the wrapping paper and fed forward, and allow the shoe to pause a moment while the wrapper is being cut, and then be returned to its starting position as the angle lever is tilted back, as shown and described. 12th. In combination with the frame of a folding machine and top therefor, the angle lever pivoted to the side of the frame and provided with an elongated aperture at its lower end, the pivoted lever D, a rod carried thereby and engaging in said aperture, a sliding plate on the top of the frame, a feeding shoe and notched lever pivoted to said plate, said notched lever having a connection with the angle lever, a tooth on the arm of said shoe, which tooth engages in a notch in the lever carried by said plate, whereby as the apertured angle lever is tilted up said shoe will be depressed against the top and in the tilting down of said lever the shoe will be raised from contact with the top and returned to its starting position, and means for operating the mechanism. 13th. In a wrapping machine, the combination with the folding table and means for folding the flaps as described, of the receiving trough having vertical slots in each side wall, the inner wall of each slot being curved as described and disposed diagonally through said wall in which slot the end flap is designed to engage and be folded against the end of the article, as shown and described. 14th. In a wrapping machine, the combination with the table top, the feeding plate sliding in guideways in said top, a rod carried by said plate, a paper holding shoe mounted thereon, the arms of said shoe having lugs, the angle levers pivoted to said plate and engaging with said lugs and connections, whereby said shoe may be tilted down and the plate carrying the same advanced, as shown and described. 15th. In a wrapping machine, the combination with the frame the table top therefor, the angle plate secured to the underside thereof adjacent to the article feeding aperture therein, the spring flap D^3 secured to the lower free edge of said angle plate designed to hold the flaps of the wrapper, while the article being wrapped is fed forward to an exit trough, as shown and described. 16th. In a wrapping machine, the combination with the frame, the folding blades and means as described for operating same, of the trough for receiving the wrapped articles, said trough being enclosed on its four sides, with open end to receive the paritally wrapped article, each side wall adjacent to its open end being slotted up from its lower edge longitudinally and diagonally through the wall, and opening into the interior of the trough, the lower edge of the portion of the side between the slot and the interior of the trough being cut away to allow the last flap of the wrapper to pass thereunder, and said portion tapering on its outer face from the upper margin of its slot to a sharp edge at its lower end, as set forth. 17th. In combination with the feeding chute, plunger and means for operating the same, tilting shelves mounted in the apertures at the end of said trough, and designed to receive the articles and hold the same suspended until depressed by the plunger, and the outwardly extended arms with weighted ends connected to said shelves, which arms are designed to be thrown to their highest limit under the impact of the plunger striking the article against said shelves thus allowing the latter to tilt down without their edges cutting into the sides of the article, said shelves adapted to return to their normal positions after the article has passed below the same, as set forth. 18th. A feeding trough for wrapping machines, comprising in combination with the walls of the trough, the inclined rotatable bars disposed lengthwise in the trough, and forming a bottom therefor, as set forth. 19th. In combination with the feeding chute of a wrapping machine, the bars 7 having conically pointed ends, the rotatable rods having conical-shaped depressions in their lower ends adapted to have bearings on said conical points 7, and handles on said bars for rotating the same, as set forth. 20th. In combination with the vertically movable plunger and the feeding chute of a wrapping machine, a plate and lugs carried thereby, which latter are normally held in the path of the plunger and thrown out of said path as the article to be wrapped slides down the chute and against said plate, and means for operating the plunger, as set forth. 21st. In combination with the frame of a wrapping machine, the plunger working thereon and the feeding chute as described, a swinging plate mounted in the path of the articles as they slide down by gravity to a position to be depressed by the plunger, said plate normally presenting a stop to prevent the plunger being depressed until the plate is swung back out of the path of said plunger, as shown and described. 22nd. The combination with the frame of a wrapping machine, the feeding chute, the plunger and means for operating the same, of an automatically operated swinging stop plate having lugs thereon, which are normally disposed in the path of the plunger and adapted to hold the same from being depressed and designed to be swung out of engagement with said plunger, as an article to be wrapped slides down into a position to be depressed by the plunger to receive its wrapper, as shown and described. 23rd. The combination with a wrapping machine, the feeding trough, the plunger and means for operating the same, a frame provided with apertures, and swinging plate supported thereon, lugs carried by the arms of said plate, said lugs extending through apertures with their free ends in the path of the plunger, and adapted to be thrown out of the path of the plunger, as the plate is swung laterally, as shown and described. 24th. In combination with the table of a wrapping machine, the plunger, the feeding chute, the wrapper feeding shoe and plate carrying same, the wrapper supporting plate, the sliding strips carrying the latter, the upper faces of said strips being flush with the table top and means for reciprocating said strips as the wrapper feeding shoe is advanced and returned to its starting position, as set forth. 25th. In combination with a wrapping machine, the table top, the shoe carrying plate mounted thereon, the rod carried by said plate, the dogs pivoted on said rod, the sliding strips mounted in the table top, the wrapper supporting plate carried thereby, and levers pivoted to said sliding strips and to the table top, which levers are adapted to be tripped by said dogs to advance the wrapper supporting plate, and means for returning said plate, as set forth. 26th. In combination with the top of a wrapping machine, the horizontally movable shoe carrying plate, the rod carried by upright projections on said plate, the dogs pivoted on the ends of said rod, the wrapper supporting plate, the sliding strips supporting the latter, the trip levers pivoted to the table top, with their inner ends in the path of said dogs, the links pivoted to said sliding strips, and to the outer ends of said trip levers, and the lug on the sliding strips against which the free ends of the dogs engage to return the wrapper supporting plate to its starting position, as set forth. 27th. In combination with the sides of the trough designed to receive the partially wrapped articles, in a machine of the character described, sliding plates mounted in said sides, folding blades secured to said plates and means for throwing the latter forward to fold the end flaps, as set forth. 28th. In combination with the sides of the trough designed to receive the partially wrapped article in a wrapping machine of the character described, slides mounted in recesses in said side walls, laterally flaring folding blades mounted in the ends of said slides, a reciprocating arm, and lugs on said blades disposed in the path of said arm, whereby as the latter is actuated, the blades are driven forward, as shown and described. 29th. In combination with the trough designed to receive partially wrapped articles, in a machine of the character described, the slides working in dovetailed recesses in the walls of said trough, the folding blades secured to the ends of said slides, the spring flaps fastened to the inner faces of said blades and extending back into the trough, the lugs on the outer faces of said blades, the hooked arms I and means for operating same, and the bars I^2 secured to the hooked ends of said arms, and designed to strike against the lugs on the folding blades, as set forth.

No. 67,126. Draft Connection. *(Connection de tirage.)*

James D. Hubbell, Brighton, Michigan, U.S.A., 24th April, 1900; 6 years. (Filed 5th February, 1900.)

Claim.—1st. The combination of a thill and a yielding draft connection attached thereto, comprising a stationary frame, a pair of spaced transverse lugs extending laterally from each end of the frame and adapted to engage upon opposite sides of the thill, a bolt extending through each pair of lugs and the inclosed portion of the thill, a movable frame having a sliding engagement with the stationary frame, one end of said movable frame being formed into a continuous loop projecting normally beyond the stationary frame, and springs arranged intermediate the two frames, as and for the purpose described. 2nd. The combination of a thill, and a sliding draft connection attached thereto, comprising a stationary frame consisting of oppositely arranged heads, apertured lugs projecting laterally and at some distance from the ends of the heads, the spaced lugs being adapted to engage upon opposite sides of the thill, bolts extending through the apertured lugs and through the thills, spaced parallel rods centrally connecting the heads, a movable frame comprising an apertured head slidingly engaging the rods of the stationary frame, side bars secured to the apertured head and projecting through one of the heads of the stationary frame, connections for the ends of the rods at a point beyond the latter frame, and springs upon the rods of the stationary frame, substantially as described.

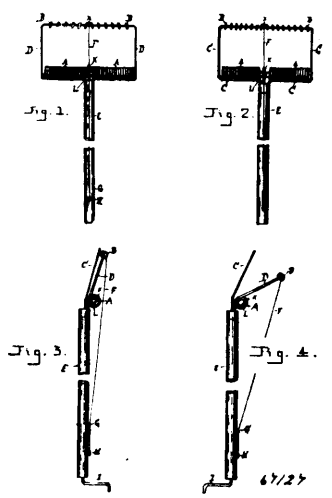
3rd. The combination of a thill, and a yielding draft connection attached to the inner side of the thill, comprising a stationary frame



substantially rectangular in configuration consisting of oppositely arranged heads, apertured lugs flush with and projecting laterally some distance from the ends of the heads, the spaced lugs being adapted to engage upon opposite sides of the thill and the side of the head from which the lugs project being curved to conform to the external configuration of the inner side of the thill, bolts extending through the apertured lugs and the said thill, spaced parallel rods or bars centrally connecting the heads, a movable frame comprising an apertured head slidingly engaging the rods of the sta ionary frame, parallel side bars connected to the said apertured head and extending through one of the heads of the stationary frame, a loop connecting the ends of the side bars at a point beyond the stationary frame, and coiled springs upon the bars of the latter frame, having their ends bearing against the head of the movable frame, and one of the heads of the stationary frame.

No. 67,127. Window Washer and Mop.

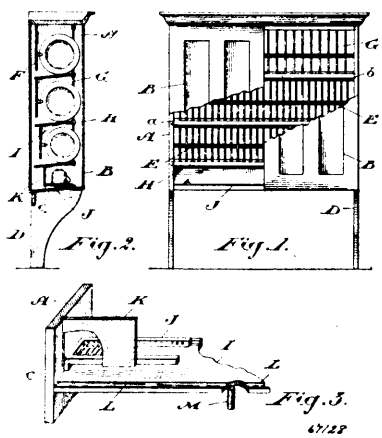
(Appareil à laver les fenêtres et guipon.)



Austin Waymire, Dayton, Ohio, U.S.A., 24th April, 1900; 6 years (Filed 3rd April, 1900.)

Claim.—1st. In a device of the class described, the combination of a fixed jaw, of rectangular form, secured to the end of a handle, a movable jaw, a wire connected to said movable jaw and extending along the handle and provided with coils prings for securely pressing the movable jaw against the fixed jaw, a metal core inclosed by the coil spring, a pin inserted in the core between the coil springs, a wire coiled around the lip of the movable jaw, and a loop in centre of same to which the wire is connected, all as described and for the purposes specified. 2nd. The combination of the following elements, a fixed rectangular jaw, a movable jaw of about the same size, with coil springs and metal core, the lip of the movable jaw being wound with wire, both jaws being inserted in the end of a handle, all as described.

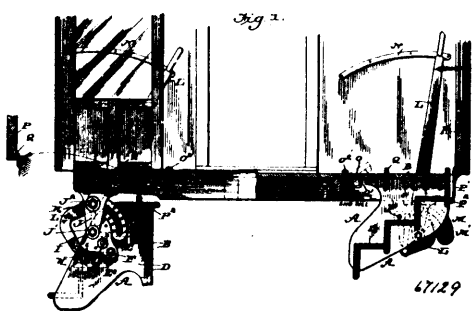
No. 67,128. Dish Drier. *(Sechoir à vaisclle.)*



Henry S. Weller and Frederick S. Weller, Toronto, Ontario, Canada, 24th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. A dish drier comprising a cabinet provided with one or more racks for cups, plates and saucers, and a rearwardly inclined draining board below each rack, substantially as and for the purpose specified. 2nd. A dish drier comprising a cabinet provided with one or more racks for plates and saucers, a grating for cups, and a rearwardly inclined draining board beneath each rack and the grating, substantially as and for the purpose specified. 3rd. As a dish drier, a cabinet provided with one or more racks, each comprising a transverse bar having notches therein to receive the edges of the plates and saucers, a front frame composed of transverse bars connected by vertical wooden spindles set suitable distance apart, and an inclined draining board, substantially as and for the purpose specified. 4th. A dish drier comprising a cabinet provided with one or more racks for plates and saucers, a grating for cups, a rearwardly inclined draining board beneath each rack and the grating, the upper boards draining on to the lower which is provided with gutters inclined towards the centre, and a spout with which the gutters communicate, substantially as and for the purpose specified. 5th. As a dish drier, a cabinet provided with a plurality of notched transverse bars, a frame comprising transverse bars removably connected with the sides of the cabinet and connected by vertical spindles, and transverse draining boards inclined backwards, substantially as and for the purpose specified.

No. 67,129. Car Step. (*Marche de chars.*)

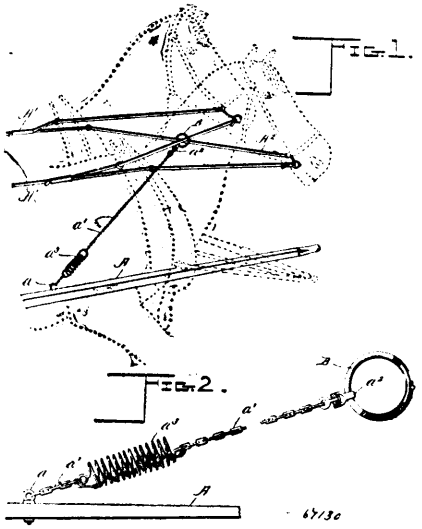


Nelson Gray, Louisville, Kentucky, U.S.A., 24th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. The combination with the main platform section of the swinging platform section, and the tilting platform section tilting vertically at its outer edge and arranged at such edge to lock the swinging platform section in position when such section is adjusted to form an extension of the main platform, substantially as set forth. 2nd. The combination of the steps, the main platform, the swinging platform section, swinging inwardly from the position where it forms an extension of the main platform, the tilting platform section arranged between the main platform and the swinging section, and the lever for operating said tilting section, substantially as set forth. 3rd. A folding car step section which is pivotally supported and is provided with a platform section arranged approximately at right angles to the treads of the steps and adapted to form an extension of the platform when the steps are adjusted out of position for use, substantially as set forth. 4th. A folding car

step section, combined with the vestibule door arranged to fasten or lock the step section in place when such section is adjusted into position for use, substantially as set forth. 5th. A folding car step section which is pivotally supported, combined with the vestibule door arranged to lock the step section in place when such section is adjusted to position for use, and means for bracing the door in position to so stop the lock section, substantially as set forth. 5th. The combination of the step section pivotally supported, the hangers to which said section is pivoted, the brace plates secured to said section and forming the pivotal connection thereof with the hangers, and the lever pivoted to one of the hangers and connected with one of the brace plates, substantially as set forth. 7th. The combination of the step section provided with a grooved stop plate, the hanger to which said section is pivoted, the lever for operating the step section and the pin on which said lever is pivoted, said pin being secured to the hanger and provided with a projecting portion which enters the groove of the stop plate on the step section, substantially as set forth. 8th. The combination of the step section pivotally supported whereby it may be inverted, the vestibule door provided near its swinging edge with a depending portion arranged to bear upon the step section and lock it in position for use, and a latch by which to embrace the vestibule door in position to lock the step section in position for use, substantially as set forth. 9th. The combination of the step section provided with a platform section movable with the step and arranged to form an extension of the fixed platform section when the steps are adjusted out of position for use, the brace plates fixed to said step section, the stop plate fixed to such section and having a stop groove or channel, the hangers pivoted at their lower ends to the brace plates of the step section, the lever pivoted to one of such hangers and having its pivot pin extended to enter the stop plate of the step section, and the link connecting the operating lever with one of the brace plates of the step section, substantially as set forth. 10th. A folding car step section which can be inverted and is provided on its under side with a platform section arranged to form an extension of the fixed platform when the step section is inverted, substantially as set forth. 11th. A folding car step section which is provided with steps, and below the same with a platform section movable whereby it may form an extension of the fixed platform in the folded position of the step section, substantially as set forth. 12th. A folding step section pivotally supported whereby it may be inverted and provided with a platform section fixed in relation to the steps of the folding section and movable therewith, whereby to form an extension of the platform in the folded position of the steps, substantially as set forth. 13th. A folding car step section pivotally supported whereby it may be turned or inverted, and means whereby such section may be inverted in adjusting the steps into and out of position for use, and the platform section carried by the step section and arranged to form an extension of the car platform in the inverted position of the step section, substantially as set forth.

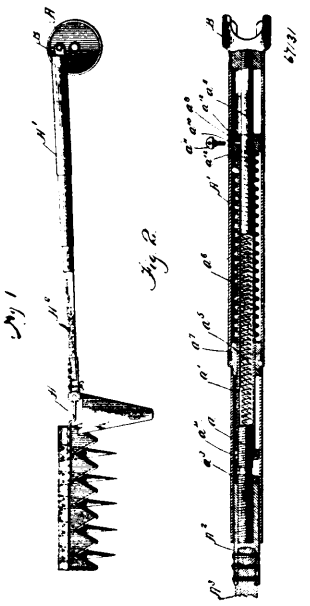
No. 67,130. Harness. *(Harnais.)*



Richard Barnes, Lauder, Manitoba, Canada, 24th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. A safety rein guard for double teams, comprising a ring for receiving the cross reins, the latter being crossed within the ring, and a connection between the ring and the wagon pole, said connection being of less length than the distance to the front end of the pole, whereby the reins will be prevented from passing beneath the end of the pole, substantially as described. 2nd. A safety rein guard for double teams, comprising a ring for receiving the cross reins, the latter being crossed within the ring, and a yielding connection between the ring and the wagon pole, said yielding connection at its greatest length being of less length than the distance to the front end of the pole, whereby the reins will be prevented from passing beneath the end of the pole, substantially as described. 3rd. A safety rein guard for double teams, comprising a ring for receiving the cross reins, the latter being crossed within the ring, a chain connecting the said ring to the wagon pole, and a coiled spring secured to the links of said chain, the slack of the chain between said links being equal to the length of the spring when stretched to its greatest length, substantially as described.

No. 67,131. Mowing Machine. *(Faucheuse.)*



Charles Houzel, Alma, Assiniboia, North-west Territories, Canaada, 24th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. A shaft for the cutter bar of a mowing machine, comprising a tubular rod, a bar pivotally connected to the cutter bar and adapted to have a reciprocating movement within said tubular rod, a tube sleeved within said tubular rod and adjustably connected to said bar, and a spring sleeved within said tube, whereby the tube is permitted to yield under excessive pressure, substantially as described. 2nd. A shaft for the cutter bar of a mowing machine, comprising a tubular rod, a bar pivotally connected to the cutter bar and adapted to have a reciprocating movement within said tubular rod, a tube sleeved within said tubular rod and adjustably connected to said bar, a spring sleeved within said tube, and a spring sleeved on the outside of said tube and adapted to bear at one end to a fixed support and at the other end to a nut fixed on said tube, whereby the tube is permitted to yield in either direction under excessive pressure, substantially as described. 3rd. A shaft for the cutter bar of a mowing machine, comprising a tubular rod, a bar pivotally connected to the cutter bar and adapted to have a reciprocating movement within said tubular rod, a turn buckle threaded at one end in the end of said bar, a tube sleeved within said tubular rod and threaded to the other end of said turn buckle, a rod fixed to the head piece of said shaft and sleeved within the said tube, a spring arranged within said tube and bearing against the turn buckle at one end and the said rod at the other end, and a spring sleeved exteriorly upon said tube and bearing at one end against a fixed support and at the other end against a nut threaded on the end of said tube, substantially as described.

No. 67,132. Non-refillable Bottle.
(Bouteille non récmplisable.)

John Edward Laidlaw, Vancouver, British Columbia, Canada, 24th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. A bottle neck having a diaphragm, with a port on one side some distance from its mouth, in combination with a packing disc 13 lying on said diaphgram, and a hole through such disc co-inciding with the port in the diaphragm, a stopper lying on the packing with a port on its opposite side to the port in the diaphragm but susceptable of being aligned therewith, a retaining ring lying in a groove in said stopper and a like groove in the bottle neck, a rack and pawl mechanism allowing the stopper to be turned until the port in the diaphragm are brought in alignment, and locking said

stopper in scuh position, and a detachable handle on the upper end of said stopper, substantially as specified. 2nd. In combination with

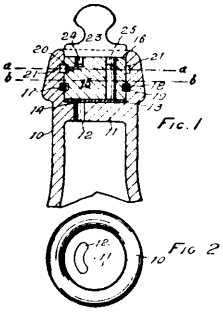


FIG. 1.

FIG. 2.

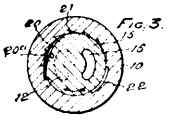


FIG. 3.

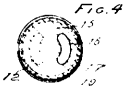


FIG. 4.

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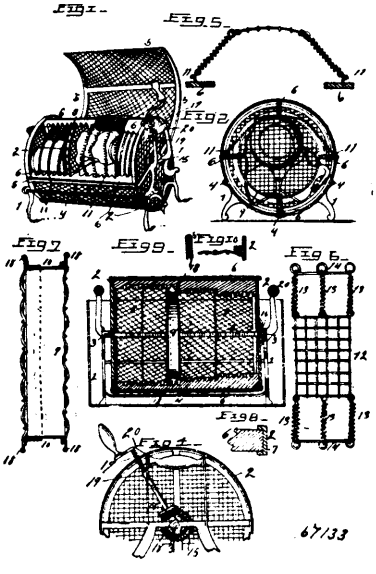
a bottle neck having a diaphragm with a port on one side, a suitable packing over such diaphragm with an opening the rein corresponding with the opening in same, a valve stopper 15 held down upon the packing by a retaining ring 19, a port 16 in the stopper, a rack and pawl mechanism for allowing the stopper to turn but one way and locking it when the port in the stopper and the port in the diaphragm are aligned, and a detachable handle for turning the stopper, as specified.

No. 67,133. Dish Washer. *(Laveuse de vaisselle.)*



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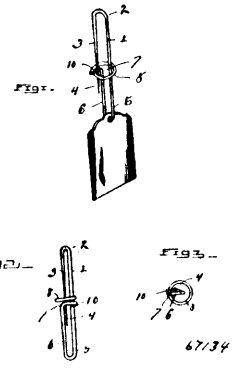
Charlotte H. Sterling, Gambier, Ohio, U.S.A., 24th April, 1900; 6 years. (Filed 9th April, 1900.)

Claim.—1st. In a dish cleaner, and in combination with the rotatable washing cylinder, and means for holding articles of table ware therein, an annular closure or compartment fixed transversely within the cylinder chamber and formed of extensible partitions each having a side telescoping rim, and means for retaining said extensible parts to form the closure. 2nd. In a cleaner for table ware and in combination with the rotatable washing cylinder, and means for holding the ware therein, an annular closure or compartment transversely fixed within the cylinder chamber, and formed of separable partitions having telescoping rims and circumferential rims projecting beyond the telescoping rims, and means for retaining the parts to form the closure. 3rd. In a cleaner for tableware, and in combination with the rotatable washing cylinder, and means for holding ware therein, an annular closure or compartment transversely fixed within the washing chamber, formed of separable positions each with a rim adapted to telescope within the diameter of the partitions, and toothed bars adapted to engage the annular projecting edges of the partitions outside of telescoping rims. 4th. In a dish washer and in combination with the rotatable washing cylinder, and changeable transverse partitions for the chamber thereof, of an elastic band or strap fixed to one side of the cylinder, adapted to span the chamber and be attached to the other side of the cylinder whereby to hold the articles firmly together within the washing chamber. 5th. In a dish washer, and in combination with the rotatable washing cylinder, and longitudinal bars having hooks along their length, of elastic grasps adapted to span the chamber, and hooks set along the length of the cylinder for engagement with the said spanning grasps. 6th. In a washer for tableware, and in combination with the rotatable washing cylinder, having hooks set longitudinally diametrically along its opposite sides, of grasps composed of an open wire section, coil springs, and a rod connecting the springs for engaging the hooks, to form grasps adapted to span the cylinder chamber. 7th. In a dish cleaner, and in combination with a rotatable washing cylinder, and means for holding articles of table ware therein, a removable closure composed of circular headpieces each having a face rim of less diameter than the heads adapted to telescope and toothed bars with the teeth of which the edges of the separate heads engage for holding them together. 9th. In a dish washer, and in combination with a rotatable washing cylinder, a closure formed of separate telescoping heads, each head having a rim projecting beyond the body of the closure and means in the cylinder for engaging the rim of each separate head to hold them together whereby the area of the closure may be varied to suit a greater or less number of articles.

No. 67,134. Tag Holder. *(Porte-etiquette.)*



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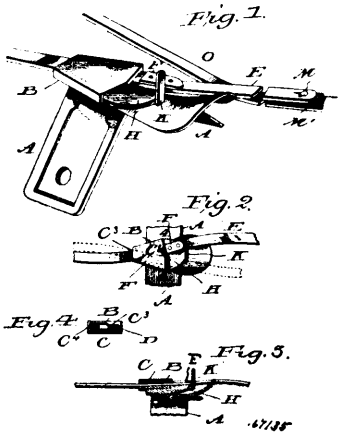
Robert F. Strobel, Cannelton, Indiana, U.S.A., 24th April, 1900; 6 years. (Filed 9th April, 1900.)

Claim.—A holder for attaching tags to dry goods, &c, made of spring wire in one piece, and comprising a substantially straight body portion, one terminal of which is recurved and pointed to form an impaling hook, the other terminal being recurved and extended to overlap the point of the hook and then bent at an angle and coiled to form a complete loop around the body portion and hook, the ends of the coil overlapping each other and passing twice outside of the impaling point of the hook, substantially as described.

No. 67,135. Unchecking Device. *(Appareil à enrêner.)*



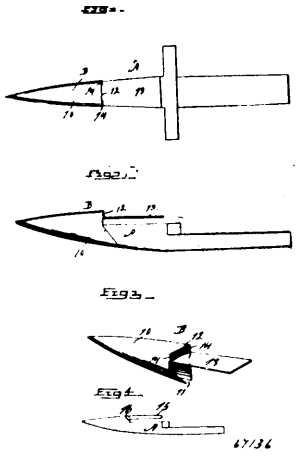
67/35

John Percy Hart, Cadwallader, Pennsylvania, U.S.A., 24th April, 1900; 6 years. Filed 6th April, 1900.)

Claim.—1st. In a checking and unchecking device for harnesses, a shell secured to the saddle, which shell has a contracted portion, a

check strap, a stop secured to said strap, an upturned portion of the shell forming a guide to hold the strap in a checked or unchecked relation, as set forth. 2nd. In a checking and unchecking device, the shell with contracted portion at one side of its longitudinal median line, the stop and strap carrying same, an extension of the shell outside of the opening therein, on which said strap rests, and an integral upturned guide at the end of the extension, as set forth. 3rd. In a checking and unchecking device, the flattened shell with edges tapering towards its forward end, a portion of the upper wall of the shell being thickened, thus forming a contracted space on one side of the longitudinal line of the shell, the strap, the stop thereon, and upturned guide designed to hold said strap in either the contracted or wide space in the shell, as shown and described.

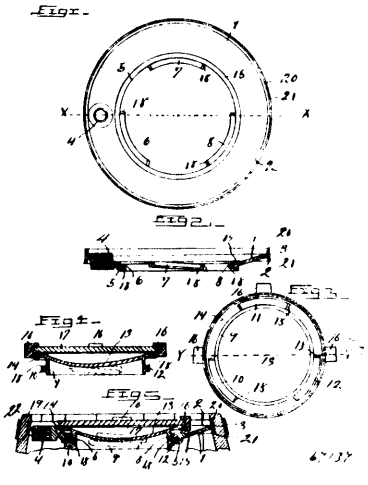
No. 67,136. Mower Guard. *(Garde de faucheuse.)*



John C. Prout, jr., Ogden, Utah, U.S.A., 24th April, 1900; 6 years. (Filed 5th April, 1900.)

Claim.—1st. A cap for a guard finger, consisting of a body portion conforming substantially to the shape of a guard finger, and a table projected rearward from the body portion, substantially as specified. 2nd. A cap for mower guards, consisting of a tapering spring body, and a table projected from the rear of the said body, as specified. 3rd. A cap for mower guards, consisting of a body portion constructed of a spring material, which body portion is tapered longitudinally and is provided with a longitudinal opening at the bottom, the upper rear portion of the body being formed with a vertical shoulder and a table which extends rearwardly from the said shoulder, as and for the purpose specified. 4th. A cap for mower guards consisting of a tapering body of spring material, open at the back and having a longitudinal opening at the bottom, the upper rear portion of the body being provided with a downwardly extending shoulder and a horizontal projection from the said shoulder, the projection and shoulder being integral portions of the said body, as specified.

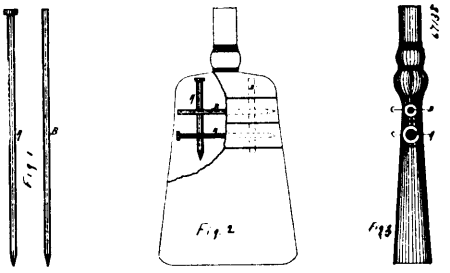
No. 67,137. Rotary Clamp Barrel Closure.
(Fermeture de baril rotatoire.)



James Fleming, Troy, New York, U.S.A., 24th April, 1900; 6 years. (Filed 4th April, 1900.)

Claim.—1st. In a rotary clamp barrel closure, the combination of a removable central portion having a depending cylindrical part provided with inclined clamping blocks, and a head portion proper having corresponding clamping blocks and a depressed flange-like part terminating inwardly in a circular rim about an open area, the said flange-like part being bounded outwardly by a tapering periphery, substantially as described. 2nd. In a rotary clamp barrel closure, the combination of a removable central portion having a depending cylindrical part provided with inclined clamping blocks, and a head portion proper having corresponding clamping blocks and a depressed flange-like part terminating inwardly in a circular rim about an open area, the said flange-like part being bounded outwardly by a tapering periphery, said periphery having a concave exterior face, substantially as described. 3rd. In a rotary clamp barrel closure, the combination of a removable central portion having a depending cylindrical part provided with inclined clamping blocks and suitable packing, and a head portion proper having corresponding clamping blocks and a depressed flange-like part terminating inwardly in a rim 5, possessing the flat bearing circle 15, for packing, the said flange-like part being bounded outwardly by a tapering periphery, said periphery having a concave exterior surface, substantially as described.

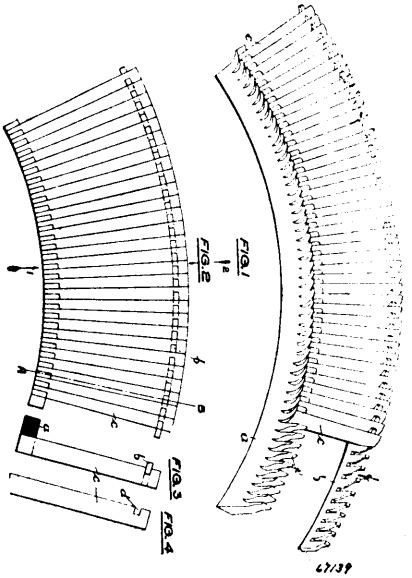
No. 67,138. Broom and Whisk. *(Balai et époussette.)*



John Hepner, Port Elgin, Ontario, Canada, 24th April, 1900; 6 years. (Filed 24th March, 1900.)

Claim.—The method of stiffening the brush end of brooms or whisks by the insertion of pins or rods of some stiff material such as metal or wood within the fibre or corn of the brooms or whisks, substantially as described.

No. 67,139. Steam Turbine. *(Turbine à vapeur.)*



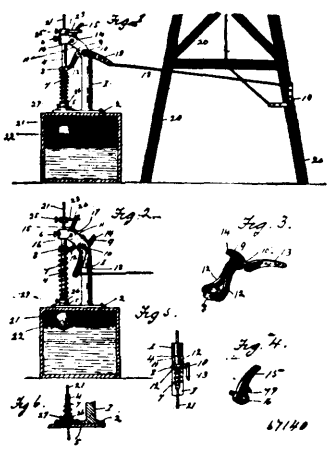
The Honourable Charles Algenon Parsons, George Gerald Stoney and Hugh Francis Fullagar, all of Newcastle-on-Tyne, Northumberland, England, 24th April, 1900; 6 years. (Filed 4th April, 1900.)

Claim.—1st. Assembling and binding together turbine blades by means of one or more metallic strips, which strips are provided with notches to receive the blades and are formed into rings, semi-circles or sectors, and the notches are closed up to grip the blades, substan-

tially as hereinbefore described. 2nd. Rings, semi-circles, or sectors of turbine blades, having a shroud or shrouds in which notches are cut, blades gripped in the notches by pressure of the teeth in the shroud or shrouds, the base shroud being considerably wider than the blades, and grooves in the rotating or fixed parts of the turbine within which the shrouds are held, substantially as hereinbefore described. 3rd. Mechanism for cutting metallic shrouds and closing in the teeth upon the blades, comprising a rotated table, an oscillated cutter, and a reciprocating closing punch, all substantially as hereinbefore described. 4th. The method of simultaneously cutting metallic shrouds, and closing in the teeth upon blades, so as to avoid creeping or irregular spacing of the blades, substantially as and for the purposes hereinbefore described and illustrated in the drawings.

No. 67,140. Windmill Regulator.

(*Régulateur de moulin a vent.*)

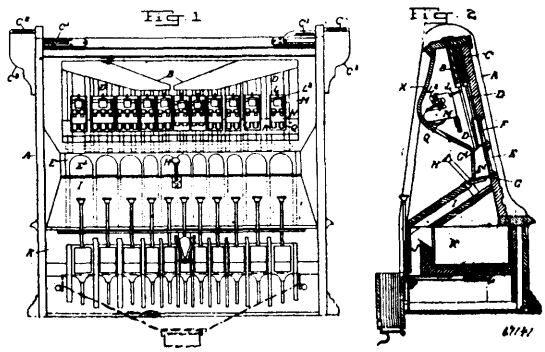


B. M. Totdahl, St. Olaf, Minnesota, U.S.A., 24th April, 1900; 6 years. (Filed 5th February, 1900.)

Claim.—1st. A windmill regulator comprising a support mounted on a tank or reservoir, a lever fulcrumed on the support, means for connecting the lever with the operating mechanism of a windmill, a spring arranged to be compressed by the lever when the device is set and adapted when the device is tripped to draw the windmill out of the wind, a trigger for setting the lever, and a float having a tripping device arranged to disengage the trigger from the lever, substantially as described. 2nd. A windmill regulator comprising a standard or support mounted on a reservoir, a shaft journalled on the standard or support, means for connecting the shaft with the operating mechanism of a windmill, a spring, a dog mounted on the shaft and arranged to compress the spring to set the device, means for setting the dog, and a float adapted to trip the dog, substantially as described. 3rd. A windmill regulator comprising a spring actuated lever connected with the mechanism for throwing a windmill out of the wind, means for setting and tripping the lever, and a float connected with said means, substantially as described. 4th. A windmill regulator comprising a support, a shaft fulcrumed on the support and having an arm adapted to be connected with the operating mechanism of a windmill, a dog carried by the shaft, a spring arranged to be compressed by the dog, links connecting the dog with the spring a trigger mounted on the support and adapted to engage the dog to set the device, a float, and a tripping device connected with and operated by the float and arranged to disengage the trigger, substantially as described. 5th. A windmill regulator comprising a support, a shaft mounted on the support and having an arm connected with a windmill, a spring, a dog mounted on the shaft and arranged to compress the spring, links connecting the dog and a spring, a trigger engaging the dog and disposed at an inclination, a float having a vertical stem, and a tripping device mounted on the stem and having an opening receiving the trigger and adapted to disengage the same, substantially as described. 6th. A windmill regulator comprising a support having a vertical tube and designed to be mounted on a tank or reservoir, a coiled spring disposed on the tube, a lever fulcrumed on the support and connected with and adapted to compress the spring, said lever being designed to be connected with the operating mechanism of a windmill, a trigger arranged to set the lever, a float having a stem extending through the tube, and a tripping device mounted on the stem of the float and arranged to engage the trigger, substantially as described. 7th. A windmill regulator comprising a support provided with a vertical tube, a coiled spring mounted thereon, a shaft journalled on the support and having an arm connected with the operating mechanism of a windmill, a dog mounted on the shaft, a sliding collar arranged on the tube and adapted to compress the spring, links connecting the sliding collar with the dog, a trigger for setting the dog, a float having a stem extending through the tube, and a tripping device carried by the stem and adapted to disengage the trigger, substantially as described. 8th. A windmill regulator comprising a standard having a base and mounted upon a tank or reservoir, a vertical tube supported by the base and the top of the standard, a coiled spring disposed on the tube, a shaft journalled on the standard and designed to be connected with the operating mechanism of a windmill, a dog mounted on the shaft, a sliding collar engaging the spring and connected with the dog, a trigger pivoted to the standard and engaging the dog, a float having a stem extending through the tube, and an adjustable trip carried by the stem and arranged to engage the trigger, substantially as described.

No. 67,141. Means for Registering Cash Receipts.

(*Moyen d'enrégistrer les reçus.*)



The Globe Cashier (British and Foreign) Limited, London, England, assignee of Walter Evans, Birchfield, Warwick, England, 25th April, 1900; 6 years. (Filed 5th September, 1899.)

Claim.—1st. In a till of the character described, the coin assorters B and C, the coin slots thereto in the case, guides D for the coins from these assorters to indicators E and F respectively, said indicators being placed one above the other, suitable means for simultaneously releasing coins from both indicators, the chutes I leading to receptacles in the cash drawer and suitable mechanism for automatically registering cash receipts, substantially as and for the purposes herein set forth. 2nd. The indicators E and F arranged one above the other having hinged bottoms connected together by rods and retained in the closed position by springs and capable of being simultaneously opened by a press knob, substantially as and for the purposes herein set forth. 3rd. The combination with a coin assorter, of the channel guides D for each denomination of coins to be assorted, connected together and arranged, substantantially as and for the purposes herein set forth. 4th. The arrangement of a lever in the passageway of the guides D so as to be operated by a falling coin, the weight for returning said lever to its normal position, and suitable parts therewith for the purpose of actuating registering gear. 5th. In registering mechanism for cash receipts, a device for each denomination of coins assorted having a lever L and bell crank N on the oscillating bar L^1 carried by the frame M, the weight L^2 connected with said bar, the pawl O on bell crank to engage the ratchet wheel P, and suitable registering wheels arranged and operated, substantially as herein set forth. 6th. In a device for registering cash receipts, the bell crank N with its free end to bear upon the pawl O, and which is further pressed thereon by the weight L^2 so as to prevent the ratchet wheel P turning further than the proper distance in one direction at each movement of the lever L and the pawl V to prevent the said wheel P turning in the opposite direction, substantially as herein set forth. 7th. In a device for registering cash receipts, the pinion wheel having every alternate tooth shorter than the others arranged so that two of the long teeth bear on the periphery of a registering wheel in order to prevent the pinion from turning and imparting movement to toothed wheel such as R^1 and consequently the registering wheel connected therewith until engaged by a U-shaped lug, substantially as herein set forth.

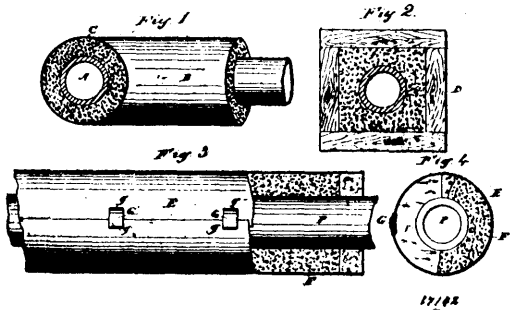
No. 67,142. Non-conducting Covering.

(*Couverture non-conductrice.*)

John Archibald, 127 Union Grove, Aberdeen, Scotland, 25th April, 1900; 6 years. (Filed 23rd March, 1899.)

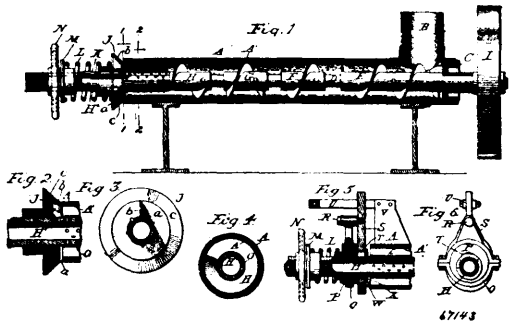
Claim.—1st. The method of protecting water cisterns, main supply pipes and the like, consisting of a covering of cork, or other similar material surrounding the said cisterns or pipes as set forth. 2nd. The method of protecting water, sewage and other pipes and their traps and connections, consisting in enclosing them in a case or casing of wood, metal or other suitable material, packed with ground

cork, substantially in the manner as hereinbefore described and shown. 3rd. The method of protecting steam pipes, boilers and the



like, consisting of a metal casing packed with ground cork, constructed and arranged, substantially as hereinbefore described and shown.

No. 67,143. Press. *(Presse.)*

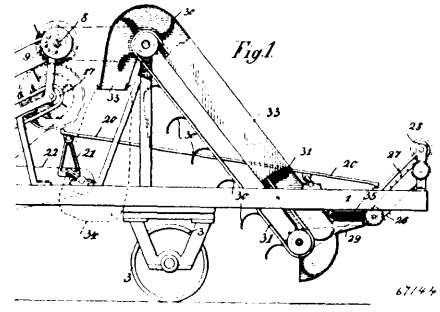


Valerius D. Anderson, Cleveland, Ohio, U.S.A., 25th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. In a press, the combination of a perforate shell or casing, a shaft mounted therein, and a series of separated screws mounted on and carried by said shaft. 2nd. In a press, the combination of a perforate shell or casing, a shaft mounted therein, and a series of screws mounted on and carried by said shaft, the screws being separated from each other and having the ends of their blades overlapping, substantially as described.. 3rd. In a press, the combination of a perforate shell or casing, a shaft mounted therein, and a series of separated screws mounted on and carried by said shaft, the forward end of each screw blade overlapping the discharge end of the preceding screw blade. 4th. In a press, the combination of a perforate shell or casing, a shaft mounted therein, a series of separated screws mounted upon and carried by said shaft, and a yielding plug or head for the discharge end of the shell or casing. 5th. In a press, the combination of a perforate shell or casing, a shaft mounted therein, a series of separated screw blades mounted on said shaft, a yielding head for the discharge end of the shell or casing, and a disintegrating device working across the path of discharge of the material passing from the press. 6th. In a press, the combination of a perforate shell or casing, means contained therein for subjecting the material undergoing treatment to pressure, and means at the discharge end of the shell for retarding the discharge of the material, and gradually disintegrating the same as it is forced from the press. 7th. In a press, the combination of a perforate shell or casing, means contained therein for subjecting the material undergoing treatment to pressure, adjustable means for retarding the discharge of the material from the press, and means movable across the path of discharge for disintegrating the material as it is forced from the press. 8th. In a press, the combination of a perforate shell or casing, a shaft working therein, a series of separated screws mounted on said shaft, a plug or head mounted at the discharge end of the shell, means for holding the plug up to the shell under yielding pressure, and a disintegrating device carried by said plug. 9th. In a press, the combination of a perforate shell or casing, a shaft mounted therein, a series of separated screws mounted on said shaft and having the ends of their blades overlapping, substantially as described, a rotary head or plug mounted at the discharge end of the shell, and a knife carried by said head in a position to work upon the material as it is forced from the press. 10th. In a press, the combination of a perforate shell or casing, a shaft mounted therein, a series of separated screws mounted on said shaft and having the ends of their blades overlapping, substantially as described, a tube connected to the shaft and having that portion which is within the shell perforated, a head or disc slidably mounted upon said tube adjacent to the discharge end of the shell, a spring acting against the rear of said head or disc, and a knife carried by said head. 11th. In a press, the combination of a cylindrical, perforate shell or casing, a shaft mounted therein, and a series of separated screws mounted upon and carried by said shaft. 12th. In a press, the combination of a cylindrical, perforate shell or casing, a shaft mounted therein, a series of separated screw blades mounted on and carried by said shaft, the ends of the blades overlapping, substantially as described, and means at the discharge end of the shell for retarding the discharge of the material and gradually disintegrating the same as it is forced from the press.

No. 67,144. Potato Harvesting Machine.

(Machine pour arracher les patates.)

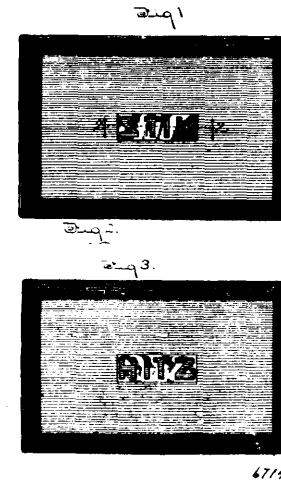


Hinrich Harms and Heinrich Seegelke, Eystrup, Hanover, 25th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. The combination in a potato harvesting machine of plant raisers 11 and 12, rotary cutters 13, for separating the plant from the root stock, a share for raising the root stock and the earth adhering thereto, an elevator 15, an endless chain 5, with spikes 10, preventing the root stocks from falling back in the elevator, a vibratory sieve 20, a rake 26, a roller 28, for separating the potatoes from the quick grass and the like, a collecting dish 29, a conveyer with blades 30, in a casing 33, for depositing the potatoes harvested in a suitable receptacle and transmission means for actuating the various organs from the wheels of the machine, substantially as described and shown. 2nd. A potato harvesting machine, the whole constructed, arranged and adapted to operate substantially as described with reference to the accompanying drawings.

No. 67,145. Self-Labelling Baker.

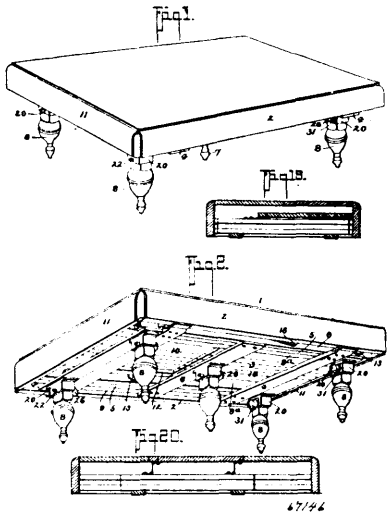
(Appareil à étiqueter le pain.)



Christian Kessler, Indianapolis, Indiana, U.S.A., 25th April, 1900; 6 years. (Filed 12th April, 1900.)

Claim.—A self-labelling baker embodying in its construction a means of producing labels upon the loaves baked therein, consisting of a plate having openings cut therein to the form of the letters or characters constituting the inscription, which plate thus forms a bordering around the letters and impresses itself into the loaves and constitutes an additional thickness for the pan at the point where applied, thereby protecting the adjacent portions of the bread being baked from heat to a degree, and causing the letters or characters constituting the inscription to be surrounded by a lighter coloured border when the loaf has been baked, substantially as set forth.

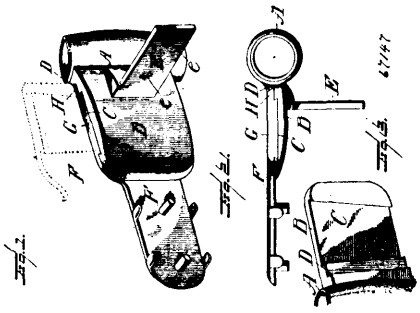
No. 67,146. Extension Table. (*Table à rallonge.*)



Chris. N. Smith, Elgin, Illinois, U.S.A., 25th April, 1900; 6 years. (Filed 11th April, 1900.)

Claim.—1st. An extension table, comprising a fixed and extensible section, the fixed section having fixedly held pendent sides and fixed runner guides, the extensible section having runners slidable against the fixed guides, said extensible sections also having fixedly held pendent strips adapted to contact the pendent sides of the fixed table when the extensible section is slid into a closed position, whereby to hold the said extensible section from lateral movement, as specified. 2nd. In an extensible table, the combination with the fixed or central section, having a top provided with pendent side members and an extensible section having longitudinal runners or bars slidable under the fixed table top and having a top section hinged to the said runners to fold in different horizontal planes, said top section having foldable sides adapted to be extended in a vertical plane in line with the firm extensions of the sides of the fixed table sections, and a supplemental top section having pendent strips adapted to engage the runners or slides of the extension sections and support the said supplemental top, and the side members foldably connected to the said supplemental top to close down to a vertical plane and form continuations of the extensible top side members, all being arranged substantially as shown and for the purposes described. 3rd. In an extension table, the combination with the extension slides or runners of the table top sections, having hinged connections with the said runners to fold in horizontal planes, said connections comprising hinged members pivotally secured at their lower end to to the runners, their upper ends being pivotally connected to the table top at a point to the rear of the longitudinal axis of the hinged members, the outer ends of the said hinged members being cut at an acute angle, whereby such ends will form supports for the said top when it is swung to its uppermost position, as specified. 4th. The combination with an extension table as described, with the main table having pendent side members, of an extensible section having longitudinal runners slidable under the top of the main table and having a foldable top section adapted to be swung in different horizontal planes, said top section having pendent ribs at its outer ends, link hinges pivotally secured to the runners to swing down in a plane therewith, the upper ends of said hinges being pivotally secured to the pendent members of the foldable top, said pendent members forming guides to engage with the pendent sides of the fixed top table section when the extensible section is slid in, substantially as shown and for the purposes described. 5th. The combination of the table of the character described, including an extensible section having a top portion foldable in different horizontal planes, said foldable top section having adjustable sides, link arms connecting the sides to the body of the top section, said top section having seats or cut out portions for said link arms, said link arms being pivoted to the ends of the foldable top section and movable in the cut out portions thereof, all being arranged substantially as shown, whereby the end portions can be folded either flat upon the top of the foldable top sections, or down in a vertical position over the sides thereof, substantially as shown and for the purposes described. 6th. In a table of the character described, a leg fastening, comprising in combination with the leg having wedged grooves on opposite sides of its head, of a socket plate open at the bottom and at one side, whereby to admit of the insertion of the head of the leg therein, said socket plate having a wedge-shaped link to engage the grooves of the leg head, said socket having a threaded boss at the end opposite the open end, and a screw bolt fastening through the table head and adapted to engage the threaded socket, and a washer plate interposed between the head of the screw and the side of the leg head, all being arranged substantially as shown and for the purposes described.

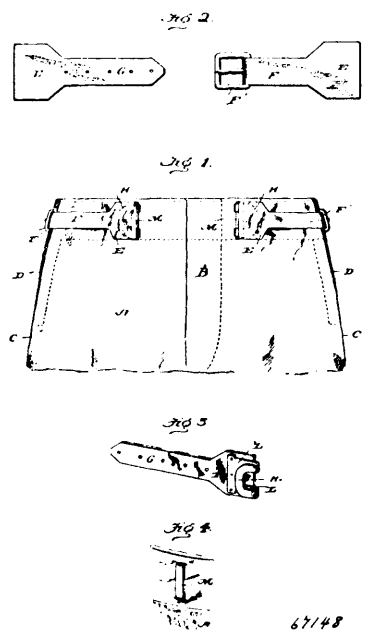
No. 67,147. Corner Fastening. (*Ferrement pour meubles.*)



William C. Walton, Harrisburg, Pennsylvania, U.S.A., 25th April, 1900; 6 years. (Filed 10th April, 1900.)

Claim.—1st. A corner fastening comprising a plate with a wedge shaped portion with undercut walls, and a bevelled side locking portion, and a co-operating part with correspondingly shaped sockets to receive the same, as set forth. 2nd. A corner fastening comprising a boss with a lateral portion having a wedged shaped socket and a socket with undercut wall in a different plane, and a plate with a tapered projection and a side portion in different planes to engage the sockets of said lateral portion, as set forth. 3rd. A corner fastening comprising a boss with a lateral portion with undercut walls in two different vertical planes, and a plate with a projection having undercut walls and an extension in a different plane with bevelled end wall and interengaging with the undercut walls of the lateral portion and forming a double lock in different vertical planes lying parallel with the side of the lateral portion and the face of the plate, as set forth. 4th. The improved corner fastening described comprising in combination, the boss with integral lateral portion with sockets in different vertical planes and a lug with openings, and the side rails plate having portions in different planes with undercut walls to engage in said sockets, substantially as and for the purpose specified.

No. 67,148. Garment. (*Vêtement.*)

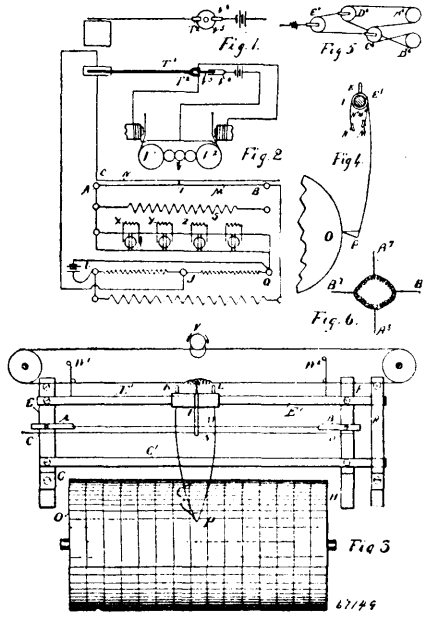


Maurice Bartelstone, Rochester, New York, U.S.A., 25th April 1900; 6 years. (Filed 11th April, 1900.)

Claim.—1st. As an article of manufacture, a body garment having a waistband, slits upon the sides of the garment extending from the top of the waistband and down below the same, attaching means

secured to the waistband upon each side of said slits, and detachable means for holding the slits closed to hold the garment upon the wearer, said means consisting of the bodies arranged in pairs one of each carrying a buckle and the other of each provided with a tongue to be engaged by said buckle to the other bodies, and means carried by said bodies to engage said attaching means of the waistband to hold the bodies in place. 2nd. As an article of manufacture, a body garment having a waistband, slits upon the sides of the garment extending from the top of the waistband and down below the same, and detachable means for holding the slits closed to hold the garment upon the wearer, said means consisting of the bodies arranged in pairs one of each carrying a buckle and the other of each provided with a tongue to be engaged by said buckle of the other bodies, and a plate provided with a hook carried by each body to detachably secure them to the waistband of the garment.

No. 67,149. Electrical Recording Apparatus.
(Appareil à enregistre électrique.)

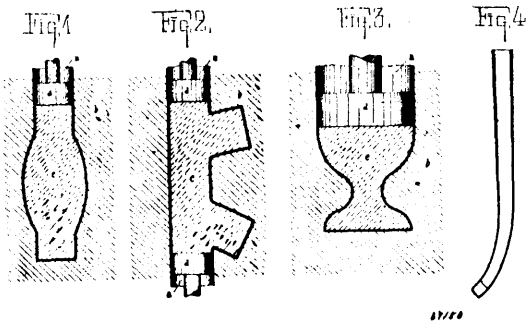


Hugh L. Callendar, Montreal, Quebec, Canada, 25th April, 1900; 6 years. (Filed 3rd August, 1898.)

Claim.—1st. The combination with a bridge wire, a contact movable along it, a recording device carried by the contact, a galvanometer, means for connecting its poles to the bridge wire and to the contact, and means actuated by the galvanometer for traversing the contact. 2nd. The combination of a bridge wire, a contact movable along it, a recording device carried by the contact, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the contact, and means actuated by the galvanometer for traversing the contact. 3rd. The combination of a bridge wire, a contact movable along it, a recording device carried by the contact, a galvanometer, means for connecting its poles to the bridge wire, and to the contact, a series of auxiliary resistances, means for connecting them to the bridge wire or resistances, and means actuated by the galvanometer for traversing the contact. 4th. The combination of a bridge wire, a contact movable along it, a recording device carried by the contact, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the contact, a series of auxiliary resistances, means for connecting them to the bridge wire, and means actuated by the galvanometer for traversing the contact. 5th. The combination of a bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a galvanometer, means for connecting its poles to the bridge wire and to the second wire, and means actuated by the galvanometer for traversing the contacts. 6th. The combination of a bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the second wire, means actuated by the galvanometer for traversing the contacts. 7th. The combination of a bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a galvanometer means for connecting its poles to the bridge wire and to the secon wire, a series of auxiliary resistances, means for connecting them to the bridge wire, and means actuated by the galvanometer for traversing the contacts. 8th. The combination of the bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the second wire, a series of auxiliary resistances, means for connecting them to the bridge wire, and means actuated by the galvanometer for traversing the contacts. 9th. In an electrical recording apparatus, the combination of a galvanometer arm, means whereby it is kept in a state of gentle oscillation, a pair of contact surfaces carried by it, a second pair of contact surfaces against which the first pair work. 10th. In an electrical recording apparatus, the combination of a galvanometer arm, means whereby it is kept in a state of gentle oscillation, a pair of contact surfaces carried by it, a second pair of contact surfaces against which the first pair work, means for rotating the second pair of surfaces and scrapers acting on them. 11th. In an electrical recording apparatus, the combination of a galvanometer arm, a pair of contact surfaces carried by it, a second pair of contact surfaces against which the first pair work, means for rotating the second pair of surfaces and scrapers acting on them. 12th. In an electrical recording apparatus, the combination of a galvanometer, a recording device, a pair of motors controlled by the galvanometer and tending to move the recording device one in one direction and the other in the other. 13th. In an electrical recording apparatus, the combination of a galvanometer, a recording device, a pair of clock motors tending to move the recording device one in one direction and the other in the other, brakes tending to stop the motors and means operated by the galvanometer for taking off the brakes. 14th. In an electrical recording apparatus, the combination of a galvanometer, a recording device, a pair of motors tending to move the recording device in one direction and the other in the other, circuits closed by the galvanometer and controlling the motors, and switches in the circuits one at each end of the travel of the recording device and operated by it. 15th. The combination of a bridge wire movable longitudinally, means for clamping it in position, a contact movable along it, a recording device, a galvanometer, means for connecting the poles to the bridge wire and to the contact, and means actuated by the galvanometer for traversing the contact. 16th. The combination of an electrical recording apparatus, substantially as described, with a constant battery and a series of auxiliary resistances connected according to the potentiometer method, for recording variations of voltage or current on a direct current circuit, or for recording variations of temperature by means of a thermocouple or thermopile. 17th. The combination of a bridge wire, a contact movable along it, a recording device carried by the contact, a galvanometer, means for connecting its poles to the bridge wire and to the contact, a pair of clock motors tending to move the contact in opposite directions, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 18th. The combination of a bridge wire, a contact movable along it, a recording device carried by the contact, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the contact, a pair of clock motors tending to move the contact in opposite directions, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 19th. The combination of a bridge wire, a contact movable along it, a recording device carried by the contact, a galvanometer, means for connecting its poles to the bridge wire and to the contact, a series of auxiliary resistances, means for connecting them to the bridge wire, a pair of clock motors tending to move the contact in opposite directions, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 20th. The combination of a bridge wire, a contact movable along it, a recording device carried by the contact, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the contact, a series of auxiliary resistances, means for connecting them to the bridge wire, a pair of clock motors tending to move the contact in opposite direction, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 21st. The combination of a bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a galvanometer, means for connecting its poles to the bridge wire end to the second wire, a pair of clock motors tending to move the contact in opposite directions, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 22nd. The combination of a bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the second wire, a pair of clock motors tending to move the contact in opposite directions, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 23rd. The combination of a bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a galvanometer, means for connecting its poles to the bridge wire or resistance and to the second wire, a

series of auxiliary resistances, means for connecting them to the bridge wire, a pair of clock motors tending to move the contacts in opposite directions, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 24th. The combination of a bridge wire, a second wire parallel to it, a pair of contacts connected together and movable along the bridge wire and the second wire, a recording device carried by the contacts, a shunt, means for connecting its ends to the ends of the bridge wire, a galvanometer, means for connecting its poles to the shunt and to the second wire, a series of auxiliary resistances, means for connecting them to the bridge wire, a pair of clock motors tending to move the contacts in opposite directions, brakes tending to stop the motors, and means operated by the galvanometer for taking off the brakes. 25th. In an electrical recording apparatus, the combination of a galvanometer arm, contacts limiting its travel, and means for keeping it in a state of gentle oscillation.

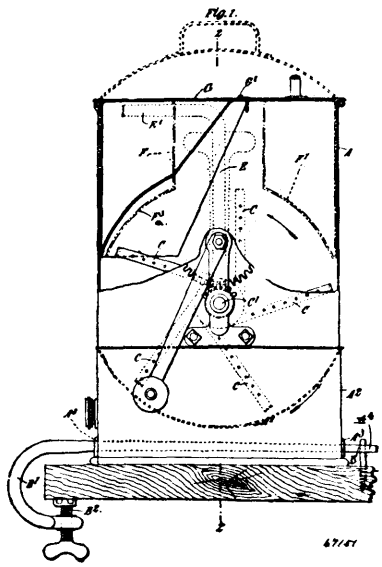
No. 67,150. Process of Furnishing Metal Pipe with Enlarged Parts and Strengthening Walls.
(Procédé pour élargir et renforcir les tuyaux de métal.)



Fritz Schilling and Johann Schurz, Nuremborg, Germany, 25th April, 1900; 6 years. (Filed 29th December, 1898.)

Claim.—The process for furnishing metal pipes with adjutages or enlarged parts, consisting of placing a pipe in a mould of the form desired, filling the pipe with sand, and applying pressure gradually to said sand from one or both ends of the pipe until the pipe conforms to the shape of the mould, substantially as set forth.

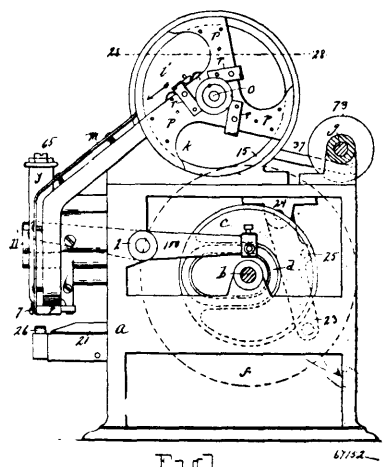
No. 67,151. Whisking and Mixing Machine.
(Machine à vergeter et mélanger.)



William King Baker and George Samuel Baker, both of 58 City Road, London, England, 25th April, 1900; 6 years. (Filed 1st April, 1899.)

Claim.—1st. In a whisking, mixing or similar machine the combination with a revolving beater, of a hanger or holder which for the purpose described is elastic. 2nd. In a whisking, mixing or similar machine a beater, blade tangential to the beater spindle for the purpose described. 3rd. In a whisking, mixing or similar machine a filler or fillers such as F, F^1, substantially as and for the purpose described. 4th. In a whisking, mixing or similar machine the combination with a cover or lid of one or more fillers or guards or guide blades for the purpose described. 5th. In a whisking, mixing or similar machine, guards or guide blades such as H, H^1, or H6 with or without drainage apertures therein for the purpose described. 6th. In a whisking, mixing or similar machine, guards or guide blades which are made elastic in order to engage with the beater spindle, substantially as described. 7th. In a whisking, mixing or similar machine the combination of two or more guards or guide blades and a cross piece such as H^3 connecting them, the device being retained in engagement with the beater spindle by its own elasticity, substantially as described. 8th. In a whisking, mixing or similar machine, guards or guide blades H, H^1, or H^6 of a radius greater than that of the mixing chamber for the purpose described. 9th. In a whisking, mixing or similar machine, a holder such as Q, upon which is mounted a driving gear, and which is adapted to receive any one of a number of mixing chambers, for the purpose described. 10th. A whisking, or similar apparatus constituted by the combination with a holder such as Q, upon which is mounted a driving gear of a series of mixing chambers, substantially as described. 11th. In a whisking, mixing or similar machine, the employment of a body or casing consisting of intersecting spherical or globular chambers. 12th. In a whisking, mixing or similar machine, the combination with the body or casing consisting of intersecting spherical or globular chambers, of a set of beaters central in each such chamber, substantially as described. 13th. In a whisking mixing, or similar machine, the combination with the beater C, C^1 (Figure 13) of another similar beater and gearing to rotate them, and maintain constant the angular relationship of one beater to the other. 14th. In a whisking, mixing or similar machine, the combination with the beater of a disc D having an annular groove and diametral slot therein and an elastic hanger such as E, having upon one of its arms an interrupted ring receivable in the annular groove, for the purpose described. 15th. A wisking, mixing or similar machine, the chamber of which internally is with the aid of a filler or guard or guide blade made to be substantially spherical.

No. 67,152. Button and Staple Setting Machine.
(Machine à poser les crampes et boutons.)



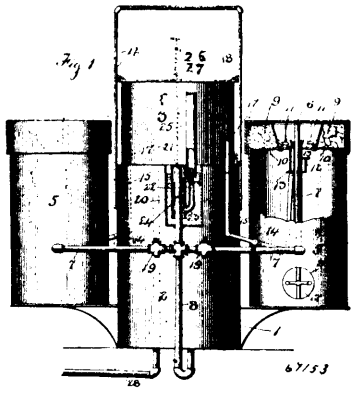
The McKenny Button Fastening Company, assignee of Robert McKay and Frank R. Welton, both of Detroit, Michigan, U.S.A., 30th April, 1900; 6 years. (Filed 9th April, 1900.)

Claim.—The combination with a hopper and a fastener runway arranged to carry a two pronged fastener with the prongs projecting downward, of means to reverse the direction of the prongs and to bring them into proper alignment, whereby the fasteners will be delivered from the runway with the prongs projecting upward, and in position to engage the work, substantially as described. 2nd. The combination with a hopper and a fastener runway, of means to give to the prongs of a two pronged fastening a partial rotation to bring said prongs into desired position, substantially as described. 3rd. The combination with a hopper and a fastener runway, of means to give to the prongs of a two pronged fastener a partial rotation to bring said prongs into desired aligment, and mechanism to reverse the direction of the prongs, substantially as described. 4th. The combination with a hopper and a fastener runway arranged to carry a two pronged fastening and to deliver the prongs of the fastener out of a common upright plane, of a device to hold the fastener by one of the prongs, and to permit the fastener to swing downward to bring the two prongs into an upright plane, substantially as described. 5th. In a button setting machine, a rotatable button feed wheel constructed with two corresponding blades or portions spaced one

from the other, said blades formed with feeding arms, substantially as described. 6th. In a button setting machine, a button feeding wheel having in combination a rotatable shaft, and two corresponding blades or portions mounted upon said shaft and spaced one from the other, said blades provided with feeding arms, substantially as described. 7th. The combination with a feeding device and a runway, of a device adjacent to the throat of the runway to clear the runway and prevent a closing of the runway, substantially as described. 8th. The combination with a feeding device and a runway, of an intermittently actuated arm to clear the runway and prevent the clogging of the runway, substantially as described. 9th. The combination with a button feed wheel, of an overhanging finger to remove buttons carried thereon in improper position, substantially as described. 10th. In a button setting machine, a die spindle and its die provided with a button holding device adjacent to one of the upright faces of the die, said die recessed on its upright face adjacent to the button holding device, substantially as described. 11th. In a button setting machine provided with a runway, a die spindle, a button holding device, mechanism to deliver a button from the runway to the button holding device, said mechanism provided with a bell crank lever actuated by the descent on the spindle in one direction, and means to actuate the bell crank in the opposite direction, substantially as described. 12th. In a button setting machine, the combination of a supporting frame, a shaft, a double cam upon the shaft, a lever actuated by said cam, a die spindle actuated by said lever, button delivery mechanism, and fastener delivery mechanism also actuated by said cam, substantially as described. 13th. In a button setting machine, the combination with a feeding device and a runway, of a pivoted arm adjacent to the throat of the runway, and means to actuate said arm to clear the runway and prevent the clogging of the runway, substantially as described. 14th. A button feeding wheel constructed with corresponding rotatable discs spaced one from another and formed with corresponding feeding arms, said feeding wheel having in combination therewith a finger overhanging the said arms to remove buttons carried thereon in improper position, substantially as described. 15th. In a button setting machine, the combination of a supporting frame, a shaft, a double cam upon the shaft, a die spindle, a lever actuated by the cam to operate the die spindle, a plunger, and an additional lever actuated by the cam to operate the plunger, substantially as described. 16th. In a button setting machine, the combination of a supporting frame, a shaft, a cam upon the shaft, a die spindle, a lever operated by the cam to operate the die spindle, said lever having a limited free movement without actuating the spindle, substantially as described. 17th. In a button setting machine, the combination of a supporting frame, a shaft, a cam upon the shaft, a die spindle, a lever to actuate the spindle having a limited free movement without actuating the spindle, a button runway, a button holding device, mechanism to deliver a button from the runway to the button holding device, said mechanism provided with a bell crank lever, means to hold one end of said bell crank lever against the outer end of the lever actuating the spindle, whereby the bell crank lever will be given a further movement into engagement with the lever operating the spindle as the last named lever rises in the free movement thereof, and whereby the button delivery mechanism will be actuated before the spindle is actuated, substantially as described. 16th. The combination with a rotatable shaft, of a feeding device located thereon, ratchet mechanism to actuate said shaft, and an additional rotatable shaft to actuate the ratchet mechanism, substantially as described. 19th. The combination with a rotatable shaft, of a feeding device actuated thereby, ratchet mechanism to drive said shaft, an additional rotatable shaft, means to actuate the ratchet mechanism operated by the last named shaft, a stop to limit the movement of the ratchet, the means for actuating the ratchet arranged to move the stop out of normal position, substantially as described. 20th. The combination with a shaft, of a feeding device actuated thereby, and means to give said shaft an intermittent motion, substantially as described. 21st. The combination with staple setting mechanism provided with a die seat, of expansible fastener holding blades having a reciprocatory movement adjacent to the die seat, said blades constructed with adjacent necks arranged to receive and hold the prongs of a fastening therebetween, the blades below said necks constructed to engage and hold the fastener head when the necks are expanded to release the prongs of the fastening, substantially as described. 22nd. The combination with staple setting mechanism provided with a die seat and with a reciprocatory setting die, of expansible fastener holding blades having a reciprocatory movement adjacent to the die seat, said blades constructed with adjacent necks near their upper ends, said necks provided with a front opening to receive a two-pronged fastening, the inner faces of the necks near the rear thereof located adjacent one to another to form a rear stop to limit the insertion of the fastening between said blades, said necks arranged to engage the prongs of a fastening and hold the prongs firmly therebetween, substantially as described. 23rd. The combination with a staple setting mechanism provided with a die seat and with a reciprocatory setting die, of expansible fastener holding blades having a reciprocatory movement adjacent to the die seat, said blades constructed near their upper ends with adjacent necks having their adjacent faces grooved to receive the adjacent prong of the fastening, said necks constructed with an opening therebetween in front of said grooves closely approaching one another to form a stop for the prongs of the fastening, substantially as described. 24th. The combination with staple setting mechanism provided with a reciprocatory setting die and with a die seat, of expansible and reciprocatory fastener holding blades adjacent to the die seat, said blades constructed with adjacent fastener holding necks near their upper ends, the front portion of said necks arranged to permit the reception of a two-pronged fastening therebetween, the rear portions of said necks constructed to form a stop to limit the insertion of the fastening, the upper ends of the blades flanged outwardly the one from the other, substantially as described. 25th. The combination with staple setting mechanism provided with a reciprocatory setting die, and a die seat bevelled on its outer face, of expansible fastener holding blades adjacent to the die seat, said blades having a reciprocatory movement upon an adjacent portion of the die seat, means to hold said blades in normal position, said blades constructed with adjacent fastener holding necks near their upper ends, said necks arranged to permit the reception of a two-pronged fastener therebetween, the upper extremities of the blades provided with outwardly turned flanges, and said blades inwardly bevelled below the necks, whereby when the setting die approaches the die seat, the die pressing upon the flanges of said blades will force the blades in a corresponding direction, and whereby the blades will be expanded by contact with the die seat, substantially as described. 26th. The combination with a staple setting mechanism provided with a reciprocatory setting die, a die seat, and a support for said seat, of expansible and reciprocatory fastener holding blades, said blades constructed with elongated orifices, the adjacent portions of said support provided with pins projecting through said orifices, and a spring to hold the blades in normal position, said blades constructed near their upper ends with adjacent necks recessed on their inner adjacent faces and made open at their front edges to receive a two-pronged fastening, the rear edges of said necks having a stop for one of the prongs of the fastening, substantially as described. 27th. The combination with staple setting mechanism provided with a reciprocatory die spindle and its die, of a button holding device consisting of arms secured to the die spindle and reciprocatory therewith, one of said arms constructed to engage the head of a button, the other arm constructed to form a seat for the eye of the button, substantially as described. 28th. The combination with staple setting mechanism provided with a reciprocatory die spindle and its die, of a button holding device consisting of arms secured to the die spindle and reciprocatory therewith, one of said arms constructed to engage the head of a button, the other arm constructed to form a seat for the eye of a button, said arms arranged to be swung out of normal position, substantially as described. 29th. The combination with staple setting mechanism, provided with a reciprocatory die spindle and its die, of a button holding device consisting of arms secured to the die spindle and reciprocatory therewith, one of said arms constructed to engage the head of a button, the other arm constructed to form a seat for the eye of a button, and means to adjust the position of said latter arm, substantially as described. 30th. The combination with staple setting mechanism provided with a reciprocatory die spindle and its die, of a spring arm secured to the die spindle and reciprocatory therewith constructed to engage the head of a button and to hold the button in position to receive the prongs of a fastening, substantially as described. 31st. In a staple setting mechanism provided with a reciprocatory die, a button holding device adjacent to the die, and a seat for the fastener beneath the reciprocatory die, of means to automatically feed a two-pronged fastening to the die seat with the prongs projecting upward, means to align the prongs of the fastening, and means to feed a button to the button holding device above the fastening, whereby the prongs of the fastening will be engaged through the work from beneath and through the attaching portion of the button engaged upon the surface of the goods, substantially as described. 32nd. In a fastener setting mechanism, provided with a reciprocatory slide, a button holding device adjacent to the spindle, a seat for the fastener below the spindle, a fastener runway to feed two-pronged fasteners, and means to automatically separate the fasteners one by one, means to align the prongs of the fasteners singly to the fastener seat with the prongs projecting upward, substantially as described. 33rd. In a fastener setting mechanism, the combination with a seat for a fastener, of a fastener runway, a fastener guideway adjacent to said seat, means to align the prongs of a two-pronged fastener and to feed the fasteners one by one from the runway to said seat, said guideway provided with a covering adjacent to the fastener seat to protect the prongs of a fastening from the goods, substantially as described. 34th. In a fastener setting mechanism, the combination with a seat for the fastening, of a fastener runway, means to automatically feed two-pronged fasteners to the runway with the prongs projecting downward, means to give to the two prongs of a fastener a partial turn, and means to turn the head of the fastening to bring the prongs uppermost at the base of the runway, and mechanism to feed the fastening from the base of the runway to the seat in proper alignment, substantially as described. 35th. In a button setting machine, the combination of a supporting frame, a shaft, a die spindle, button delivery mechanism, a lever actuated by said shaft to actuate the die spindle and the button delivery mechanism, a fastener seat, mechanism to deliver a two-pronged fastener with its prongs in proper alignment, and an additional lever actuated from said shaft to actuate the fastener delivery mechanism, substantially as described. 36th. In a fastener setting mechanism, the combination with a fastener runway and a fastener seat, of a dropper blade to engage the head of a fastening, said spring movable with the

blade when the blade oscillates in one direction to release the head of the fastening, and retracting into normal position when the blade is oscillated in the opposite direction, substantially as described. 37th. In a fastener setting mechanism, the combination with a run way and a fastener seat, of a fastener dropper blade provided with a ledge at its lower end to engage the prongs of a fastener, means to oscillate said blade to release the prongs, and a spring provided with a ledge at its lower end adjacent to said blade to engage the head of a fastener, said blade and spring simultaneously movable in like directions, substantially as described. 38th. In staple setting mechanism of the character described, the combination of a supporting frame, a shaft, a die spindle, button delivery mechanism, fastener delivery mechanism, and a cam upon the shaft, said spindle, button delivery mechanism and fastening delivery mechanism, all actuated by said cam, substantially as described. 39th. In a staple setting mechanism of the character described, the combination of a shaft, a runway, a swinging arm fulcrumed adjacent to the throat of the runway to clear the runway, and a cam upon the shaft constructed to intermittently actuate said cam, substantially as described. 40th. In staple setting mechanism of the character described, the combination of a case, a die spindle reciprocatory in the case and made hollow at its upper end, and an oscillatory lever engaged with said spindle, said lever having a free movement in said die spindle and its case for a desired distance before actuating the spindle. 41st. The combination with a button runway, of a device to feed the buttons from the runway one-by-one, consisting of spindle arms, each provided with a ledge, the one above the other, to project into the path of the buttons in the runway to engage the buttons, and means to alternately move said spring arms out of the way of the adjacent buttons, substantially as described. 42nd. The combination with a button runway, of a device to feed the buttons from the runway one by one, consisting of spring arms, each provided with a ledge, the one above the other, to engage the buttons in the runway, a bell crank provided with arms to engage each of said spring arms upon the movement of the bell crank to move said ledges alternately out of the way of the adjacent buttons, and means to operate said bell crank, substantially as described. 43rd. In a button setting machine, the combination with a button runway, of a rotatable receptacle in which said runway discharges, an oscillatory delivery arm provided with a carrier plate, and a spring arm carried by said plate to engage and hold a button against the carrier plate, substantially as described. 44th. In a button setting machine, the combination with a button runway, of a rotatable receptacle in which said runway discharges, an oscillatory delivery arm provided with a carrier plate, and a spring arm carried by said plate to engage and hold a button against the carrier plate, said delivery end provided with a friction arm to rotate said receptacle, substantially as described. 45th. In a button setting machine, the combination with a button runway, of a rotatable receptacle into which said runway discharges, an oscillatory delivery arm provided with a carrier plate, a spring arm secured to said plate to engage and hold a button against the carrier plate, a delivery arm provided with a friction arm to rotate said receptable, a vertically movable forked spindle to engage and align the eyes of a button, and a device to depress said spindle, said delivery arm provided with an arm to actuate said device to depress said spindle, substantially as described.

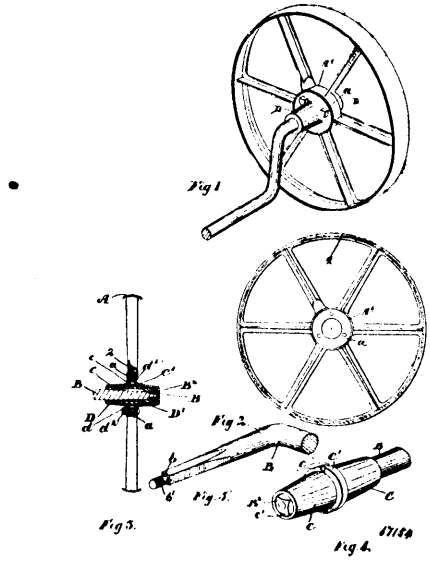
No. 67,153. Acetylene Gas Generator.
(Générateur à gaz acétylène.)



La Compagnie Savoie-Guay, assignee of J. F. Guay, all of Plessisville, Quebec, Canada, 30th April, 1900; 6 years. (Filed 22nd February, 1899.)

Claim.—1st. The combination with a gasometer, of a generator, a series of carbide receptacles secured within said generator, each receptacle having a hinged door, means for holding said doors in their closed position, and a collar mounted to have a vertical movement within said generator, said collar having a series of lateral projections, located at different heights, said projections being adapted to contact with said door closing means, successively, whereby the receptacles will be emptied independently and successively. 2nd. The combination with a gasometer, of a generator, a series of carbide receptacles secured within said generator, each receptacle having a hinged door, means for holding said doors in their closed position, a collar mounted to have vertical movement within said generator, said collar having means for successively tripping said door closing means, and a rocking lever operatively connected to said collar, and operated by the movement of said gasometer, for successively bringing said tripping means into operation with said door closing means, whereby the receptacles will be emptied independently and successively. 3rd. An acetylene gas generating apparatus, comprising a gasometer, a generator, a series of carbide receptacles secured within said generator, said receptacles being arranged about the inner periphery of said generator, a door hingedly connected to said receptacles, each receptacle having an independent door, said door being adapted to normally close said receptacles, each door extending radially toward the centre of said generator, a catch for each door, adapted to normally hold the door closed, said catch extending inwardly toward the centre of said generator, and means, operated by the movement of the gasometer, and movable vertically within said generator, for successively tripping said catches, whereby said doors will be released and said receptacles emptied independently and successively. 4th. The combination with a telescoping gasometer, of a plurality of generators operatively connected thereto, each of said generators having a series of carbide receptacles, doors hingedly connected to said receptacles, each receptacle having an independent door, said doors being normally in a closed position, a tripping mechanism mounted within each generator, a rocking lever adapted to be operatively connected to said tripping mechanism, the movement of said lever being adapted to impart a vertical movement to said tripping mechanism, whereby said doors will be released, and means automatically operated by the movement of the bell of the gasometer, for imparting movement to said rocking levers, said means being automatically brought into operative position by the movement of said bell.

No. 67,154. Wheel for Plough. *(Roue de charrue.)*

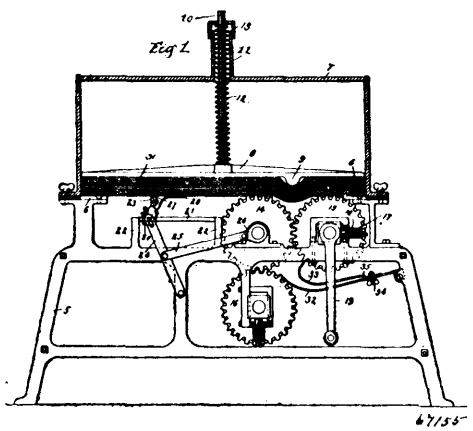


The Verity Plow Company, assignee of William John Verity and Paul Abraham Vansickle, all of Brantford, Ontario, Canada, 30th April, 1900; 6 years. (Filed 11th April, 1900.)

Claim.—1st In a bearing or journal for plough wheels and the like, a wheel provided with a hub having secured to each side thereof cone cups, one provided with an opening to receive the axle and the other closed at the end, an axle having secured on the end a double cone bushing tapered towards each end and forming a bearing for the correspondingly tapered cone cups, as and for the purpose specified. 2nd. The combination with the wheel having a hub provided with a central flange and the cone cups provided with flanges and means for securing them to the flange of the hub of the wheel, of an axle extending through the centre cone cup and a double cone bushing tapered towards each end secured on the end of the axle and provided with a central flange designed to fit in between the inner ends of the cone cups, as and for the purpose specified. 3rd. The combination with the wheel having a hub provided with a central flange and the cone cups provided with flanges and means for securing them to the flanges of the hub of the wheel, of the axle provided with a squared tapered end and reduced threaded end, a double cone bushing tapered towards each end and provided with an end recess and pushers and nuts fitting on to the reduced end within the enlarged recessed end of the bushing, as and for the purpose

specified. 4th. The combination with the wheel hub and double cone cups extending on each side of the hub, of the axle and cone bushing fitting within the double cone cups and provided with a central flange, oil passageways in the flange and an oil passageway through the hub of the wheel communicating with the oil passageways in the flange of the bushing, as and for the purpose specified.

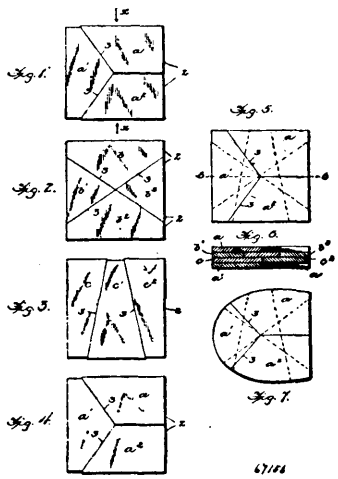
No. 67,155. Paper Folding Machine.
(Machine à plier le papier.)



William Lang and William Zander, both of Chicago, Illinois, U.S.A., 30th April, 1900; 6 years. (Filed 13th January, 1900.)

Claim.—1st. In a folding machine, the combination with a pair of folding rollers, of a fixed guide to receive a sheet of paper after such paper has been folded by said folding rollers and a second pair of folding rollers engaging the sheet as such sheet bends in toward the bite of said second pair of rollers after being stopped in the said guide, said second pair of rollers acting to withdraw the sheet from said guide and impart to the sheet a second fold, substantially as and for the purpose specified. 2nd. In a folding machine, the combination with a pair of folding rollers, of a reciprocating carriage, means for actuating said rollers and carriage, a device carried by said carriage for frictionally engaging the lower sheet of a pile of papers located above said rollers and carriage, and a support for said pile of papers connected to and moving with said carriage, substantially as and for the purpose specified. 3rd. In a folding machine, open at the top to receive a pile of sheets, the combination with a pair of folding rollers, of means for supporting a pile of papers over said rollers, and other means for buckling the lower sheet of such pile above the bite of said rollers so as to be caught by the rollers and folded, substantially as and for the purpose specified. 4th. In a folding machine, the combination with a pair of folding rollers, of means for supporting a pile of papers over said rollers, means for moving the lower sheet of such pile to cause it to buckle downward over the line of contact of said rollers and be folded by said rollers, a guide to receive said folded sheet, and means for withdrawing such sheet from said guide and giving to it an additional fold, substantially as and for the purpose specified. 5th. In a folding machine, the combination with a pair of folding rollers, of devices for supporting a pile of sheets above said rollers, means for moving the lower sheet of said pile, and a follower resting upon said pile and provided with a projection for depressing said sheets over the line of contact of said rollers, substantially as and for the purpose specified. 6th. In a folding machine, the combination with a pair of folding rollers, of a reciprocating carriage, means for actuating said rollers and carriage, a strip extending across said carriage and adapted to frictionally engage the lower sheet of a pile of papers located above said rollers and carriage when said carriage is moved toward the rollers, and adapted to be swung out of operative engagement on the return movement of the carriage, and a spring to return said strip to its operative position, substantially as and for the purpose specified. 7th. In a folding machine, the combination with a pair of folding rollers, of a reciprocating carriage, means for actuating said rollers and carriage, a device carried by said carriage for frictionally engaging the lower sheet of a pile of papers located above said rollers and carriage when said carriage is moved toward the rollers, means for allowing such engaging device to yield on the return movement of the carriage so as not to disarrange or disturb the position of the paper, and a supporting device carried by said carriage on which the pile of paper rests, substantially as and for the purpose specified. 8th. In a folding machine, the combination with a pair of folding rollers, of means for supporting a pile of sheets of papers over said rollers, said means being arranged to receive the sheets above said rollers, and other means for buckling the lower sheet of such pile above the bite of said rollers so as to be caught by the rollers and folded, substantially as and for the purpose specified. 9th. In a folding apparatus open at the top to receive a pile of sheets, the combination of sheet supporting means, sheet creasing mechanism arranged below the sheet supporting means and adapted to receive the sheet to be folded from above, and other means for projecting a buckled portion of the sheet to be folded into the creasing mechanism, substantially as and for the purpose specified. 10th. In a folding apparatus open at the top to receive a pile of sheets, the combination of means adapted to support such pile of sheets, sheet creasing mechanism arranged below the sheet supporting means and adapted to receive the sheets to be folded from above, and other means for projecting successively a buckled portion of the lowermost sheet of the pile into the creasing mechanism, substantially as and for the purpose specified. 11th. In a folding apparatus open at the top to receive a pile of sheets, the combination of means adapted to support such pile of sheets, sheet creasing mechanism arranged below the sheet supporting means and adapted to receive the sheets to be folded from above, a stop at one of the sheets, and means adapted to engage the lowermost sheet and carry the opposite end forward, thereby buckling said sheet and causing said buckled portion to engage the creasing mechanism, substantially as and for the purpose specified. 12th. The combination with sheet folding mechanism, of means upon which a pile of sheets is adapted to be supported at each end of said pile, other means for affording an intermediate support for the pile, each of said supporting means being arranged to receive the said pile over said folding mechanism, and means for moving the lowermost sheet of said pile to cause it to buckle downward over said folding mechanism and be caught and folded thereby, substantially as and for the purpose specified. 13th. The combination with a pair of folding rollers, of means upon which a pile of sheets is adapted to be supported at each end of said pile, other means for affording an intermediate support for said pile, each of said supporting means being arranged to receive the said pile over said rollers, and means for moving the lower sheet of said pile to cause it to buckle between said rollers and be caught and folded thereby, substantially as and for the purpose specified. 14th. The combination with a pair of folding rollers, over which a pile of sheets can be placed, of means for supporting such pile of sheets over said rollers, said rollers constituting a portion of said supporting means, and other means for buckling the lower sheet of said pile above the bite of said rollers so that said buckled portion will be caught and the sheet folded, substantially as and for the purpose specified.

No. 67,156. Boot and Shoe Heel. (*Talon de chaussure.*)



The American Heel Manufacturing Company, Boston, Massachusetts, U.S.A., 30th April, 1900; 6 years. (Filed 12th April, 1900.

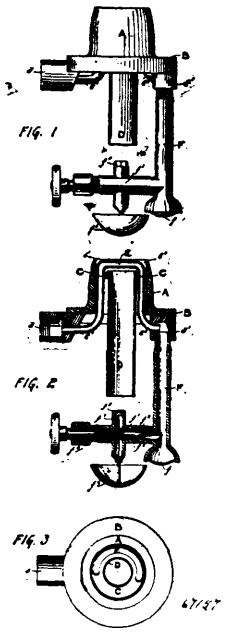
Claim.—A heel composed of a series of lifts each comprising a plurality of pieces or sections, each of which has all of its edges substantially at a right angle to its surface to form butt joints between the pieces, and each piece or section in each lift being wedge-shaped and having an edge obliquely arranged relatively to the breast of the heel, each joint of each lift crossing a joint of an adjoining lift, the several lifts and the edges of the pieces or sections being cemented and pressed together.

No. 67,157. Gasolene Burner. (*Bec de gazoléne.*)

A. E. Vezina and Albert Laurendeau, both of St. Gabriel de Brandon, Quebec, Canada, 30th April, 1900; 6 years. (Filed 27th February, 1900.)

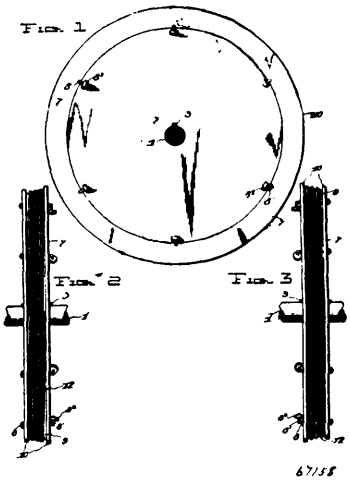
Claim.—1st. A gasolene burner in whose body is a combustion chamber, having inside of it a vapourizing coil connected to the supply and feed pipes and supported by a circular flange forming the bottom of the combustion chamber, substantially as described and

for the purpose herein set forth. 2nd. A gasolene burner, comprising a body with combustion chamber, in which is a coil connected



to the supply pipe and leading to a feed pipe, whose extremity is bell shaped and closed by a thin metal disc substantially as shown and for the purposes herein set forth. 3rd. In a gasolene burner the combination of a cross pipe inside of which is a valve and valve rod with the feed pipe, substantially as shown and for the purposes herein set forth. 4th. In a gasolene burner on whose cross pipe is a nipple, the combination of a cup immediately beneath the nipple and cross pipe with a needle point attached to the said cup, and working through the opening in the nipple, for the purpose herein set forth.

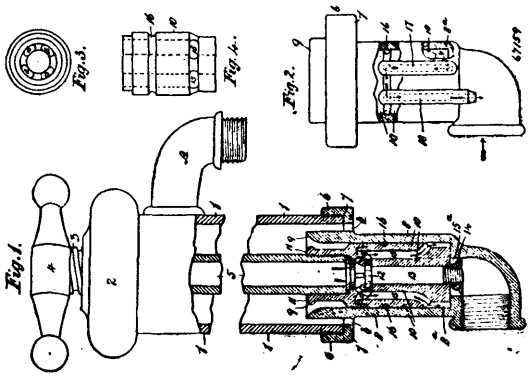
No. 67,158. Pulley. (*Poulie.*)



George Leask and Robert Giffen Drinnan, both of Nanaimo, British Columbia, Canada, 30th April, 1900 ; 6 years. (Filed 19th February, 1900.)

Claim.—1st. A traction pulley comprising a shaft, a pulley hub fixed to said shaft, and a pulley rim having a frictioned engagement with said hub, substantially as and for the purpose set forth. 2nd. A traction pulley comprising a shaft, a pulley hub fixed on said shaft, a separable section having a frictional engagement with said hub, and means for regulating the traction between the hub and section, substantially as and for the purpose set forth. 3rd. A traction pulley having its plane face arranged diagonal to its axis, and a spiral guide encompasing the face of said pulley, substantially as and for the purpose set forth. 4th. A traction pulley having a diagonal face, a spiral guide encompassing said face, and a series of gearing rollers mounted on said guide, substantially as and for the purpose set forth. 5th. A traction pulley comprising a hub and a separable section, in combination with a series of spring bolts connecting said hub and section, substantially as and for the purpose see forth.

No. 67,159. Hydrant. (*Borne fontaine.*)



John H. Parker and Charles F. Willis, assignees of John F. Mallinckrodt, all of Boulder, Colorado, U.S.A., 31st April, 1900; 6 years. (Filed 16th February, 1899.)

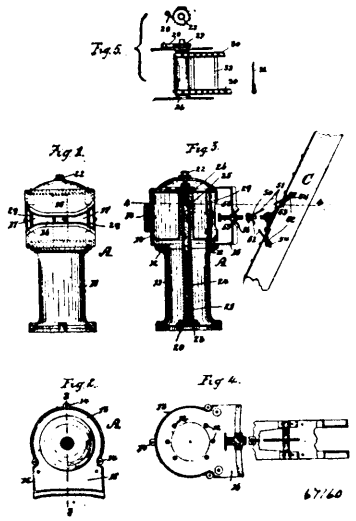
Claim.—1st. In a hydrant, the combination with a valve casing, of a valve in said casing having passages or channels therein for the passage of water and a syphon co-operating with the hydrant when said valve is closed. 2nd. In a hydrant, the combination with a valve casing, of a valve in said casing having channels therein for the passage of water, and a peripheral groove or chamber around said valve, said casing having a channel to connect the channels in said valve with the peripheral groove or chamber and a channel communicating at its upper end with said peripheral chamber and open at its lower end. 3rd. In a hydrant, the combination of a valve casing and a valve therein, said valve having a channel for the passage of water therethrough, and a peripheral groove around the same, said valve casing having a channel connecting the channel in said valve with said groove, and another channel in said valve casing adapted to convey water from said groove to the outside of said casing, said channels co-operating to form a syphon only when the supply of water is cut off. 4th. In a hydrant, the combination with a valve casing and a valve seat therein, of a valve having channels through the same for passage of water and a peripheral chamber around said valve, and a syphon in said valve casing to communicate with said peripheral chamber to drain the hydrant when said valve is closed. 5th. In a hydrant the combination with a valve casing and a valve seat therein, of a valve composed of a single piece having channels therethrough for the passage of water, and a peripheral chamber around the same, and a syphon in said casing adapted to communicate with the peripheral chamber, to drain the hydrant when the valve is closed. 6th. In a hydrant, the combination with a valve casing and a valve therein, of a valve composed of a single piece of flexible material and having passages therethrough for the passage of water, said flexible valve adapted to be forced tight against the sides of the casing by the water passing therethrough, to prevent leakage. 7th. In a hydrant, the combination with the valve casing having a valve seat therein, of a valve having passages through the same for the passage of water and a peripheral groove or chamber, said casing having a syphon for the draining of water when the valve is closed, said valve being so constructed as to break said syphon when the valve is opened or partially opened. 8th. In a hydrant, the combination with a valve casing and a valve seat therein. of a valve in said casing, composed of a single piece of flexible material and having channels or passages therethrough for the passage of water, a syphon in said casing adapted to drain water from said hydrant when the valve is closed, and a plug ore nut secured to said valve and adapted to maintain the water supply cut off until the syphon is broken.

No. 67,160. Guard for Swing Bridges.
(*Garde de pont tournant.*)

Gédéon Lalonde, Coteau du Lac, Quebec, Canada, 30th April, 1900 ; 6 years. (Filed 22nd January, 1900.)

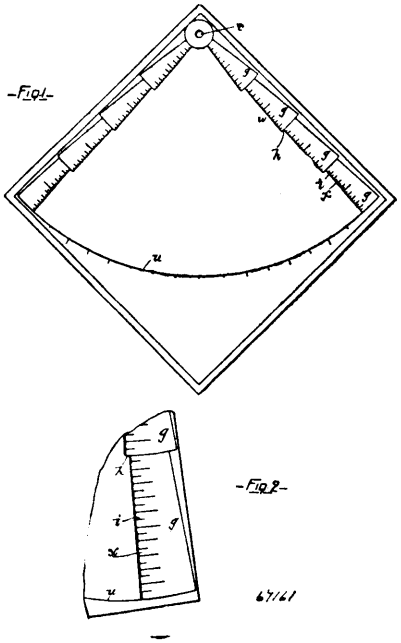
Claim.—1st. An automatically operated barrier or guard for the approaches to swing bridges, etc., consisting of a post containing a spring drum, secured to one side of the roadway, a chain on said spring drum, a grip secured to the end of the said chain, an arm on that part of the swing bridge adjacent to the said post, a receiving post at the opposite side of the roadway, adapted to receive and be engaged by the grip, and release the said arm from said grip, sub-

stantially as set forth. 2nd. An automatically operated barrier or guard for approaches to swing bridges, etc., consisting of a chain or



chains held on a spring drum, a grip on the end of the said chain adapted to engage an arm on the swing bridge, and a receiving post adapted to hold the said grip, substantially as set forth. 3rd. In an automatically operated barrier or guard for approaches to swing bridges, etc., the combination with a chain secured by one end to a spring actuated drum and carrying a grip on its free end, of an arm 50, pivoted to the swing bridge, stay rods 41 and rubber blocks 52, substantially as set forth. 4th. In an automatically operated barrier or guard for approaches to swing bridges, etc., the combination with a post in which is journalled a spring actuated drum of a chain secured by one end to the said drum, a grip carried by the free end of the said chain, and an arm on the swing bridge adapted to be engaged by the said grip, substantially as set forth.

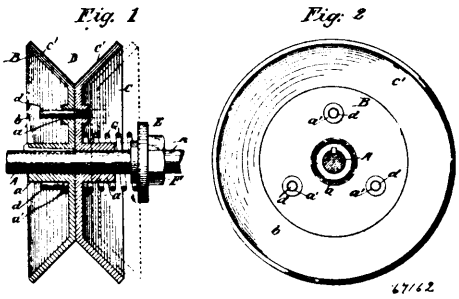
No. 67,161. Chart Blank. (*Blanc de patron.*)



William Henry Goodwin, Toronto, Ontario, Canada, 30th April, 1900; 6 years. (Filed 30th October, 1899.)

Claim.—A quadrantal chart blank having one or more radial scales at the radial edge or edges thereof, substantially as described, and for the purpose set forth. 2nd. A quadrantal chart blank having one or more radial scales at the radial edge or edges thereof, and a graduated arc, substantially as described, and for the purpose set forth.

No. 67,162. Pulley. (*Poulie.*)

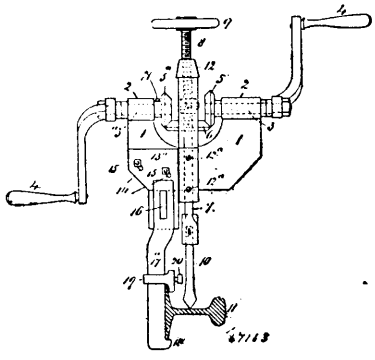


Patrick Kennedy, Brooklyn, New York, U.S.A., 30th April, 1900: 6 years. (Filed 23rd December, 1899.)

Claim.—1st. The combination with a shaft, of a pulley composed of two parallel sections having outwardly flaring rims, one of said sections fast on said shaft, the other of said sections arranged to slide on said shaft, means for rotating the sliding section in unison with the section fast on the shaft, means for holding the two sections together under normal conditions, and means for returning the sliding section to its position after separation from the section which is fast on the shaft, substantially as herein set forth. 2nd. The combination with a shaft, of a pulley composed of two parallel sections having outwardly flaring rims to provide a circumferential groove, one of said sections fast on said shaft and having guide holes, the other of said sections arranged to slide on said shaft, and having pins which work in the guide holes in the opposite section, and means for holding the two sections together under normal conditions of use, and for permitting the one section to spread from the other to widen and deepen the groove when subjected to incidental excessive strain, substantially as herein set forth. 3rd. The combination with a shaft, of a pulley composed of two parallel sections having flaring rims which provide the circumferential groove of the pulley, one of said sections fast on the shaft and having guide holes, the other of said sections arranged to slide upon said shaft and having pins which work in the guide holes of the opposite section, a spring for returning the sliding section to the section fast on the shaft after it has been spread therefrom, and a stop for limiting the movement of the sliding section, substantially as herein set forth. 4th. The combination with a shaft, of a pulley composed of two parallel sections having flaring rims which provide the circumferential groove of the pulley, one of said sections fast on the shaft and having guide holes, the other of said sections arranged to slide on the shaft and having pins that work through the guide holes of the opposite section, and a hub which encircles the shaft, a stop provided to the shaft to limit the movement of the sliding section thereon, and a spiral spring interposed between the stop and the sliding section and coiled about the hub of said section, substantially as herein set forth.

No. 67,163. Hand Drill for Boring Metal Rails.
(*Foret à main pour rails.*)

Fig. 1.

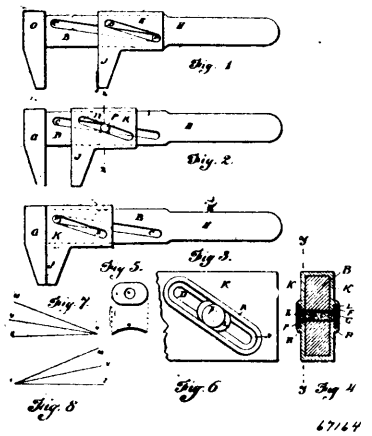


Peter Sharp and James A. Lynch, both of Ottawa, Ontario, Canada, 30th April, 1900; 6 years. (Filed 2nd November, 1899.)

Claim.—1st. A hand drill for boring metal rails, comprising a flat plate stock 1, having tubular bearings 2, in alignment, shafts 3 3ª, journalled in said bearings, a tool holder spindle 7, journalled to said

stock at right angles to and between the end of said shafts, bevel gear wheels 5, 5a and 6, connecting said shafts and spindle, a frame 12, straddling said stock and bolted thereto, a hand feed screw 8, screwing through the top of said frame to feed the drill tool to its work, a sleeve 23, connecting said spindle and screw shaft, one of said crank shafts and its gear wheel removable to permit the machine to operate on the ground to bore a rail either on or off the track, as set forth. 2nd. A rail drilling machine comprising a plate drilling stock, a tool holder journalled thereto and having a changeable section 22, a bevelled gear wheel rotating said holder, two removable crank shafts in alignment journalled to said stock, each carrying a removable bevelled wheel meshing with said gear wheel, a frame straddling said stock and secured thereto and carrying a feed screw to reciprocate the tool holder, and a rail holding frame consisting of two adjustable plates bolted to opposite sides of the drill stock, a bar passing through said plates and fixed thereto, changeable arms provided with an eye at one end and a stop projection at the other end, said arms slipped on said bar and each arm provided with a clamp adapted to engage the flange of a rail, as set forth.

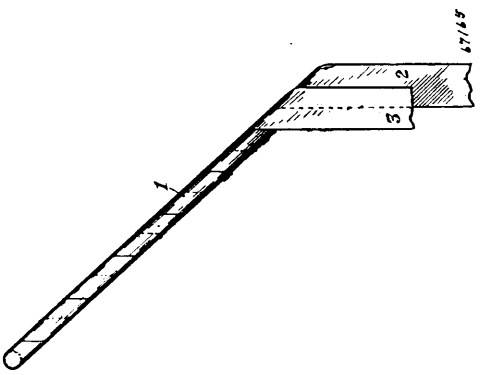
No. 67,164. Wrench. *(Clé à écrou.)*



William Rodman Smythe, Joel W. Goff and John H. Williamson, all of Madison, South Dakota, U.S.A., 30th April, 1900; 6 years. (Filed 27th January, 1900.)

Claim.—1st. In a wrench, the combination with a fixed jaw having a shank, of a movable jaw mounted upon the shank, slots arranged in the shank and movable jaw respectively, said slots being arranged at an angle to each other, and connecting means passing through said slots, substantially as as described. 2nd. In a wrench, the combination with a shank having a fixed jaw and provided with a slot arranged at an angle to the longitudinal axis thereof, of a movable jaw arranged upon the shank and provided with a slot arranged at a different angle to the longitudinal axis of the shank from the slot in said shank, and a pin passing through the slots, substantially as described. 3rd. In a wrench, the combination with a shank having a fixed jaw at one end and provided with a slot arranged at an angle to the longitudinal axis thereof, of a movable jaw arranged upon the shank and provided with a slot arranged at a different angle to the longitudinal axis of the shank from the slot in said shank, but having a portion of the two slots always in alignment, and a pin passing through the slots, substantially as described. 4th. In a wrench, the combination with a shank having a fixed jaw at one end and provided with a slot arranged at an angle to the longitudinal axis thereof, of a movable sleeve carrying a jaw and slidably mounted on the shank, said sleeve being provided with slots arranged at a different angle to the longitudinal axis of the shank from the slot in said shank, and a pin passing through the slots, substantially as described. 5th. In a wrench, the combination with a shank having a fixed jaw at one end and provided with a slot arranged at an angle to the longitudinal axis thereof, of a sleeve slidingly mounted upon the shank and carrying a jaw, said sleeve being also provided with slots arranged at a different angle to the longitudinal axis of the shank, a headed pin passing through the several slots, and a spring arranged upon the pin and having a frictional engagement with one of the members, substantially as described.

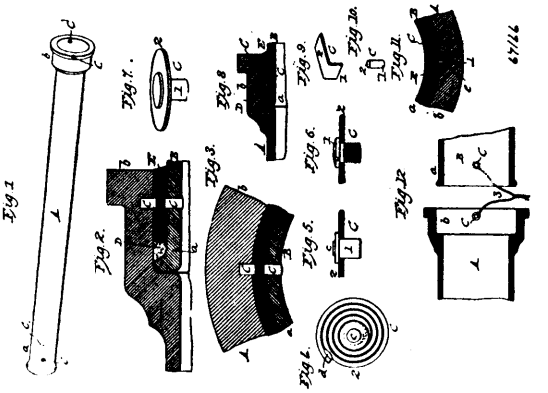
No. 67,165. Julep Straw. *(Paille.)*



Benjamin Fletcher, Toronto, Ontario, Canada, 30th April, 1900; 6 years. (Filed 25th March, 1899.)

Claim.—As a new article of manufacture, a julep straw consisting of a paper tulee formed of two parallel strips wound spirally, the inner one half its width in advance of and beneath the other, substantially as shown and described.

No. 67,166. Electric Bonds for Street Mains.
(Liaison électrique pour conducteurs.)



Adolphus Alvord Knudson, Rutherford, New Jersey, U.S.A., 30th April, 1900; 6 years. (Filed 17th March, 1900.)

Claim.—1st. An electric bond for street mains, electrically connected with the metal of adjoining pipe sections, and wholly inclosed within the joint between such pipe sections. 2nd. An electric bond for street mains, electrically connected with the metal of adjoining pipe sections, and hermetically inclosed within a lead joint between such pipe sections. 3rd. In an electric bond for street mains having lead joints, a metallic contact electrically connected with the metal of a pipe section, and in electrical contact with the lead of a joint. 4th. In an electric bond for street mains having lead joints, a metallic contact of tin or metal covered with tin, electrically connected with the metal of a pipe section and an electrical contact with the lead of a joint. 5th. In an electric bond for street mains having lead joints, a metallic contact comprising an attaching portion electrically connected with the metal of a pipe section and a protruding portion embedded within the lead of a joint and in electrical contact therewith. 6th. In an electric bond for street mains having lead joints, a metallic contact comprising an attaching portion electrically connected with the metal of a pipe section and a spiral washer in electrical contact with the lead of a joint. 7th. In an electric bond for street mains having lead joints, a pair of metallic contacts electrically connected respectively with the spigot and bell of a joint and in electrical contact with the lead of such joint. 8th. In an electric bond for street mains, a pair of electrical contacts electrically connected respectively with the adjoining pipe sections, and comprising spiral washers composed of wires adapted to be uncoiled and electrically connected with each other.

TRADE-MARKS

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7288. THE KNOWLTON DANDERINE COMPANY, Chicago, Illinois, U.S.A. Scalp Tonics, 2nd April, 1900.

7289. THE JAMES E. PATTON COMPANY, Milwaukee, Wisconsin, U.S.A. Paints, 2nd April, 1900.

7290. CHAPPELL, ALLEN & COMPANY, LIMITED, Patriotic Corset Works, Redfield, Bristol, England. Corsets, 2nd April, 1900.

7291. THE UNION BREWING COMPANY, LIMITED LIABILITY, Nanaimo, B.C. Beer and Porter in bottles, 3rd April, 1900.

7292. F. F. DALLEY, COMPANY, LIMITED, Hamilton, Ont. Baking Powder, 4th April, 1900.

7293. } THE CANADIAN RUBBER COMPANY OF MONTREAL, Montreal,
7294. } Que. Rubber Goods, 4th April, 1900.

7295. JOHN KILLIPS PATTON, Vancouver, B.C. Medicines, 4th April, 1900.

7296. JAMES THOMPSON, Kingston, Ont. Soda and Mineral Waters, Ginger Beer, Ale, Porter and Lager, 6th April, 1900.

7297. LISTER & COMPANY, Bradford, Yorkshire, England. Dry Goods, 9th April, 1900.

7298. ADOLPH MAAS & COMPANY, Berlin, Prussia, Germany. Berlin Wools, 9th April, 1900.

7299. PHILLIPS & WRINCH, Toronto, Ont. Ladies' Hose Supporters and Men's Garters, 9th April, 1900.

7300. GEORGE E. BOAK & COMPANY, Halifax, N.S. Dry and Pickled Fish, 9th April, 1900.

7301. HENRY DOYLE & COMPANY, Vancouver, B.C. Rubber Coats and Rubber Boots, 9th April, 1900.

7302. FRANCOIS MARIE BENOIT MATHYS, Montreal, Que. Bobines de Fil de Coton a Coudre, 9 avril, 1900.

7303. JOHN CROSKERY, Perth, Ont. Patent Medicines, 9th April, 1900.

7304. THE J. D. KING COMPANY, LIMITED, Toronto, Ont. Boots and Shoes, 9th April, 1900.

7305. B. HOUDE & COMPAGNIE, Québec, Qué. Tabac coupé et Cigarettes mis en paquets, 10 avril, 1900.

7306. SOCIÉTÉ ANONYME DU HOME DECOR, 172 Quai de Jammapes, Paris, France. Panneaux et de motifs de decoration murale, 11 avril, 1900.

7307. GEORGE ROBERTSON & SON, Kingston, Ont. Tea, Coffee, Cocoa, Baking Powder and Mustard, 12th April, 1900.

7308. JOHN W. SPROUL & COMPANY, Canso, N.S. All kinds of Canned and Preserved Fish, 14th April, 1900.

7309. JOHN W. CARTER, Toronto, Ont. Shoe Blacking, 14th April, 1900.

7310. LEITCH BROTHERS, Oak Lake, Manitoba. Flour, Rolled Oats, Meals and Cereal Foods, 17th April, 1900.

7311. LUCAS, STEELE & BRISTOL, Hamilton, Ont. Tea, 20th April, 1900.

7312. THE EMPIRE TOBACCO COMPANY, LIMITED, Granby, Que. Tobacco, 24th April, 1900.

7313. D. S. PERRIN & COMPANY, London, Ont. Biscuits, Confectionery and Candies, 24th April, 1900.

7314. THE TOBACCO WAREHOUSING AND TRADING COMPANY, Danville, Virginia, U.S.A. Tobaccos and Tobacco Products for Fumigating, Veterinary or Medicinal purposes, 25th April, 1900.

7315. TEUTONIA MISBURGER PORTLAND CEMENTWERK, Hanover, Prussia, Germany, Portland Cement, 25th April, 1900.

7316. THE ELLIOT & COMPANY, LIMITED, Toronto, Ont. Paint, 26th April, 1900.

7317. ALONZO HENRY SIMMS, Birmingham, Alabama, U.S.A. Kilns, 27th April, 1900.

7318. GRAFTON & COMPANY, Dundas, Ont. Ready Made Clothing, 27th April, 1900.

7319. WILLIAM MAXIMILLIAN McKAY, Montreal, Que. Cigars, 30th April, 1900.

7320. } TELLIER, ROTHWELL & COMPANY, Montreal, Que. Washing Blues,
7321. } 30th April, 1900.

INDUSTRIAL DESIGNS.

Registered during the month of April, 1900, at the Department of Agriculture—Copyright and Trade-Mark Branch.

1640. JOSEPH MONTPETIT, Montreal, Que. Ear and Fastener for Pails, Buckets, etc., 2nd April, 1900.

1541. THE CANADIAN RUBBER COMPANY OF MONTREAL, Montreal, Que. Roughened Surface for Rubber Soles and Heels, 4th April, 1900.

1642. WILLIAM JAMES CUMMINGS, Toronto, Ont. Lamp or Burner, 6th April, 1900.

1643. THOMAS WILLIAM HAND, Hamilton, Ont. Patriotic Portrait Flag, bearing portraits of Queen Victoria, and of Generals Roberts, Kitchener, Buller and White, 14th April, 1900.

1644. BENJAMIN SHELMIRE, Windsor, Ont. Gasolene Gas Lamp, 14th April, 1900.

1645. GEORGE THOMAS WILFORD, Galt, Ont. Toe Clip for Bicycle Pedal, 19th April, 1900.

1646. MACDONALD MANUFACTURING COMPANY, Toronto, Ont. Ornamentation of Tinware in imitation of Japanese lacquer work, 19th April, 1900.

1647. HENRY NERLICH, Junior, Toronto, Ont. Decoration of Chinaware and other fancy articles: Queen Victoria in the centre partially surrounded by Maple Leaves and the Arms of the different provinces of the Dominion, 18th April, 1900.

1648. ARTHUR GEORGE PIPER, Toronto, Ont. Bicycle Holder, 25th April, 1900.

1649. FREDERICK CRAPPER, Toronto, Ont. Advertising device re British Flag and Lion with words: "Strike Me and I'm Your Match", 26th April, 1900.

1650. THE ROYAL CANADIAN YACHT CLUB, Toronto, Ont. Burgee Flag, 27th April, 1900.

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11274. THE NEW LAWS OF EMPLOYERS' LIABILITY IN ENGLAND AND FRANCE. By Frederick Parker Walton. C. Théoret, Montreal, Que., 2nd April, 1900.

11275. BY WAY OF THE WILDERNESS. By "Pansy" (Mrs G. R. Alden.) and Mrs. C. M. Livingstone. Wm. Briggs, Toronto, Ont., 2nd April, 1900.

11276. LIGHTNING COAL SALES BOOK. (A.) Arthur Miville Dechêne, Montreal, Que., 2nd April, 1900.

11277. LIGHTNING COAL SALES BOOK. (B.) Arthur Miville Dechêne, Montreal, Que., 2nd April, 1900.

11278. PERPETUAL CALENDAR. Central Machine Works, Toronto, Ont., 2nd April, 1900.

11279. ART METAL OFFICE CONSTRUCTION. The Eclipse Office Furniture Company of Ottawa (Ltd.), Ottawa, Ont., 4th April, 1900.

11280. THE WATERS OF THE GREAT MAGI CALEDONIA SPRINGS. (Book.) The Grand Hotel Company of Caledonia Springs (Ltd.), Caledonia Springs, Ont., 4th April, 1900.

11281. LES EAUX DES GRANDES SOURCES MAGI DE CALEDONIA. (Book.) The Grand Hotel Company of Caledonia Springs (Ltd.), Caledonia Springs, Ont., 4th April, 1900.

11282. THE CORRECT MEASURE. Chart and Scale. Signard Maxime Beaudoin, Montreal, and Prosper Alfred Bissonnet, Stanstead, Que. (The Correct Measure Company.), 4th April, 1900.

11283. PRICE LIST No. 22, SPRING AND SUMMER, 1900. The S. Carsley Company (Ltd.), Montreal, Que., 4th April, 1900.

11284. GUIDE MAP OF ROSSLAND, BRITISH COLUMBIA. R. E. Young, Rossland, B.C., 4th April, 1900.

11285. HERD OF BUFFALOES IN THE NATIONAL PARK, BANFF, NORTH-WEST TERRITORIES, CANADA. (Photo Marked A.) Joseph Rouer Roy, Ottawa, Ont., 5th April, 1900.

11286. HERD OF BUFFALOES IN THE NATIONAL PARK, BANFF, NORTH-WEST TERRITORIES, CANADA. (Photo Marked B.) Joseph Rouer Roy, Ottawa, Ont., 5th April, 1900.

11287. HERD OF BUFFALOES IN THE NATIONAL PARK, BANFF, NORTH-WEST TERRITORIES, CANADA. (Photo Marked C.) Joseph Rouer Roy, Ottawa, Ont., 5th April, 1900.

11288. MONTREAL. Marche-Two-Step. Par Jean Julien Clossey. Albert Turcotte, Montreal, Que., 5 avril, 1900.

11289. GENERAL SIR GEORGE STEWART WHITE, V.C., G.C.B. (Picture.) Joseph C. Clarke, Toronto, Ont., 6th Aprll, 1900.

11290. THE CANADIAN MAGAZINE. April, 1900. The Ontario Publishing Company (Ltd.), Toronto, Ont, 7th April, 1900.

11291. JOAN OF THE SWORD HAND. By S. R. Crockett. (Book.) Ward, Lock & Company (Ltd.), London, England, 7th April, 1900.

11292. SECOND CHARLOTTETOWN DETACHMENT WHO VOLUNTEERED FOR SERVICE WITH THE CANADIAN CONTINGENT FOR THE WAR IN SOUTH AFRICA. (Photo.) George H. Cook, Charlottetown, P.E.I., 9th April, 1900.

11293. THE CANADIAN ANNUAL DIGEST, 1899. By Charles H. Masters, Q.C., and Charles Morse, B.C.L. Robert Reid Cromarty, Toronto, Ont., 9th April, 1900.

11294. THE SONG OF THE HEROES. By Jacob Goldenberg, Wapella, N.W.T., 10th April, 1900.

11295. SOUTH AFRICA AND THE BOER-BRITISH WAR. Illustrated. Volume I. By J. Castell Hopkins, F.S.S., and Murat Halstead. J. L. Nichols & Company, Toronto, Ont., 11th April, 1900.

11296. NEWLANDS HAYES' EDUCATIONAL AND BUSINESS CHART. Newlands Hayes, Windsor, Ont., 11th April, 1900.

11297. THE EDUCATIONAL MUSIC COURSE. By Alex. T. Cringan. Book IV. The Canada Publishing Company (Ltd.), Toronto, Ont., 12th April, 1900.

11298. ANGELICA WALTZES. By Harry J. Weiler, Baden, Ont., 14th April, 1900.

11299. REMEMBER OUR SOLDIER BOYS. Patriotic March, Song. Words and Music by Harry J. Weiler, Baden, Ont., 14th April, 1900.

11300. THE MEDICAL DIRECTORY OF TORONTO AND SUBURBS. Compiled and Published by Frederick Smily, Toronto, Ont., 17th April, 1900.

11301. WITH NUMBER THREE. By Rudyard Kipling. Published in *The Citizen*, Ottawa, Ont. (Temporary Copyright.) Rudyard Kipling, London, England, 17th April, 1900.

11302. THE LATE MAJOR H. M. ARNOLD, OF THE FIRST WINNIPEG CONTINGENT TO SOUTH AFRICA. (Photo $7\frac{1}{2}$ x $9\frac{1}{2}$.) Arnold Kohnen, Winnipeg, Man., 17th April, 1900.)

11303. THE LATE MAJOR H. M. ARNOLD, OF THE FIRST WINNIPEG CONTINGENT TO SOUTH AFRICA. (Photo 10 x 13.) Arnold Kohen, Winnipeg, Man., 17th April, 1900.

11304. THE NEREID'S LULLABY. (Mezzo Soprano or Baritone.) By Clayton Johns. The John Church Company, Cincinnati, Ohio, U.S.A., 19th April, 1900.

11305. THE WILD HUNT. (Mezzo Soprano or Baritone.) By Clayton Johns. The John Church Company, Cincinnati, Ohio, U.S.A., 19th April, 1900.

11306. THE MESSIAH. Words by Alexander Pope. (1688-1744.) Music by Adolph M. Foerster. The John Church Company, Cincinnati, Ohio, U.S.A., 19th April, 1900.

11307. FEO. A Romance. By Max Pemberton. The Copp, Clark Company (Ltd.), Toronto, Ohio, U.S.A., 19th April, 1900.)

11308. WOOD'S TIME SHEET AND PAY ROLL. William Archibald Wood, Montreal, Que., 19th April, 1900.

11309. CANADA, THE BEAUTIFUL. Poem, by S. G. Saywell, Toronto, Ont., 20th April, 1900.

11310. EDUCATIONAL REVIEW SUPPLEMENTARY READINGS, CANADIAN HISTORY, NUMBER NINE, MARCH, 1900. George U. Hay, St. John, N.B., 20th April, 1900.

11311. BY THE MARSHES OF MINAS. By Charles G. D. Roberts. William Briggs, Toronto, Ont., 21st April, 1900.

11312. PRACTICAL STATUTES. Being a Collection of Statutes of Practical Utility in force in Ontario, with Notes on the Construction and Operation thereof. By James Bicknell and Arthur James Kappele. James Bicknell, Toronto, Ont., 21st April, 1900.

11313. VIE DE MÈRE GAMELIN, FONDATRICE ET PREMIÈRE SUPÉRIEURE DES SŒURS DE LA CHARITE DE LA PROVIDENCE. Sœurs de la Charité de la Providence, Montréal, Qué., 23 avril 1900.

11314. VOLUNTEER. Patriotic Song. Words and Music by Felix McGlennon. Whaley, Royce & Company, Toronto, Ont., 22nd April, 1900.

11315. RÊVERIE. Paroles de Nap. Legendre. Musique de M. A. Mercille. Madam Albert Mercille, St. Lambert, Comté de Chambly, Qué., 24 avril 1900.

11316. AUNT MINERVY ANN'S. Cake Walk and characteristic March. By Jos. St. John. Arranged by R. Gruenwald. Joseph St. John, Montreal, Que., 24th April, 1900.

11317. FOSTER'S CYCLISTS' ROAD MAP OF EASTERN ONTARIO. J. G. Foster & Company, Toronto, Ont., 25th April, 1900.

11318. THE CODE OF CIVIL PROCEDURE OF THE PROVINCE OF QUEBEC. By R. Stanley Weir, D.C.L. Camille Theoret, Montreal, Que, 25th April, 1900.

11319. WRITE A FEW LINES TO MY MOTHER. Words and Music by John A. Birmingham, London, Ont., 26th April, 1900.

11320. LONDON TIMES' NEWS AND VIEWS *RE* TRANSVAAL WAR. No. 5. The *Globe* Printing Company, Toronto, Ont., 26th April, 1900.

11321. THE QEEEN'S BRAVE CANADIANS. Words and Music by Wm. M. Wallace. Arranged by Prof. W. E. Rosendale. William M. Wallace, St. John, N.B., 26th April, 1900.

11322. CANADIAN VOLUNTEERS. Words by Herbert L. Manks. Music by R. Percy Strand, St. John, N.B., 26th April, 1900.

11323. TWENTIETH CENTURY WALTZ. By E. A. Hunter, Keewatin, Ont., 27th April, 1900.

11324. THE SONS OF CANADA. Words by John Beverley Harris. Music by F. H. Torrington. John Beverley Harris, Toronto, Ont., 27th April, 1900.

11325. THE OLYMPIAN RANGE, FROM ESQUIMALT, B.C. (Photo.) John Wallace Jones, Esquimalt, B.C., 28th April, 1900.

11326. THE GORGE. (Photo.) John Wallace Jones, Esquimalt, B.C., 28th April, 1900.

11327. SURGICAL AND MEDICAL. By Rudyard Kipling. Story. Published in *The Citizen*, Ottawa, Ontario, Canada. (Temporary Copyright.) Rudyard Kipling, London, England, 30th April, 1900.