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# The Canadian Patent Office

## RECORD





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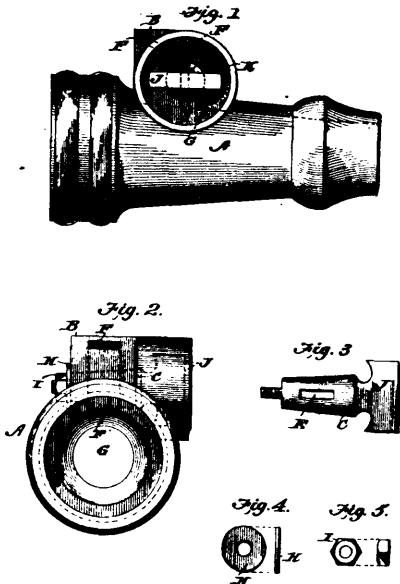
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No. 63,392. Nozzle. (*Lance de boyaux.*)



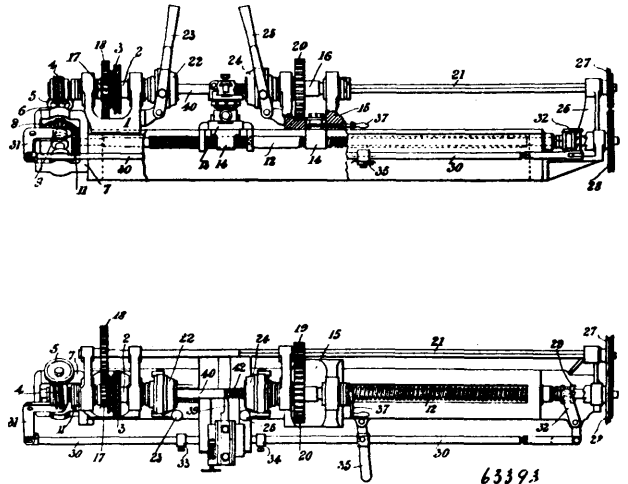
63392

James Kitchen, assignee of James Wright, both of Roslyn, Washington, U.S.A., 7th July, 1899; 6 years. (Filed 9th March, 1899.)

*Claim.*—1st. A hose nozzle, having at one side a valve casing having a port communicating with the bore of the nozzle and its outer end arranged to discharge a protecting stream upon the hose-man and the valve operating in said casing, substantially as set forth. 2nd. A nozzle, having at one side a valve casing provided with a port communicating with the bore of the nozzle, such casing being provided at one end with a recess, and the valve turning in the casing and controlling the port thereof and provided with a handle lying in the end recess of the casing, substantially as set forth. 3rd. A nozzle, having a valve casing provided with a port by

which to deliver a protecting stream, such port being widened laterally, and a valve for controlling such port, substantially as set forth. 4th. A nozzle, provided at one side with a casing having a port arranged to discharge rearwardly, and a valve controlling such port, substantially as set forth.

No. 63,393. Machine for Making Metallic Ribbon.  
(*Machine pour la fabrication de ruban métallique.*)



63393

The Porous Accumulator Company, assignee of John Charles Howell, all of 24 Queen Victoria Street, London, England, 7th July, 1899; 6 years. (Filed 3rd January, 1899.)

*Claim.*—1st. In a machine for the manufacture of metallic ribbon, the combination with mechanism adapted to cut a metal tube, of a mandrel having both a rotating and a receding motion with relation to the tube, and adapted to collect and spirally wind the ribbon so produced, substantially as described. 2nd. In a machine for the manufacture of metallic ribbon, the combination with mechanism adapted to cut a metal tube, of mechanism adapted to collect, crinkle and spirally wind the ribbon so produced, substantially as described. 3rd. In a machine for the manufacture of metallic ribbon, the combination with the slide rest and cutting tool of a leading screw and a tail stock operated by such leading screw in a reverse direction to the motion of the slide rest, substantially as described. 4th. In a machine for the manufacture of metallic ribbon, the combination with the slide rest and cutting tool of a leading screw, a tail stock operated in a reverse direction to the slide rest by such leading screw, and means whereby a slight independent movement may be imparted to the tail stock, substantially as described. 5th. In a machine for the manufacture of metallic ribbon, the combination with a chuck carrying the material to be operated upon, of a slide rest, a mandrel carried by the tail stock, gearing operating the chuck and mandrel at the same or different speeds, and a leading screw operating the slide rest and tail stock in opposite directions at the same or different speeds, substantially as set forth. 6th. In a machine for the manufacture of metallic ribbon, the combination with a chuck carrying the material to be operated upon, and a mandrel upon which the ribbon is to be

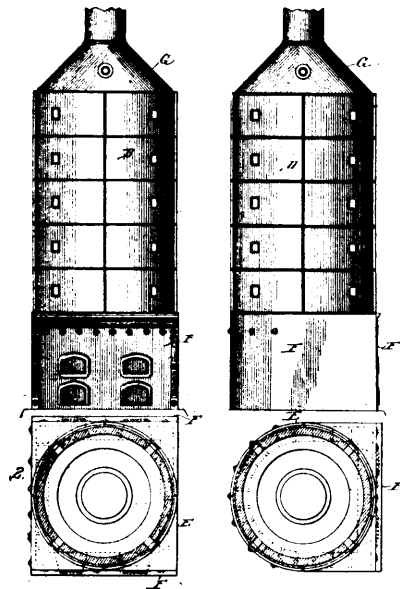
collected, of gearing operating said chuck and mandrel, a leading screw, a slide rest and a tail stock operated by said screw, a rod operated by the slide rest and adapted to throw the leading screw out of gear with the chuck and reversing gear to enable the slide rest and tail stock to be reset in starting position, substantially as set forth.

**No. 63,394. Explosive. (Explosif.)**

David William Nightingale, 152 Wyndham Road, Camberwell and Richard Clere Parsons, 39 Victoria Street, Westminster, both of London, England, 7th July, 1899; 6 years. (Filed 24th December, 1898.)

*Claim.*—1st. The manufacture of a safety explosive by adding to potassium chlorate and the carbonaceous matter usually combined therewith, a sensible proportion of sodium carbonate, substantially as and for the purpose set forth. 2nd. A safety explosive, containing potassium chlorate, carbonaceous matter, a sensible proportion of sodium carbonate and paraffin or other wax or stearine, as and for the purpose set forth.

**No. 63,395. Steam Boiler Settings. (Chaudière à vapeur.)**



63395

Edward Selden Townsend Kennedy, Larchmont, New York, U.S.A., assignee of John Herron Williamson, Bethel, Connecticut, U.S.A., 7th July, 1899; 6 years. (Filed 21st November, 1898.)

*Claim.*—1st. A steam boiler setting, provided with a lower or fuel chamber having an enclosing casing, and having a self-sustaining lining of brick work supported independently of the casing, and an upper chamber for the circulation of the products of combustion, said upper chamber being supported independently of the brick work of the lower chamber and having its walls over the brick lining of the lower chamber but separated therefrom by an intervening expansion space. 2nd. A steam boiler setting, provided with a lower or fuel chamber having an enclosing casing, and having a self-sustaining lining of brick work supported independently of the casing, and an upper chamber for the circulation of the products of combustion, said upper chamber having inner walls and an outer envelope or casing enclosing but not supporting said inner walls, said inner walls being supported from the casing of the lower chamber independently of the brick work lining of said lower chamber, and separated therefrom by an intervening expansion space. 3rd. A steam boiler setting, provided with a brick lined lower or fuel chamber, an upper chamber for the circulation of the products of combustion, said lower chamber being provided with an enclosing casing, and brackets extending from the said casing and supporting the upper chamber. 4th. A steam boiler setting, provided with a brick lined lower or fuel chamber, an upper chamber for the circulation of the products of combustion, said lower chamber being provided with an enclosing casing, a shelf upon which the upper chamber rests, and brackets extending from said casing and supporting the shelf and upper chambers. 5th. A steam boiler setting, provided with a brick lined lower or fuel chamber, an upper chamber for the circulation of the products of combustion, said lower chamber being provided with an enclosing casing, a shelf upon which the upper chamber rests, and brackets extending from said casing and supporting the shelf and upper chamber, said brackets comprising diagonal and horizontal members and uprights. 6th. A steam boiler setting, provided with a brick lined lower or fuel chamber, an upper chamber for the circulation of the products

of combustion, said lower chamber being provided with an enclosing casing, a shelf upon which the upper chamber rests, and brackets extending from said casing and supporting the shelf and upper chamber, said brackets comprising diagonal and horizontal members and uprights, the diagonal members extending from angles of the casing. 7th. A steam boiler setting provided with a brick lined lower or fuel chamber, an upper chamber for the circulation of the products of combustion, said lower chamber being provided with an enclosing casing, and brackets extending from the said casing and supporting the upper chamber, said brackets being located in enlarged recesses of the brick work, so as to be independent of expansion of the latter. 8th. A steam boiler setting, provided with a brick lined lower or fuel chamber, an upper chamber for the circulation of the products of combustion, a shelf upon which the upper chamber rests, and brackets for supporting the shelf independently of the brick work of the lower chamber, said brackets comprising diagonal and horizontal members and uprights and being located in enlarged recesses of the brick work, so as to be independent of expansion of the latter. 9th. A steam boiler setting, provided with a brick lined lower or fuel chamber provided with an enclosing casing, an upper chamber for the circulation of the products of combustion, a shelf upon which the upper chamber rests and brackets for supporting the shelf independently of the brick work of the lower chamber, said brackets comprising diagonal and horizontal members and uprights joined to the enclosing casing of the lower chamber, and being located in enlarged recesses of the brick work, so as to be independent of the expansion of the latter. 10th. A steam boiler setting, provided with a brick lined lower or fuel chamber, said lower chamber being provided with an enclosing casing angular in cross section, and an upper chamber for the circulation of the products of combustion, said upper chamber being of general circular contour, a shelf upon which the chamber rests and diagonal shelf supporting bracket pieces extending from the angles of the casing of the lower chamber. 11th. A steam boiler setting, provided with a brick lined lower or fuel chamber, said lower chamber being provided with an enclosing casing angular in cross section, and an upper chamber for the circulation of the products of combustion, said upper chamber being of general circular contour, a shelf upon which the upper chamber rests and shelf supporting bracket pieces extending from the angles of the casing of the lower chamber, one of said bracket pieces being horizontal and one being diagonal the said bracket pieces being located in enlarged recesses of the brick work, so as to be independent of expansion of the latter. 12th. A steam boiler setting, provided with a brick lined lower or fuel chamber, said lower chamber being provided with an enclosing casing angular in cross section and an upper chamber for the circulation of the products of combustion, said upper chamber being of general circular contour, a shelf upon which the upper chamber rests, diagonal shelf supporting bracket pieces extending from the angles of the casing of the lower chamber, and an auxiliary shelf supporting stringer or girder member, spanning the angles of the casing, said shelves supporting bracket pieces and stringer being located in enlarged recesses of the brick work so as to be independent of expansion of the latter. 13th. A steam boiler setting, having a superstructure of substantially cylindrical contour, for the circulation of the products of combustion, and a subjacent deflecting furnace having a substantially rectangular grate surface and having an enclosing casing and an independently supported brick lining, the superstructure being supported from the said enclosing casing independently of the said brick lining, and the deflecting furnace having a rectangular front. 14th. A steam boiler setting, having a superstructure of substantially cylindrical contour, for the circulation of the products of combustion, and a subjacent deflecting furnace having a substantially rectangular grate surface and having an enclosing casing and an independently supported brick lining, the superstructure being supported from the said enclosing casing independently of the said brick lining and the deflecting furnace having a rectangular front and front and rear firing doors.

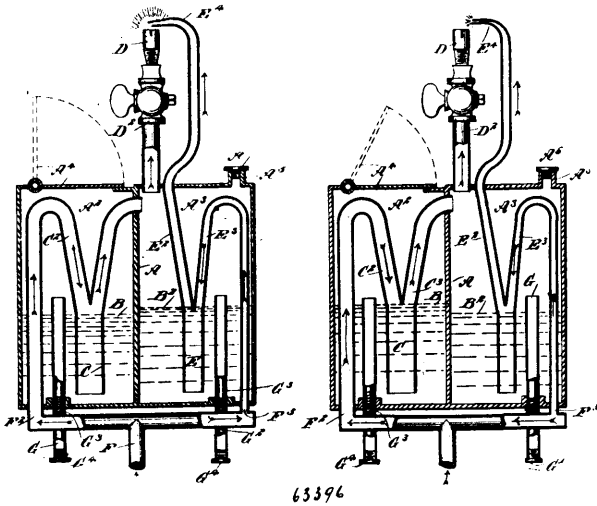
**No. 63,396. Gas Jet Lighter and Extinguisher.**

(Appareil à allumer et éteindre le gaz.)

The Automatic Gas Lighting and Extinguishing Company, 14 Lombard Chambers, St. George's Terrace, assignee of Henry Hoare, Perth Gas Works, and Matthew Joseph Kennedy, 218 Wellington Street, all of Perth, Australia, 7th July, 1899; 6 years. (Filed 21st November, 1898.)

*Claim.*—1st. The herein described method of automatically lighting and extinguishing gas jets, burners or flames, consisting in utilizing the pressure in the gas main or source of supply for the purpose of opening or closing a way or passage for the gas by means of the displacement and replacement of an elastic fluid or liquid, substantially as and for the purposes herein described and set forth and as illustrated in the accompanying drawings. 2nd. An apparatus consisting essentially of a bifurcated or Y-shaped pipe, tube or chamber, the trunk end of which is placed in a sealing liquid, and the other branches being in connection with the gas main and burner respectively, the junction of such branches and trunk providing or forming means whereby a passage is opened or closed respectively for or against the gas current by the utilization of the pressure in the manner as above claimed, and substantially as and for the purposes herein described and set forth. 3rd. An apparatus consisting essentially of a chamber as M, in which is confined a

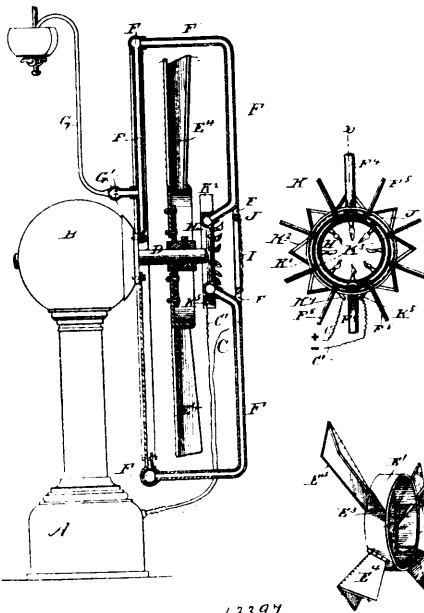
sealing agent or liquid, and such chamber having at each of its ends a bifurcated or Y-shaped tubular formation whose branches at their



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junction provide means whereby a passage is opened for or against the gas current by the utilization of pressure, substantially as and for the purposes herein described and set forth.

**No. 63,397. Apparatus for Heating and Agitating Air.**  
(Appareil à chauffer et agiter l'air.)



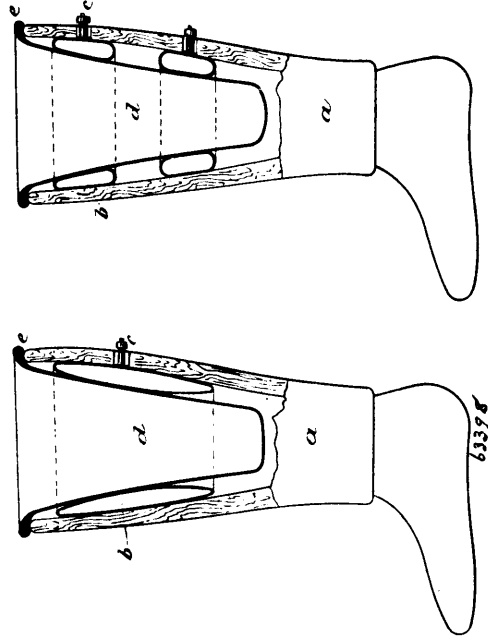
63397

The Bay State Electric Heat and Light Company, Jersey City, New Jersey, assignee of Edwin F. Porter, Boston, Massachusetts, U.S.A., 7th July, 1899; 6 years. (Filed 5th March, 1898.)

*Claims.*—1st. An air heating and diffusing apparatus, comprising a rotary fan, a burner of oil or gas opposite the centre of said fan, feed pipes or tubes from a source of supply of oil or gas to the burner, a thermo-electric generator connected to said burner, and an electric motor connected to said generator by a metallic circuit, whereby the burner heats the air and the thermo-electric generator causes the motor to rotate the fan, substantially as set forth. 2nd. An apparatus of the character described, comprising a rotary fan, a burner of gas or oil offset from the centre of the fan, a thermo-electric generator energized by heat from said burner, an electric motor, and a metallic circuit connecting the generator and motor, as and for the purpose set forth. 3rd. An apparatus for heating and diffusing air, comprising a rotary fan, a burner offset from the centre of said fan, pipes or tubes forming a protecting guard to the fan and supplying the burner with gas or oil from a source of supply, and a motor rotating the fan from a source of electric energy, as set forth. 4th. An apparatus for heating and diffusing air, comprising a rotary fan having a hub formed by a flat ring closed at the inner end, said ring having triangular apertures, and V-shaped fan blades

connected to said ring to partially enclose the apertures, a burner opposite to said ring, feed tubes to said burner from a source of supply of gas or oil, a thermo-electric generator connected to said burner, and an electric motor connected to the generator by metallic conductors, as set forth.

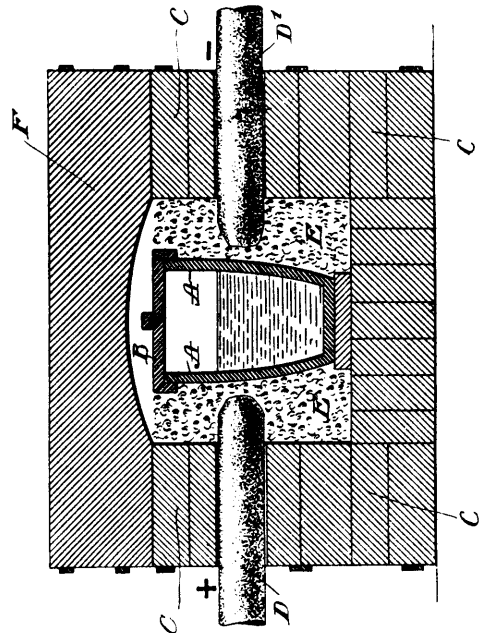
**No. 63,398. Artificial Leg.** (*Jambe artificielle.*)



Niels Faarup, Elsinore, and Paul Christensen, Copenhagen, both in Denmark, 7th July, 1899; 6 years. (Filed 9th September, 1898.)

*Claim.*—1st. In artificial legs, the arrangement of an annular air chamber or tire *b* inside the covering *a* intended to hold the leg, which chamber can be inflated thus lying close around the leg stump and making any further securing unnecessary. 2nd. In artificial legs, the arrangement of the suspension bag inside the excavation for the natural leg into which bag the leg stump is kept in suspended state.

**No. 63,399. Alloy of Titanium.** (*Alliage de titanium.*)



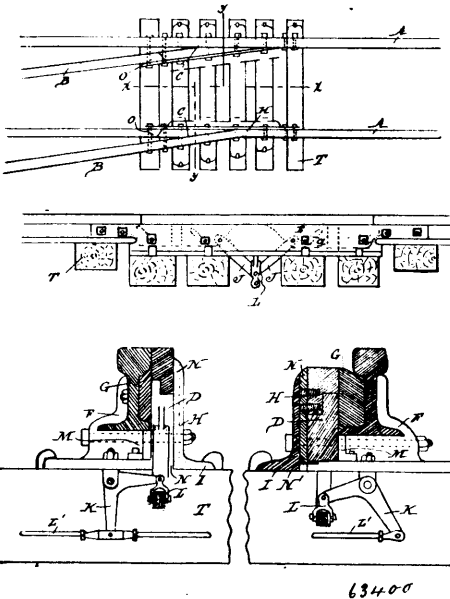
63399

August Jacques Rossi, James MacNaughton and Walter Dunnau Edmonds, all of New York City, U.S.A., 7th July, 1899; 6 years. (Filed 23rd August, 1898.)



*Claim.*—1st. The process of producing a new compound or alloy of titanium and iron, containing some carbon, and titanium in industrially important proportions, that is to say, in excess of five per centum of titanium, which consists in supporting in a bath of molten iron and while subjected to intense heat, say not less than 3,500 degrees Fahrenheit, a mixture of carbon and of titanic acid, substantially as and for the purposes described. 2nd. The process of producing a new compound or alloy of titanium and iron, containing some carbon, and titanium in industrially important proportions, that is to say, in excess of five per centum of titanium, which consists in supporting in a bath of molten iron and while subjected to intense heat, say not less than 3,500 degrees Fahrenheit, a mixture of carbon and of a compound, containing titanic acid as one of its important constituents, substantially as and for the purposes described. 3rd. The process of producing a new compound or alloy of titanium and iron, containing some carbon, and titanium in industrially important proportions, that is to say, in excess of five per centum of titanium, which consists in supporting in a bath of molten iron and while subjected to intense heat, say not less than 3,500 degrees Fahrenheit, a mixture of carbon and of titaniferous iron ore, substantially as and for the purposes described. 6th. As a new article of manufacture, a new compound containing an important quantity of iron, say not less than ten per centum of the mass, some carbon, and titanium in industrially important proportions, that is to say, not less than five per centum of the mass, substantially as and for the purposes described.

**No. 63,100. Railway Switch.** (*Aiguille de chemin de fer.*)



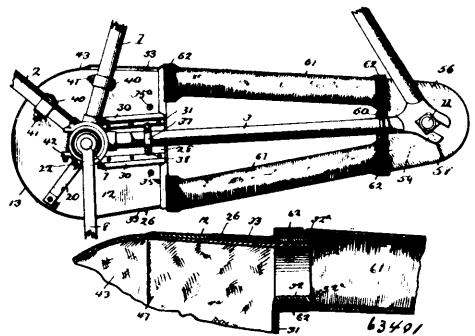
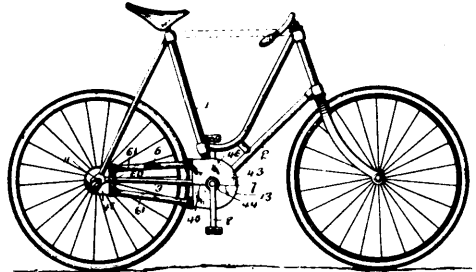
Thorn Copeman, Edgar Mills, Ontario, Canada, 7th July, 1899; 6 years. (Filed 2nd June, 1899.)

*Claim.*—1st. In a railway switch, the combination with the stationary rails of a main track and siding, of a vertically movable switch points in line with the inner rails at the junction with the outer rails, one switch point being depressed and the other at the level of the rails, a pair of sliding bearing blocks supporting each switch point and having inclined slots oppositely inclined in the two blocks, stationary bolts passing transversely through these slots, toggles connecting the inner ends of each pair of bearing blocks together, and operative connection for actuating the toggles in opposite directions by the movement of the switch-rod. 2nd. In a railway switch, the combination with the stationary rails of a main track and siding, of vertically movable switch points in line with the inner rails at the junction with the outer rails, one switch point being depressed and the other at the level of the rails, a pair of sliding bearing blocks supporting each switch point and provided with inclined slots formed with horizontal offsets, toggles connecting the inner ends of each pair of bearing blocks and adapted to move the same in opposite directions, stationary bolts extending transversely through the slots in the bearing blocks, means at the ends of said bearing blocks adapted to support said ends when the blocks are in raised position and operative connection with the switch rod for actuating the toggles of the two pair of bearing blocks in opposite directions. 3rd. In a railway switch, the vertically movable switch points in combination with sliding bearing blocks below the same and having inclined guide slots formed with horizontal offsets, bolts passing transversely through these slots and supporting the bearing blocks slidably in position, and means for operating the bearing blocks. 4th. In a railway switch, the combination with the stationary rails of a main and side track,

of the vertically movable switch points *c*, the bearing blocks *D* having inclined slots *a* formed with horizontal offsets *a*<sup>1</sup>, the bolts *E* passing through said slots, the chairs *F* and cover plate *H* in which said bolts are supported upon the ties, the vertical guides *N* secured to the switch points and projecting beneath the bearing blocks, the toggles *J*, the bell cranks *K* adapted to move said toggles in opposite directions and the connecting rod *L* for operating the same.

**No. 63,101. Gear Casing for Bicycles.**

(*Etui d'engrenage de bicyclet.*)

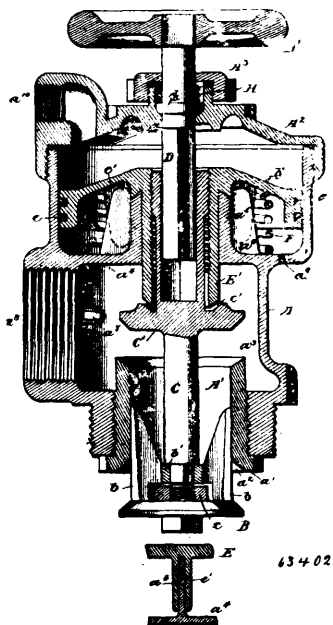


Charles H. Wills, New Philadelphia, Ohio, U.S.A., 7th July, 1899; 6 years. (Filed 30th January, 1899.)

*Claim.*—1st. In a gear case for bicycles, a metal case to close the periphery and one side of the sprocket wheel, combined with a diaphragm of flexible material secured to said case to inclose the other side of the sprocket wheel, said diaphragm comprising a main body portion having a central opening to receive a crank shaft or other rotating member and being cut in a substantially horizontal plane from said opening to one edge to form a folding section, and a flap secured at its lower horizontal edge to the lower edge formed by said cut and adapted to be secured at its upper and outer vertical edge to the casing, and said folding section being adapted to be secured at its edges to the flap, substantially as described. 2nd. In a gear case for bicycles, a metal case for the front sprocket wheel consisting of two metal sections adapted to have a sliding connection to each other on a horizontal plane to inclose the periphery and one side of the wheel, means to detachably lock the sections together, and to the bicycle frame, a diaphragm of flexible material secured to said case to inclose the other side of the sprocket wheel, said diaphragm comprising a main body portion having a central opening to receive the crank shaft, and being cut on a horizontal plane from said opening to one edge to form a folding section, and a flap secured at its lower horizontal edge to the lower edge formed by the said cut and adapted to be secured at its upper and outer vertical edges to the casing, and said folding section being adapted to be secured at its edges to the flap, substantially as described and for the purpose specified. 3rd. In a gear casing for bicycles, a metal case for the front sprocket wheel, consisting of two metal sections adapted to have a sliding connection with each other, one of said sections having a slot to receive the crank hanger, and a curved lateral flange to embrace the lower portion of the hanger, an elbow brace connected to the casing and the lateral flange, and having a hook extending parallel with said flange, means to detachably lock the sections together, and a clip embracing the crank hanger and engaging in said hook, substantially as described. 4th. In a gear casing for bicycles, a metal case for the front sprocket wheel formed of two sections adapted to be slidably connected to each other, each section having a plate portion, one of which has guideways and the other flanges to slide in said guideways, one section having a lateral flange around its sides and front end and the other section having sleeves at its rear end for the passage of the sprocket chain, and a lateral flange extending from its rear end between the sleeves to partially close the rear end of the case, and said plate portions having threaded openings adapted to register with each other when the sections are in position around the sprocket wheel, combined with screws to fit in said registering openings, perforated spring strips secured to one casing and adapted to engage pins on the other

section, and clips to cock the casing to the frame bars of the machine, substantially as described. 5th. In a gear casing for bicycles, the combination with metal cases to respectively close the periphery and one side of the front and rear sprocket wheels, the case for the front sprocket wheel being in sections detachably connected together, each case having projecting sleeves or collars for the passage of the sprocket chains, of diaphragms of chamois, or similar material, secured to said metal cases to inclose the other sides of the sprocket wheels, and rubber tubes inclosing the chain secured at their opposite ends to the respective collars on the metal cases, and means to secure the metal cases to the frame of the machine, the construction being such that the front section of the case on the front sprocket wheel and its diaphragm can be separately removed, without removing the remaining parts of the gear casing, substantially as described.

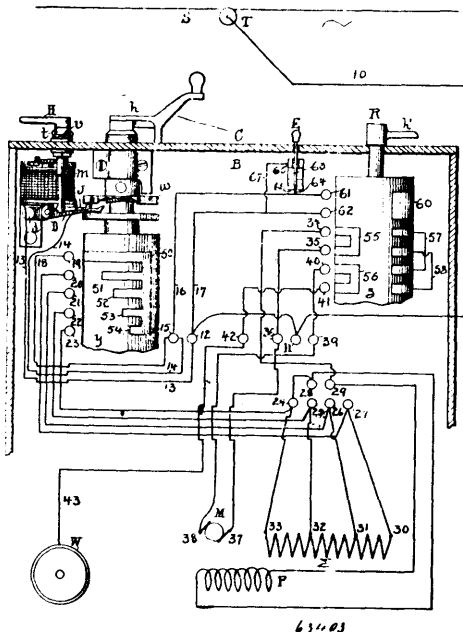
**No. 63,402. Blow-Off Cock. (Robinet d'extraction.)**



Daniel Barr Donnelly, Pittsburg, Pennsylvania, U.S.A., 7th July, 1899; 6 years. (Filed 21st November, 1898.)

*Claim.*—1st. A blow-off cock, having a main valve arranged to be operated by fluid pressure, and independent means for opening and closing the valve by hand, substantially as described. 2nd. A blow-off cock, having a main valve arranged to be operated by fluid pressure, an auxiliary valve on the same stem, and means for operating both valves by hand independently of the fluid pressure actuating devices, substantially as described. 3rd. A blow-off cock, having a main valve and an auxiliary valve both on the same stem, a seat for each valve on a portion of the casing lying between said valves, and means for opening and closing said valves alternately, substantially as described. 4th. A blow-off cock, having a main valve, a piston having a tubular rod, a hand stem adjustable in said rod, means for moving said stem by hand, substantially as described. 5th. A blow-off cock, having a main valve, a piston having a tubular rod, a valve stem screwing into said rod, and means for rotating said stem by hand, substantially as described. 6th. A blow-off cock, having a main valve, a piston having a tubular rod, a valve stem screwing into said rod, and having a polygonal socket, and a polygonal spindle entering said socket, substantially as described. 7th. In a blow off cock, the combination with a piston having a tubular rod, of a valve stem movable lengthwise therein, and co-operating faces on the end of the rod, substantially as described. 8th. In a blow-off cock, the combination with a casing having a cap, of a spindle rotatable in said cap, a main and an auxiliary valve, a valve stem carrying both said valves and longitudinally movable on said spindle, and seats for said valves so arranged that only one can be closed upon at once, substantially as described. 9th. In a blow-off cock, the combination with a main valve, of a piston for operating it by fluid pressure, a rotatable spindle for operating it by hand, and means for preventing the piston from rotating, substantially as described. 10th. In a blow-off cock, the combination with the piston E having wings c', of the casing A provided with interlocking wings a'', substantially as described. 11th. In a blow-off cock, a bushing A' removably secured in the neck of the casing of said cock, and having a valve seat at each end, substantially as described. 12th. In a blow off cock, the combination with a removable bushing having a valve seat on each end, of a main valve and an auxiliary valve, and a stem common to both, said valves being so arranged that when one is seated the other will be open, substantially as described.

**No. 63,403. Electric Motor Switch. (Commutateur pour moteur électrique.)**



Reese Hutchison, Mobile, Alabama, U.S.A., 7th July, 1899; 6 years. (Filed 1st December, 1898.)

*Claim.*—1st. The combination of a supply circuit and two or more electric motors in separate branch circuits, a multiple contact switch and electrical connections between points in said switch and the terminals of said motor branches whereby said branches may be connected in series or in parallel arrangement, a locking device for said switch, and an electromagnet to control said locking device having its coils included in one of said motor branches, substantially as described. 2nd. The combination with a suitable source of electricity and an electrically propelled vehicle of two electromagnet motors each motor mechanically connected to a wheel or axle of the vehicle, a car circuit containing an adjustable artificial resistance, two branch circuits each containing the coils of a motor, a rotating switch having a series of contacts respectively connected to points in the artificial resistance and the terminals of the motor branches, a locking device for said switch and an electromagnet to control said locking device having its coils in a motor branch circuit responsive to a predetermined strength of current, substantially as described. 3rd. The combination of two electromagnet motors, a common source of electric energy therefor, and means for simultaneously varying the power and speed of said motors consisting of an adjustable artificial resistance in a branch circuit common to both motors, a separate branch circuit for each motor, a rotating switch having a series of contacts connected to points in said resistance and to the terminals of the motor branch circuits, a locking device for said switch and an electromagnet responsive to a predetermined strength of current to control said locking device having its coils included in one of the motor branch circuits, substantially as described. 4th. The combination with a suitable source of electricity and an electrically propelled vehicle of two electromagnet motors mechanically connected to the wheels or axles thereof, respectively, means for connecting said motors in parallel and in series relation to vary the effective strength of current with respect to both motors simultaneously, said means consisting of a rotating switch having a series of fixed and movable contacts connected respectively to the terminals of the field and armature coils of said motors, a locking device for said switch having a series of engaging points in number equal to the contact points of said switch, and an electromagnet to control said device having its coils in a motor branch circuit responsive to the predetermined maximum current permissible in said motor branch, substantially as described. 5th. The combination of two electric motors, a motor circuit therefor, a multiple contact switch for connecting said motors in series and in parallel branch circuit with respect to each other, a locking device for said switch and an electromagnet responsive to a predetermined strength of current having its coils located in said circuit in series with one motor and in parallel with the other motor, substantially as described. 6th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, a locking device for holding said switch in any contact position, an electromagnet included in the motor circuit responsive to a predetermined strength of current only to control said switch, and a separate switch located in close proximity to the first named switch having its contact points connected to opposite terminals of said magnet whereby said magnet

may be included and excluded with respect to the motor circuit, substantially as described. 7th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an electromagnetic locking device for holding said switch in any contact position and means for throwing said locking device out of action in emergency. 8th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an electro magnetic locking device for holding said switch in any contact position, means for throwing said locking device out of action and a tell-tale to normally hold said means in position, consisting of a severable section of metal, arranged substantially as described. 9th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic electro magnetic locking device for locking or holding said switch in any contact position, and means for mechanically disengaging said locking device, substantially as described. 10th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic electro magnetic locking device for holding said switch in any contact position and means for disengaging said locking device by directly and mechanically displacing the movable member thereof, substantially as described. 11th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic electro magnetic locking device for holding said switch in any contact position, and means for disengaging said locking device consisting of a manually operated arm in position to engage and displace the movable member of said locking device, and an actuating handle for said arm, substantially as described. 12th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic locking device controlled by an electro magnet for holding said switch in either contact position and means for instantly unlocking said locking device by overcoming its electro magnetic control consisting of a manually operated arm in position to engage the movable member of the locking device and force it out of engagement, substantially as described. 13th. The combination of an electric motor, a suitable circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic locking device controlled by an electro magnet for holding said switch in any contact position and means for instantly unlocking said locking device by directly and mechanically overcoming its electro magnetic control, consisting of a movable part or member of said locking device and an operating lever fixed to said movable arm, substantially as described. 14th. The combination of an electric motor, a motor circuit therefor, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic device controlled by an electro magnet in the motor circuit to hold said switch in any contact position, means for instantly unlocking said lock consisting of an operating arm and a cam lever located on a spindle with a seal or tell-tale consisting of a severable section of metal arranged to block and hold said spindle in its normal position, normal position, substantially as described. 15th. In a motor controlling switch having a series of contact positions and electrical connections with the motor and with the source of electricity, the combination of an automatic electro magnet locking device including a toothed ratchet, a vibrating finger or dog to engage therewith and a section of non-magnetic metal in position to prevent the establishment of magnetic continuity through the ratchet and dog, substantially as described. 16th. In a motor controlling switch having a series of contact positions and electrical connections with the motor and with the source of electricity, the combination of an automatic electro magnet locking device including a toothed ratchet and a vibrating finger or dog, said dog being composed of a section of non-magnetic material and a hardened contact point to engage with said ratchet, substantially as described.

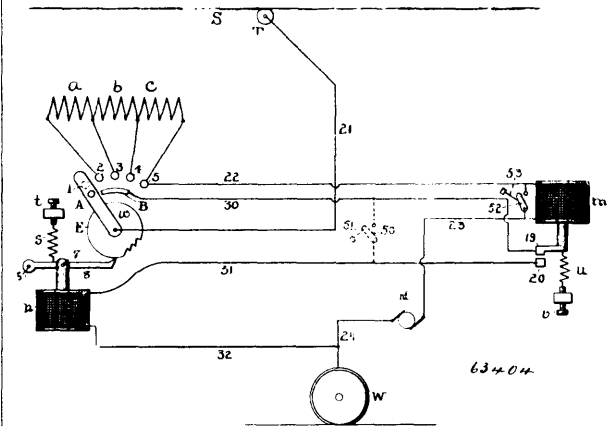
**No. 63,404. Electric Motor Switch.**

*(Commutateur pour moteurs électriques.)*

Reese Hutchinson, Mobile, Alabama, U.S.A., 7th July, 1899; 6 years. (Filed 29th March, 1899.)

*Claim.*—1st. The combination of an electric motor, an electric circuit, a motor switch for varying the current strength in said circuit, and means for normally locking and automatically controlling the movement of said switch. 2nd. The combination of an electric motor, a suitable circuit, a switch for varying the strength of current in the motor coils, an automatic lock for said switch and an electromagnetic device to control said lock, said electromagnetic device being connected with the motor circuit and so adjusted that upon the establishment of a predetermined strength of current the switch is released, substantially as described. 3rd. The combination of an electric motor, a suitable circuit therefor, a multiple contact motor switch for varying the strength of current in the motor coils, an automatic lock, normally holding the switch at rest, and an electromagnetic device connected with the motor circuit operating to release the switch upon the establishment of a predetermined strength of current only. 4th. The combination with an electric

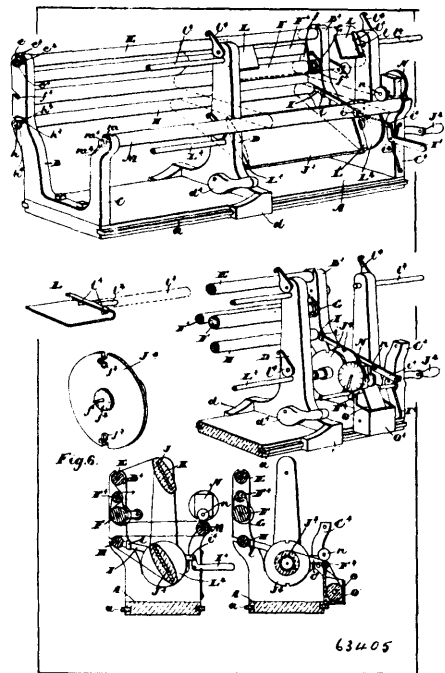
motor, a circuit therefor, a multiple contact switch to vary the strength of current in the motor, a lock to normally hold the switch



in any contact position, and a magnet to operate said lock located in a branch or second circuit responsive to a predetermined strength of current in the motor circuit. 5th. The combination with an electric motor, a circuit therefor, a multiple contact switch to vary the strength of current in the motor coils, a lock arranged to normally engage and hold said switch, a magnet to disengage said lock located in a second circuit, and a magnet located in the motor circuit operating break points in said second circuit. 6th. The combination with an electric motor, a circuit therefor, a multiple contact switch to vary the current strength in the motor coils, a lock arranged to normally engage and hold said switch, a magnet to disengage said lock having its coils in a branch of the motor circuit and break points in said branch circuit operated by the switch, substantially as described. 7th. The combination with an electric motor, a circuit therefor, a multiple contact switch to vary the current strength in said circuit, and a lock arranged to normally engage and hold said switch, a magnet to control said lock having its coils in a branch circuit and a break point in said branch controlled by said switch, substantially as described.

**No. 63,405. Fabric Winding Machine.**

*(Machine pour enrouler les tissus.)*

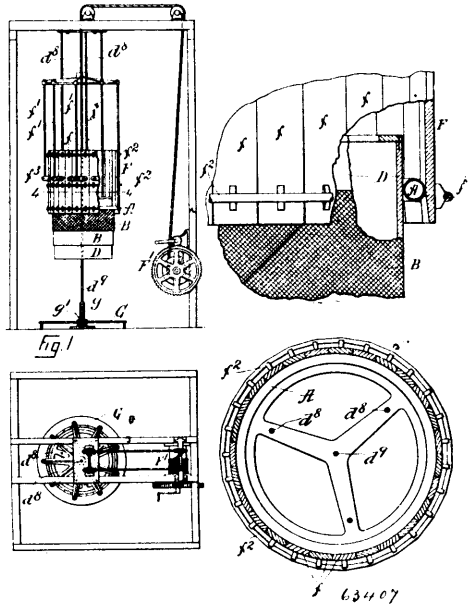


Brinton Dougall Wight, Napinka, Manitoba, Canada, 7th July, 1899; 6 years. (Filed 29th March, 1899.)

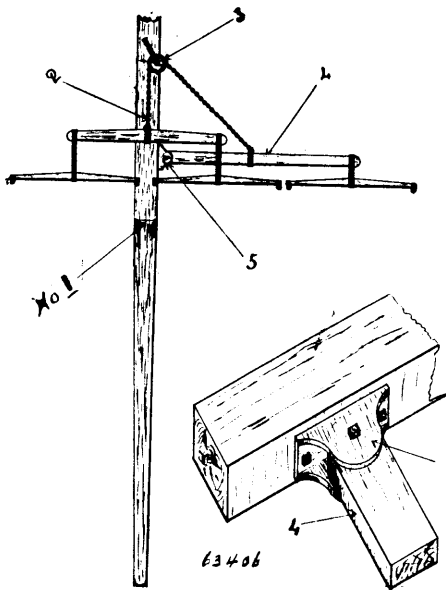
*Claim.*—1st. The combination with the holding roller for the wound fabric, of the winding spindles provided with end plates having suitable holding spicular projections and gripping lips and the pair of tension rollers, one journaled on the arms secured to the spindle of the roller and the helical spring for exerting a

tension upon the rollers, so as to press upon the cloth passing between them, as and for the purpose specified. 2nd. The combination with the holding roller for the wound fabric, of the winding spindles provided with end plates having suitable holding spicular projections and gripping lips and the intermediate guiding roller journalled stationary at one end and having the other end adjustably journalled, and means for varying the adjustment, as and for the purpose specified. 3rd. The combination with the holding roller for the wound fabric, of the winding spindles provided with end plates having suitable holding spicular projections and gripping lips, the intermediate guiding roller journalled stationary at one end and having the other end adjustably journalled, the bar supported upon suitable guideways having one end forming a journal for the guiding roller, the operating crank handle, the link connecting it to the bar and the spring for holding the crank handle in position, as and for the purpose specified. 4th. The combination with the holding roller for the wound fabric, of the winding spindles provided with end plates having suitable holding spicular projections and gripping lips, the top guiding roller, the tension rollers between which the cloth passes, the forward guiding roller, the rear guiding roller adjustable at one end and the cloth board upon which the fabric is rewound, as and for the purpose specified. 5th. In a cloth machine, the combination with the cloth board, of the end holding plates having spicular projections extending into the boards and the end lips overhanging the edge of the board, the hollow spindle receiving the stems of the plates and the cam fingers designed to press upon the fingers and hold them from longitudinal displacement, as and for the purpose specified. 6th. In a cloth machine, the combination with the cloth board, of the end holding plates having spicular projections extending into the boards and the end lips overhanging the edge of the board, the hollow spindle receiving the stems of the plates, means for holding the spindles from longitudinal displacement and the adjustable standard supported in guideways on the base and receiving one side of end spindles and the cam handle for holding such standard rigidly in position, as and for the purpose specified.

relation one to another, to wrap cover cylinder B, about lining tube A, substantially as described. 3rd. The article above described



**No. 63,406. Whiffletree. (Palonnier.)**



William Humphrey Perrin, Smith's Falls, Ontario, Canada, 7th July, 1899; 6 years. (Filed 7th December, 1898.)

*Claim.*—In a three horse draft equalizer, in combination with a pole, a lever hinged to one side of the pole by means of an iron bracket, a single tree on the outer end of said lever, a pulley attached to the pole rearwardly of the said lever, a chain having one end fastened at a point about the middle of the said lever, said chain passing over the pulley and having its other end fastened to a double tree, the said double tree being provided with single trees, and being connected to the pole by means of the chain and the pulley, all as described and for the purpose set forth.

**No. 63,407. Tubing. (Tubage.)**

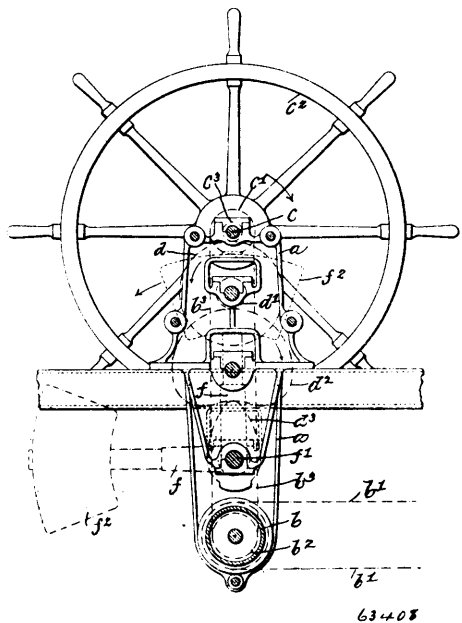
James Bennett Forsyth, Boston, Massachusetts, U.S.A., 7th July, 1899; 6 years. (Filed 14th February, 1899.)

*Claim.*—1st. The method of forming an endless and seamless tube by rolling an inflated endless tube on a cover cylinder whereby the cover cylinder is rolled into an outer endless and seamless tube on the inflated endless tube as a core, substantially as described. 2nd. The apparatus above described comprising a drum and an exterior cylinder with means to move the drum and cylinder endwise in

made up of the inner endless tube A, and the cover cylinder B, wrapped about it to form an outer endless and seamless tube, both tubes being of vulcanizable compound in whole or in part, and vulcanized to form a single endless and seamless tube, substantially as is above described.

**No. 63,408. Steering Device for Ships.**

(Appareil à gouverneur pour vaisseaux.)

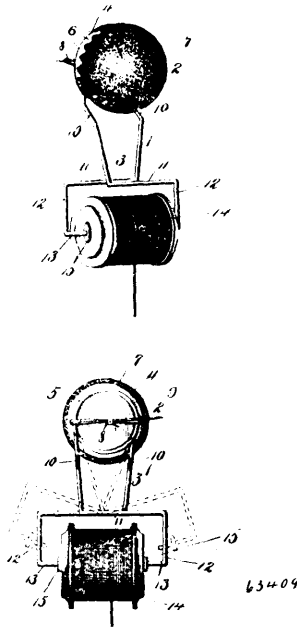


Carl Victor Suppan, Vienna, and Béla Szendi, Budapest, both of Hungary, 7th July, 1899; 6 years. (Filed 5th April, 1899.)

*Claim.*—1st. In a steering gear for ships, the combination with the rudder and steering appliances, of means for balancing or substantially balancing the forces of resistance transmitted through the rudder to said steering appliances, as set forth. 2nd. In a steering gear for ships, the combination with the rudder and steering appliances, of means, operating only when the rudder is shifted from its position amidship, to balance or substantially balance the forces of resistances transmitted through said rudder to the steering appliances, for the purpose set forth. 3rd. In a steering gear for ships, the combination with the rudder and steering mechanism, of appliances for balancing the forces of resistances transmitted to said mechanism through said rudder, said appliances organized to vary the power of the steering mechanism in accordance with the varia-

tions of said forces of resistance, substantially as set forth. 4th. In a steering gear for ships, the combination with the rudder, the steering wheel spindle and the rudder chain winding drum or wheel geared to said spindle, of a balancing weight displaced by the rotation of the steering wheel spindle and operating to balance or substantially balance the forces of resistances transmitted through the rudder to the steering chain and winding drum, for the purpose set forth. 5th. In a steering gear for ships, the combination with the steering mechanism, of the two intergeared cams  $d^2 d^3$ , transmitting gearing connecting cam  $d^2$ , with the steering spindle, and a weighted lever, the fulcrum spindle of which is connected with and revolved by cam  $d^3$ , substantially as and for the purpose set forth. 6th. In a steering gear for ships, the combination with the steering wheel spindle and the steering chain winding drum geared to said spindle, of the two intergeared cams  $d^2 d^3$ , transmitting gearing connecting cam  $d^2$ , with said steering wheel spindle, and a weighted lever on the spindle of cam  $d^3$ , substantially as and for the purpose set forth.

**No. 63,409. Needle and Thread Holder.**  
(*Porte aiguille et. Al.*)



George Adams, Franklin Centre, and Claude Adams, Hull, both in Quebec, Canada, 8th July, 1899; 6 years. (Filed 6th February, 1899.)

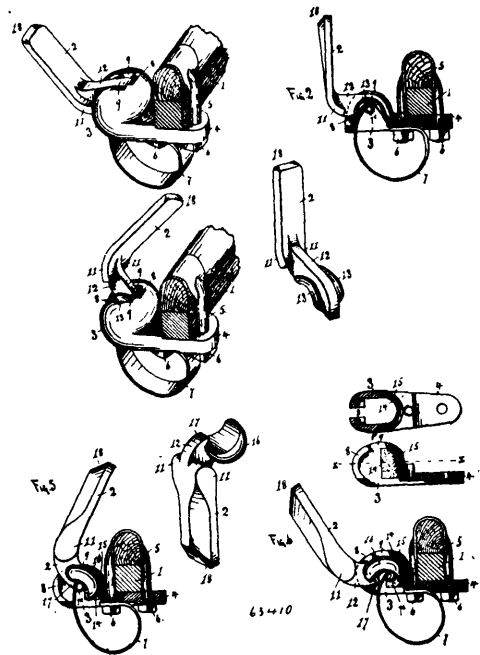
*Claim.*—The combination with a needle holder having a securing pin, of a spool holder, comprising a single piece of spring wire secured at its central portion to the said needle holder, the arms of said wire being bent at their central portion at substantially right angles and extending towards each other and overlapping and then downwardly, the extremities of said arms being bent inwardly, and a spool removably supported upon said extremities, substantially as described.

**No. 63,410. Thill or Pole Couplings.**  
(*Armon de limonière.*)

Charles Nash Bell, St. Paul, assignee of John Marshall Bryant, Minneapolis, both in Minnesota, U.S.A., 8th July, 1899; 6 years. (Filed 4th February, 1899.)

*Claim.*—1st. A thill or pole coupling, comprising the cup-like socket section having an upper slot, the web or blade, means for interlocking the two portions together and the cushion buffer located in the rear portion of the socket, as and for the purpose specified. 2nd. A thill or pole coupling, comprising the cup-like socket section provided with the slot having notched lug passages and the co-acting web or blade provided with the lock flanges and the cushion buffer located in a recess in the back of the socket and designed to abut the rear end of the web or blade, as and for the purpose specified. 3rd. A thill or pole coupling, comprising the cup-like socket section 3, provided with the slot 8 formed with notches or lug passages 9, and the web or section 12 provided with the segmental lock flanges 13, which parts are adapted to be interlocked, substantially as described. 4th. A thill or pole coupling, comprising a cup-like socket section provided with an extended slot formed with expanded notches or lug passages, a web or male section provided with segmental lock flanges projecting from its opposite sides, which parts are adapted to be interlocked, and a

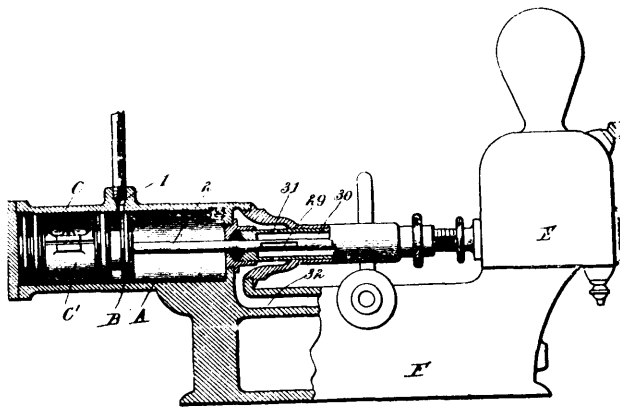
spring pressing against the inner surface or surfaces of said segmental lock flanges, substantially as described. 5th. A thill or pole



coupling, comprising a cup-like section 3, provided with the slot 8 formed with notches 9, the web or section 12 provided with segmental lock flanges 13, which parts are adapted to be interlocked, and the hammer spring 7 secured to said section 3 and pressing against the concave surface of said section 12, said parts operating, substantially as described. 6th. A thill or pole coupling, comprising an inverted cup-like socket section having a slotted perforation through its upper face, a web or blade section, means for interlocking the socket and the web or blade section together, and a cushion buffer located within and in the rear portion of the socket section between the two sections, substantially as and for the purpose specified. 7th. A thill pole or coupling, comprising an inverted semi-globular cup-like section having a thill or pole tip or pole eye perforated passage-way through the rear portion of its upper face with said passage-way continuing as a narrower elongated slot or opening forward through said upper face, and through the upper portion of the forward face of said socket section, a thill or pole tip with its upper face semi-globular in form and with its lower face concave in form and adapted to enter the semi-globular perforated passage-way of the socket section and interlock therewith, a cushion buffer located within and in the back of the socket section, substantially as described. 8th. A thill or pole coupling, comprising an inverted semi-globular cup-like section having a thill eye or pole tip perforated passage-way through the rear portion of its upper face with said passage-way continuing as a narrow elongated slot or opening forward through the length of said upper face, and through the upper portion of the forward end face of said socket, a semi-globular thill or pole tip with its lower face concave in form and adapted to enter the semi-globular perforated passage-way of the socket section and interlock therewith, a cushion buffer located within and in the back of the socket section, a spur or stop 17 located at the forward end of the lower face of the thill or pole tip and formed integral therewith, a spring pressing upwardly against the concave lower face of the thill or pole tip, said parts interlocking and operating, substantially as described. 9th. A thill or pole coupling, comprising an inverted semi-globular cup-like section 3, having a thill or pole eye passage-way 9 through its upper face, a thill iron with the welding stem 18 and the semi-globular wearing tip 16, and a contracted portion 12 forming shoulder 11 between the welding stem and the wearing tip, which parts are adapted to be interlocked, the spring 7 secured to said section 3, the free end thereof pressing against the concave lower face of the wearing end 16, the spur or spring stop 17, the cushion 14, said parts arranged and operating, substantially as described. 10th. A boltless, quickshifting, anti-rattling, self-cleaning thill or pole coupling, adapted to automatically take up its own wear, comprising an inverted cup-like socket section, having a slotted perforation through its upper face, a web or blade section, which sections are adapted to be interlocked, a cushion buffer located within and in the rear portion of the socket section and between the two sections a fulcrum acting spring pressing against the lower face of the blade section and holding the interlocked sections in continuous frictional engagement, substantially as described.

**No. 63,411. Steam Actuated Valve.**

(*Soupee actionnee par la vapeur.*)



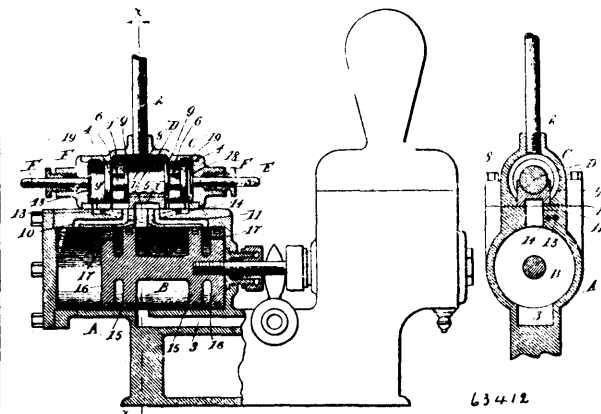
63411

Frederick C. Austin, Chicago, assignee of Jay Byron Rhodes, Harvey, both in Illinois, U.S.A., 8th July, 1899; 6 years. (Filed 5th November, 1898.)

*Claim.*—1st. A steam or other motive fluid actuated ported piston reciprocating within a piston cylinder and having a valve seat, and a steam or other motive fluid actuated valve device comprising a valve carrier arranged to slide upon the piston and provided with a valve which slides upon the valve seat and which is adjustable independently of the valve carrier in a direction to take up wear incident to the sliding contact between the contacting surfaces of the valve and valve seat, substantially as described. 2nd. A steam or other motive fluid actuated ported piston reciprocating within a piston cylinder and having a valve seat, and a steam or other motive fluid actuated reciprocating valve device comprising a valve carrier arranged to slide upon the piston and provided with a valve which is automatically adjustable upon the valve seat independently of the valve carrier and to such end subject to fluid pressure acting to maintain the valve in working contact with the valve seat regardless of wear, substantially as described. 3rd. A steam or other motive fluid actuated piston reciprocating within a piston cylinder and provided with a couple of annular flanges and an intervening valve seat, and having longitudinally extending ports or ducts arranged for supply and exhaust and opening laterally through the valve seat, and a steam or other motive fluid actuated valve device comprising a reciprocating valve carrier provided with annular flanges and having between such flanges a valve which controls the ports of the piston and which is adjustable independently of the valve carrier in a direction to take up wear, substantially as described. 4th. A steam or other motive fluid actuated piston reciprocating within a piston cylinder and provided with a couple of flanges and an intervening valve seat, and having ports or ducts opening through such valve seat, and a reciprocating steam or other motive fluid actuated valve device comprising a valve carrier provided with annular flanges and having between such flanges a valve which is adjustable independently of the valve carrier and which is provided with ports arranged to take fluid pressure from fluid pressure space between the flanges of the valve carrier and deliver the same to the piston ports, substantially as described. 5th. A steam or other motive fluid actuated reciprocating piston provided with a pair of flanges which move along the inner wall of the piston cylinder, and an intervening body portion provided with a recess terminating short of the flanges and having its bottom adapted to form a valve seat, and a reciprocating steam or other motive fluid actuated valve device comprising a valve carrier constructed with flanges and fitted to slide upon the non-recessed part of the said body portion of the piston, and an adjustable valve arranged between the flanges of the valve carrier and fitted to slide upon the valve seat the piston and valve device being ported to permit fluid pressure delivered between the end flanges of the valve carrier and the flanges of the piston to pass to a pressure space between the flanges of the valve carrier, substantially as described. 6th. A steam or other motive fluid actuated spool shaped piston provided with suitable supply and exhaust ports and having in one side of its body portion a recess having its bottom adapted to form a valve seat, and having its ends terminating short of the end flanges of the piston so as to provide the latter with cylindrical portions 8 and 9 back of its said end flanges, and a steam or other motor fluid actuated valve suitably ported and comprising a sleeve having annular end flanges arranged to slide upon the cylinder portions 8 and 9 of the piston and provided with a ported adjustable part or member arranged between its flanges and having a seating side which slides upon the valve seat, substantially as described. 7th. A spool shaped steam or other motive fluid actuated piston provided with suitable supply and exhaust ports and having a valve seat formed by the bottom of a recess arranged to leave cylindrical portions 8 and 9 between the ends of the recess and the end flanges of the piston, ports extending from such

recess to and through the surface of the cylindrical portions 8 and 9 of the piston, ports extending from opposite ends of the piston to and through the valve seat, an exhaust port extending part way of the length of the piston and having its inner end opening through said valve seat, and a suitably ported valve arranged to slide upon the piston and comprising a sleeve having a body portion 19 provided with annular end flanges, and an independent, adjustable part or member fitted to and arranged to slide upon the valve seat, substantially as described. 8th. A steam or other motive fluid actuated piston having a centrally arranged exhaust port 13 extending part way of the length thereof and opening through one side of the middle portion of the piston by way of a couple of branches or sub-ports 13<sup>a</sup> and 13<sup>b</sup>, and ports for alternate supply and exhaust extending back from opposite ends of the piston and opening through one side thereof adjacent to the sub-ports or branches 13<sup>a</sup> and 13<sup>b</sup> of the centrally arranged exhaust port, and a steam or other motive fluid actuated valve arranged to slide upon the piston and suitably ported for controlling said ports of the piston, substantially as described. 9th. The combination with the cylinder having an inlet port 1 intermediate of its ends, of the spool shaped piston provided with the longitudinally arranged exhaust port 13 opening through one side of the piston at the middle thereof by way of a couple of branches or supports 13<sup>a</sup> and 13<sup>b</sup>, the longitudinally arranged ports 15 and 16 extending back from opposite ends of the piston and opening through said side of the piston adjacent to the branches or supports 13<sup>a</sup> and 13<sup>b</sup>, of the centrally arranged exhaust port, and a steam or other motive fluid actuated valve arranged to slide upon the piston and provided with ports 22, 23 and 24, arranged for controlling said ports of the piston, substantially as described.

**No. 63,412. Steam Engine.** (*Machine a vapeur.*)



63412

Frederick C. Austin, Chicago, assignee of Jay Byron Rhodes, Harvey, both of Illinois, U.S.A., 8th July, 1899; 6 years. (Filed 17th January, 1899.)

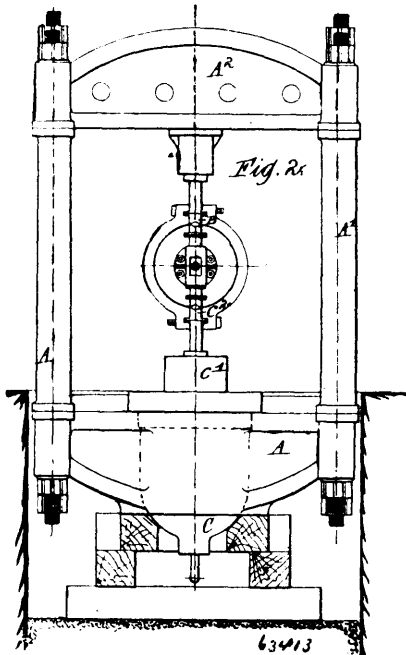
*Claim.*—1st. In a steam or other motive fluid actuated engine, the piston cylinder provided with suitable supply and exhaust ports, the piston recessed to provide an exhaust space or chamber through which the exhaust from the said piston cylinder is discharged, and a cut-off valve by which the exhaust from the said piston cylinder is admitted to the said exhaust space or chamber in the piston, substantially as described. 2nd. In a steam or other motive fluid actuated engine, the piston cylinder provided with suitable supply and exhaust ports, a motive fluid actuated cut-off valve, and a piston recessed to provide an exhaust space through which the exhaust from both the valve and piston chambers is exhausted, substantially as described. 3rd. In a steam or other motive fluid actuated engine, the piston recessed to provide an exhaust chamber, the piston cylinder having inlet and outlet exhaust ports communicating with said exhaust chamber and having ports for supplying and exhausting from its end portions and a steam or other motive fluid actuated valve by which the inlet exhaust port of the piston cylinder is alternately connected with one and the other of the said end ports, the exhaust from the piston cylinder being delivered to the exhaust chamber in the piston and also discharged therefrom, substantially as described. 4th. In a steam or other motive fluid actuated engine, the piston having recesses formed in its end portions and provided with ports leading to and through the ends of the piston, and the piston cylinder having end ports adapted for supply and exhaust and arranged to alternately communicate with one and the other of the end recesses in the piston, substantially as described. 5th. In a steam or other motive fluid actuated engine, the piston having ported recesses in its end portions, and an intervening recess forming a middle exhaust chamber, the piston cylinder having end ports adapted for alternate supply and exhaust and alternately in communication with one and the other of the end recesses in the piston, and also having inlet and outlet exhaust ports in communication with the middle exhaust chamber, a valve chamber having supply and exhaust ports alternately supplied from the piston cylinder by way of one of the end



recesses in the piston, and exhausting into the middle exhaust space or chamber in the piston, and a suitable valve for alternately connecting the inlet exhaust port of the middle exhaust chamber with one and the other of the end ports of the piston cylinder, substantially as described. 6th. The piston cylinder provided externally with a flat valve seat, the valve casing arranged upon the piston cylinder and having an opening over the flat valve seat, and the valve having an independent seating portion extending through the opening in the valve casing and seating upon the flat seat on the piston cylinder, substantially as described. 7th. In an engine of the class set forth, the piston provided with two pairs of end flanges arranged to provide annular end spaces or recesses and a relatively large middle space, and having ports 17 through its extreme end flanges, the piston cylinder provided with middle ports 12 and 3 communicating with the middle recess in the piston, and having end ports 10 and 11 leading from its end portions to points at opposite sides of the port 12, the valve chamber arranged external to the piston cylinder and adapted for communication with ports 10 and 11, and having end ports 13 and 14 crossing one another and opening into the piston cylinder at opposite sides of the port 12, and a steam or other motive fluid actuated valve adapted for alternately connecting port 12 with one and the other of ports 10 and 11, substantially as described.

**No. 63,413. Machine for Closing Locking Bars.**

(Machine pour fermer les tubes.)



Nephan Ferguson, Oldfleet, Collins street, Melbourne, Victoria, Australia, 8th July, 1899; 6 years. (Filed 22nd July, 1898.)

*Claim.*—1st. A machine for closing locking bars about the opposing edges of curved plates in the manufacture of rivetless pipes comprising a frame supporting in its upper portion a downward depending anvil and in its lower portion a ram, the plunger whereof carries an upward extending closing tool, a mandrel extending between said anvil and closing tool, and having a vertically movable closing tool in line with said anvil and a stationary closing tool in line with the closing tool of said plunger, a side block in said mandrel having an inclined surface engaging with the bottom of said vertically movable closing tool, means as described for reciprocating said slidebox, and clamps, such as described for holding the parts of the pipe in position on the mandrel while the locking bars are secured thereon, the combination operating substantially as described.

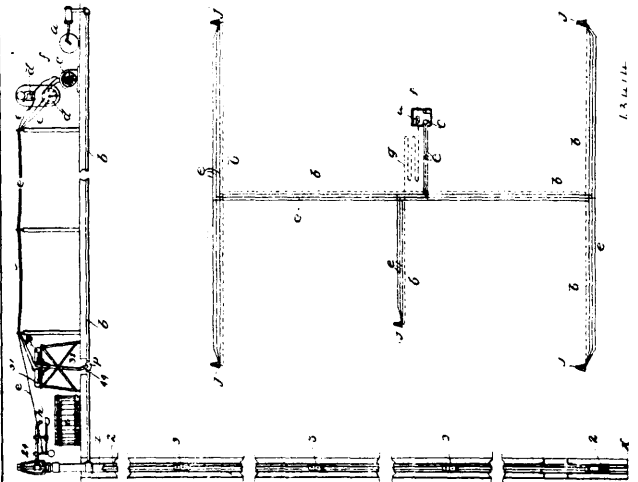
**No. 63,414. Pneumatic Pumping Apparatus.**

(Appareil de pompe pneumatique.)

Jacob S. Smith, Chicago, Illinois, U.S.A., 8th July, 1899; 6 years. (Filed 12th December, 1898.)

*Claim.*—1st. In a well, the combination with outer and inner tubing communicating by a passage near the lower end, of a central pipe below said passage, a valve in said central pipe opening to pressure from beneath and closing to pressure from above, a packer surrounding said central pipe and the walls of said outer tubing, and means for pressing the exterior of said packer against the walls of said outer tubing by pressure applied from above, substantially as described. 2nd. In a well, the combination with an outer tubing and an inner tubing provided near the lower end with an opening

leading into the outer tubing, a valve for sealing the inner tubing below said opening, opening to pressure from below and closing to



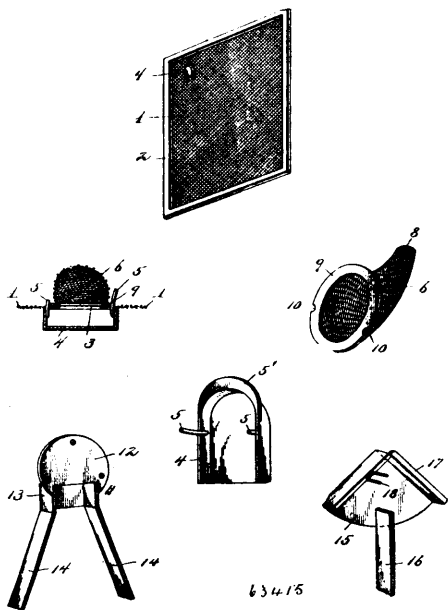
pressure from above, a packer surrounding the inner tubing below said opening and normally permitting fluid to flow between said inner tubing and the walls of said outer tubing and expanding against the walls of said outer tubing by pressure from above, means for supplying compressed air to the upper end of one of said tubings and an exit duct for the fluid provided at the upper end of the other tubing, substantially as described. 3rd. The combination with the outer tubing 1, of the inner tubing 2 and 2<sup>a</sup>, the packer 6 between the said inner tubing 2<sup>a</sup> and the outer tubing, the valve for sealing the inner tubing 2<sup>a</sup>, the yoke 3 secured to the inner tubing 2, means for moving said inner tubing 2 longitudinally, and a valve or valves in the inner tubing 2, opened and closed by the movement of the upper sections of the inner tubing 2, substantially as described. 4th. The combination with the outer tubing 1, of the inner tubing 2 and the inner tubing 2<sup>a</sup>, the packer 6 sealing the said inner tubing 2<sup>a</sup> and the outer tubing, the valve for sealing the upper end of the inner tubing 2<sup>a</sup>, the yoke secured to the inner tubing 2, and means for moving said inner tubing 2 longitudinally to bring said yoke into engagement with said packer, substantially as set forth. 5th. In a well, the combination with the outer and inner tubings communicating by a passage near the lower end, of a central pipe below said passage, a valve therein, a packer surrounding said central pipe, said inner tubing being formed in longitudinally movable sections, a yoke supported upon the end of the lower section, ports or openings in said inner tubings at intervals, means for lowering and raising said inner tubing to bring said yoke into engagement with said packer and to move the sections of the inner tubing longitudinally to successively open and close the ports or passages therein, means for supplying compressed air to the upper end of one of said tubings, and an exit duct for the fluid provided at the upper end of the other tubing, substantially as set forth. 5th. In a plurality of wells, the combination with an outer and inner tubing in each well, of means for supplying compressed air or gas to the upper end of one of said tubings in each well, and an exit duct provided at the upper end of the other of said tubings in each well, a valve in said first mentioned tubing at each well to control the pressure supply thereto, means for operating all of said valves from a common point, and signaling apparatus at each common point communicating with said exit duct at each well, and operated by the flow of liquid from each well, whereby the several wells may be controlled from a common point, substantially as described.

**No. 63,415. Fly Escape. (Echappe-mouche.)**

Viola D. Muzzy, East Branch, Pennsylvania, U.S.A., 8th July, 1899; 6 years. (Filed 31st January, 1899.)

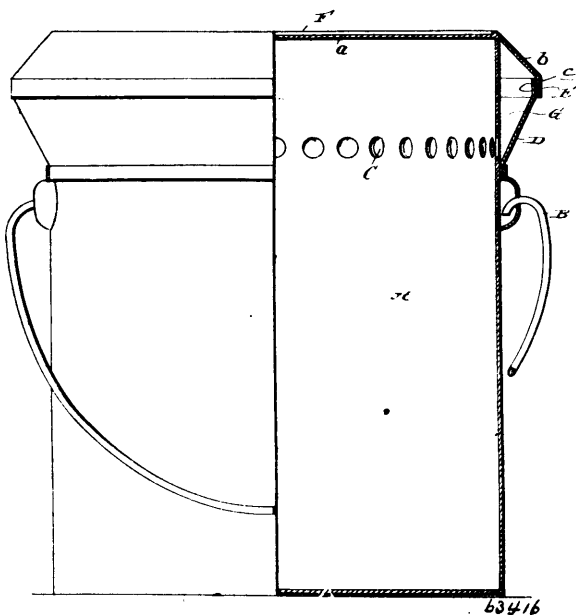
*Claim.*—1st. In a device of the character described, the combination with an apertured screen, of a conical pocket secured to said screen on one side of the aperture, and provided with an egress opening at its apex, and a cap secured to the opposite side of the screen and in line with the aperture thereof, said cap having a lower open end to permit the passage of flies thereinto, substantially as described. 2nd. The combination with an apertured screen, of a conical wire fabric pocket provided with an aperture at its apex, a cap plate designed to cover the aperture in the screen, and co-operative securing means carried by the conical pocket and the cap plate, substantially as described. 3rd. The combination with an apertured screen, of a conical pocket provided with an egress aperture at its apex, a circular frame at the base of the pocket provided with notches, and a cap provided with spring arms adapted to project through the screen and be engaged by the notched base of the pocket for securing the pocket and cap to the screen, substantially as described. 4th. In a device of the character described, the combination with an apertured screen, of a conical pocket secured

to said screen on one side of the aperture and provided with an egress opening at its apex, a cap secured to the opposite side of the



screen and in line with the aperture therein, said cap having a lower open end to permit the passage of flies thereinto, and a flange formed upon the cap and adapted to bear against the screen, substantially as described.

**No. 63,416. Can. (Bidon.)**

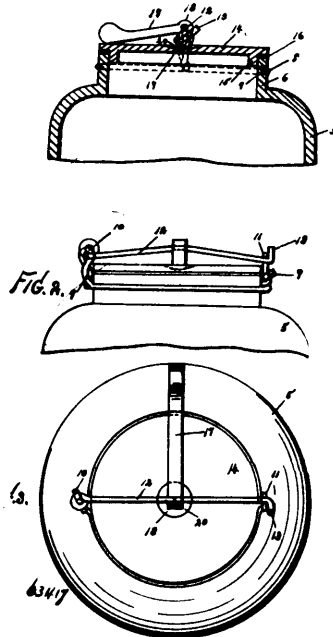


Michael F. Hartnett, La Salle, Illinois, U.S.A., 8th July, 1899; 6 years. (Filed 27th February, 1899.)

*Claim.*—1st. The herein described hermetically sealed can, comprising a body, an exterior rim permanently connected to the body and extending upwardly and outwardly therefrom and having the vertically disposed flange E at its upper edge, and the cover F resting over the top of the body and having the depending skirt b and the vertically disposed flange c of a diameter to surround the flange E of rim D, the said flange c being arranged around and in the same plane as the flange E and connected by solder to the same, whereby the can is hermetically sealed, and, when the can is opened, the upper edge of the flange E is enabled to serve as a guide rest for the cutting implement and said implement is prevented from contacting with the contents of the can, substantially as specified. 2nd. The herein described hermetically sealed can, comprising the body A made of sheet metal and having the apertures C formed therein at intervals in its circumference and at a distance from its upper end, the exterior rim D permanently connected to the body below the apertures C and extending outwardly and upwardly therefrom

and having the vertically disposed flange E at its upper edge, and the cover F resting over the top of the body and having the depending skirt b and the vertically disposed flange c of a diameter to surround the flange E of rim D, the said flange c being arranged around and in the same plane as the flange E and connected by solder to the same, whereby the can is hermetically sealed, and, when the can is opened, the upper edge of the flange E is enabled to serve as a guide rest for the cutting implement and said implement is prevented from contacting with the contents of the can, substantially as specified.

**No. 63,417. Can Closing Means. (Moyen de fermer les bidons.)**



John Frederick Richmann, Fort Lee, New Jersey, U.S.A., 8th July, 1899; 6 years. (Filed 24th June, 1899.)

*Claim.*—1st. A can or other vessel provided with a neck, a wire or band secured to and encircling said neck, a cross bar pivotally connected with said wire or band at one side thereof and adapted to swing vertically, means for detachably connecting the opposite end of said cross rod with said wire or band, and a lever mounted on said cross rod centrally thereof, and provided with a downwardly directed shoulder or projection, substantially as shown and described. 2nd. A can or other vessel provided with a neck having an annular groove in the outer wall thereof, a wire or band secured in said groove, said wire or band being provided at opposite sides with upwardly directed projections, one of which is provided with a hook, a cross rod hinged to the other projection and adapted to swing vertically, and the free end of which is adapted to engage said hook, a lever mounted on said cross rod centrally thereof and adapted to swing vertically, said lever being provided with a downwardly directed shoulder or projection, substantially as shown and described. 3rd. The herein described means for securing a cap or cover to the neck of a can or other vessel, comprising a wire or band which is adapted to be secured to said neck, and which is provided at its opposite ends with upwardly directed projections, one of which is provided with a hook, a cross rod pivotally connected with the opposite projection, and adapted to engage with said hook, a lever through one end of which said rod passes, said lever being provided at the end thereof through which the rod passes, with a downwardly directed projection which is adapted to bear on the cap or cover of the can, substantially as shown and described.

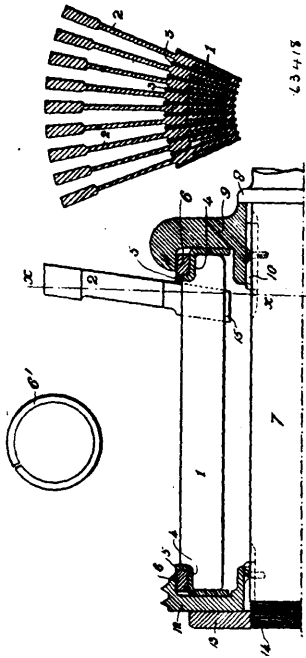
**No. 63,418. Dynamo Electric Machine. (Machine dynamo electrique.)**

P. R. Jackson & Co., assignees of Joseph Slater Lewis and Felix John Howitt, all of the Selford Rolling Mills, Manchester, Lancaster, England, 8th July, 1899; 6 years. (Filed 19th February, 1898.)

*Claim.*—1st. In dynamo electric machines, the combination with the armature spindle of a series of commutator segments, insulating material interposed between adjacent segments, rings under centripetal pressure surrounding the assembled segments and insulation at each end thereof, collars keyed to the spindle, annular grooves in said collars engaging with the rings, and means for forcing said collars nearer together, so as to grip the rings, substantially as set forth. 2nd. In dynamo electric machine, the combination with the armature spindle of a series of commutator segments, insulating material interposed between adjacent segments, rings shrunk on the



assembled segments and insulation at each end thereof, collars keyed to the spindle, annular grooves in said collars engaging with



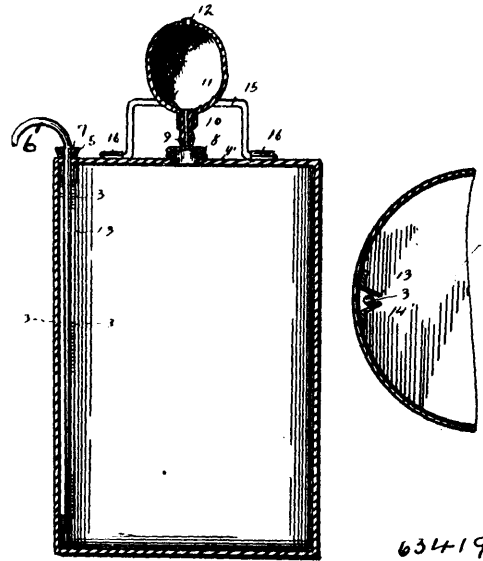
the rings and means for forcing said collars nearer together, so as to grip the rings, substantially as set forth. 3rd. In dynamo electric machine, the combination with the armature spindle of a series of commutator segments, insulating material interposed between adjacent segments, externally tapered rings under centripetal pressure surrounding the assembled segments and insulation at each end thereof, collars keyed to the spindle, annular grooves in said collars engaging with the rings and means for forcing said collars nearer together, so as to grip the rings, substantially as set forth. 4th. In dynamo electric machine, the combination with the armature spindle of a series of commutator segments, insulating material interposed between adjacent segments, externally tapered rings under centripetal pressure provided with a transverse saw cut surrounding the assembled segments and insulation at each end thereof, collars keyed to the spindle, annular grooves in said collars engaging with the rings and means for forcing said collars nearer together, so as to grip the rings, substantially as set forth. 5th. In dynamo electric machines, the combination with the armature of a series of metallic segments and interposed insulation assembled together forming a commutator, means for securing said commutator to the armature spindle, a series of radial strips, each said strip connected at one end to an armature coil and having a transverse groove near its other end engaging with a transverse groove in the commutator segment to which it is to be connected as set forth. 6th. In a multipolar dynamo electric machine, a field magnet comprising an outer magnet ring, inwardly projecting radial magnet cores secured to said ring, and annular plates of non-magnetic metal secured to said ring and to the cores, as and for the purpose set forth. 7th. In dynamo electric machines, the combination with the armature of additional coils each wound on the periphery so as to line on each side of an armature coil and connected to bars of the said coil and to its corresponding commutator section, of a field magnet having the air space between the forward horn of one pole and the back horn of the next pole approximately equal to the span of such an additional coil, for the purpose specified. 8th. In dynamo electric machines, the combination with the armature of additional coils each wound on the periphery so as to lie on each side of an armature coil and connected to bars of the said coil and of its corresponding commutator section, of a field magnet having its poles of such angular breadth that the circumferential distance in air between the magnet field fringing the forward tip of one pole and the field fringing the back tip of the next pole is approximately equal to the span of such an additional coil, for the purpose specified.

**No. 63,419. Can. (Bidon.)**

Frank Lowe, Oklahoma, Oklahoma, U.S.A., 8th July, 1899; 6 years. (Filed 22nd June, 1899.)

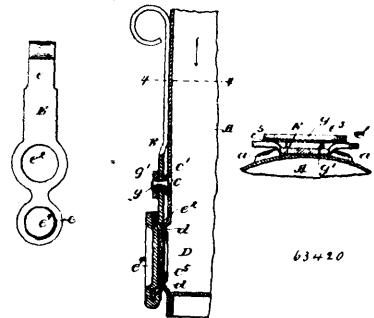
*Claim.*—An oil can having an opening in its top adjacent its edge, an integral socket 5 surrounding the same and a central opening surrounded by a threaded collar, a screw cap 8 engaging said collar and formed with an integral, upwardly projecting socket 9, a collapsible bulb 11 provided with a nipple 10 adjacent to fit in said socket, a discharge tube 3 extending on the inner side of the can to near the bottom thereof and projecting at its upper end through

said socket 5 and formed with an elbow or gooseneck 6, a collar 7 on the tube at the base of the gooseneck fitted in said socket 5, and



angularly disposed guide flanges 13 and 14 secured to the inner wall of the can and arranged to form a V-shaped passage through which the discharge tube extends, the free edges of said flanges being adapted to clamp said tube between them, substantially as described.

**No. 63,420. Can Opening. (Overture de bidon.)**



Randolph C. Hopkins, Glenville, Ohio, U.S.A., 8th July, 1899; 6 years. (Filed 21st March, 1899.)

*Claim.*—1st. The combination with a can, provided with an opening having a raised wall formed integral with the can body, a pivotal gate lever provided with an opening and a compressible washer fitting in said opening, said lever provided with an extension folded over said washer whereby the latter is secured in position, substantially as set forth. 2nd. The combination with a can provided with an opening and a compressible washer fitting in the latter, said lever provided with an extension having a depressed central portion folded over said washer whereby the latter is secured in position, substantially as set forth.

**No. 63,421. Pump. (Pompe.)**

The Ingersoll Sergeant Drill Co., New York City, New York, assignee of William Lawrence Saunders, North Plumfield, New Jersey, U.S.A., 10th July, 1899; 6 years. (Filed 19th December, 1898.)

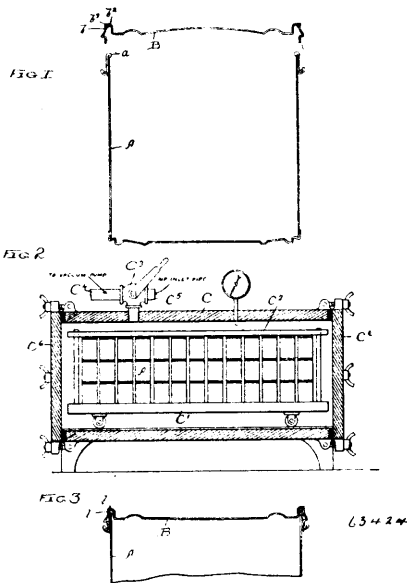
*Claim.*—1st. The herein described method of pumping, which consists in applying directly to the open lower end of a valveless



having an internal roller shoulder at its upper edge fitting over the upper end of the can body, and an externally projecting fold or shoulder at its lower edge to serve as a fulcrum in prying off the cover, and a cover having an outer flange provided with an external shoulder to co-operate with said external shoulder or fulcrum on said seamless ring, said cover having also a secondary inner flange bent or crimped outwardly under and against said internal roll or shoulder at the upper edge of said seamless ring, substantially as specified. 2nd. The combination with a can body, of a seamless ring secured to the can body and provided at its upper edge with an inwardly projecting roll or shoulder, and a cover having an outer flange and a secondary inner flange bent or crimped outwardly under and against said internal roll or shoulder on said seamless ring, said seamless ring being also provided with an outwardly projecting fold or shoulder near its lower edge, and the outer flange of said cover having also an outwardly projecting shoulder and a straight or cylindrical portion below said shoulder, substantially as specified. 3rd. In a sheet metal can or vessel, the combination with a can body, of a seamless ring fitting outside the can body and having an internal roll or shoulder at its upper edge fitting over the upper end of the can body, and an externally projecting fold or shoulder at its lower edge to serve as a fulcrum in prying off the cover, and a cover having an outer flange provided with an external shoulder to co-operate with said external shoulder or fulcrum on said seamless ring, said cover having also a secondary inner flange bent or crimped outwardly under and against said internal roll or shoulder at the upper edge of said seamless ring, said cover having an annular channel or seat for a packing between its outer and inner flanges provided with a curved or rounded inner corner and a square or enlarged outer corner, and a packing in said receptacle or seat, substantially as specified.

No. 63,424. Method of Canning Food.

(Méthode de mettre les aliments en conserves.)

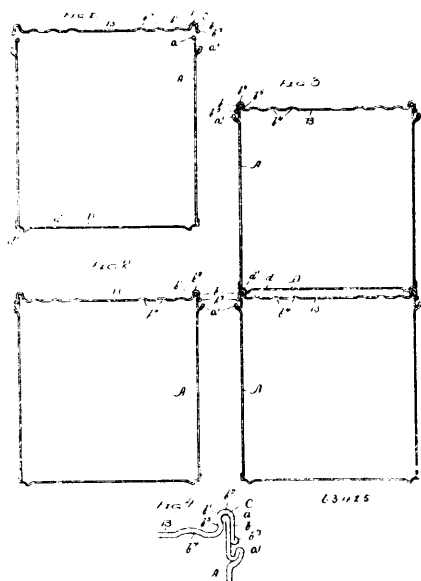


The Automatic Vacuum Canning Co., Chicago, Illinois, assignee of Edwin Norton, Maywood, 10th July, 1899; 6 years. (Filed 1st February, 1899.)

Claim.—1st. The herein described process of canning hermetically sealed food, consisting in placing the food in cans provided with covers adapted to be sealed by atmospheric pressure, placing the cans with their covers in place with a receiver, exhausting the air in the cans, and sealing the covers on the cans by the sudden admission of air to the receiver, substantially as described. 2nd. The herein described process of canning hermetically sealed food, consisting in placing the food in cans provided with covers adapted to be sealed by atmospheric pressure, placing the cans with their covers in place within a receiver, exhausting the air in the cans, sealing the covers on by the sudden admission of air to the receiver, then locking the covers securely to the cans so as to form an air tight mechanical seal, and finally cooking the contents while in vacuum, substantially as described. The herein described process of canning hermetically sealed food, which consists in placing the food in cans with covers for the entire top, placing such filled cans with their covers in place within a receiver, exhausting the air from the receiver, cans, and contents, and seaming the covers on the cans so as to form an air tight mechanical seal, substantially as described. 4th. The herein described process of canning hermetically sealed food, which consists in placing the food in cans with covers for the entire top, placing such filled cans with their covers in place within a receiver, exhausting the air from the receiver, cans, and contents, and seam-

ing the covers on the cans so as to form an air tight mechanical seal, then clamping the filled cans and processing the same to sterilize the contents, substantially as described. 5th. The process of canning food or other articles, consisting in the following steps, first filling the cans, next extracting the air therefrom, next sealing the covers on the cans with a vacuum seal, next locking the covers securely to the cans by seaming to prevent the escape of their contents or of steam or gases arising therefrom during the next or cooking step, and finally cooking the contents while in vacuum, substantially as shown and described. 6th. The process of canning hermetically sealed food, consisting in the following steps, first filling the cans, next producing by mechanical means as near a perfect vacuum in the cans as practicable by removal of the air therefrom, next sealing the covers on the cans by seaming to prevent the return of air thereto and to prevent the escape of their contents or of steam or gases arising therefrom during the next or cooking step, and next cooking the food contained in the cans while in vacuum, whereby the injurious effects upon the cans and contents of the air always heretofore sealed up in the cans with the food, is avoided, substantially as shown and described. 7th. The herein described process of canning hermetically sealed food, consisting in placing the food in cans provided with covers adapted to be sealed by atmospheric pressure, placing the cans with their covers in place within the receiver, exhausting the air in the cans, and sealing the covers on by the sudden admission of air to the receiver, next removing the cans from the receiver and securely sealing the covers to the cans by a mechanical seal to prevent the escape of their contents or of steam or gases arising therefrom, next placing the cans in suitable clamps to prevent the action of the steam cooking from breaking the sealed joint between the cans and the covers, placing the cans in a cooking retort and sterilizing and cooking the contents while in vacuum, next removing the cans from the retort and cooling the contents, and next removing them from the clamps, substantially as shown and described.

No. 63,425. Can. (Bidon.)

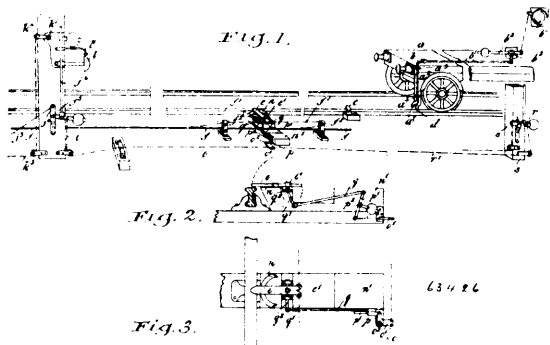


The Automatic Vacuum Canning Co., Chicago, assignee of Edwin Norton and Bernard H. Larkin, both of Maywood, Illinois, U S.A., 10th July, 1899; 6 years. (Filed 1st February, 1899.)

Claim.—1st. In a sheet metal can or vessel, the combination with a body having an internal roll or bead *a* at its upper end or mouth and provided with an externally projecting shoulder *a'* near its upper end to serve as a fulcrum for prying off the cover, of a cover *B* having an outer flange *b* fitting outside the can body and provided at its lower edge with a roll, bead or fold to co-operate with said shoulder on the can body, said cover *B* having also an inner secondary flange *b'* adapted to be bent or crimped outwardly under and against said internal roll or bead *a* on the can body, a gasket, cement or packing *C* fitting in the groove or channel between said flanges *b, b'* on the cover, and compressed between the cover and said roll or bead *a* on the can body, said cover being sealed and secured to the can body by a vacuum seal and a mechanical seal, substantially as herein shown and described. 2nd. In a sheet metal can or vessel, the combination with a can body having an internal roll or bead at its upper end or mouth, and an externally upwardly projecting fold constituting a shoulder, of a cover having an outer flange and a secondary inner flange bent or crimped outwardly under and against said internal roll or bead at the upper edge of the can body, said outer flange of the can body having a roll or fold at its lower edge to enable the cover to be pried off against

said externally projecting shoulder on the can body as a fulcrum, the free upper end of the can body bearing said internal roll or bead permitting the same to give as the cover is pried off, gradually at different points of its circumference, substantially as specified. 3rd. The combination with a can body having an internal rolled edge at its upper end, of a cover having an outer flange fitting outside the can body, an inner secondary flange fitting inside the can body and adapted to be bent or crimped outwardly under and against said internally rolled edge of the can body, and a packing C fitting the annular groove or seat in the cover formed by said said inner and outer flanges thereon, said can body having an external upwardly projecting fold constituting a shoulder to act as a fulcrum and the cover having a roll or shoulder on its external flange to co-operate with said fulcrum on the can body in prying off the cover, substantially as specified. 4th. The combination with a can body A, having internally rolled upper edge, of cover B having inner and outer flanges *b*, *b'* fitting one inside and one outside the can body, packing C sealing and securing said cover to said body by a vacuum seal, said inner flange *b'* on the cover being crimped outwardly under and against said rolled upper edge of the can body and securing said cover to said body by a mechanical seal, said outer flange *b* of said cover B having a rolled edge, and said body A having an external integral shoulder *a'* serving as a fulcrum for prying off the cover, the free upper end of the can body bearing said internal roll or bead permitting the same to give as the cover is pried off, gradually at different points of its circumference, substantially as specified. 5th. The combination with a can body A, having internally rolled upper edge, of cover B, having inner and outer flanges *b*, *b'* fitting one inside and one outside the can body, packing C sealing and securing said cover to said body by a vacuum seal, said inner flange *b'* on the cover being crimped outwardly under and against said rolled upper edge of the can body and securing said cover to said body by a mechanical seal, said outer flange *b* of said cover B having a rolled edge, said body A having an external integral shoulder *a'* serving as a fulcrum for prying off the cover, and a bottom D having a raised central portion *d* fitting within said inner flange *b'* of the cover to enable the cans to be stacked securely one on top of another, the free upper end of the can body bearing said internal roll or bead permitting the same to give as the cover is pried off, gradually at different points of its circumference, substantially as specified.

**No. 63,426. Railway Signal.** (*Signal de chemin de fer.*)

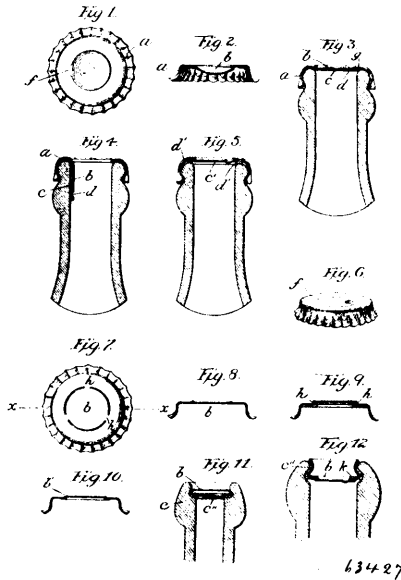


John James Grundy, 27 Princess Street, Regent Street, London, assignee of Edward Maynard and George Maynard, both of 17 Merritt Road, Brockley, Surrey, England, 10th July, 1899; 6 years. (Filed 13th March, 1899.)

*Claim.*—1st. In combination, a signal in the signal box, a semaphore rod with connection thereto from the signal box, a signal at the semaphore, means for operating the same from the signal box, a signal on the engine, and contacting means on the engine and beside the track to operate the signal on the engine to notify the engineer that he has arrived at the semaphore and to notify also the signal man, the said signal at the semaphore enabling the signal man to notify the engineer when the track is clear, substantially as described. 2nd. In combination, a signal in the signal box, a semaphore rod with connection thereto from the signal box, a signal at the semaphore, means for operating the same from the signal box, a signal on the engine, contacting means on the engine and beside the track to operate the signal on the engine to notify the engineer that he has arrived at the semaphore and to notify also the signal man, the said signal at the semaphore enabling the signal man to notify the engineer when the track is clear, and a connection from the semaphore, substantially as described. 3rd. In combination, the semaphore, a signal in the signal box, a contact means on the engine, contact means beside the track on each side of the semaphore connected with the signal in the box and arranged in the path of the contact means on the car to operate the signal in the box, substantially as described. 4th. In combination, the semaphore, the signal station, an audible signal operated by the passage of the engine to notify the engineer of his approach to the semaphore, an audible signal at the semaphore and operating connections leading thereto from the signal box, substantially as described. 5th. In an improved railway signalling apparatus, the combination of a fixed striker *i*,

on a railway engine, and swivelling lever *e*, *m*, with means for operating a bell or gong alarm *h*<sup>4</sup>, in a signal cabin, said means consisting essentially of a weighted lever *g*, rod *g*<sup>2</sup>, crank *g*<sup>3</sup>, latch bolt *h*, hinged flap *h*<sup>1</sup>, and the usual chains, wires and rods, substantially as described. 6th. In an improved railway signalling apparatus, the combination of the chain, rod, or wire *o*, bell crank lever with arms *o*<sup>1</sup>, *p* weighted lever *p*<sup>1</sup>, rod *q*, crank *q*<sup>1</sup> and spindle *q*<sup>2</sup>, for simultaneously tilting the swivelling lever *e*, with the semaphore on the signal post *i*, substantially as described. 7th. In an improved signalling apparatus, the means as described for simultaneously lowering the semaphore on signal post *i*, tilting the swivelling lever *e*, and locking the starting signal on the previous section of railway, in the danger position, substantially as described. 8th. In an improved railway signalling apparatus, the combination of the rocking striker *a*<sup>1</sup>, crank *b*, rod *b*<sup>1</sup>, lever *b*<sup>2</sup>, fixed striker *d*, tongue *c*, swivelling levers *e*, *m*, the spring lever *k*, lever *k*<sup>4</sup>, latch bolt *h*, hinged flap *h*<sup>1</sup>, clappers and gongs *l*, *l*<sup>1</sup>, *h*<sup>4</sup>, the bell crank lever with arms *o*<sup>1</sup>, *p*, rod *q*<sup>1</sup>, spindle *q*<sup>2</sup>, and weighted lever *r*, with the means for connecting the various levers and transmitting their motion from one to the other, substantially as described.

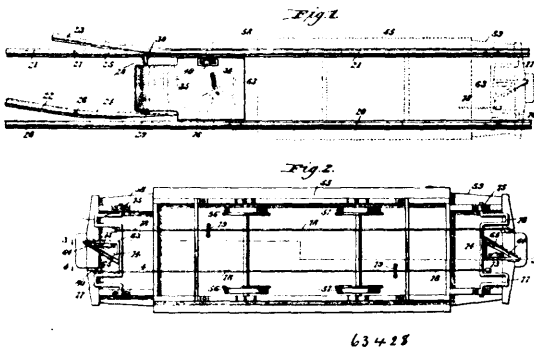
**No. 63,427. Bottle Closure.** (*Fermeture de bouteille.*)



The Crown Cork and Seal Company, assignee of William Painter, all of Baltimore, Maryland, U.S.A., 10th July, 1899; 6 years. (Filed 23rd June, 1899.)

*Claim.*—1st. A metallic closure for bottles, constructed with an opening through it sufficient for freely discharging the contents of the bottle having a movable flap in integral connection therewith, said flap being adapted to be displaced, and a sealing medium beneath the flap adapted to be ruptured, substantially as described. 2nd. A metallic closure for bottles, constructed with an opening through it sufficient for freely discharging the contents of the bottle, having a flap integral with the closure extending beneath the opening and having an unattached portion bearing on the under face and a sealing medium, substantially as described. 3rd. A bottle stopper, consisting of a hard metal cap adapted to be locked or secured to the head of a bottle, an interposed disc of sealing material between the cap and bottle top, an opening in the metal cap for discharging said bottle, and a displaceable disc of metal forming a continuation of the cap and in substantially the same plane, closing said opening, all the parts being so arranged that the sealing medium may be ruptured to produce an opening for the discharge of the contents by the downward depression of the movable disc, substantially as described. 4th. A metallic closure for bottles, constructed with an opening through it sufficient for freely discharging the contents of the bottle, said opening being closed by a part displaceable by bending inward and capable of retaining its inwardly bent position, in combination with a rupturable sealing medium acting to make a gas tight joint between the metallic closure and the bottle, and a sealing medium for the joint around the edges of said displaceable part, substantially as described. 5th. A metallic closure for bottles, constructed with an opening through it sufficient for freely discharging the contents of the bottle, and a flap placed underneath and covering the opening combined with a sealing medium, consisting of a disc beneath the flap to seal the same and serving also to make a gas tight joint between the metallic closure and the bottle.

**No. 63,428. Switch. (Aiguille.)**

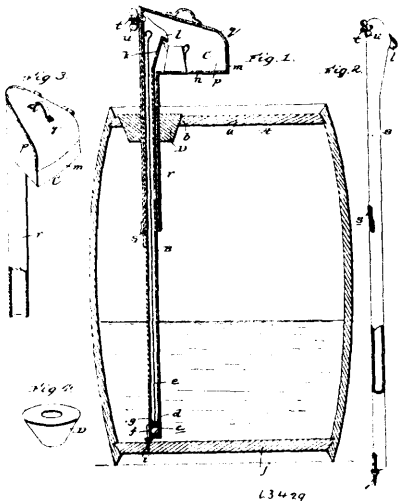


63 428

Ephraim Behney, Elwood, Pennsylvania, U.S.A., 10th July, 1899; 6 years. (Filed 26th May, 1899.)

*Claim.*—1st. The combination with switch tongues, of the cross rod pivotally connecting them, the lever pivoted to the frame and pivotally connected at one end to the cross rod, the pin projecting upward from the opposite end of the lever through a slot in the cover plate, the spring for normally holding the lever in position to close the switch, the catch arm projecting laterally from the lever and provided with a hook at its outer end, the latch bolt provided with a bevelled catch to engage said hook, and means for moving the latch bolt longitudinally to disengage the catch from the hook and release the lever, substantially as described. 2nd. The combination with the switch tongues, of the cross rod pivotally connecting them, the lever pivoted to the frame and pivotally connected at one end to the cross rod, the pin projecting upward from the opposite end of the lever through a slot in the cover plate, the spring for normally holding the lever in position to close the switch, the catch arm projecting laterally from the lever, the latch bolt provided with a leveled catch to engage said hook the spring for maintaining the engagement of the latch arm and catch, the slotted lever pivoted at its lower end and having its upper end projecting above the surface through a slot in the surface of the cover plate, and the pin passing through the slot in the lever and into the latch bolt, substantially as described. 3rd. The combination with the car, of the vertical plate slidably mounted through the platform, the triangular frame or shoe attached to its lower end, the spring contact plate secured to said shoe, and the wheel journaled in the shoe, substantially as described. 4th. The combination with the car, of the vertical plate slidably mounted through the platform, the triangular frame or shoe attached to its lower end, the slotted hand lever pivoted above the platform, the pin passing through the vertical plate and the slot in the lever, the curved rack, and the pawl mechanism attached to the lever and engaging the rack, substantially as described. 5th. The combination with the car, of a rock shaft pivoted below the platform at one end and provided with a cranked bend, a lever pivoted above the platform at the opposite end of the car and projecting below it, a rod connecting the lower end of the lever with the cranked bend, the curved rack, and the pawl and lever mechanism for engaging said rack, substantially as described.

**No. 63,429. Barrel Pump. (Pompe de baril.)**



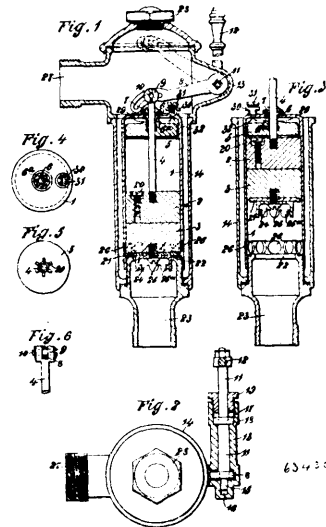
63 429

John O. Elliston, Southampton, New York, U.S.A., 10th July, 1899; 6 years. (Filed 4th April, 1899.)

*Claim.*—1st. The combination of a barrel having an opening *b*, a drifter, comprising a body resting at a considerable distance above

the barrel and having a bottom and side walls and a cover, and a depending tube extending down through the opening and into the barrel, a pump cylinder loosely arranged in the depending tube of the drifter and extending up into the body thereof and having the enlarged portion *k* and lip *j* at its upper end and also having a lug receiving the lower end of the drifter tube, a detachable connection between the upper portion of the pump cylinder and the body of the drifter, a screw connected to the side of the pump cylinder and depending below the lower end of the same and engaging the bottom of the barrel, said screw having its point disposed off the longitudinal centre of the pump cylinder, and a revoluble exteriorly tapered collar surrounding the tube of the drifter and occupying the opening *b* in the barrel, said collar being of less height than the distance between the bottom of the body of the drifter and the top of the barrel, substantially as specified. 2nd. In a barrel pump, the combination of a drifter, comprising a body adapted to rest at a distance above the barrel, and a depending tube adapted to extend through an opening in the barrel, a pump cylinder extending through and detachably connected to the depending tube of the drifters said cylinder being of a length to support the drifter body at a distance above the barrel, a screw connected to the side of the pump cylinder and depending below the lower end of the same and adapted to engage the bottom of a barrel, said screw having its point disposed off the longitudinal centre of the pump cylinder, and a collar surrounding the tube of the drifter and adapted to occupy the barrel opening, said collar being adapted to be moved upwardly on the drifter tube and out of the barrel opening, substantially as specified.

**No. 63,430. Apparatus for Drawing Off Fixed Quantities of Liquids. (Appareil pour soutirer des quantites donnees de liquides.)**



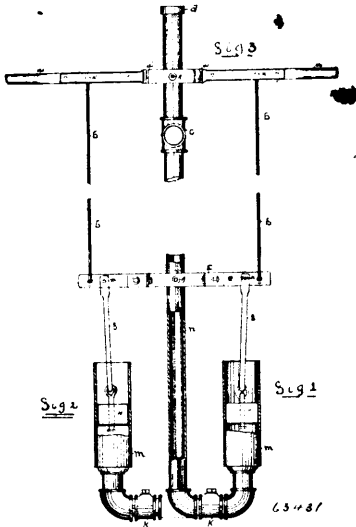
63 430

William Turnbull, 54 Lambton Quay, Wellington, New Zealand, 10th July, 1899; 6 years. (Filed 17th October, 1898.)

*Claim.*—1st. In an apparatus for drawing off fixed quantities of liquids, in combination an outer casing, a dome within the casing having perforations in its lower part, a piston having a vent, a weighted valve and a vent in the top of the dome, a piston rod carrying the piston and passing through the top of the dome, means for operating the piston and a valve below the piston, substantially as set forth herein. 2nd. In an apparatus for drawing off fixed quantities of liquids, in combination an outer casing having a nozzle at its upper part and a nozzle at its lower part, a vent in the upper part of the outer casing, a dome within the casing having perforations in its lower part, a piston having a vent, a weighted valve and a vent in the top of the dome, ribs upon the top of said weighted valve, a piston rod carrying the piston, a lever and handle for operating the piston and a valve below the piston, substantially as set forth herein. 3rd. In an apparatus for drawing off fixed quantities of liquids, in combination an outer casing, a dome within the casing having perforations in its lower part, said dome being screw threaded so that its perforations may be partially closed, a piston having a vent a weighted valve and a vent in the top of the dome, a piston rod carrying the piston and passing through the top of the dome, means for operating the piston and a valve below the piston, substantially as set forth herein. 4th. In an apparatus for drawing off fixed quantities of liquids, in combination an outer casing, a dome within the casing having perforations in its lower part, a vent in the top of the dome, a piston rod carrying the piston and passing through the top of the dome, a lever and handle for operat-

ing the piston, a bracket having a stuffing box for carrying the spindle of the said lever and handle and a valve below the piston, substantially as set forth herein. 5th. In an apparatus for drawing off fixed quantities of liquids, in combination an outer casing, a dome within the casing having perforations in its lower part, a piston having a vent a weighted valve and a vent in the top of the dome, a piston rod carrying the piston and passing through the top of the dome, means for operating the piston, a valve below the piston capable of rising in the dome, and a cup with a scalloped edge attached to the said valve to partially cut off the flow of liquid, substantially as set forth herein. 6th. In an apparatus for drawing off fixed quantities of liquids, a piston, a weighted valve below the piston, a dome for containing the said piston and valve, means for raising the said piston so that a partial vacuum is formed below the piston to raise the valve vents in the piston and dome to provide for the descent of the valve and a weighted non-return valve in the top of the dome, substantially as set forth herein.

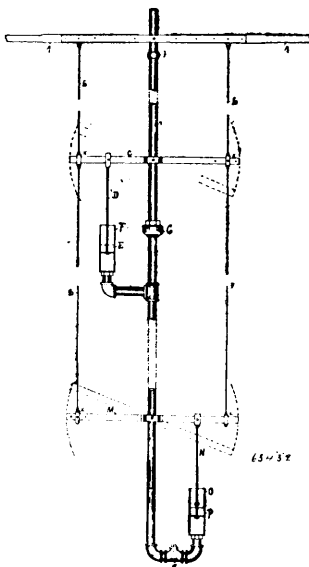
**No. 63,431. Pump. (Pompe.)**



James Bulpit Gay, Lucknow, Ontario, Canada, 10th July, 1899; 6 years. (Filed 6th February, 1899.)

*Claim.*—A pump comprising the cylinder, the plunger H, valve K, handle *a a*, bar E, and wires or rods *b b*, all formed and arranged as and for the purpose hereinbefore set forth.

**No. 63,432. Pump. (Pompe.)**



James Bulpit Gay, Lucknow, Ontario, Canada, 10th July, 1899; 6 years. (Filed 23rd June, 1899.)

*Claim.*—1st. The combination of the cylinder F with the plunger E and the rod D and bar C, handle A A, rods or wires *b b a d*, valves S and O, substantially as and for the purposes hereinbefore set out.

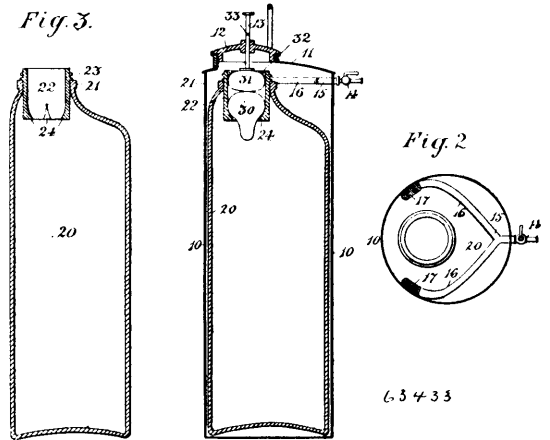
2nd. A pump comprising the cylinders O and F and plungers E and P, rods D and N, bars C and M, valves S and G, rods or wires *b b* and handle A A, substantially as and for the purposes hereinbefore set forth.

**No. 63,433. Chemical Fire Engine.**

(*Extincteur chimique d'incendie.*)

Fig. 1.

Fig. 3.



Charles Patton, Ottawa, Ontario, Canada, 19th July, 1899; 6 years. (Filed 19th June, 1899.)

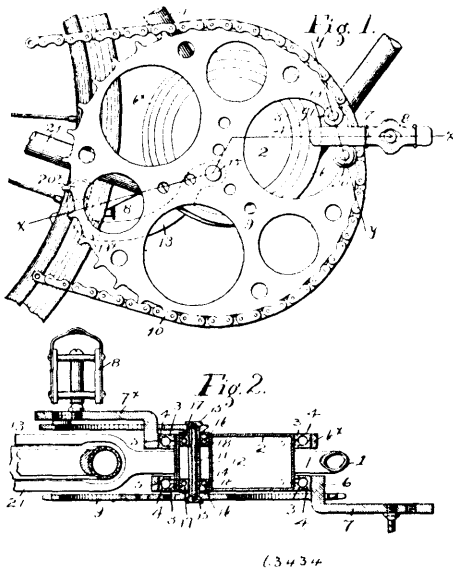
*Claim.*—1st. A chemical fire engine consisting of casing having an outlet trap, a cap or cover through which a breaker or plunger rod, made in two pieces, a glass lining having a neck in which is cemented a cylindrical chamber open at its top and bottom, hermetically sealed chemical bulbs placed in said chamber, the said chamber being hermetically closed by cement, substantially as set forth and for the purposes described. 2nd. In a chemical fire extinguisher, a bulb of spherical shape and another of pear shape, both containing gas producing bodies, acting in conjunction in and with a chemical fluid in a glass vessel hermetically sealed, substantially as described. 3rd. In a chemical fire engine the combination with a metal casing having outlet tap and breaker rods as described, of a glass receptacle for the extinguishing fluid, hermetically sealed bulbs containing gas producing chemicals secured in a chamber in the neck of the said receptacle, the said bulbs being cemented in the said chamber so as to hermetically seal the said receptacle, substantially as set forth and described. 4th. In a chemical fire extinguisher having glass lining case 10, glass neck, glass bulbs, cemented to the tap on the outside of the casing and with the inside by tapering tube branches, the ends covered with wire gauze, as described and set forth. 5th. In a chemical fire engine, the combination with the casing 10, of the tap 14 at the outside thereof, a Y-tube connected to the said tap on the inside of the casing, branches 16 diverging from the said Y-tube, the ends of said branches being covered with wire gauze, substantially as set forth. 6th. In a chemical fire engine, a Y-tube connected to the top on the outside, and with the inside by tapering tube branches, the ends of which are covered with wire gauze, as described and for the purposes set forth.

**No. 63,434. Cycle Mechanism. (Mecanisme de cycles.)**

Homer Ellis Shephard and John Kennedy, both of Rochester, New York, U.S.A., 12th July, 1899; 6 years. (Filed 25th May, 1899.)

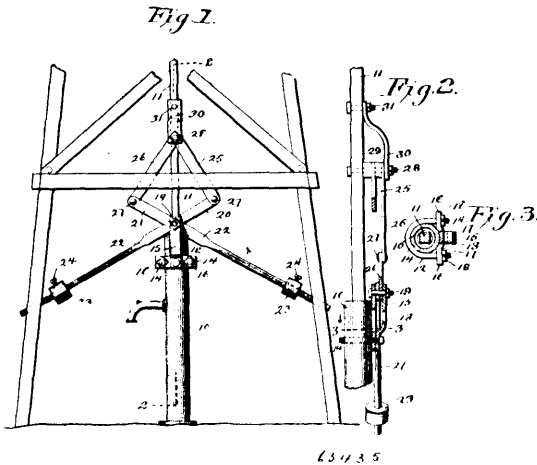
*Claim.*—1st. The combination with the frame, the axle, the driving wheel 9 connected to one end of the axle, and the crank 13 at the other end, of the independent ring cranks journalled on bearings surrounding the axle and on centres forward of and eccentric of the axle, and pedals connected to the outer ends of the ring cranks, one of said ring cranks co-operating directly with the crank 13 on the axle, and the other passing through and directly engaging the driving wheel 9, the point of co-operation between the ring and cranks and the co-operating parts being located between their pedals and their centre of rotation, whereby the cranks will operate as lengthened levers, substantially as and for the purpose described. 2nd. The combination with the tubular hanger, the bearing collars thereon, the rotary rings surrounding the hanger having the offset cranks and pedals thereon, the bearing collars on the rings, and the balls between the collars, of the axle passing through the ring cranks and eccentric thereof, the sprocket wheel 9 having an aperture for one of the ring cranks, and rollers at the side thereof, the crank 13 on the axle having the rollers between which the other ring crank passes, arranged and operating, substantially as and for the purpose specified. 3rd. The combination with the frame, the tubular axle 11, the sprocket wheel 9, the crank 13 thereon, and the bolt 14, of offset ring cranks extending around and eccentrically of the axle,

and connected with the sprocket wheel and crank 13 respectively, substantially as and for the purpose specified. 4th. The combina-



tion with the cycle frame embodying the continuous front tube and rear fork, the tubular hanger, the seat post extending through the hanger and connected to the frame, and the sleeve eccentrically arranged in the hanger, of the axle journaled in the sleeve, the wheel thereon, and rings on the hanger having the cranks connected to the wheel, substantially as and for the purpose specified. 5th. The combination with the driving wheel, having the aperture therein, and the roller beside the aperture, of the ring rotating eccentrically of the centre of rotation of the wheel and above it, the offset crank on the ring having the pedal on its outer end and passing through the aperture in the wheel and engaging the roller between the pedal and the centre of rotation of the crank, substantially as and for the purpose specified.

**No. 63,435. Pump. (Pompe.)**

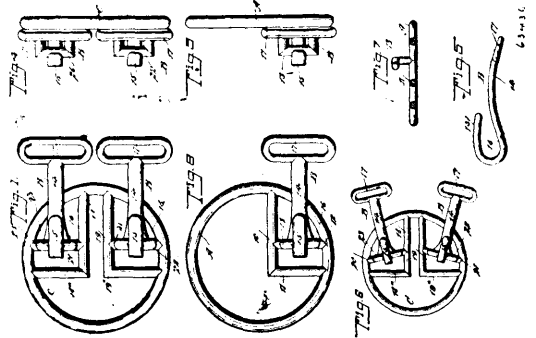


Harry Landa, New Braunfels, assignee of Joseph Willmann, Solms, both in Texas, U.S.A., 12th July, 1899; 6 years. (Filed 17th March, 1899.)

*Claim.*—1st. The combination with a tube, of a support fastened thereto, weighted levers mounted on said support by the fulcrum bolt which is common to both levers, and links pivoted individually to said levers and having a common connection with the pump rod, substantially as described. 2nd. The combination with a tube, of a supporting clamp attached to said tube, a single fulcrum bolt supported by the clamp, the crossed levers fulcrumed on said bolt, the shiftable weights clamped to said levers, a reciprocating rod, and links pivoted individually to the short arms of the levers, and having a single pivotal connection with said rod, substantially as described. 3rd. In an equalizer for pump rods, a supporting clamp consisting of a bent armed plate, a yoke having its ends connected to the arms of said plate, and a brace fastened to the plate, in combination with

bent levers having their short arms crossed within the space between the plate and brace of said clamp, a fulcrum bolt supported in the clamp and passing through said levers, the counterpoise weights on the long arms of said levers, a pump rod, and a pair of links pivoted individually to short arms of the levers and having a single pivotal connection with the pump rod, substantially as described.

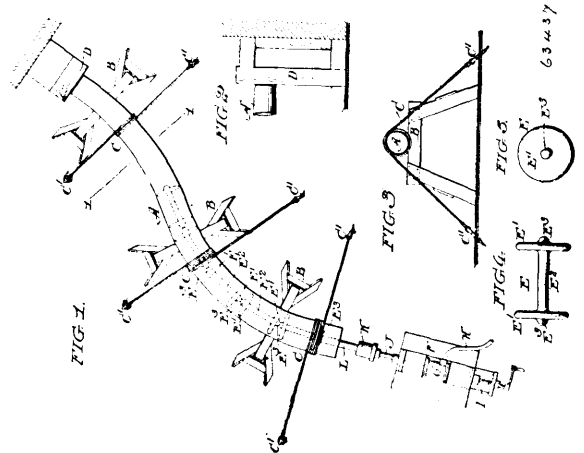
**No. 63,436. Harness. (Harnais.)**



James Walter Fisher, Walter Johnson and Robert Marshall Callison, of Palouse, Washington, U.S.A., 12th July, 1899; 6 years. (Filed 6th March, 1899.)

*Claim.*—1st. In harness, the combination of a ring, a bar attached to the ring and projecting into the interior space thereof, an intermediate bar secured to the body of the ring and to the first named bar, and a loop formed upon the intermediate bar and projecting laterally out of the plane of the ring. 2nd. In harness, the combination of a ring, an angular bar attached to the ring at its inner face and projected into the interior space of the ring, an intermediate bar secured to the body of the ring and the angular bar, and a loop formed upon the intermediate bar, for the purpose specified. 3rd. In harness, the combination of a ring, an angular bar attached to the ring at its inner face and projecting into the interior space of the ring, an intermediate bar secured to the body of the ring and to the angular bar, a loop formed upon the said intermediate bar, and a hook arranged to enter the said loop, the said hook being provided with shoulders on its shank, preventing the movement of the hook in direction of its return end after the said hook has been entered into the said loop, substantially as described.

**No. 63,437. Apparatus for Unifying the Sectional Curvature of Tubes. (Appareil pour rendre uniforme les courbes sectionales des tubes.)**

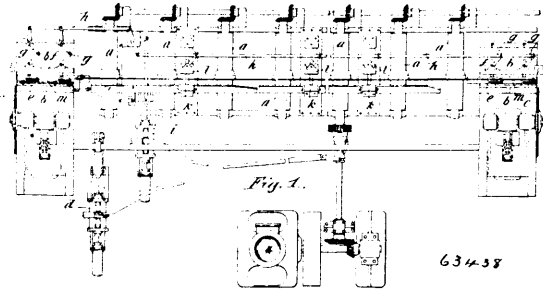


Birney Clark Batcheller, and Robert Gundlach, both of Philadelphia, Pennsylvania, U.S.A., 12th July, 1899; 6 years. (Filed 23rd March, 1899.)

*Claim.*—1st. An expanding mandrel for unifying the sectional curvature of tubes consisting of two discs each having narrow rounded edges rigidly secured together by a stud. 2nd. An expanding mandrel for unifying the sectional curvature of tubes consisting of two discs each having narrow rounded edges rigidly secured together by a stud and having on their outer faces central bosses for receiving or transmitting impact blows. 3rd. In an apparatus for unifying the sectional curvature of tubes, the combination with means for anchoring the tube in place, of a power hammer, a frame in which the hammer is adjustably secured, and a series of expanding mandrels, adapted as described, to be driven through the anchored pipe by the repeated impact blows of the hammer.



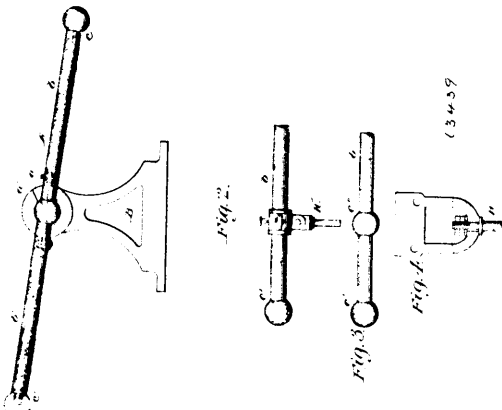
**No. 63,138. Saw Table.** (*Table de scierie.*)



Edward William McKenna, Milwaukee, Wisconsin, assignee of David Holliday Lentz, Joilet, Illinois, both in the U.S.A., 12th July, 1899; 6 years. (Filed 27th February, 1899.)

*Claim.*—1st. In a rail mill, the combination with a table for receiving a heated rail from the finishing rolls, of a series of clamps arranged along said table and having rigid flat opposing surfaces engaging corresponding flat surfaces of the rail, and means for simultaneously actuating said clamps to straighten and remove twist from the rail, substantially as set forth. 2nd. In a rail mill, the combination with a saw table for receiving a heated rail from the finishing rolls, of a saw for sawing off the ends of the rail, clamps disposed along said table in the line of the rail, said clamps having flat, unyielding opposing surfaces for engaging corresponding flat surfaces upon the rail, means for actuating said clamps whereby the rail is straightened and the twist removed therefrom, and means for thereupon engaging the saw with the rail to saw off the end thereof, substantially as described. 3rd. The combination with a saw table for receiving a heated rail from the finishing rolls, of a pair of saws for removing the ends of such heated rail, a series of clamps arranged at intervals along the table between the saws, flat unyielding engaging surfaces upon the opposing members of said clamps for engaging corresponding flat surfaces upon the rail, means for actuating said clamps to cause the same to engage the rail, whereby the latter is straightened, and means for engaging the saws with the heated rail to saw off the ends thereof, substantially as described. 4th. In a rail mill, the combination with a table adapted to receive a heated rail from the finishing rolls, a set of clamps adapted to engage with said rail as it lies upon the table and straighten the same in a given plane, a second set of clamps operating substantially at right angles to said first set, said second set of clamps being adapted to engage said rail and straighten the same in a plane substantially at right angles to the plane of operation of said first set, whereby the rail may be straightened and the twist removed therefrom, substantially as described. 5th. In a saw table for a rail mill, the combination with saws adapted to saw off the ends of a rail lying upon said table, of a set of clamps adapted to engage with said rail as it lies upon the table and straighten the same in a vertical plane, a second set of clamps adapted to engage said rail and straighten the same in a horizontal plane, said two sets of clamps thus operating to straighten the rail and clamp it while being sawn, and means for removing the rail from the saw table after being sawn, substantially as described.

**No. 63,139. Mechanism for Transmission of Mechanical Motion.** (*Mécanisme pour la transmission de mouvement mécanique.*)

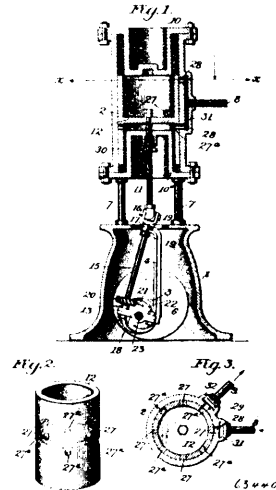


Willard Reed Green, Denver, Colorado, assignee of Augustus Howard, San Francisco, California, U.S.A., 12th July, 1899; 6 years. (Filed 9th January, 1899.)

*Claim.*—1st. A mechanical movement, consisting of a lever, having a ball and socket fulcrum bearing and means for making

universal joint connections with rotative bodies operatively connected with said lever and said rotative bodies. 2nd. A mechanical movement, consisting of a lever having spherically-terminated ends and an intermediate spherical fulcrum, in combination with spherical sockets on rotative parts in co-operation with said terminals, and a ball socket for the fulcrum and said rotative bodies, substantially as specified. 3rd. In a mechanical movement, a lever having a ball and socket fulcrum, ball and socket terminal connections, and ball and socket connections at intermediate points, by which attachment may be made to different sources of power with different ranges of movement, and rotative elements connected to the terminals of said lever. 4th. A mechanical movement, consisting of a lever, all the movable bearing or frictional points of which are balls suitable for making ball and socket joints, in combination with rotative bodies having sockets operatively connected therewith, whereby said lever is permitted to transmit revolution to or from revoluble parts while independently rotating freely on its own axis. 5th. A mechanical movement, consisting of a lever, all the movable bearing or friction points of which are balls, in combination with one or more revoluble bodies having sockets connected with said balls, and means operatively connected with a source of motive power, as an engine, whereby revolution is transmitted to said revoluble bodies from said power through the medium of said lever while permitting said lever to rotate independently on its own axis. 6th. In a mechanical movement, a lever having ball and socket terminals, a ball and socket fulcrum, said terminals and fulcrum being in alignment, and a ball and socket connection at an intermediate point for the attachment of parts designed either for the transmission or for the reception of power, substantially as specified.

**No. 63,440. Motive Engine.** (*Moteur.*)



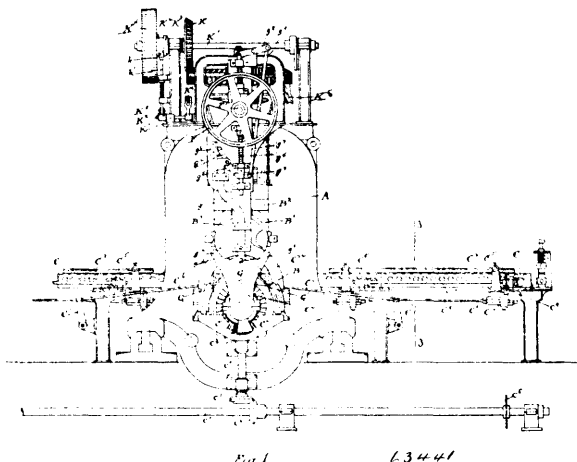
Willard Reed Green, Denver, Colorado, assignee of Augustus Howard, San Francisco, California, U.S.A., 12th July, 1899; 6 years. (Filed 9th January, 1899.)

*Claim.*—1st. In a motive engine, a cylinder provided with recessed cylinder heads, a revoluble sleeved piston in said cylinder, inlet and exhaust ports in the cylindrical walls of said cylinder, ports in the cylindrical walls of said sleeved piston, and means between the piston, and the engine crank for continuously rotating said piston in one direction while it is making both its reciprocating strokes, substantially as specified. 2nd. In a motive engine, a cylinder having in its cylindrical walls inlet and exhaust ports, a revoluble sleeved piston in said cylinder having ports in said sleeves, a piston rod connected therewith, and means connected to the crank for positively turning said rod and piston continuously while making their reciprocating movements. 3rd. In a motive engine, a cylinder having in its cylindrical walls inlet and exhaust ports, a revoluble sleeved piston in said cylinder, having ports in the walls of said sleeves, a piston rod connected to said piston, a connecting rod connected by a universal joint to said piston rod, and means for positively and continuously turning said rods and piston while making their reciprocating movements, substantially as specified. 4th. In a motive engine, a cylinder having inlet and exhaust ports in its cylindrical walls, a revoluble sleeved piston in said cylinder having ports in the walls of said sleeves, a piston rod, a connecting rod connected by universal joint with said piston rod, a pinion fixed on the lower end of said connecting rod, a scroll toothed gear wheel fixed on the engine crank disc concentric with the crank pin and meshing with said pinion, a shaft, a crank disc on said shaft and a crank pin, operatively connected and co-acting, whereby a positive continuous



rotary motion in the same direction is transmitted to the piston by the revolution imparted to the engine shaft by the reciprocating movements of said piston and the ports in said piston are successively presented to the inlet and exhaust ports of the cylinder in due order of alteration, substantially as specified. 3rd. In a motive engine, a cylinder having recessed cylinder heads and inlet and exhaust ports in its cylindrical walls, a sleeved piston therein having ports in said sleeves, a piston rod connected to said piston with means for adjusting the piston on the rod and means operatively connected therewith and with the shaft of said engine by which said piston is rotated continuously in the same direction and the ports in said cylinder and in said sleeves are brought successively into operative communication, whereby the working medium is admitted to and exhausted from said cylinder and piston and imparts reciprocating motion to said piston. 6th. In a motive engine, a cylinder having ports of suitable form, size and location in its cylindrical walls a revoluble sleeved piston in said cylinder having corresponding ports in said sleeves, a piston rod connected with said piston with means for adjusting the piston on the rod and means operatively connected with the engine shaft and with said piston rod for positively turning said piston rod and attached piston continuously in the same direction, whereby the lap, lead, and exhaust of said ports may be fixed or determined by the relative speeds of the rotation and the reciprocating movement of said piston. 7th. In a motive engine, a cylinder having ports in its cylindrical walls, a revoluble sleeved piston in said cylinder having ports in said sleeves, a piston rod connected to said piston and a joint upon the end of said piston rod to alter and determine the relative operative engagement of said ports by turning said piston rod and piston relatively to the ports in said cylinder, and means for positively turning said piston rod and piston.

**No. 63,441. Sheet Metal Rolling Mill. (Laminoir.)**

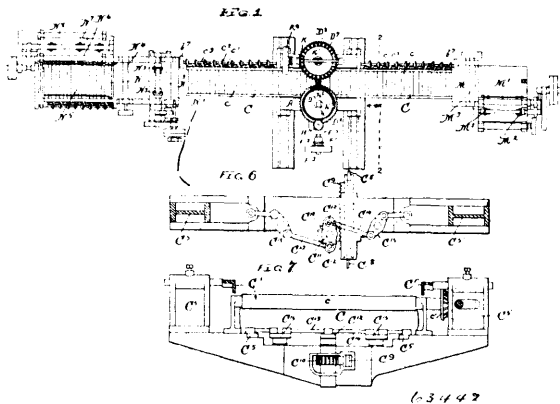


Norton Brothers, Chicago, assignee of John G. Hodgson, Maywood, both in Illinois, U.S.A., 12th July, 1899; 6 years. (Filed 1st February, 1899.)

*Claim.*—1st. In an automatic sheet metal rolling mill, the combination with the rolls, feed tables and feed screws for setting the rolls closer together, of a pair of involute gears for turning the feed screws by diminishing increments after each reduction or pass of the metal between the rolls to set them for the next pass, substantially as specified. 2nd. In an automatic sheet metal rolling mill, the combination with the rolls, feed tables and feed screws for setting the rolls closer together, of a pair of involute gears for turning the feed screws by diminishing increments after each reduction or pass of the metal between the rolls to set them for the next pass, and means for automatically turning the shaft of one of said intermeshing involute gears after each successive pass, substantially as specified. 3rd. In an automatic sheet metal rolling mill, the combination with the roll, of a pair of feed screws, one at each end of the rolls, geared together for setting the rolls together, and involute gears for turning the feed screws by diminishing increments after successive passes, substantially as specified. 4th. The combination with the rolls, feed screws and feed tables, of a driving pulley or a driving pulley shaft for the feed screws, a clutch and connecting gearing for communicating motion to said feed screws, mechanism for automatically operating said clutch at each reversal of the mill, said connecting gearing having a pair of involute gears to cause the feed screws to be turned a less and less extent at each successive turn, substantially as specified. 5th. The combination with the rolls, feed screws and feed tables, of a driving pulley or shaft for the feed screws, a clutch and connecting gearing for communicating motion to said feed screws, mechanism for automatically operating said clutch at each reversal of the mill, said connecting gearing having a pair of involute gears to cause the feed screws to be turned a less and less extent at each successive turn, and mechanism for automatically running back the feed screws after a predetermined number of passes have been made, substantially as specified. 6th.

The combination with the rolls and feed screws for setting the rolls closer together, a driving pulley or shaft for the feed screws, gearing connecting said driving pulley or shaft with the feed screws, a clutch for connecting and disconnecting said gearing with said driving pulley, a friction cam or arm on the shaft of one of the rolls, and connecting mechanism between said cam or arm and the clutch for operating the clutch at each reversal of the motion of the rolls, said connecting gearing between the feed screws and their driving pulley or shaft having a pair of involute gears to cause the feed screws to be turned a diminishing amount, substantially as specified. 7th. The combination with the rolls and feed screws for setting the rolls closer together, a driving pulley or shaft for the feed screws, gearing connecting said driving pulley or shaft with the feed screws, a clutch for connecting and disconnecting said gearing with said driving pulley, a friction cam or arm on the shaft of one of the rolls, and connecting mechanism between said cam or arm and the clutch for operating the clutch at each reversal of the motion of the rolls, said connecting gearing between the feed screws and their driving pulley or shaft having a pair of involute gears to cause the feed screws to be turned a diminishing amount, and mechanism for automatically running back or returning the feed screws to position after a predetermined number of passes have been made, substantially as specified. 8th. In a sheet metal rolling mill, the combination with the feed table and rolls, of movable gauges at the opposite edges of the feed table for automatically truing and centering the bars or sheets on the feed table, and mechanism for automatically opening and closing the gauges at each reversal of the motion of the mill, comprising a rack and gear, connecting links and levers, and a friction arm on the shaft of one of the rolls, substantially as specified. 9th. In a sheet metal rolling mill, the combination with the feed table and rolls, of movable gauges at the opposite edges of the feed table for automatically truing and centering the bars or sheets on the feed table, and mechanism for automatically opening and closing the gauges at each reversal of the motion of the mill, said mechanism consisting in a friction arm or cam and connections connecting said friction cam or arm with said movable gauges, substantially as specified. 10th. The combination with the rolls and the engine shaft of a jack or mechanism for reversing the direction of the rolls comprising two gears fixed to the engine shaft, one of which meshes directly with a loose gear on the roll shaft, the other meshing with a gear on a counter-shaft which meshes with a second loose gear on the roll shaft and a clutch upon the roll shaft to engage either of the loose gears on that shaft at the will of the workman in charge, the feed screws, and mechanism for automatically turning the feed screws at each reversal of the direction of rotation of the rolls to set or adjust the rolls for the next succeeding pass, substantially as specified. 11th. The combination with the rolls and feed screws, each having a square end, of a worm gear fitting on the squared end of the feed screw, a gear loose on the hub of the worm for communicating motion to the feed screw, and a worm journaled on said gear and engaging said worm gear, substantially as specified.

**No. 63,442. Sheet Metal Rolling Mill. (Laminoir.)**



Norton Bros., Chicago, Illinois, assignee of Edwin Norton, Maywood, Illinois, U.S.A., 12th July, 1899; 6 years. (Filed 1st February, 1899.)

*Claim.*—1st. An automatic rolling mill for reducing bars to thin sheets, or packs of sheets to thinner gauges, consisting of rolls to reduce the metal to the desired thickness, feed tables to feed the metal to the rolls and to receive it from the rolls, gauges to centre the metal on the feed tables, feed screws for adjusting the rolls, and automatic means for turning the feed screws whereby the mill is caused to make a predetermined number of reductions of the metal and then return to place for commencing another similar series of reductions without the aid of skilled workmen, substantially as specified. 2nd. In an automatic rolling mill, the combination with rolls to reduce the metal, of a feed table to feed the metal to the rolls, parallel opening and closing guides, one on each side of the feed table, to centre the metal sheets or bars on the table, feed screws for setting the rolls closer together after each successive pass, automatic

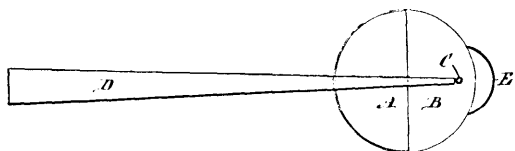
mechanism for turning the feed screws after each successive pass, means for automatically moving the guides after each pass, substantially as specified. 3rd. In an automatic rolling-mill, the combination with rolls to reduce the metal, of a feed table to feed the metal to the rolls and receive it from the rolls, parallel opening and closing guides, one on each side of the feed table to center the metal sheets or bars on the table, feed screws for setting the rolls closer together after each successive pass, automatic mechanism for turning the feed screws after each successive pass, mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next successive pass or series of passes, and means for automatically moving the guides after each pass, substantially as specified. 4th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, and mechanism for automatically turning the feed screws after each successive pass consisting in a cam frictionally connected to the shaft of the roll, and connections between said cam and feed screws, substantially as specified. 5th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next succeeding pass or series of passes, consisting in a set of gears of different diameters, and a corresponding set of segment gears of different diameters arranged one after another and interposed in the connecting mechanism through which motion is communicated to the feed screws, substantially as specified. 6th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically turning the feed screws after each successive pass, consisting in a cam frictionally connected to the shaft of the roll, and mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next succeeding pass or series of passes, consisting in a set of gears of different diameters, and a corresponding set of segment gears of different diameters arranged one after another and interposed in the connecting mechanism through which motion is communicated to the feed screws, substantially as specified. 7th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically turning the feed screws after each successive pass, and mechanism for automatically returning or running back the feed screws, substantially as specified. 8th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically turning the feed screws after each successive pass, mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next succeeding pass or series of passes, and mechanism for automatically returning or running back the feed screws, substantially as specified. 9th. In a rolling mill, the combination with the rolls adapted to be driven in opposite directions, of the feed screws for setting the rolls closer together after each pass, a feed screw driving shaft, clutch and connecting mechanism for turning the feed screws, and a cam and connecting mechanism for operating the clutch at each reversal of the motion of the rolls, substantially as specified. 10th. In a rolling mill, the combination of the rolls adapted to be driven in opposite directions, of the feed screws for setting the rolls closer together after each pass, a feed screw driving shaft, clutch and connecting mechanism for turning the feed screws, a cam and connecting mechanism for operating the clutch at each reversal of the motion of the rolls, and mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next succeeding pass or series of passes, substantially as specified. 11th. In a rolling mill, the combination with the rolls adapted to be driven in opposite directions, of the feed screws for setting the rolls closer together after each pass, a feed screw, driving shaft, clutch and connecting mechanism for turning the feed screws, a cam and connecting mechanism for operating the clutch at each reversal of the motion of the rolls, and a set of gears of different diameters, and a corresponding set of segment gears of different diameters interposed in the connecting mechanism through which motion is communicated to the feed screws, substantially as specified. 12th. In a rolling mill, the combination with the rolls adapted to be driven in opposite directions, of the feed screws for setting the rolls closer together after each pass, a feed screw driving shaft, clutch and connecting mechanism for turning the feed screws, a cam and connecting mechanism for operating the clutch at each reversal of the motion of the rolls, a set of gears of different diameters, a corresponding set of segment gears of different diameters interposed in the connecting mechanism through which motion is communicated to the feed screws after the rolling is completed, substantially as specified. 14th. In a rolling mill, the combination with the rolls adapted to be driven in opposite directions, of the feed screws for setting the rolls closer together after each pass, a feed screw driving shaft, clutch and connecting mechanism for turning the feed screws, a cam and connecting mechanism for operating the clutch at each reversal of the motion of the rolls, a set of gears of different diameters, a corresponding set of segment gears of different diameters interposed in the connecting mechanism through which motion is communicated to the feed screws, mechanism for running

back or unscrewing the feed screws after the rolling is completed, and a cam for setting said unscrewing mechanism in operation, substantially as specified. 14th. In a sheet metal rolling mill, the combination with the rolls and feed table, of a rotary cutter sheet trimming or cutter mechanism having cutters for each end of the sheet to which the rolled sheets are delivered directly by the feed table of the mill, said feed table having devices for feeding or conveying the sheets both to the rolls and to said trimming or cutting mechanism, and movable gauges on opposite sides of said feed table to centre the sheets on the table before entering the rolls or entering the trimming or cutting mechanism, substantially as specified. 15th. In a sheet metal rolling mill, the combination with the rolls and feed-table, of a rotary cutter sheet metal trimming and slitting or subdividing mechanism to which the sheets are delivered directly by the feed table of the mill, said feed table having devices for feeding or conveying the sheets both to the rolls and to said trimming and slitting or subdividing mechanism, and movable gauges on opposite sides of said feed table to centre the sheets on the table before entering the rolls or entering the trimming and slitting or subdividing mechanism, substantially as specified. 16th. In a sheet metal rolling mill, the combination with the rolls and feed table, of a sheet trimming or cutting mechanism to which the rolled sheets are delivered directly from the feed table of the mill, and a sheet metal trimming and subdividing mechanism, said feed table having devices for feeding or conveying the sheets both to said rolls and to said trimming or cutting mechanism, and movable gauges on the opposite sides of said feed table to centre the sheets on the table before entering the rolls, the trimming or cutting mechanism or the trimming and subdividing mechanism, substantially as specified. 17th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, automatic mechanism for turning the feed screws after each successive pass, parallel movable guides for automatically turning and centering bars or sheets on the feed table after each successive pass, and automatic mechanism for opening and closing the gauges after each pass, substantially as specified. 18th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically turning the feed screws after each successive pass, mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next succeeding pass or series of passes, parallel movable guides for automatically turning and centering the bars or sheets on the feed table after each successive pass, and means for automatically moving the guides after each pass, substantially as specified. 19th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically turning the feed screw after each successive pass, a mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next succeeding pass or series of passes, consisting in a set of gears of different diameters, and a corresponding set of segment gears of different diameters arranged one after another and interposed in the connecting mechanism through which motion is communicated to the feed screws, and movable gauges for automatically turning and centering the bars or sheets on the feed table after each successive pass, substantially as specified. 20th. The combination, with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, automatic mechanism for turning the feed screws after each successive pass, and a rotary sheet trimming mechanism to which the rolled sheets are delivered directly from the feed table having devices for feeding or conveying the sheets both to the rolls and to said trimming mechanism, and movable gauges on opposite sides of said feed table to centre the sheets on the table before entering the rolls or entering the trimming mechanism, substantially as specified. 21st. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, automatic mechanism for turning the feed screws after each successive pass, and a rotary sheet trimming and slitting or subdividing mechanism to which the sheets are delivered directly by the feed table of the mill, said feed table having devices for feeding or conveying the sheets to the rolls and said trimming and slitting mechanism, and movable gauges on opposite sides of said table to centre the sheets on the table before entering the rolls or entering the trimming and slitting mechanism, substantially as specified. 22nd. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically turning the feed screws after each successive pass, mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next successive pass or series of passes, and a rotary sheet trimming mechanism to which the rolled sheets are delivered directly from the feed table of the mill, said feed table having devices for feeding or conveying the sheets both to the rolls and to said trimming mechanism, and movable gauges on opposite sides of feed table to centre the sheets on the table before entering the rolls or entering the trimming mechanism, substantially as specified. 23rd. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, automatic mechanism for turning the feed screws after each successive pass, parallel movable guides for automatically turning and centering the bars or sheets on the feed table after each successive pass, and means

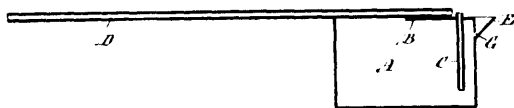
for automatically moving the guides after each pass, substantially as specified. 24th. The combination with the feed table and rolls, of the feed screws for setting the rolls closer together after each successive pass, mechanism for automatically turning the feed screws after each successive pass, mechanism for automatically changing or regulating the extent to which the feed screws are turned after any given pass or series of passes for the next succeeding pass or series of passes, and a rotary sheet trimming or subdividing mechanism to which the sheets are delivered directly by the feed table of the mill, said feed table having devices for feeding or conveying the sheets to said rolls to said trimming or cutting mechanism and to said trimming and subdividing mechanism, and movable gauges on the opposite sides of said feed table to centre the sheets on the table before entering the rolls, the trimming or cutting mechanism, or trimming and subdividing mechanism, substantially as specified.

**No. 63,443. Sprayer.** (*Appareil pulvérisateur.*)

*Fig. 1.*



*Fig. 2.*

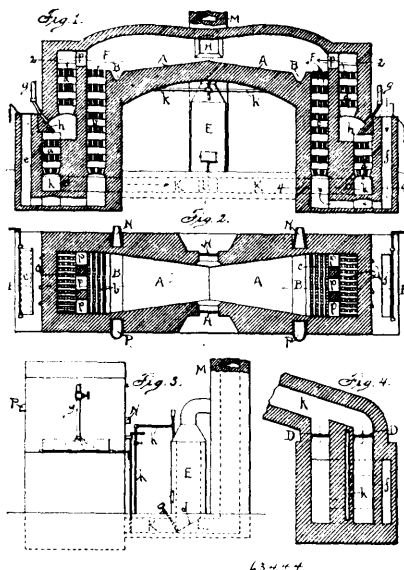


63443

Emma Florence Hallett, Truro, Nova Scotia, Canada, 12th July, 1899; 6 years. (Filed 2nd May, 1899.)

*Claim.*—The lip E secured to the outside of the reservoir A, near the semi-top B, and opposite to the discharge of the blow pipe D, to catch imperfectly sprayed oil, and a hole G in the wall of the reservoir enclosed by said lip to return the caught oil to the interior of the reservoir for re-spraying.

**No. 63,444. Smelting Furnace.** (*Fourneau de fusion.*)



63444

James A. Russell, Tacoma, Washington, U.S.A., 12th July, 1899; 6 years. (Filed 29th November, 1898.)

*Claim.*—1st. A roasting and smelting furnace, having a hearth inclined downwardly in opposite directions from its central portion, gas generating and superheating chambers located on opposite sides of the hearth, and means for cutting off said chambers in alternation from said hearth, whereby the heated gases may be directed in alternation over said double inclined hearth and the inclines of the hearth may be used in alternation for roasting and smelting the

ores, by permitting the gases from one set of chambers to pass first over one incline to smelt the ore thereon and so on in alternation, substantially as and for the purpose described. 2nd. A combined roasting and smelting furnace, having a hearth inclined in opposite directions from a central point or apex, each incline of the hearth so made as to gradually widen from said apex to the lead well, and said hearth so located between gas generating and superheating chambers that each incline will be alternately exposed directly to the combustion of the gaseous fuel. 3rd. A roasting and smelting furnace, having a hearth sloping and widening from a central summit, a lead well at the bottom of each incline, superheating and gas generating chambers at each end of said hearth, said generating chambers each divided by an offset into two parts with openings and means at said offsets for alternately discharging carbons or hydrocarbon into the centre of said generating chambers.

**No. 63,445. Method of Treating White Lead.**

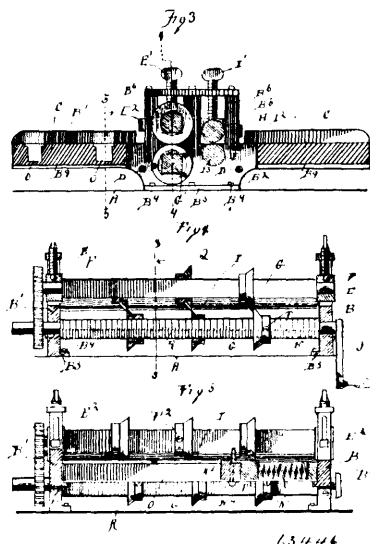
(*Méthode de traitement de blanc de plomb.*)

Thomas Crisp Sanderson, Brooklyn, Westcomb Park, London, England, 12th July, 1899; 6 years. (Filed 16th January, 1899.)

*Claim.*—1st. Improvement in treating pulpy white lead without intermediate washing by compounding the moist precipitate with oil for the purpose of separating the remaining mother-liquor and expressing the excess of oil and intermixed moisture therefrom by mechanical means. 2nd. Improvement in treating precipitated pulpy white lead without intermediate washing, consisting in partially separating it from the mother-liquor, compounding the moist precipitate with oil, and removing separated moisture from the compound. 3rd. Improvement in treating pulpy white lead without intermediate washing, consisting in drawing off the liquid, expressing a further quantity of moisture by mechanical means, compounding the moist precipitate with oil and removing superfluous moisture from the compound. 4th. Improvement in treating precipitated pulpy white lead without intermediate washing, consisting in continuously decanting the mother-liquor from above, and continuously withdrawing the precipitate from below, mixing the moist precipitate with oil, delivering the mixed compound continuously into a centrifugal machine, and removing the separated mass and the expressed liquor therefrom. 5th. Improvement in treating pulpy white lead without intermediate washing, consisting in drawing off the liquid, expressing a further quantity of moisture by mechanical means, compounding the moist precipitate with excess of oil, removing separated moisture from the compound, and finally expressing the excess of oil and intermixed moisture by mechanical means. 6th. As a new article of manufacture, the compound of undried white lead and oil.

**No. 63,446. Metal Cutter and Roller.**

(*Coupe-métal et rouleau.*)



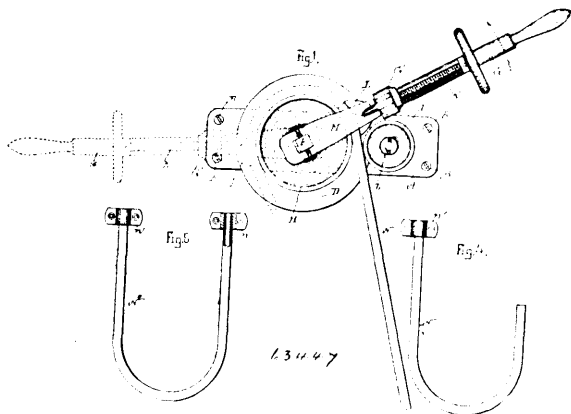
63446

Gilbert Martier Beaty and Frank Mazzie, both of Denison, Texas, U.S.A., 12th July, 1899; 6 years. (Filed 11th March, 1899.)

*Claims.*—1st. The combination of a table having guideways formed across it, blocks slidable in said guideways, means for securing them, guides resting on said blocks, and springs in the guideways backing up the guides, all substantially as set forth. 2nd. The combination with a table having suitable bearings and

guideways across it, of the cutter shafts and the rolls, mounted in the bearings and suitably geared together, the blocks slidable in the guideways, means for securing the blocks, guides resting on the blocks, and springs in the guideways backing up the guides, substantially as described.

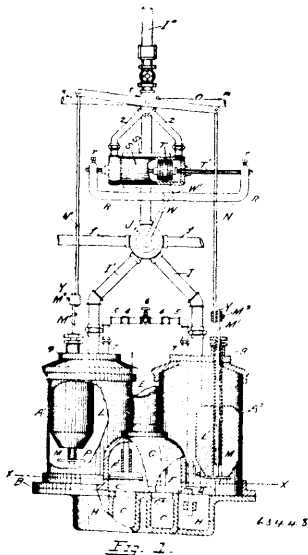
**No. 63,447. Metal Bending Machine.**  
(Machine à plier le métal.)



Frederick A. Rollins, Cambridge, Massachusetts, U.S.A., 12th July, 1899; 6 years. (Filed 27th March, 1899.)

*Claim.*—The herein described metal bending machine, consisting in combination, a work support D, a spindle journalled therein, and a lever and circular disc H, attached to said spindle, an adjustable pressure block arranged on said lever, a loosely rotating guide roller I, between which and the disc H the bar of the pipe is guided during the bending operation, and a link M, pivoted to the lever and adapted to be secured to the lever spindle, substantially as and for the purpose set forth.

**No. 63,448. Pump. (Pompe.)**

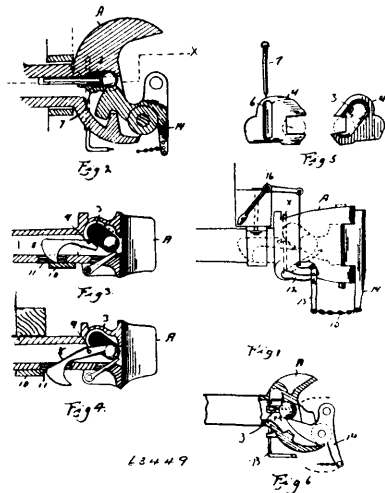


Milo L. G. Wheeler, Seattle, Washington, U.S.A., 12th July, 1899; 6 years. (Filed 29th March, 1899.)

*Claim.*—1st. In a pump of the character described, the combination of two liquid compartments, inlets and outlets therefor, a pipe communicating with the source of pressure and with each of said compartments, exhaust in communication with said pipes, a valve controlling the communication between the supply pipe and compartments and with the exhaust, cylinder, piston movable therein, said piston being connected to operate in unison with a reciprocating sash, arm secured to said valve and in operative engagement with said reciprocating sash, pipes communicating with the cylinder and the pressure supply pipe exhausts for said cylinder, valve controlling the communication between the last mentioned pipes and the exhausts and the supply pipe, tubular guides extending within the compartments, rods movable in said guides, an intermediate lever to which the said valve is secured, stops carried by said rods at

their lower ends, floats within the compartments and movable upon said tubular guides, said floats adapted to alternately engage the stops of the rods for the purpose described, and in operative connection between the pistons and the main valve, substantially as described. 2nd. In a pump of the character described, the combination of two tanks adapted to contain the liquid to be pumped, a pipe communicating with a source of pressure, pipes communicating with the supply pipe and the tanks, exhausts for said pipe, a valve controlling the communication between the said pipes and the supply pipe and the exhausts, cylinder positioned upon the supply pipe, piston moving in said cylinder, a piston rod extending through both heads of said cylinder, a reciprocating sash connected to ends of said piston rod, an arm secured at one end to said valve and engaging the reciprocating sash at its opposite end, pipes communicating with the supply pipe and said cylinder, valve chamber for said pipes, valve within said chamber for controlling the communication between the same and the supply pipe and the exhausts from cylinder, tubular guides positioned within the tanks, rods movable within the guides, an intermediate lever to which last mentioned valve is secured and to the opposite ends of which lever rods are connected, floats within the tanks movable upon the tubular guides and adapted to engage the rods to operate the same, a liquid outlet and inlet for said tanks, pipes communicating with tanks, and liquid delivery pipe from said tank for the admission of air into outlet column of the liquid, check valves and stop cock in said pipes, substantially as described. 3rd. In a pump, the combination of two liquid compartments, inlets and outlets therefor, a pipe communicating with the source of pressure and with each of said compartments, exhausts in communication with said pipes, a valve controlling the communication between the supply pipe and the compartments, cylinder, piston therein, pipe communicating with the cylinder and the pressure supply pipe, exhausts for said cylinder, valve controlling the communication between the pipes and the exhausts and the supply pipe, vibrating lever rigidly secured to last mentioned valve, rods movable in said compartments, connections between ends of the lever and the said rods, stops carried by said rods at their lower ends, floats within the compartments adapted to alternately engage the stops on the rods, and in operative connection between the piston and the main valve, substantially as described.

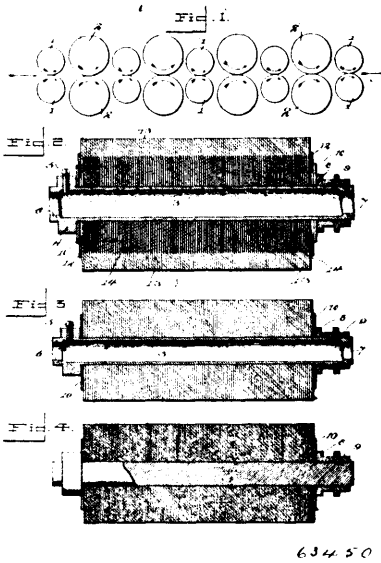
**No. 63,449. Car Coupler. (Attelage de chars.)**



John William Fawcett, Lawrenceburg, Indiana, U.S.A., 12th July, 1899; 6 years. (Filed 4th April, 1899.)

*Claim.*—1st. In a ball or other coupling mechanism for railway cars, the herein described oscillatory lever pivoted to the inner side of the wall of the drawhead, the short arm disposed along the underside of the inclined ball socket, the longer arm being normally supported by a stirrup, and adapted to drop when drawn off said stirrup and cause the short arm to rise and block the rearward movement of the ball or locking device, substantially as and for the purpose set forth. 2nd. In a car coupler, the combination with the drawhead, formed with an inclined cavity, the ball located in said cavity, the rock shaft journalled below said cavity and provided with an upwardly and forwardly extending arm, of the knuckle formed with the rearwardly extending arm adapted to engage with said ball, substantially as described. 3rd. In a car coupler, the combination with the drawhead formed with an inclined cavity, the ball located in said cavity, the rock shaft, the forwardly and upwardly extending arm, and the stirrup shaped projection at the front of the drawhead, of the pivoted knuckle having a rearwardly extending arm adapted to engage the said ball, substantially as set forth and described.

**No. 63,450. Feed Roll for Metal Sheet or Plate Polishing, Cleaning and Greasing Machine.** (*Row-leau d'alimentation pour feuilles ou plaques de métal à polir, nettoyer et machine à graisser.*)

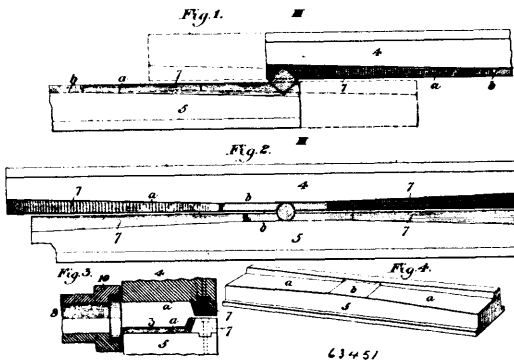


63450

Albert John Demmler, Wellsville, Ohio, U.S.A., 12th July, 1899; 6 years. (Filed 25th April, 1899.)

*Claim.*—1st. A roll of the class described comprising a longitudinal core, the partly cut washers detachably secured on said core and a series of independent textile polishing discs fixed on said core, between said washers, and means for compressing said washers against said discs, as and for the purpose set forth. 2nd. A roll of the class described comprising a longitudinal core, a series of independent textile discs encompassing said core, a partly cut washer encompassing said core contiguous to each end disc, a smaller solid washer arranged contiguous to each of said partly cut washers, and means for simultaneously binding said washers and discs together on said core, as and for the purpose set forth.

**No. 63,451. Metal Rolling Apparatus.** (*Laminoir.*)



63451

Michael John Loughran, Pittsburg, Pennsylvania, U.S.A., 12th July, 1899; 6 years. (Filed 2nd May, 1899.)

*Claim.*—1st. The combination with a rotatory socket or holder having an angular cavity arranged to receive metal of angular cross-section, of mechanism for positively rotating the holder, a pair of platens arranged to act upon the projecting end portion of the metal held in the socket, and mechanism for moving at least one of the platens longitudinally past the outer while operating upon the metal, substantially as described. 2nd. The combination with a socket or holder having a forming recess, of a pair of platens arranged to act upon the projecting end portion of metal held in the socket and force the metal into the forming recess, and means for moving at least one of the platens longitudinally past the other while operating upon the metal, substantially as described. 3rd. The combination with a socket or holder having a forming recess, a pair of platens arranged to act upon the projecting end portion of metal held in the socket and force the metal into the forming recess, and means for moving the platens longitudinally of each other, substantially as described. 4th. The combination with a socket or holder, of a pair of platens having inwardly projecting

portions with inclined faces arranged to force the metal toward the holder, and means for moving at least one of the platens longitudinally of each other, substantially as described. 5th. The combination with a split sleeve or socket having an angular cavity arranged to hold a bar of metal of angular cross-section, said holder being rotatably supported, of a pair of platens arranged to act upon the projecting end portion of the metal in the holder, and means for moving at least one of the platens longitudinally of the other, substantially as described. 6th. The combination with a split sleeve having an angular cavity, and a forming recess at the one end of the cavity, of a pair of platens having inwardly projecting portions arranged to act upon the metal and force it into the forming recess, and means for moving the platens longitudinally of each other, substantially as described. 7th. The combination with a split sleeve arranged to contain a bar of metal, of means for clamping the parts of the sleeve together about the bar, bearings in which the sleeve is rotatably mounted, platens arranged to act upon the projecting end portion of the metal held in the sleeve, and means for moving the platens longitudinally of each other, substantially as described. 8th. The combination with a split sleeve rotatably supported in bearings, of means for lowering the bearings to separate the portions of the sleeve, and a pair of platens arranged to act upon the projecting end portions of the metal held in the sleeve, substantially as described.

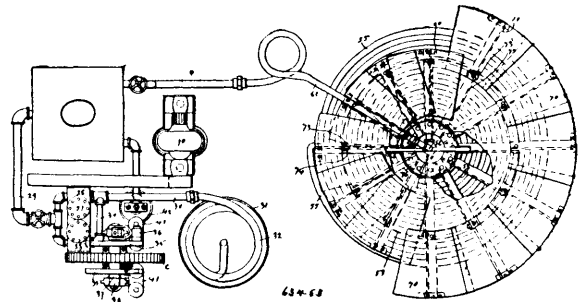
**No. 63,452. Metal Making Process.**

(*Procédé pour la fabrication du métal.*)

Wilfred Van Wart, Franz William Popp and Joseph John Bradley, all of Birmingham, England, 12th July, 1899; 6 years. (Filed 23rd December, 1897.)

*Claim.*—The herein described improved alloyed metal, consisting of aluminium of which the percentage shall be from 90 per cent upward, together with copper, zinc, tin, silver and phosphorus in or about the proportions, substantially as specified.

**No. 63,453. Thawing Apparatus.** (*Appareil à dégeler.*)



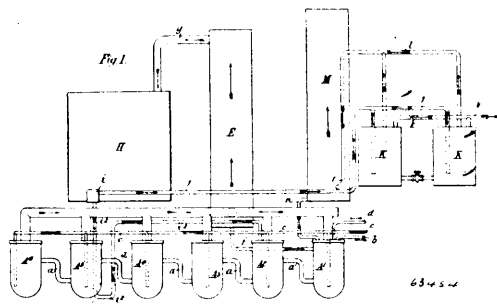
63453

Charles Taylor and Charles Edwin Robertson, both of Montreal, Quebec, Canada, 12th July, 1899; 6 years. (Filed 5th February, 1898.)

*Claim.*—1st. A thawing apparatus, comprising a heat reflecting device adapted to reflect heat upon the substance to be thawed, said reflecting device consisting of a cone having an inner reflecting surface and its outer surface covered with insulating material and carrying a series of vanes projecting beyond the diameter thereof and adapted to be adjusted to increase or reduce the diameter of said cone, for the purpose set forth. 2nd. A thawing apparatus, comprising a length of pipe coiled in conical form, a reflecting conical shield adapted to extend over said conical coil, and an outlet from said coil adapted to spray heated air upon the substance to be thawed, substantially as described and for the purpose set forth. 3rd. A thawing apparatus, comprising a length of pipe coiled in conical form, a reflecting conical shield adapted to extend over said conical coil, and an outlet from said coil adapted to spray heated air upon the substance to be thawed, said conductor consisting of a tube constructed with a reflecting interior surface and covered with insulating material, substantially as described and for the purpose set forth. 4th. A thawing apparatus, comprising a length of pipe coiled in conical form, a reflecting conical shield adapted to extend over said conical coil, an air heater, an air supply to said heater, a conduit for the heated air connecting said air heater to said coil, and an outlet from said coil adapted to spray the heated air upon the substance to be thawed, said conductor consisting of a pair of tubes located one within the other, the outer tube being constructed with a reflecting interior surface and covered with insulating material, the inner tube being of sufficiently smaller diameter than the outer tube to provide a space between said tubes, and a series of spiders located at intervals along said inner tube and adapted to maintain the space between said tubes, for the purpose set forth. 5th. A thawing apparatus, comprising a combined steam generator and air heater, an engine, a communicating pipe connecting said steam generator to said engine, an air compressor, an operative connection between said engine and compressor, a communicating pipe connecting said air compressor to said air heater, an adjustable yielding check valve adapted to control the passage through said

pipe, a heat distributing device, a flexible conductor connecting the air heater to said distributing device, comprising a coil of pipe having its discharge end controlled by an adjustable yielding check valve, all arranged substantially as described and for the purpose set forth. 6th. A thawing apparatus, comprising a combined steam generator and air heater, an engine, a communicating pipe connecting said steam generator to said engine, an air compressor, consisting of a pair of pumps each having duplex compression chambers, an independent main compression chamber, a double T-pipe connecting said duplex compression chambers to said main compression chamber, a communicating pipe connecting said main compression chamber to said air heater, an operative connection between said engine and compressor, an adjustable yielding check valve adapted to control the passage through said pipe, a heat distributing device, a flexible conductor connecting the air heater to said distributing device, said distributing device comprising a coil of pipe having its discharge end controlled by an adjustable yielding check valve, all arranged substantially as described and for the purpose set forth.

**No. 63,454. Apparatus for the Manufacture of Cyanides and Ferrocyanides from Sulphocyanides and the Recovery of Bye Products.** (*Appareil pour la fabrication de cyanure et ferrocyanure de sulfocyanogène et le recouvrement de ces produits.*)



The United States Alkali Company, assignees of Dr. Julius Raschen, all of 30 James Street, Liverpool, England, 14th July, 1899; 6 years. (Filed 23rd January, 1899.)

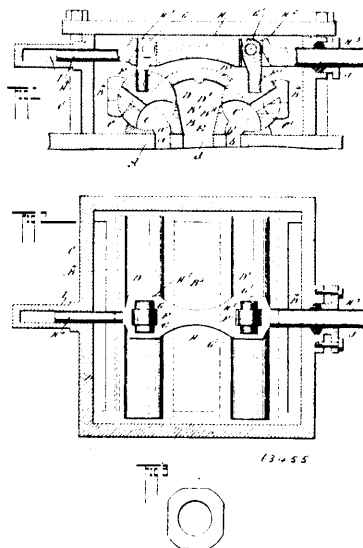
*Claim.*—1st. The manufacture of cyanides and ferrocyanides from sulphocyanides by causing the sulphocyanide, together with nitric acid, to pass through a series of decomposers to which steam is admitted, from which the gases and vapours evolved are passed through a water wash tower and thence to a condenser and thence to absorbers containing caustic alkali, or alkaline earth, by which the hydrocyanic acid is absorbed, the nitric oxide passing through a tower, or towers, in which it becomes converted to nitric acid, and is returned to the decomposers for use in the process, the liquor from both the aforesaid water wash tower and condenser being conducted back to the decomposers, all substantially as hereinbefore described. 2nd. Apparatus for the manufacture of cyanides and ferro-cyanides from sulpho-cyanides, the said apparatus consisting of the combination of decomposers, with inlets for the sulpho cyanide and the nitric acid, or nitric acid forming materials, and for steam, and communications for the gases and vapours evolved to a water wash tower, provided with communications for the gases to a condenser and for liquid back to the decomposers, and the said condenser provided with communications for liquid back to the decomposers, and for gases to an absorber, or absorbers, which absorbers are provided with a communication with a tower, or towers, in which nitric acid is re-formed and which have communication with the decomposers for the return of the nitric acid thereto, all substantially as hereinbefore described and illustrated in the accompanying drawings.

**No. 63,455. Rotary Valve.** (*Soupape rotatoire.*)

Brainerd Washington Smith, Van Wert, and Joseph H. Kuhns, Delphos, both in Ohio, U.S.A., 14th July, 1899; 6 years. (Filed 18th November, 1898.)

*Claim.*—1st. A valve mechanism, provided with a segmental valve seat, a valve mounted to turn on the said seat, and formed with a cavity for connecting the cylindrical ports with the valve chest and the exhaust, to admit and exhaust the steam to and from the said cylinder ports, the valve being formed with an auxiliary port opening into the said cavity and arranged to open into the steam chest at the time the cavity opens into the same, and to be cut off at the time the cavity opens into the same, and to be cut off or closed during the time the cavity opens to the exhaust, substantially as shown and described. 2nd. The combination with a cylinder and valve chest, the former having an exhaust port and two ingress ports, of two valve seats mounted in the valve chest and having ports respectively registering with the ingress ports of the cylinder, a valve body having a top extending over the exhaust port to form an exhaust chamber, and the top of the valve body having an extension at each side, such extensions being juxtaposed to the valve seats of

the ingress ports, two rotary valves respectively mounted on the valve seats and respectively bearing against said extensions



of the top of the valve body, each valve having a cavity and such cavities being in continual communication with the respective ingress ports, and being capable of communicating either with the exhaust chamber or with the interior of the valve chest, each valve also having an auxiliary port communicating with the cavity in the valve, such auxiliary ports being closed by the extensions of the valve body, and being opened to the interior of the valve chest as the cavities in the valves are opened to the interior of the valve chest, and means for simultaneously rolling the valves. 3rd. The combination with a cylinder and valve chest, the cylinder having an exhaust and an ingress port, of means in the valve chest and forming an exhaust chamber enclosing the exhaust port of the cylinder, a valve seat having a port registering with the ingress port aforesaid and located in the valve chest, and a rotary valve mounted on the valve seat and having a cavity in continual communication with the port thereof, the cavity being capable of communication either with the exhaust chamber or with the interior of the valve chest, and the valve also having an auxiliary port in communication with the cavity, such auxiliary port being closed when the cavity is in communication with the exhaust chamber, and being in communication with the interior of the valve chest when the cavity is in communication with the interior of the valve chest. 4th. The combination with a cylinder and valve chest, the former having an exhaust port and an ingress port, of a valve seat mounted in the valve chest and having a port in communication with the ingress port of the cylinder, a valve body situate in the valve chest and having a top forming an exhaust chamber, and also having an extension situated in proximity with the valve seat, and a rotary valve mounted on the valve seat and engaging with said extension of the top of the valve body, the valve having a cavity in continual communication with the ingress ports of the cylinder, and the cavity being capable of communication either with the exhaust chamber or with the valve chest, and the valve also having an auxiliary port in communication with the cavity and closed by said extension when the cavity is in communication with the exhaust, the auxiliary port being opened to the interior of the valve chest when the cavity is opened to the interior of the valve chest. 5th. The combination with a valve chest of two rotary valves mounted therein, an arm fixed to each valve, a friction block carried by each arm, and a valve stem reciprocal in the valve chest and provided with transversely disposed guideways wherein are fitted the respective friction blocks. 6th. In a valve gear, the combination of a valve chest having a seat therein, and a rotary valve mounted on said seat and having a cavity therein, and also having an auxiliary port run through the valve and in communication with the cavity. 7th. In a valve gear, the combination with a cylinder and valve chest, the former having an exhaust port and an ingress port, of a rotary valve mounted in the valve chest and having a cavity, and also having an auxiliary port in communication with the cavity, and means for imparting movement to the valve.

**No. 63,456. Stenciling Roller.**

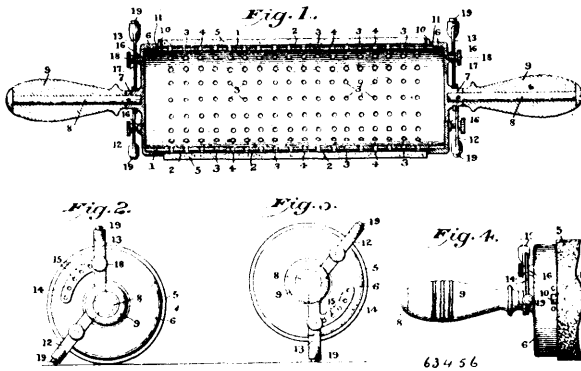
(*Rouleau pour peindre au patron.*)

William H. Siebs, assignee of Frank E. Clark, both of Bridgeport, Connecticut, U.S.A., 14th July, 1899; 6 years. (Filed 2nd February, 1899.)

*Claim.*—1st. In a stenciling roller, the combination of the telescoping cylinders provided with perforations capable of registering when said cylinders are turned one upon the other, the ink pad secured

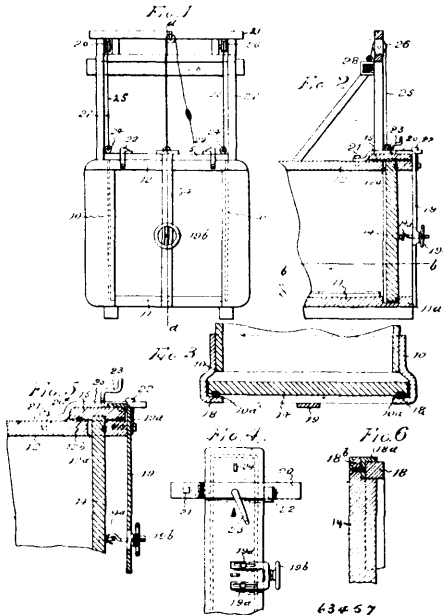


around the periphery of the outer cylinder while the inner cylinder affords the ink reservoir, the caps which close the ends of the cylin-



ders and are fastened directly to the inner cylinder, the hubs secured within said caps and having fastened thereto round spindles, and the handles loosely supported upon said spindles, substantially as set forth. 2nd. In a stenciling roller, the combination of the two cylinders contained one within the other and capable of a free rotary movement, the ink pad secured around the outer cylinder while the inner cylinder affords the ink reservoir, the end caps secured to the inner cylinder at each end thereof and provided with elongated notches, the pins which project from the outer cylinder into said notches, the hubs rigid with said caps and having extended therefrom round spindles, and the legs suspended from said hubs and capable of adjustment, substantially as set forth. 3rd. In a stenciling roller, the combination of the telescoping cylinders provided with perforations capable of registration, the ink pad secured around the outer cylinder while the inner cylinder holds the ink reservoir, the caps secured to the ends of the inner cylinder, the hubs rigid with said caps and provided with round spindles extended therefrom, the handles loosely supported around said spindles, the stationary legs supported around said hubs, the adjustable legs also supported around said hubs and capable of a free swinging movement and provided with perforated extensions, and means for securing the adjustable legs in any desired position, substantially as set forth.

**No. 63,457. Door for Closing Steam Retorts.** (*Porte pour fermer les cornues à vapeur.*)

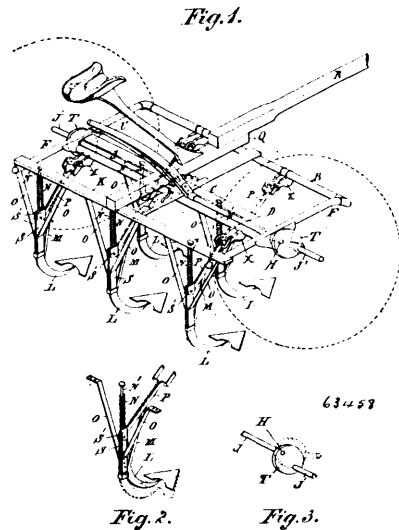


David Ross and Henry Wills Ketchum, both of Vancouver, British Columbia, 14th July, 1899; 6 years. (Filed 30th November, 1898.)

*Claim.*—1st. In a door for hermetically sealing a steam reservoir, the combination of a slidable door having packing strips arranged around near its outer edge on an even plane, a rabbeted seat within the outer end of a suitable frame to receive the said packing on an even plane, a recessed cap piece 15, substantially secured to the top of said door, a packing strip 17 arranged on the under side around

and near the outer edge to effectively close the opening through which the door is thrust, substantially as specified. 2nd. In a door for hermetically closing a steam reservoir or retort, a slidable door, a seat of even plane for the edges of the said door formed in the end of the reservoir and an opening in the upper side for the same to enter, packing arranged around the edges of the said door to intervene between the same and its seat, a metal cap piece secured to the top of the said door having packing arranged around its under side to effectively close the said opening and means for securing the said door immovably before the pressure is turned on, substantially as set forth. 3rd. As an improvement in slidable doors for retorts, the combination with the steam box or retort, the opening of which has grooves to receive the sliding door, of a door vertically slidably in such grooves, a cap piece adapted to fit over the upper edge of the door and a lock mechanism adapted to engage such cap piece to force the door outward against the die groove and to hold it down to the locked position, substantially as shown and for the purpose described. 4th. As an improved means for closing retorts, etc., the reservoir having an open end, an opening or slot across its upper side at a suitable distance from the rim or mouth, said slot being wider than such mouth, and a groove connecting with the slot and passed down on each side of the mouth and across the bottom of the reservoir, said groove being on an even plane, in combination with a slidable door arranged to pass through the slot, and its edges lie in the groove surrounding the mouth of the reservoir, a packing secured to the front edges of the door, and made to lie on the outer sides of the groove, a cap piece on the door arranged to lie upon the upper wall and a packing therein, which surrounds the slot or opening, and means for holding said cap down, and also of forcing the door forward onto the packing, by internal pressure, whereby a hermetical closure is provided, controlled by such internal pressure.

**No. 63,458. Cultivator.** (*Cultivateur.*)



Alexander Zess, Moosejaw, Assiniboia, North-west Territories, Canada, 14th July, 1899; 6 years. (Filed 17th August, 1897.)

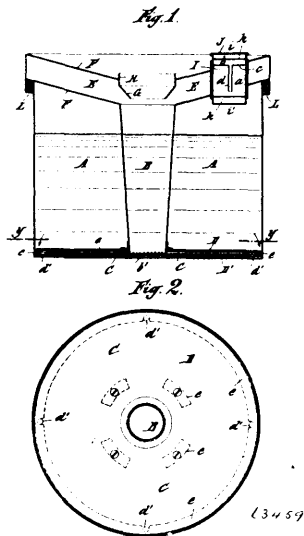
*Claim.*—1st. The combination in a cultivator frame, of round bars as part of the frame and slidingly attached lugs thrown to receive the drawbars of the hoes, as shown and described. 2nd. In a cultivator, a hoe provided with a buckle at its upper end to which is attached the rod carrying the coiled spring, and joined to the drawbar, as shown and described. 3rd. The combination in a cultivator, of the hoes provided with the buckles and the slidingly attached lugs, as shown and described.

**No. 63,459. Oil Reservoir.** (*Reservoir à huile.*)

Société Anonyme pour L'Eclairage et le Chauffage par le Pétrole, assignee of Julian Raymond Boubon, all of Antwerp, Belgium, 14th July, 1899; 6 years. (Filed 25th January, 1898.)

*Claim.*—1st. An oil reservoir for lighting and heating apparatus, comprising a liquid supply compartment and a wick compartment connected together by a capillary passage between the walls of two superposed plates, substantially as described. 2nd. In an oil reservoir for lighting and heating apparatus, the combination with supply and wick compartments, of two superposed discs arranged in the wick compartment near the bottom of the reservoir one or both the discs being detachable, said discs forming between them capillary space communicating on the one hand with the supply compartment, and on the other hand with the wick compartment, substantially as described. 3rd. In an oil reservoir for lighting and heating apparatus, the arrangement of two superposed detachable or non-detachable discs, forming between them a capillary space

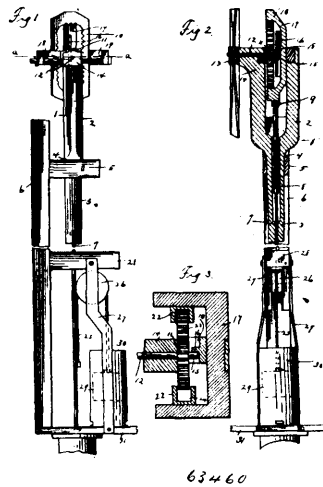
establishing communication between the supply and wick compartments, the two discs being maintained at a constant distance apart



by distance pieces, or by projections arranged on one or both discs, substantially as described. 4th. In an oil reservoir for lighting and heating apparatus, the arrangement of two detachable and non-detachable discs, forming between them a capillary space establishing communication between the supply and the wick compartments, one of the discs constituting the bottom of the latter compartment, substantially as described. 5th. In an oil reservoir for lighting and heating apparatus, the arrangement of two detachable or non-detachable discs close together, the diameter of which is substantially equal to the inner diameter of the reservoir, said discs forming between them a capillary space occupying the width of the reservoir or outer side provided with a more or less long capillary chamber formed by a circular spiral, or other groove made in one of the discs, substantially as described. 6th. In an oil reservoir for lighting and heating apparatus, the arrangement of two discs very close together, forming between them a capillary space constituting a communication between the supply and wick compartments, one of the discs forming the bottom of the reservoir, substantially as described. 7th. In an oil reservoir for lighting and heating apparatus, the arrangement of two detachable or non-detachable discs very close together forming between them a capillary space communicating on the one hand with the supply compartment through one or more openings in the upper disc, and on the other hand with the wick compartment through openings in the partition separating the compartments, substantially as described. 8th. In an oil reservoir for heating and lighting apparatus, the arrangement of detachable or non-detachable discs very close together forming between them a capillary space, the lower disc forming with the bottom of the reservoir, a second capillary space communicating with the first by means of openings made in said lower disc, substantially as described. 9th. In an oil reservoir for lighting and heating apparatus, the arrangement of detachable or non-detachable discs very close together forming between them a capillary space communicating with the wick and supply compartments through circular openings between the two discs, substantially as described. 10th. In an oil reservoir for lighting and heating apparatus, the combination of two discs forming between them, a horizontal capillary chamber with a jacket surrounding the wick chamber, and forming with the wall of the latter, a vertical capillary chamber communicating with the upper portion of the wick chamber, openings being made in the wall of said chamber, substantially as described. 11th. In an oil reservoir for heating and lighting apparatus, the combination with two horizontal discs and a jacket around the wick chamber, of capillary bodies arranged between the discs and between the jacket and the wick chamber, substantially as described. 12th. In an oil reservoir for lighting and heating apparatus, the arrangement above the wick and supply compartments, of a reserve chamber communicating with the wick compartment, and forming a chamber round the burner and having a capacity equal to at least double that of the wick compartment, substantially as described. 13th. In an oil reservoir for lighting and heating apparatus, the arrangement of an annular chamber, occupying the whole width of the reservoir and forming an insulating chamber between the burner and the two compartments of the reservoir, substantially as described. 14th. In an oil reservoir for lighting and heating apparatus, the arrangement of an annular chamber, the walls of which are inclined towards the interior of the reservoir, substantially as described. 15th. In an oil reservoir for lighting and heating apparatus, the arrangement of an annular chamber with inclined walls, a conical guard being arranged in the

said chamber under the socket of the burner, substantially as described. 16th. In an oil reservoir for lighting and heating apparatus, the combination with an annular insulating chamber with walls inclined towards the interior of the reservoir, of a wick chamber continued beyond the bottom of the receptacle, substantially as described. 17th. In an oil reservoir for lighting and heating apparatus having an insulating chamber communicating with the wick compartment, the arrangement of a filling conduit passing through said insulating and communicating directly with the supply compartment of the reservoir, substantially as described. 18th. In an oil reservoir for lighting and heating apparatus, the combination with the supply compartment of a wick chamber, superposed discs terminating said chamber at one end and forming between them a capillary space, an isolating chamber communicating with the other end of the wick chamber, a conduit passing through the isolating chamber and a liquid deflecting guard secured under the socket of the burner, the whole apparatus being adapted to be secured to the supply reservoir, substantially as described. 19th. In an oil reservoir for lighting and heating apparatus, the combination with the supply reservoir, of a separable apparatus comprising a single disc, a wick chamber, an isolating chamber practically of the same diameter as the reservoir, a filling conduit passing through said isolating chamber, a conical liquid deflecting guard arranged in the latter under the socket of the lighting or heating burner, said apparatus being adapted to be secured to the oil reservoir, and the disc carried at the lower part of the wick chamber being, by the connection of the two parts of the apparatus, brought near the bottom of the reservoir in order to form with said bottom a capillary chamber, substantially as described. 20th. In an oil reservoir for lighting and heating apparatus, the combination with a wick and an annular insulating chamber of a central air conduit passing through said chambers and provided with one or more pockets with walls inclined upwards, substantially as and for the purpose described. 21st. In an oil reservoir for lighting and heating apparatus, the combination with a supply compartment and filling conduit of a hollow plug with openings for admitting air into said supply compartments, substantially as described. 22nd. In an oil reservoir for lighting and heating apparatus, the combination with a supply compartment and filling conduit of a hollow plug with air inlets, said plug being divided into two compartments communicating together through a small tube, a metallic netting being arranged in each compartment, substantially as described.

No. 63,460. Windmill. (*Moulin à vent.*)

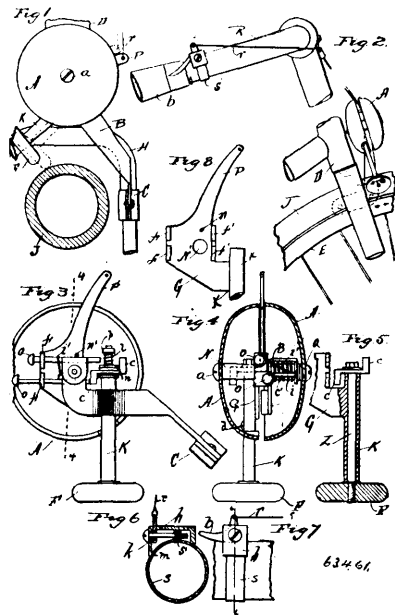


William S. Douglass, Bellevue, Texas, U.S.A., 14th July, 1899; 6 years. (Filed 13th February, 1899.)

Claim.—In a windmill, the combination with the stem having formed therewith a pair of spaced arms extending upwardly therefrom, a frame mounted on the upper portion of the arms, and having grooves therein, of a vertically and laterally movable rack bar interposed between the arms in loose contact with the rollers, the plunger head being provided with a central slot or opening having teeth formed on the inner walls thereof, a plate connected to the rear portion of the rack bar with a rib or guideway thereon, a shaft mounted in the bearings on the front arm of the stem, the hub or free end of which contacts with the rib, and a pinion on the shaft meshing with the teeth of the rack bar, whereby when the motion is imparted to the mill, the free end of the shaft and the pinion are permitted to make a continuous circuit of the rib and teeth, the lateral or rocking movement of the rack bar occurring when the free end of the shaft passes over and under the upper and lower ends of the rib, substantially as specified.



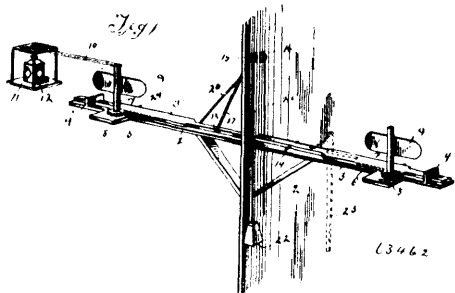
No. 63,161. Bicycle Alarm Bell. (Cloche de bicyclette.)



Frank Mossberg, Attleborough, Massachusetts, and Carl August Brink, Providence, Rhode Island, U.S.A., 14th July, 1899; 6 years. (Filed 15th March, 1899.)

*Claim.*—1st. In a bicycle alarm the combination of two bells rigidly attached to a bar, held to turn in a stationary bracket, a striking mechanism also rigidly secured to said bar to turn with it, a shaft having a driving wheel fast on its outer end in position to be turned by the tire of the bicycle wheel when said bar is turned, substantially as described. 2nd. In a bicycle alarm the combination of two bells rigidly attached, one to each end of a bar held to turn in a stationary bracket, a plate also fast on said bar and provided with ears, hammer rods fitted to slide in holes in said ears, a bearing for a shaft attached to said plate, a shaft fitted to turn in said bearing, a dog secured to one end of the shaft and arranged to operate the sliding hammer rods, a driving wheel fast on the outer end of said shaft, with means for turning the bar in the stationary bracket, substantially as described. 3rd. In a bicycle alarm the combination with a bell, of a hammer striking dog, a cam attached to its driving shaft by frictional driving elements, to allow of a slip of the dog on the shaft as the speed of the driving wheel is increased, to equalize the number of strokes on the bell, substantially as described. 4th. In a bicycle alarm bell or bells, mechanism to ring them consisting of a hammer or hammers held to slide freely in bearings with revolving dog to throw the hammer against said bell or bells, and a driving shaft with a wheel to be turned by contact with the tire, substantially as described.

No. 63,162. Railway Signal. (Signal de chemin de fer.)

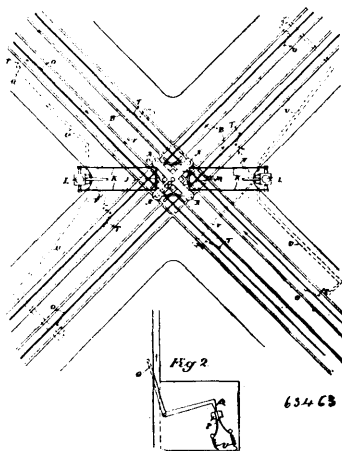


George Washington Green, Shawnee, Oklahoma, and Hue Thompson, South McAlester, Indian Territory, both in the U.S.A., 17th July, 1899; 6 years. (Filed 4th April, 1899.)

*Claim.*—1st. In a device of the class described, the combination with a rotary signal board, of a signal lamp carried thereby on a swinging arm and open on all sides, a lamp in said box, and means for turning the signal board. 2nd. In a device of the class described, the combination with an outer rotary signal board, of a similar inner rotary signal board, a shifting rack bar and pinions affording an operative connection between the two signal boards, substantially as described. 3rd. In a device of the class described,

the combination with a signal, of a sliding rack bar and pinion for operating the same, a pull cord connected to the sliding bar and used for operating the same in one direction, and a second cord also connected to the bar and adapted for moving it in the other direction. 4th. In a device of the class described, the combination with a movable signal, of a shifting rack bar and pinion for operating the same, pulleys, a pulley cord connected to the shifting bar and running over one pulley, a third pulley, carried on the support for the shifting bar and a cord running over the last named pulley and the remaining pulley of those aforesaid, and having one end connected to the shifting bar. 5th. In a device of the class described, the combination with a movable signal located in the path of a moving vehicle and designed to be operated thereby, of a flexible piece operatively connected with said signal, and a weight secured to said piece and designed to retain the signal in one position, and mechanism for moving the signal in opposition to the weight, substantially as specified. 6th. In a device of the class described, the combination with an upright spindle and a signal board and signal arm overhanging the track and carried by said spindle, of a pinion secured to the spindle, a shifting bar having a rack engaging with the pinion, a pull cord connected to the shifting bar and adapted to move the same in one direction, and a second pull cord connected to the said bar and adapted to move it in the opposite direction.

No. 63,163. Railway Signal. (Signal de chemin de fer.)

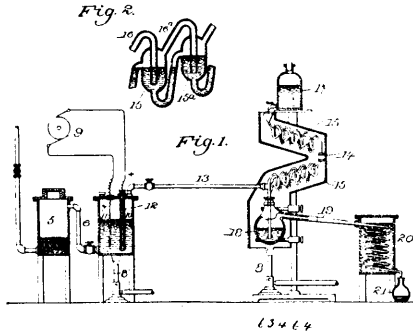


John Jorgenson, San Francisco, California, U.S.A., 17th July, 1899; 6 years. (Filed 23rd February, 1899.)

*Claim.*—1st. The combination with two transversely crossing lines of track of a plurality of alternately actuated signals, including opaque or concealing cases, disposed with relation to said signals, and colored globes movable with relation to the signals and the concealing casings, and mechanism for moving said globes comprising suspending arms, electro magnets, devices energizing said magnets, armatures so disposed with relation to said magnets as to be attracted when the magnets are energized, and connections between the armatures and the devices by which the globes are suspended, whereby the latter are moved with relation to the signals and the casings. 2nd. In an apparatus of the character described and in combination, exposed signals, globes movable with relation to the signals whereby their significance may be changed, concealing casings within which the globes are normally contained, lever arms by which said globes are supported, electro magnets, means for energizing them and armatures which are acted upon by the energizing of the magnets, and connections between said armatures and the suspending levers whereby the globes are moved with relation to the signals and concealing casings. 3rd. In an apparatus of the character described, signals and opaque concealing casings disposed with relation to each other, globes, counterbalanced levers by which said globes are suspended and normally retained within the casing, supplemental counterweights with which the armatures are connected and which normally act upon the levers to retain the globes within the casings, and electro magnets with means for energizing them whereby the armatures are attracted and the levers are first relieved of the counterweights, and allowed to operate by gravitation. 4th. In an apparatus of the character described, signals, opaque or concealing cases and globes movable with relation to the signals and the concealing casings, fulcrumed levers by which the globes are suspended, independent counterweights acting upon the levers to normally retain the globes within the concealing casings, armatures and links connecting them with the independent counterweights, electro magnets and means for energizing the same whereby the armatures are attracted and the counterweights moved so as to relieve the suspending levers and allow the globes to be moved with relation to the concealing cases and the signals. 5th. In a signal apparatus, fixed signals, globes movable to enclose or disclose the signals and concealing cases to receive the globes, an actuating

mechanism consisting of fulcrumed counterweights, electro-magnets and armatures therefor, connections between the armatures and the counterweights whereby the latter are lifted by the energizing of the magnets, levers by which the globes are moved, said levers being fulcrumed to the counterweights so that the latter are moved independently by the electro magnets, and lugs or projections upon the counterweights to engage the levers and move in unison therewith when the electromagnets are de-energized.

**No. 63,464. Ethylic Alcohol. (Alcool éthylique.)**



Frederic R. Coudert, New York, U.S.A., administrator of the Estate of Aimé Mathieu Villon, 17th July, 1899; 6 years. (Filed 30th November, 1899.)

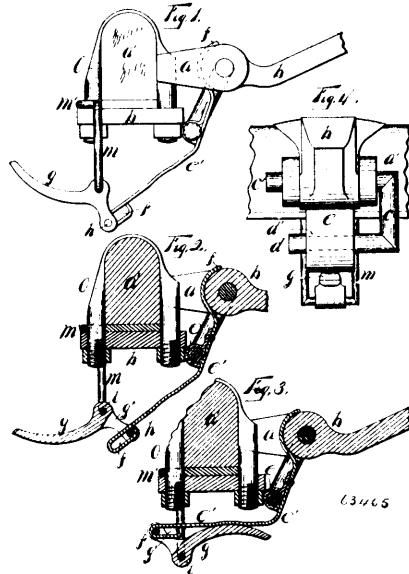
*Claim.*—1st. A step in the process for manufacturing ethylic alcohol, which consists in subjecting acetylene to the action of an agent of the character, such for instance as a double salt of ammonium and chromo sulphates, which will transform acetylene into ethylene and be itself regenerated by the action of nascent hydrogen. 2nd. A step in the process for manufacturing ethylic alcohol, which consists in subjecting the reducing agent, such for instance as a double salt of ammonium and chromo sulphates, employed to transform acetylene into ethylene, to the action of nascent hydrogen. 3rd. A process for manufacturing alcohol, which consists in subjecting acetylene to the action of a reducing agent of the character, such for instance, as a double salt of ammonium and chromo sulphates, which will transform acetylene into ethylene and be itself regenerated by the action of nascent hydrogen, absorbing the ethylene by sulphuric acid, and finally subjecting a solution of water and hydrogen ethyl sulphate to the temperature necessary to effect production and distillation of ethylalcohol. 4th. A continuous process for manufacturing ethylic alcohol, which consists of the following steps: first, subjecting acetylene to the action of a reducing agent of the character described, such for instance as a double salt of ammonium and chromo sulphates, second, absorbing the evolved ethylene by sulphuric acid, third, adding water to the solution of hydrogen ethyl sulphate thus formed, fourth, subjecting said solution to the action of a sufficient heat to effect the production and distillation of ethyl alcohol, fifth, subjecting the reducing agent to the action of nascent hydrogen. 5th. The herein described process for manufacturing ethylic alcohol, which consists in decomposing calcium carbide by water to form acetylene, then subjecting acetylene to the action of a reducing agent of the character, such for instance as a double salt of ammonium and chromo sulphates, which will reduce acetylene to ethylene and be itself regenerated by the action of nascent hydrogen, then absorbing the ethylene by sulphuric acid, and finally subjecting a solution of water and hydrogen ethyl sulphate to the temperature necessary to effect distillation of the alcohol. 6th. The herein described process of manufacturing ethylic alcohol, which consists in decomposing calcium carbide by water to form acetylene, then subjecting the acetylene to the action of a double salt of ammonium and chromium sulphates, to form ethylene, then absorbing the ethylene by sulphuric acid, then subjecting the solution of water and hydrogen ethyl sulphate to the temperature necessary to effect distillation of the alcohol, and finally either intermittently or continuously subjecting the solution of the reducing agent to the action of an electric current.

**No. 63,465. Thill Coupling. (Armon de limonière.)**

George Henry Fernald, North East, Pennsylvania, U.S.A., 17th July, 1899; 6 years. (Filed 7th April, 1899.)

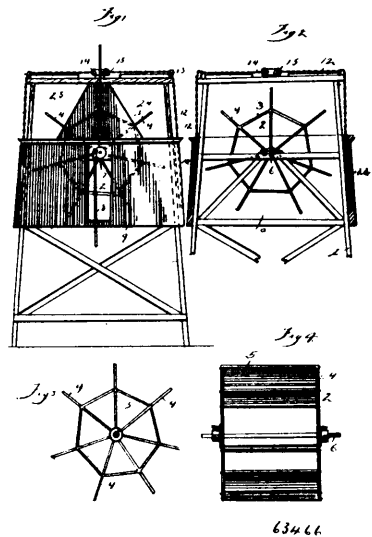
*Claim.*—1st. A quick-shift anti-rattling thill coupling, comprising a strap spring curved at one end, and provided with a U-shaped bolt, its opposite end having an elongated eye, a lever pivoted in said eye, and a bail pivoted to said lever, as set forth. 2nd. A quick-shift anti-rattling thill coupling, comprising a strap spring having one end curved, and its rear end provided with a cam lever, to which is secured a bail, a U-shaped bolt, one arm of which is adapted to be rotatably secured to the spring, and its opposite end adapted to engage the eyes of the clip and thill iron, for the purpose set forth. 3rd. A quick-shift anti-rattling thill coupling, comprising a strap spring, being slightly curved at one end, its opposite end provided with a cam lever, to which is secured a bail, and a

U-shaped bolt having one end oval shaped in cross section in two of its edges, its opposite end adapted to engage the eyes of the clip and



the thill iron, and a strap securing the U-shaped bolt through said recesses to the spring, as set forth. 4th. A quick shift anti-rattling thill coupling, comprising a strap spring having one end curved, the rear end provided with a cam lever, to which is secured a bail, and a double arm bolt rotatably secured to said strap spring, as set forth.

**No. 63,466. Windmill. (Moulin à vent.)**

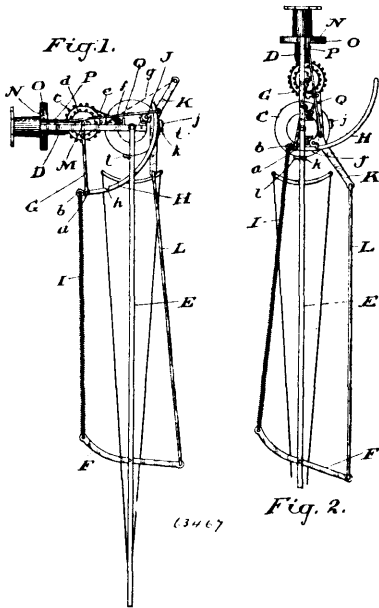


Albert J. Smalley, El Reno, Oklahoma, U.S.A., 17th July, 1899; 6 years. (Filed 22nd June, 1899.)

*Claim.*—1st. In a windmill, a tower, a wind wheel mounted in the upper portion thereof, a boxing for closing off the wind from the lower portion of the wheel, closures for regulating openings at opposite sides of the tower, a governor rod, a vane on the rod, and connections between the governor rod and closures, the rod and connections being so arranged as to cause the closures to cover or uncover the openings simultaneously, substantially as specified. 2nd. In a windmill, a tower, a wind wheel mounted in the upper portion thereof, a boxing for closing off the wind from the lower portion of said wheel, vertically movable closures for regulating opposite openings in the tower above the boxing, chains extended from said closures around pulleys mounted on the tower, a horizontally movable governor rod or lever having connection with said chain, a vane carried by said rod or lever and mounted to rock, and means for automatically turning said vane with its edge to the wind to stop the mill, substantially as specified. 3rd. In a windmill, a tower, a wind wheel mounted in the upper portion thereof, a boxing on the tower for cutting off the wind from the lower portion of the wheel, closures mounted to slide in said boxing for regulating

opposite openings in the tower above said boxing, chains extended from said closures around pulleys on said tower, a horizontally swinging lever or rod having connection with said chain, a vane mounted to rock or swing on the outer end of said lever or rod, and rods extended from the upper portion of the tower to deflect said vane when engaged thereby, substantially as specified.

**No. 63,467. Windmill. (Moulin à vent.)**



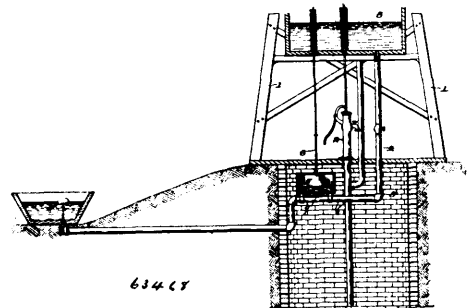
windmill, an engine and vane so supported as to swing independently, an equalizer pivoted upon the vane, a tension spring connection between the engine and one side of the equalizer, a link flexible or otherwise connecting with the opposite side of the equalizer and the engine, and means for shifting the line of draft of the link between the equalizer and the engine, substantially as and for the purpose specified. 7th. In a windmill, an engine and vane so supported as to swing independently, in combination with an equalizer pivoted on the vane, a tension spring connection between the engine and one side of the equalizer at one side of the pivot point of the vane, a lever pivoted on the engine, one end of which is at the other side of the said pivot point, a link flexible or otherwise between the lever and the other side of the equalizer, and means for swinging the said lever to move its end so as to alter the relative position of the lines of draft, substantially as and for the purpose specified. 8th. In a windmill, the engine D, and the vane E, so supported as to swing independently, in combination with the equalizer F, pivoted upon the vane, the link G, pivoted upon the engine, the notched quadrant H, to which the other end of the said link is pivoted at a, the coil spring I, connected to one side of the equalizer and to the quadrant H, at b, the lever K pivoted upon the engine, the link L connecting the other side of the equalizer with the said lever, the fixed dog J upon the lever with which the notch in the quadrant H, is adapted to engage, and means connected with the engine for swinging the said lever, substantially as and for the purpose specified. 9th. In a windmill, the engine D, and the vane E, so supported as to swing independently, in combination with the equalizer F, pivoted upon the vane, the link G, pivoted upon the engine, the notched quadrant H, to which the other end of the said link is pivoted at a, the coil spring I, connected to one side of the equalizer and to the quadrant H at b, the lever K pivoted upon the engine, the link L connecting the other side of the equalizer with the said lever, the fixed dog J, upon the lever with which the notch in the quadrant H, is adapted to engage, means connected to the engine for swinging the said lever, the brake disc N fast on the shaft of the engine, the brake band O encircling the said disc and having one end fast to a stationary part, the lever P fulcrumed upon the engine and pivoted to the other end of the brake band, and the pivoted link Q connecting the levers P and K, substantially as and for the purpose specified.

Charles Henry Herod, Brantford, Ontario, Canada, 17th July, 1899; 6 years. (Filed 4th May, 1899.)

*Claim.*—1st. In a windmill, an engine and a vane so supported as to swing independently, in combination with tension spring connections on each side of the pivot point or points of the engine and vane, and means whereby the relative position of the lines of draft of the connections may be shifted with regard to the said pivot point or points, so that the engine and vane may be held in line by spring tension, or similarly held out of line, substantially as and for the purpose specified. 2nd. In a windmill, an engine and vane, so supported as to swing independently, in combination with a tension spring connection between the engine and vane at one side of their pivot point or points, a lever pivoted upon the engine, one end of which is at the other side of the said pivot point or points, a tension spring connection between the end of the lever and the vane, and means for swinging the said lever to move its end so as to alter the relative position of the lines of draft, substantially as and for the purpose specified. 3rd. In a windmill, an engine and vane so supported as to swing independently, in combination with a tension spring connection between the engine and vane at one side of their pivot point or points, a lever pivoted upon the engine, one end of which is at the other side of the said pivot point or points, a tension spring connection between end of the lever and the vane, a wheel or pulley journaled upon the engine, a cord or chain wound on the said pulley and connected with the other end of the lever, which is centrally pivoted, and means for rotating the said wheel, substantially as specified. 4th. In a windmill, an engine and vane so supported as to swing independently, in combination with a link pivoted upon the engine, a notched quadrant to which the other end of the said link is pivoted, a stationary dog secured to the lever with which the notch in the quadrant is adapted to engage, a lever of the first order pivoted upon the engine, a tension spring connection between the quadrant, just outside the point of connection of the link and the vane, a tension spring connection between the end of the lever and the vane, and means connected with the engine and the other end of the lever whereby it may be swung to cause the notched quadrant to engage the fixed dog, or released to cause the fixed dog upon it to release the said quadrant and to shift the lines of draft of the said tension spring connections, substantially as and for the purpose specified. 5th. In a windmill, an engine and vane so supported as to swing independently, in combination with a link pivoted upon the engine, a lever pivoted upon the engine, tension spring connections between the link and the vane and between the end of the lever and the vane located on opposite sides of the pivot point or points of the engine and vane, means for swinging the lever to shift the lines of draft of the said tension spring connections, and means for holding the tension spring connection between the vane and the engine close in to the pivot point of the vane when the engine and vane are in line, and for releasing it when the engine is to be swung out of line with the vane, substantially as and for the purpose specified. 6th. In a

**No. 63,468. Windmill Governor.**

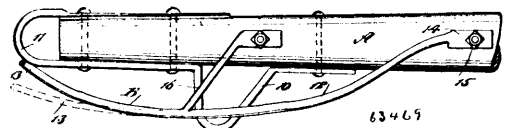
*(Gouverneur de moulin à vent.)*



Henry S. Gaskill, Battle Creek, Michigan, U.S.A., 17th July, 1899; 6 years. (Filed 26th May, 1899.)

*Claim.*—The combination with the two stationary tanks in different horizontal planes, a feed pipe communicating with said tanks and having a horizontal extension, and a float valve controlling the lower tank, of a third movable tank located in a horizontal plane intermediate the other tanks and journaled on the horizontal extension of the feed pipe, a connection attached to the free end of the movable tank and also connected to the gearing of a windmill, and a flexible tubular connection between the movable tank and feed pipe.

**No. 63,469. Rein Guard. (Guide-rênes.)**

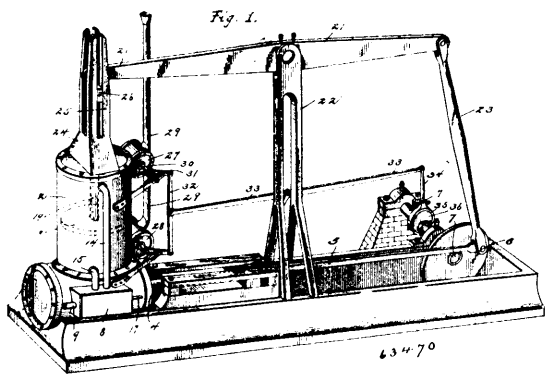


Fletcher Mathew Bird, Wenatchee, Washington, U.S.A., 17th July, 1899; 6 years. (Filed 6th March, 1899.)

*Claim.*—1st. The combination with the tongue or pole of a vehicle, of a rein guard located at each side of the pole or tongue and extending forwardly, the forward end of the guard trending across the forward end of the pole with an upward inclination, as described. 2nd. The combination, with the tongue or pole of a vehicle, of a line guard located at each side of the pole or tongue,

extending to a point below and beyond the pole or tongue, the forward end of the guard extending across the forward end of the pole with an upward inclination, as described. 3rd. The combination with a vehicle pole or tongue, of a rein guard constructed of a spring material, the rein guard being attached at its rear ends to the pole or tongue and carried along the sides thereof to the front, the side portions of the guard extending below and laterally beyond the sides of the pole or tongue, the forward end of the said guard being upwardly curved and arranged for a resilient engagement with the forward portion of the tongue or pole, for the purpose described. 4th. The combination, with a vehicle tongue or pole, of a rein guard elliptical in plain view, the rein guard being constructed of one piece of a spring material, the rear portions of said guard being secured to opposite sides of the pole or tongue, the sides being given a downward and an outward inclination and a concave upper surface, the forward end of the guard being in the form of an upwardly inclined bow adapted for a resilient engagement with the forward end of the tongue or pole, as described. 5th. The combination, with a vehicle tongue or pole, of a rein guard elliptical in plain view, the rear guard being constructed of one piece of spring material, the rear portions of the guard being secured to opposite sides of the pole or tongue, the sides being given a downward and outward inclination and a concave upper surface, the forward end of the guard being in the form of an upwardly inclined bow adapted for a resilient engagement with the forward end of the tongue or pole, braces attached to the sides of the guard, the braces having an upward, rearward and inward inclination, and means, substantially as described, for attaching the braces to the tongue or pole, as set forth. 6th. A rein guard, consisting of side members upturned at the front and at the rear and having an outward lateral inclination from a line drawn longitudinally between them, the side members at the front being joined, forming thereby an upwardly inclined bow member, and means for attaching the guard to a support. 7th. A rein guard, consisting of side members upwardly curved at their forward and rear portions, and outwardly and laterally inclined from a line drawn longitudinally between them, the side members at the front being joined, and the connecting member thus formed bowed in an upward and outward direction, and braces connected with the said side members, the rear portion of the guard being arranged for attachment to a support, as described.

**No. 63,170. Engine. (Machine à vapeur.)**



Ollis P. Hartman, Taylor, Texas, U.S.A., 18th July, 1899; 6 years. (Filed 7th January, 1899.)

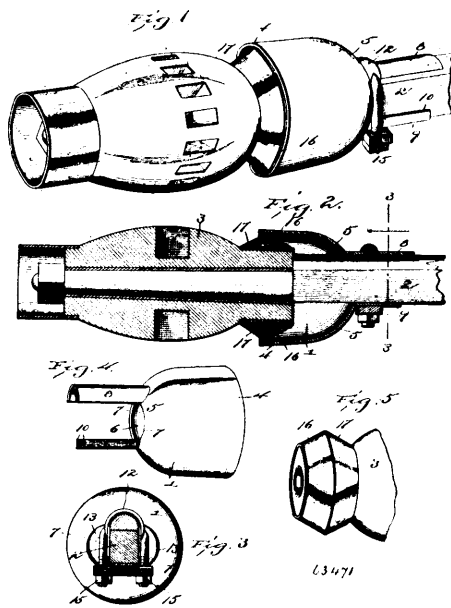
*Claim.*—The combination with the cylinder of an engine and the piston rod thereof, of lateral projections on said piston rod, a walking beam pivoted thereto, and means for guiding said piston rod in a direct line consisting of a guide frame having four parallel arms thereout between which one pair of which said walking beam fits and moves and is prevented from lateral displacement, and between the other pair of which said lateral projections fit and move and are prevented from lateral displacement in the direction of the length of said walking beam.

**No. 63,171. Spindle and Hub Protector. (Protecteur de moyen et essieu.)**

William H. Holden, Idaho Falls, Idaho, U.S.A., 18th July, 1899; 6 years. (Filed 3rd January, 1899.)

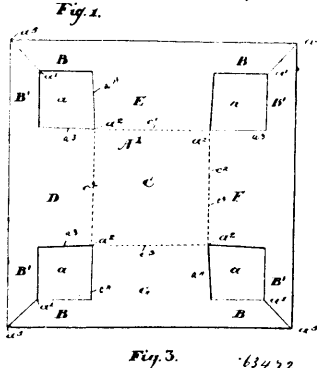
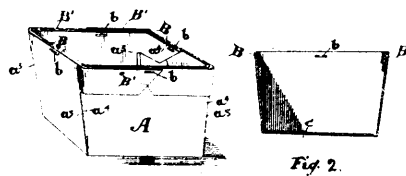
*Claim.*—1st. A device of the class described comprising a substantially bell-shaped shield, designed to be mounted on an axle and adapted to extend over the inner portion of the hub, and a collar or band designed to be mounted on the said hub and arranged within the outer end of the shield and substantially closing the same, said collar or band being provided with an inclined or tapering portion extending beyond the outer end of the shield and adapted to shed water, sand, mud and other accumulation and exclude the same from the interior of the device, substantially as described. 2nd. A device of the class described, comprising an annular shield designed to be mounted on an axle and adapted to extend over the inner por-

tion of the hub, and a collar or band designed to be mounted on the hub and arranged within and substantially closing the outer end of



the shield and having an inclined or tapering portion lying beyond the same, substantially as and for the purpose described. 3rd. A device of the class described, comprising a substantially bell-shaped shield having a slightly flared outer portion and designed to be secured to an axle, and a collar or band designed to be mounted on a hub, arranged within the flared portion of the shield and substantially closing the same, said collar or band being substantially triangular in cross section and having its outer inclined portion located beyond the shield, substantially as described. 4th. A device of the class described, comprising a shield of annular form provided at its inner end with an aperture conforming to the configuration of an axle, and having enlarged side portions, whereby it is adapted to permit the shield to be passed over the spindle of the axle, arms extending from the top and bottom of the aperture of the shield and conforming to the configuration of the axle, an axle clip for securing the arms to the axle, said axle clip being provided at opposite sides with enlargements or ears arranged to cover the enlarged side portions of the aperture, and a collar or band designed to be mounted on a hub and arranged within the shield, substantially as described.

**No. 63,172. Berry Box. (Boîte à bluet.)**

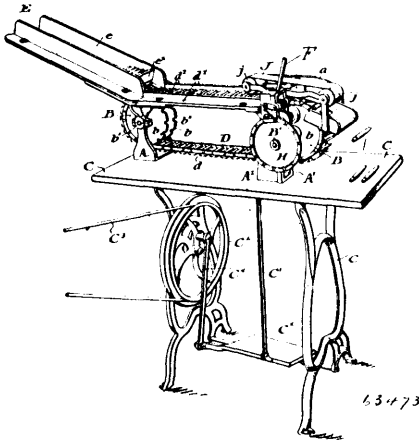


The E. B. Eddy Co., Hull, assignee of Robert Erskine Stewart, Ottawa, both of Canada, 19th July, 1899; 6 years. (Filed 5th April, 1899.)

*Claim.*—A berry box made from a single blank composed of the square central portion A, flared sides B, D, G, F, the sides F, D,

having the tongues B and the sides E G, having the tongues B', the tongues B being secured by staples to the sides E G, on the inside of the box, and the tongues B' secured to the sides D F, on the outside of the box so that the tongues overlap at the corners and form ventilating openings at such corners as and for the purpose specified.

**No. 63,473. Printing Machine. (Machine à imprimer.)**



George William Swift, jr., Bordentown, New Jersey, U.S.A., 19th July, 1899; 6 years. (Filed 8th March, 1899.)

*Claim.*—1st. In an apparatus for printing upon the surface of cigars or other cylindrical bodies, a holder for the device to be printed, a flexibly supported printing wheel, and means for revolving the one about the other, said printing wheel being caused to rotate idly by its contact with the device to be printed upon, substantially as set forth. 2nd. In a machine for printing upon the surface of cigars or other cylindrical bodies, the following instrumentalities in combination, namely, a holder for the device to be printed, a printing wheel, means for supplying ink to the same, a flexible carrier for said printing wheel, and means for occasioning the revolution of said printing wheel about said device to be printed, said printing wheel being mounted in such manner as to be idly rotated by its contact with said device to be printed upon, substantially as set forth. 3rd. In an apparatus for printing upon the surface of cigars or other cylindrical bodies, a holding device for the article to be printed, a printing wheel mounted free for revolution upon an axle device, in such position as to be brought into contact as to its periphery with the article to be printed, means for causing one of said devices to travel around the other, and means for carrying said printing wheel at intervals bodily away from the device, substantially as set forth. 4th. In an apparatus for printing upon the surface of cigars or other cylindrical bodies, a holding device for the article to be printed, an idly supported printing wheel mounted free for revolution upon a flexible axle device, in such position as to be brought into contact as to its periphery with the article to be printed, means for causing one of said devices to travel about the other, so that the frictional contact of the printing wheel with the article to be printed occasions the rotation of the printing wheel upon its axle device, and means for supplying ink to said printing wheel, substantially as set forth. 5th. In an apparatus for printing upon the surface of cigars or other cylindrical bodies, a holding device for the article to be printed, a printing wheel mounted free for revolution upon a flexible axle device, in such position as to be brought into contact as to its periphery with the article to be printed, and to be rotated by its contact with the article to be printed, means for causing one of said devices to travel about the other, an inking pad, and means for carrying said inking pad and printing wheel into contact, substantially as set forth. 6th. In a machine for printing upon cigars or similar cylindrical bodies, in combination, a conveyor, a printing wheel, a flexible shaft upon which said printing wheel is mounted free for rotation, and means for causing periodic revolutions of said flexible shaft, substantially as set forth. 7th. In a machine for printing upon cigars or other cylindrical bodies, in combination, a conveyor for the articles to be printed, means for occasioning the intermittent travel of said conveyor, a printing wheel, and means for causing said printing wheel to circumsolve in turn each of the bodies presented to it by the conveyor, substantially as set forth. 8th. In combination, in a machine for printing upon cigars or other cylindrical bodies, a conveyor, holders mounted upon said conveyor and adapted to contain each one of the bodies to be printed, an idle holder apron supported above said conveyor, and a plate which bears through said holder apron the articles as they pass beneath it, a printing wheel and means for causing said printing wheel to circumsolve each of said bodies in succession as said bodies come beneath the plate, substantially as set forth. 9th. In a machine for printing upon cigars and similar cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent

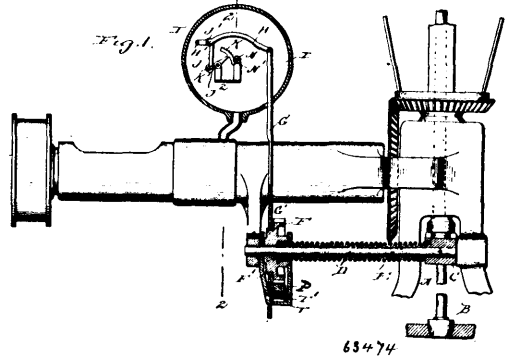
travel of said conveyor, a rotatable crank shaft into the vicinity of which the devices to be printed are successively carried, a crank arm mounted on said shaft, a flexible shaft mounted on said crank arm, a printing wheel mounted upon said flexible shaft, and driving mechanism in gear with first-mentioned shaft to occasion its intermittent revolution, substantially as set forth. 10th. In a machine for printing upon cigars and similar cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent travel of said conveyor, a rotatable crank shaft into the vicinity of which the devices to be printed are successively carried, a crank arm mounted on said shaft, a flexible shaft mounted on said crank arm, a printing wheel mounted upon said flexible shaft, a driving mechanism in gear with said first-mentioned shaft to occasion its intermittent revolution, and means for placing said printing wheel in contact with an inking device during the periods when said crank shaft is not revolving, substantially as set forth. 11th. In a machine for printing upon cigars and similar cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent travel of said conveyor, a rotatable crank shaft into the vicinity of which the devices to be printed are successively carried, a crank arm mounted on said shaft, a flexible shaft mounted on said crank arm, a printing wheel mounted upon said flexible shaft, a driving mechanism in gear with said first-mentioned shaft to occasion its intermittent revolution, a constantly rotating inking disc, and means for automatically lowering said shaft first-mentioned during the periods of its non-revolution to carry the printing wheel into contact with said ink disc, substantially as set forth. 12th. In a machine for printing upon cigars and other cylindrical bodies, in combination, a conveyor embodying a series of holders for the articles to be printed, a printing wheel, mechanism to operate said printing wheel to cause it to circumsolve successively the articles carried by the conveyor, mechanism for causing the travel of the conveyor, a reciprocating driving rack in gear with the printing wheel operating mechanism, and the conveyor mechanism, the arrangement being such that the printing wheel mechanism is inactive while the conveyor operating mechanism is in operation, and the conveyor operating mechanism is inactive when the printing wheel operating mechanism is in operation, substantially as set forth. 13th. In a machine for printing cigars and other cylindrical bodies, in combination, a conveyor, a printing wheel, mechanism for causing said printing wheel to circumsolve said cigars in succession, an operating rack which operates both mechanisms, and means for throwing said mechanisms, alternately into and out of operation, so that the printing mechanism is active when the conveyor mechanism is inactive and the conveyor mechanism is active when the printing mechanism is inactive, substantially as set forth. 14th. In a machine for printing upon cigars and other cylindrical bodies, in combination, a conveyor provided with a series of holders, a pair of conveyor wheels upon which said conveyor is mounted, means for causing the intermittent travel of said conveyor, a printing wheel, means for causing said printing wheel to successively circumsolve the cigars as the same are successively presented to it by the conveyor, a locking plate mounted upon the shaft of one of the conveyor wheels, said locking plate embodying a series of peripheral notches, a locking device which operates against said locking plate and is adapted to enter one of said recesses each time the conveyor pauses in its travel, substantially as set forth. 15th. In a machine for printing upon cigars and other cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent travel of said conveyor, receiving devices with which said conveyor is equipped to receive the bodies to be printed, a crank shaft mounted in said machine and adapted to have a rotary movement and also an up and down movement, a rock shaft provided with projecting arms, in which arms said crank shaft is journaled, a crank arm mounted on said crank shaft, a flexible shaft mounted on said crank arm, a printing wheel mounted on the extremity of said flexible shaft, an inking disc, means for causing the rotation of said crank shaft when in its uppermost position, means for automatically tilting said rock shaft to occasion the elevation of said first mentioned shaft to its uppermost position, substantially as set forth. 16th. In a machine for printing upon cigars and other cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent travel of said conveyor, receiving devices with which said conveyor is equipped, to receive the bodies to be printed, a crank shaft mounted in said machine and adapted to have a rotary movement and also an up and down movement, a rock shaft provided with projecting arms in which arms said crank shaft is journaled, a crank arm mounted on said crank shaft, a flexible shaft mounted on said crank arm, a printing wheel mounted on the extremity of said flexible shaft, means for causing the rotation of said crank shaft when in its uppermost position, means for automatically tilting said rock shaft to occasion the elevation of said first mentioned shaft to its uppermost position, a constantly rotating inking disc, and means for automatically occasioning the lowering of said crank shaft at regular intervals to carry the printing wheel into contact with said inking disc, substantially as set forth. 17th. In a machine for printing upon cigars and other cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent travel of said conveyor, a crank shaft mounted in the frame work of the machine and adapted to have both a rotary and an up and down movement, a crank arm mounted on the said shaft, a flexible shaft mounted on said crank arm, a printing wheel mounted on said flexible shaft, an inking disc, with which said printing wheel is in contact when the crank shaft is in its lower-

most position, and means for automatically causing said crank shaft to alternately occupy its upper and its lower position, substantially as set forth. 18th. In a machine for printing upon cigars and other cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent travel of said conveyor, a crank shaft mounted in the framework of the machine and adapted to have both a rotary and an up-and-down movement, a crank arm mounted on the said shaft, a printing wheel mounted on said flexible shaft, an inking disc with which said printing wheel is in contact when the crank shaft is in its lowermost position, means for automatically causing said first mentioned shaft to alternately occupy its upper and its lower position, means for occasioning the positive rotation of said crank shaft when in its uppermost position, substantially as set forth. 19th. In a machine for printing upon cigars and other cylindrical bodies, in combination, a conveyor, means for occasioning the intermittent travel of said conveyor, a crank shaft mounted in the framework of the machine and adapted to have both a rotary and an up-and-down movement, a crank arm mounted on the said shaft, a flexible shaft mounted on said crank arm, a printing wheel mounted on said flexible shaft, an inking disc with which said printing wheel is in contact when the crank shaft is in its lowermost position, means for automatically causing said crank shaft to alternately occupy its upper and its lower positions, a gear wheel loosely mounted upon said shaft, a reciprocating rack in mesh with said wheel, and means for locking said wheel to said shaft during the period of the ascent of the rack, substantially as set forth. 20th. In a cigar printing machine, in combination, a crank shaft, a crank on said shaft, a flexible shaft on said crank, a printing wheel on said flexible shaft, a gear wheel loosely mounted on said crank shaft, a pawl carried by said gear wheel, a ratchet wheel fast on the shaft, a stop plate on said shaft, a pawl adapted to engage said stop plate, and a rack engaged with said tooth gear wheel, substantially as set forth. 21st. In a cigar printing machine, in combination, a shaft, a crank on said shaft, a flexible shaft on said crank, a printing wheel on said flexible shaft, a gear wheel loosely mounted on said crank shaft, a pawl carried by said gear wheel, a ratchet wheel fast on the shaft, a stop plate on said shaft, a pawl adapted to engage said stop plate, and a rack engaged with said toothed gear wheel, a collar fast on said shaft and provided with a tooth, a long tooth on said rack adapted to engage with the tooth on said collar, substantially as set forth. 22nd. In a cigar printing machine, in combination, a shaft, a crank on said shaft, a flexible shaft on said crank, a printing wheel on said flexible shaft, a gear wheel loosely mounted on said crank shaft, a pawl carried by said gear wheel, a ratchet wheel fast on the shaft, a stop plate on said shaft, a pawl adapted to engage said stop plate, and a rack engaged with said toothed gear wheel, a collar fast on said shaft and provided with a tooth, a long tooth on said rack adapted to engage with the tooth on said collar, elongated slots in the frame of the machine in which said shaft is journaled, a rock shaft having arms with cylindrical bearings in which said shaft is journaled, a rock arm attached to said rock shaft, a pivoted link connected to said rock arm, the lower end of which bears against the lower face of the rack, and a cam face on said rack, substantially as set forth. 23rd. In a cigar printing machine, in combination, a shaft, a crank on said shaft, a flexible shaft on said crank, a printing wheel on said flexible shaft, a gear wheel loosely mounted on said shaft, a pawl carried by said gear wheel, a ratchet wheel fast on the shaft, a stop plate on said shaft, a pawl adapted to engage said stop plate, and a rack engaged with said toothed gear wheel, a collar fast on said shaft and provided with a tooth, a long tooth on said rack adapted to engage with the tooth on said collar, elongated slots in the frame of the machine in which said shaft is journaled, a rock shaft having arms with cylindrical bearings in which said shaft is journaled, a rock arm attached to said rock shaft, a pivoted link connected to said rock arm, the lower end of which bears against the lower face of the rack, a cam face on said rack, a bracket through which the central portion of said pivot link extends, a stop mounted on said pivot link, and a spiral spring confined between said bracket and said stop, substantially as set forth. 24th. In a cigar printing machine, in combination, a holder for a cigar, a shaft, a crank arm mounted on said shaft, a flexible shaft connected to said crank arm, and a printing wheel mounted on said flexible shaft, substantially as set forth. 25th. In a machine for printing cigars, in combination, a cigar holder, a shaft, a crank arm mounted on said shaft, a flexible shaft adjustably mounted on said crank arm, and a printing wheel mounted on said flexible shaft, substantially as set forth. 26th. In a machine for printing cigars, in combination, a holder for cigars, a shaft, a crank arm mounted on said shaft, a flexible shaft mounted on said crank arm, and consisting of two independent parts supported in axial relationship by a spiral spring connected to both, and a printing wheel mounted on said flexible shaft, substantially as set forth. 27th. In a cigar printing machine, in combination, a holder for a cigar, a shaft adapted for both rotary and up-and-down movement, a crank arm mounted on said shaft, a flexible shaft connected to said crank arm, and a printing wheel mounted on said flexible shaft, substantially as set forth.

**No. 63,474. Speed Changing Device Indicator.**  
(Indicateur de changement de vitesse.)

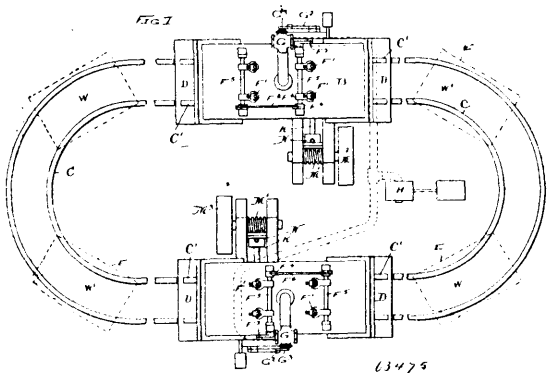
Phillip Jacob Runser, Redfield, South Dakota, 19th July, 1899; 6 years. (Filed 7th February, 1899.)

*Claim.*—1st. An indicator provided with an operating rod adapted for connection with mechanism for controlling the indicator, a



pivoted pointer having a pinion on its shaft, a toothed pivoted arm engaging with said pinion, a lever pivotally connected to the operating rod, discs pivoted on the said lever and arm respectively, and a link eccentrically connected to said discs, substantially as described. 2nd. The combination with a governor stem, of a spring one end whereof is connected to said stem, a double gear wheel connected to the other end of the spring for adjusting the tension thereof, said gear wheel being normally stationary, an operating device engaging one of the series of teeth on said gear wheel to turn the same, and an indicator operated by the second set of teeth, substantially as described. 3rd. The combination with an indicator, and a governor stem, of a shaft adjacent to the governor stem, a fork on one end of the shaft and engaging the said stem, a gear wheel on the other end of the shaft, a spring surrounding the shaft and having one end secured to the fork and its other end connected with the said gear wheel, means for turning the shaft to increase or decrease the tension of the spring, a rod provided with rack teeth engaging the gear wheel, and intermediate mechanism between the rod and indicator for operating the latter from the former, substantially as described. 4th. The combination with an indicator, and a governor stem, of a shaft adjacent to the governor stem, a fork on one end of the rod and engaging the stem, two gear wheels secured to the other end of the said shaft, a spring surrounding the shaft and having one end secured to the fork and its other end to one of the gear wheels, a rod provided with rack teeth engaging the other gear wheel, and intermediate mechanism between the rod and indicator for operating the latter from the former, substantially as described. 5th. The combination with an indicator, and a governor stem, of a shaft adjacent to the stem, a fork on one end of the shaft and engaging the said stem, two gear wheels secured to the other end of the shaft, a spring surrounding the shaft and having one end secured to the fork and its other end to one of the gear wheels, a rack engaging the gear wheels to which the spring is secured, a lever for operating said rack, a rod having rack teeth on its lower end engaging the other gear wheel, and intermediate mechanism between the rod and indicator for operating the latter from the former, substantially as herein shown and described.

**No. 63,475. Machine for Hermetically Sealing Sheet Metal Cans.** (Machine pour sceller hermétiquement les boîtes métalliques.)



Edwin Norton, Maywood, Illinois, U.S.A., 19th July, 1899; 6 years. (Filed 9th February, 1899.)

*Claim.*—1st. An apparatus for automatically sealing and securing covers upon cans by a vacuum or atmospheric pressure seal, comprising in combination, a receiver, doors for said receiver through which the cans may be inserted and removed, a follower



plate or platen for forcing the covers home upon the cans, a valve for opening and closing the exhaust and air inlet communications, and mechanism for automatically operating said doors, valve and follower plate, substantially as specified. 2nd. The combination with a receiver of a follower plate for forcing the covers home upon the cans, and mechanism for automatically operating said follower plate before the air inlet valve is opened to restore the atmospheric pressure to the receiver, substantially as specified. 3rd. The combination with a receiver provided with a door through which the cans may be inserted and removed, a valve for opening and closing the communication between the exhaust and air inlet valve and receiver, a follower plate for forcing the covers home upon the cans or vessels, and mechanism for automatically operating said door, valve and follower plate, substantially as specified. 4th. The combination with a receiver, having a door, a valve controlling the communication between the receiver and the exhaust and air inlet, a follower plate for forcing the covers home upon the vessels, and mechanism for automatically operating said valve and follower plate, substantially as specified. 5th. In an apparatus for automatically sealing and securing the covers on cans or vessels by a vacuum or atmospheric pressure seal, the combination with a receiver, having doors, of tracks or rails on the bottom and on the doors of a receiver for a can truck, substantially as specified. 6th. In an apparatus for automatically sealing and securing the covers on cans or vessels by a vacuum or atmospheric pressure seal, the combination with a receiver, having doors, of tracks or rails on the bottom and on the doors of the receiver for a can truck, said doors being inclined when closed, and provided with pockets to receive the ends of the rails on the bottom of the receiver, substantially as specified. 7th. In an apparatus for automatically sealing and securing the covers on cans or vessels by a vacuum or atmospheric pressure seal, the combination with two receivers having doors at each end thereof, of a curved track or rails uniting upon the receivers, substantially as specified. 8th. The combination with two receivers having inclined doors furnished with tracks or rails, and curved tracks or rails uniting the receivers, substantially as specified. 9th. In an apparatus for automatically sealing and securing covers on cans or vessels by a vacuum or atmospheric pressure seal, a receiver having automatically opening and closing doors, substantially as specified. 10th. In an apparatus for automatically sealing and securing covers on cans or vessels by a vacuum or atmospheric pressure seal, a receiver having automatically opening and closing inclined doors, and tracks or rails for a can truck on the doors and on the bottom of the receiver, substantially as specified. 11th. In an apparatus for automatically sealing and securing covers on cans or vessels by a vacuum or atmospheric pressure seal, a receiver having automatically opening and closing inclined doors, and tracks or rails for a can truck on the doors and on the bottom of the receiver, said doors having pockets to receive the ends of the tracks or rails on the bottom of the receiver, substantially as specified. 12th. The combination with a receiver, having doors, of toggle links for opening and closing the doors of the receiver, a crank shaft and arm, and links connecting the crank arm with said toggle links, substantially as specified. 13th. The combination with a receiver, having doors, of toggle links for opening and closing the doors of a receiver, a crank shaft and arm, links connecting the crank arm with said toggle links, and a cam for operating the same, substantially as specified.

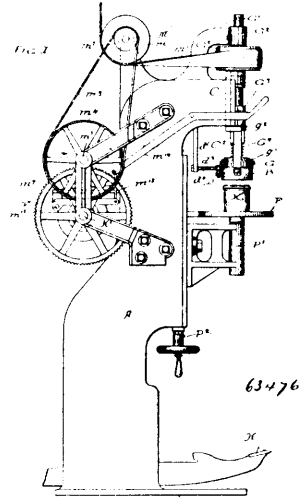
**No. 63,476. Sheet Metal Seaming Machine.**

(Machine à souder les feuilles métalliques.)

Edwin Norton, Maywood, Illinois, U.S.A., 19th July, 1899; 6 years. (Filed 9th February, 1899.)

*Claim.*—1st. In a machine for seaming covers on cans, the combination with an opening and closing clamping ring, with mechanism for automatically operating the seaming rollers, substantially as specified. 2nd. In a seaming machine, the combination with an opening and closing clamping ring, mechanism for automatically closing the clamping ring, seaming rollers, operating arms or levers upon which the seaming rollers are journaled, a rotating ring or frame to which the seaming roller levers are pivoted, and a reciprocating head for operating said seaming roller levers, substantially as specified. 3rd. In a seaming machine, the combination with an opening and closing clamping ring, mechanism for automatically closing the clamping ring, seaming rollers, operating arms or levers upon which the seaming rollers are journaled, a rotating ring or frame to which the seaming roller levers are pivoted, a reciprocating head for operating said seaming roller levers, and a reciprocating slide and shaft, substantially as specified. 4th. In a seaming machine, the combination with an opening and closing clamping ring, mechanism for auto-

matically closing the clamping ring, seaming rollers, operating arms or levers upon which the seaming rollers are journaled, a rotating



ring or frame to which the seaming roller levers are pivoted, a reciprocating head for operating said seaming roller levers, and a reciprocating slide and shaft, said reciprocating slide being connected to said clamping ring and having a slight independent reciprocating movement thereon, substantially as specified. 5th. In a seaming machine, the combination with an opening and closing clamping ring, mechanism for automatically closing the clamping ring, seaming rollers, operating arms or levers upon which the seaming rollers are journaled, a rotating ring or frame to which the seaming roller levers are pivoted, a reciprocating head for operating said seaming roller levers, a reciprocating slide and shaft, a cam and connecting mechanism for reciprocating slide, said connecting mechanism being provided with a clutch and mechanism for disengaging the clutch after each rotation of the cam, substantially as specified. 6th. In a seaming machine, the combination with a bodily reciprocating split opening and closing clamping ring adapted to receive and surround the upper end of the can body, of a cam lever D, pivoted to one end of the split ring and engaging a pin or projection on the other end of the split ring for closing the same, and a chuck disc, for the can to rest upon, substantially as specified. 7th. In a seaming machine, the combination with an opening and closing reciprocating clamping ring, of an operating lever for closing the ring pivoted at one end to the stationary frame of the machine and connected at its other end to the meeting ends of the clamping ring so that the ring may be automatically closed or opened by the reciprocating movement of the ring itself, substantially as specified. 8th. In a seaming machine, the combination with an opening and closing reciprocating clamping ring, of an operating lever for closing the ring pivoted at one end to the stationary frame of the machine and connected at the other end to the meeting ends of clamping ring so that the ring may be automatically closed or opened by the reciprocating movement of the ring itself, and seaming rollers and mechanism for operating the same, substantially as specified. 9th. In a seaming machine, the combination with an opening and closing reciprocating clamping ring, of an operating lever for closing the ring pivoted at one end to the stationary frame of the machine and connected at the other end to the meeting ends of the clamping ring so that the ring may be automatically closed or opened by the reciprocating movement of the ring itself, and seaming rollers and mechanism for operating the same, said mechanism for operating the seaming rollers having seaming roller carrying levers F<sup>1</sup>, a ring or supporting frame G, for said levers, and an operating head H, substantially as specified.

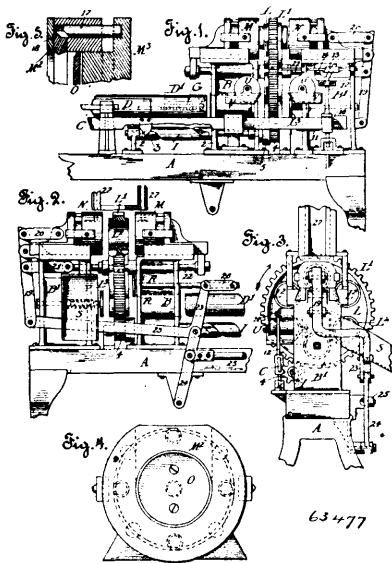
**No. 63,477. Can Making Machine.**

(Machine à faire les boîtes en fer blanc.)

Robert Deriston Hume, Gold Beach, Oregon, U.S.A., 19th July, 1899; 6 years. (Filed 26th May, 1899.)

*Claim.*—1st. In a can-heading machine, a rotary can-carrier, having can-holding chambers and provided with a peripheral gear, in combination with oppositely acting heading rams, a pinion engaging with such gear, and means for giving an intermittent rotation in the same direction to said pinion. 2nd. In a can-heading machine, a rotary can-carrier having can-holding chambers and provided with a peripheral gear, in combination with an oscillating shaft, a loose pinion thereon engaging said gear, a clutch on said shaft for alternately engaging with and releasing said pinion as the shaft oscillates, and oppositely acting heading rams. 3rd. In a can-heading machine and in combination a rotary can-carrier having can-holding chambers, a reciprocating side bar, connections between said side bar and carrier for imparting an intermittent rotation to the carrier, oppositely moving heading rams, a second and independ-

ent side bar, and connections between said last named side bar and said rams for moving them simultaneously. 4th. In a can-heading



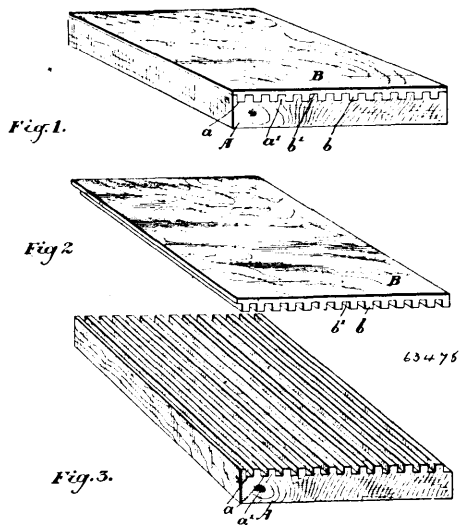
machine and in combination, a can-carrier, means for imparting an intermittent rotation thereto, two oppositely moving heading rams, a supporting frame, a lever pivoted thereto and connected to one of said rams, a sliding shaft, forming the journal or axis for said carrier and connected to the other of said rams, and means for oscillating said lever to produce a simultaneous movement of both rams. 5th. In a can heading machine supporting standards, a shaft sliding longitudinally in said standards, a can-carrier journaled between said standards and upon said shaft, oppositely movable heading rams sliding in said standards, a lever pivoted to one of the standards and connected by a direct connection to one of said rams and by said sliding shaft to the other ram, and means for operating said lever. 6th. In a can-heading machine, the combination with a rotary can-carrier, and with oppositely movable heading-rams, of a reciprocating side-bar, a rocking shaft having a worm and connected to the side bar, and carrying a fixed clutch disc engaging with a pinion at alternate oscillations of the worm shaft, and a gear on the can-carrier engaging said pinion. 7th. In a can-heading machine, a rotary can-carrier having can-holding chambers, in combination with a can-head feed chute, a head retaining and releasing device for feeding the heads singly from said chute, a slot in the wall of each can-holding chamber, a lever normally extending into said slot, and connections from said lever for operating the can-head retaining and releasing devices. 8th. In a can-heading machine, the combination with a supporting frame, of a rotary can-carrier journaled therein and having chambers from which the ends of the can-bodies project, a flux bath mounted on the frame, and a flux roller mounted on an axis at right angles to the axis of the can, said roller being of a length not less than the diameter of the can and adapted to rotate in contact with the edge of the can in the movement of the carrier, substantially as described. 9th. In a can-heading machine and in combination, a rotary can-carrier, a plunger for seating can-bodies therein, two oppositely acting heading rams, and a second plunger for discharging headed cans from said carrier. 10th. In a can-heading machine, the combination with the rotary can-carrier and with heading mechanism operating in connection therewith, of a sliding rod adapted to engage with and act as a stop for the carrier, a reciprocating side bar and a lever connecting said side bar with said stop rod. 11th. In a can-heading machine, the combination with the rotary can-carrier, and with heading mechanism, of a sliding rod adapted to engage with said carrier, a lever engaging with said rod by means of inclined surfaces on said rod and lever, and a reciprocating side bar connected to said lever, and having oppositely placed cams. 12th. In a can heading machine, a rotary carrier having a series of projecting can-holding chambers, means for operating said carrier, and a stop adapted to engage said projecting chambers, and connected to said operating means. 13th. In a can-heading machine, the combination with the rotary can-carrier and with heading mechanism operating in connection therewith, of a reciprocating side bar having opposite inclines or cams, a lever engaging therewith and having an inclined end, and a stop rod having an inclined slot and engaging said lever.

**No. 63,478. Lumber Manufacture.**

(Fabrication de bois de charpent.)

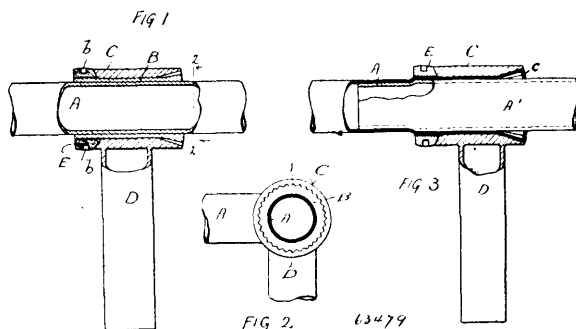
David Gilmour, Trenton, Ontario, Canada, 20th July 1899; 6 years. (Filed 12th July, 1899.)

Claim.—1st. As a new article of manufacture, a lumber product, comprising a low grade base piece of wood provided with a plurality



of projections and recesses upon the side thereof and an outer high grade layer or piece having the side adjacent to the low grade base piece provided with a plurality of projections and recesses registering, fitting into, compressed and secured to the aforesaid recesses and projections, whereby the surface of the side of the low grade piece is covered by the superimposed high grade piece, as and for the purpose specified. 2nd. As a new article of manufacture, a lumber product, comprising a low grade base piece of wood having a plurality of tongues and grooves parallelly arranged upon one side thereof and an outer higher grade layer or piece having corresponding tongues and grooves formed on the side adjacent to the low grade base piece fitting into, compressed and interlocking with the tongues and grooves of the base piece, whereby the surface of the side of the low grade piece is covered by the superimposed high grade piece and means for permanently securing the tongued and grooved sides together, as and for the purpose specified. 3rd. As a new article of manufacture, a lumber product, comprising a low grade base piece of wood having a plurality of tongues and grooves parallelly arranged upon one side thereof and an outer high grade layer or piece having corresponding tongues and grooves formed on the side adjacent to the low grade base piece and fitting into, compressed and interlocking with the tongues and grooves of the base piece, whereby the surface of the side of the lower grade is covered by the superimposed high grade piece and a suitable waterproof cement for securing the tongued and grooved sides together, as and for the purpose specified.

**No. 63,479. Bicycle Handle Bar. (Manche de bicyclette.)**



The Claus Handle Bar Company, assignee of Emil Louis Claus, both of Milwaukee, Wisconsin, U.S.A., 20th July, 1899; 6 years. (Filed 21st January, 1899.)

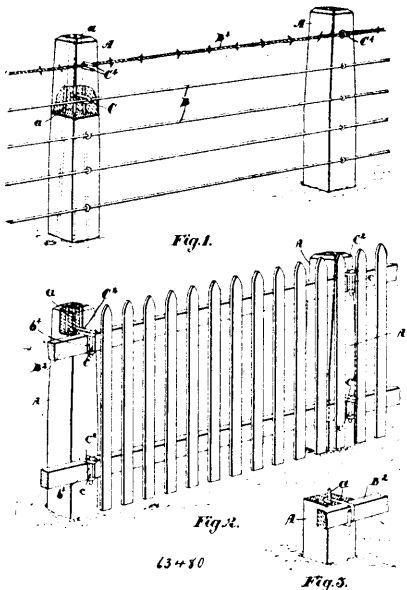
Claim.—1st. A bicycle handle bar having its central portion provided with longitudinal corrugations and a screw thread, a tubular supporting head having a match-fit on the corrugated portion of the handle bar, and a nut run on said screw thread to bind against the end of the supporting head furthest from the corrugations of the joint. 2nd. A bicycle handle bar having its central portion provided with longitudinal corrugations and a screw thread, a tubular supporting head having match-fit on the corrugated portion of the handle bar, and a bevel end nut run on said screw thread against a corresponding bevel at the end of the supporting



head furthest from the corrugations of the joint. 3rd. A bicycle handle bar having its central portion provided with longitudinally bevelled corrugations and a screw thread, a tubular supporting head having match-fit on the corrugated portion of the handle bar, and a nut run on said screw thread against the end of the supporting head furthest from the corrugations of the joint. 4th. A bicycle handle bar having its central portion provided with longitudinally bevelled corrugations and a screw thread, a tubular supporting head having match-fit on the corrugated portion of the handle bar and a leveling end nut run on said screw thread against a corresponding level at the end of the supporting head furthest from the corrugations of the joint. 5th. A bicycle handle bar having an annular enlargement thereon provided with longitudinally extending corrugations, a tubular supporting head adapted to enclose said enlargement, an annular internal abutment carried thereby having longitudinal corrugations, and means for holding the same into engagement with said enlargement. 6th. The combination with a tubular supporting head provided upon its inner surface with a series of corrugations, of a longitudinally movable and revoluble handle bar provided also with a series of tapering corrugations adapted to mesh with those in the head, and locking means for preserving such engagement.

**No. 63,480. Cement Fence Post.**

(*Poteau de clôture en ciment.*)



Ernest Albert Brown, Kingsville, and Colin Wright, Amer. both in Ontario, Canada, 20th July, 1899; 6 years. (Filed 13th October, 1898.)

*Claim.*—In a fence post and rail fastener, in combination the cement post having an interior central vertical wire passing longitudinally therethrough, the fence rail or longitudinal wire, the integral loop through which the rail or longitudinal wire passes, such loop having two hooked inner ends straddling the central wire, as and for the purpose specified.

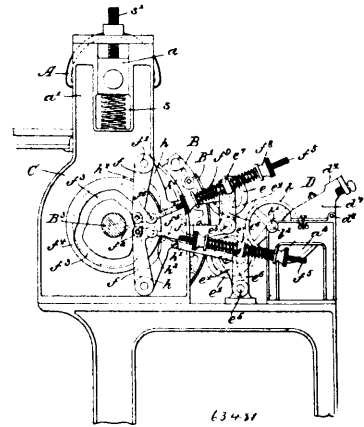
**No. 63,481. Inking Apparatus for Printing Presses.**

(*Appareil à encrer pour presses à imprimer.*)

Eugene Semple Bradford, Brooklyn, New York, U.S.A., 20th July, 1899; 6 years. (Filed 25th May, 1899.)

*Claim.*—1st. In a machine of the character described, a rotatable plate cylinder, transfer inking rollers, an inking cylinder, a drum adapted to be secured to a shaft and having a cam engaging arms controlling said transfer inking rollers and holding the same in yielding contact with either a plate of said cylinder or said inking cylinder, substantially as and for the purposes described. 2nd. In a machine of the character described, a rotatable plate cylinder, an inking cylinder, a cam drum mounted on a shaft, arms engaging the cam of said drum and provided with rods carrying coiled springs compressed and released by the action of said cam, and a rock shaft actuated by said springs and carrying crank arms, said arms provided with transfer inking rollers, the construction being such that the transfer inking rollers by the actuation of said cam drum are swung into contact with a plate of said cylinder or with said inking cylinder or caused to occupy an intermediate position between said plate cylinder and inking cylinder, substantially as and for the purposes described. 3rd. In a machine of the character described, a shaft carrying a rotary plate cylinder, transfer inking rollers, a drum mounted on said shaft and provided with a cam groove,

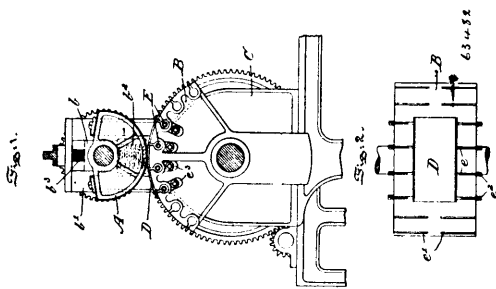
blocks adjustably connected with and located in a groove of said drum, said blocks adapted to shift said rollers out of contact with



the plate of said cylinder, when said cam-groove tends to press said rollers into contact with said cylinder, substantially as and for the purposes described. 4th. In a machine of the character described, a shaft carrying a rotary plate cylinder, transfer inking rollers, a drum mounted on said shaft and having blocks adjustably connected with said drum and adapted to shift said rollers out of contact with the plate of said cylinder, substantially as and for the purposes described. 5th. In a machine of the character described, a rotary plate cylinder, a cam drum adjustably mounted on a shaft, inking rollers, arms carrying rollers engaging the groove of said cam drum, rods pivotally attached to said arms and carrying spiral springs adapted to force with the required degree of pressure said inking rollers against the plate of said cylinder, substantially as and for the purposes described. 6th. In a machine of the character described, a rotary plate cylinder, a drum suitably mounted on a shaft, blocks adjustably connected with said drum, inking rollers, means actuated by said blocks to shift said inking rollers, and means connected with the block actuated means for forcing said inking rollers with required pressure against the plate of said cylinder, substantially as and for the purposes described. 7th. In a machine of the character described, a tank, an inking roller, and means, substantially as described, having separately adjustable devices engaging with said roller, substantially as and for the purposes described. 8th. In a machine of the character described, a tank an inking roller and a scraper having separately adjustable yielding blades engaging the surface of said roller, substantially as and for the purposes described. 9th. In a machine of the character described, a tank, an inking roller and a scraper having independently movable blades engaging said roller and springs for pressing said blades toward said roller, substantially as and for the purposes described. 10th. In a machine of the character described, the combination with a tank and an inking roller, of a scraper having independently movable blades engaging said roller, springs for pressing said blades toward said roller, and screws for withdrawing the blades from said roller, substantially as and for the purpose described. 11th. In a machine of the character described, the combination with a tank and an inking roller, of a scraper comprising a supporting plate, sliding plates mounted on said supporting plate, movable blades detachable mounted in said plates, springs for pressing said blades toward said inking roller, and means, substantially as described, for separately adjusting said springs so as to regulate the pressure of said blades against said inking roller, substantially as and for the purposes described. 12th. In a machine of the character described, the combination with a tank and an inking roller, of a scraper comprising a supporting plate, sliding plates mounted on said supporting plate, movable blades detachable mounted in said plates, and adjustable spring devices for pressing said blades toward and regulating their pressure against said inking roller substantially as and for the purposes described. 13th. In a machine of the character described, a tank and an inking roller, a scraper frame pivotally secured to said tank, and a scraper having spring controlled movable blades adapted to engage said roller, substantially as and for the purposes described. 14th. In a machine of the character described, an ink fountain, comprising a tank, an inking roller, a scraper having independently detachable and adjustable blades adapted to engage said roller, and a cover plate for said scrapers and their accessories, substantially as and for the purposes described. 15th. In a machine of the character described, an ink fountain roller, a transfer inking roller, a plate cylinder, mechanism, substantially as described, by which the transfer inking roller is moved from said ink fountain roller to the plate cylinder, and mechanism, substantially as described, for moving said transfer inking roller from the plate cylinder in opposition to the mechanism which moved said transfer inking roller to said plate cylinder, substantially as and for the purposes described. 16th. In a machine of the character described, an ink fountain roller, a plate cylinder, a transfer inking roller, mechanism for moving the transfer inking roller from said

ink fountain roller to said plate cylinder, and mechanism for moving said transfer inking roller away from said plate cylinder, in opposition to the mechanism which moved said transfer inking roller to said plate cylinder, said mechanism consisting of a pivoted arm connected to the transfer inking roller, a drum, and blocks adjustably secured to said drum, substantially as and for the purposes described. 17th. In a machine of the character described, an ink fountain roller, a rotary plate cylinder, a transfer inking roller, a mechanism for moving said transfer inking roller from said ink fountain roller to said plate cylinder and mechanism for moving said transfer inking roller away from said plate cylinder in opposition to the other mechanism and consisting of a pivoted arm connected to said transfer inking roller, a drum having a grooved periphery and adjustable blocks fitting the groove of said drum, substantially as and for the purposes described. 18th. In a machine of the character described, a roller for applying ink to a cylinder, mechanism, substantially as described, for moving the roller into contact with said plate, and mechanism, substantially as described, for moving the roller out of contact with the plate in opposition to the first-mentioned mechanism, substantially as and for the purposes described. 19th. In a machine of the character described, a roller for applying ink to a rotary plate cylinder, means for moving said roller into contact with said plate, comprising pivoted arms, a cam for moving said arms, rods connected with a transfer inking roller and with which is connected said rod, and springs placed between said second arm and nuts on said rod, substantially as and for the purposes described. 20th. In a machine of the character described, a roller for applying ink to a plate, mechanism for moving said roller into contact with said plate by a spring pressure, and mechanism for moving said roller out of contact with said plate, in opposition to the first-mentioned mechanism and consisting of a pivoted arm connected to said roller, and a drum having adjustable blocks secured to its periphery and adapted to engage with said arm, substantially as and for the purposes described. 21st. In a machine of the character described, an ink fountain roller, a transfer inking roller, a plate cylinder, and mechanism for moving said transfer inking roller from said ink fountain roller to the plate cylinder, consisting of arms  $e^4$  and  $e^6$ , a cam  $f^2$ , rods  $f^3$ , and springs  $f^4$ , substantially as and for the purposes described. 22nd. In a machine of the character described, an ink fountain roller, a transfer inking roller, a plate cylinder, means for moving said transfer inking roller from said ink fountain roller to said plate cylinder, comprising arms  $e^4$ ,  $e^6$  and  $e^{20}$ , a cam  $f^3$ , rods  $f^6$  and springs  $f^7$ , and means for moving said transfer inking roller away from said plate cylinder in opposition to the other mechanism, and which consists of arms  $h$ , connected with said transfer inking roller, a drum  $j^2$ , and adjustable blocks  $h^4$ , substantially as and for the purposes described.

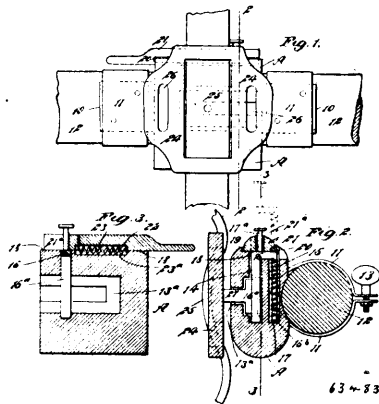
**No. 63,182. Fastening Devices for Securing Printing Plates to Supporting Cylinders in Printing Presses.** (*Appareil à assujettir les plaques à imprimer aux cylindres de presses d'imprimeries.*)



Eugene Semple Bradford, Brooklyn, New York, U.S.A., 20th July, 1899; 6 years. (Filed 25th May, 1899.)

*Claim.*—1st. In a machine of the character described, a plate cylinder having longitudinal openings in grooves therein, a plate holder consisting of dogs mounted on spindles or screw bolts and movable grooves in the openings of said cylinder, and clamps adapted to swing on said spindles or screw bolts and with said dogs to be clamped to said cylinder, substantially as and for the purposes described. 2nd. In a machine of the character described, a plate cylinder, means for clamping a plate to said cylinder, consisting of dogs slidable in grooves or openings of said cylinder, spindles or screw bolts traversing said dogs, and S-shape clamps adapted to swing on said spindles or screw bolts, substantially as and for the purposes described. 8th. In a machine of the character described, a plate cylinder, dogs adapted to be brought into and out of engagement with the plate of said cylinder, spindles or screw bolts operating said dogs, and S-shape clamps adapted to be swung into and out of engagement with the bolts of said plate cylinder, substantially as and for the purposes described.

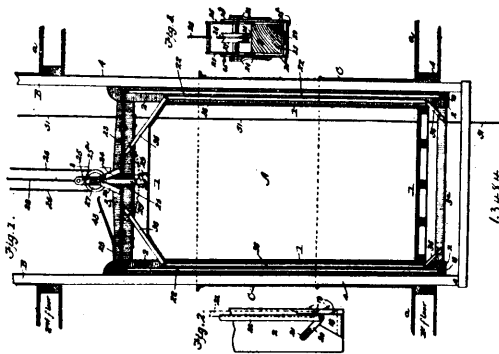
**No. 63,183. Device for Attaching Harness to Vehicle Shafts.** (*Appareil à assujettir les harnais aux timons de voiture.*)



Frederick Dickerboom, Bingham Lake, Minnesota, U.S.A., 21st July, 1899; 6 years. (Filed 26th November, 1898.)

*Claim.*—1st. A thill attachment having a body provided with a horizontally extending and undercut slot opening at the front of the body and also provided with a horizontal slideway communicating with two transversely extending bores or passages, one of which is also in communication with the undercut slot, a buckle having a stud projecting and movable in the undercut slot, a U-shaped bolt, the arms of which are respectively movable in the bores or slots, a spring pressing U-shaped bolt, and a spring pressed slide movable in the slideway and capable of holding the bolt in a position opposed to the tendency of the spring thereof, substantially as described. 2nd. A thill attachment having a body portion provided with a slot opening at the forward end of the body portion, the body portion being also provided with a bore or passage intersecting the slot, a bolt movable in the bore or passage, a spring pressing the bolt outward from the bore or passage, a slide capable of holding the bolt against the pressure of the spring, a spring pressing the slide to engagement with the bolt, and a buckle provided with a stud movable in the slot and normally engaged by the bolt to prevent the disengagement of the stud from the body, substantially as described. 3rd. A thill attachment having a body provided with a slot and with a bore intersecting the slot, a slide formed with a slot, a spring pressing the slide inward, a bolt having a stud movable in the slot of the slide, a spring pressing the bolt, and a buckle provided with a stud movable in the slot and engaged by the bolt to prevent the disengagement of the stud with the body. 4th. A thill attachment having a body portion provided with a slot opening at the forward end of the body portion, the body portion being also provided with a bore or passage intersecting the slot, a bolt movable in the bore or passage, a spring pressing the bolt outward from the bore or passage, a slide capable of holding the bolt against the pressure of the spring, and a spring pressing the slide to engagement with the bolt, the slot being capable of receiving a portion of a buckle, substantially as described.

**No. 63,184. Elevator.** (*Elevateur.*)

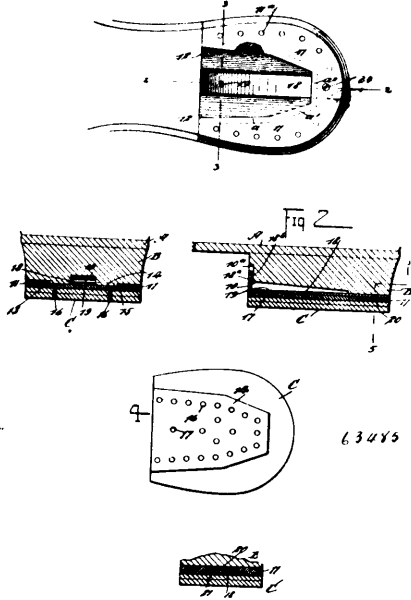


John Holley Moon, Portland, Oregon, U.S.A., 21st July, 1899; 6 years. (Filed 10th March, 1899.)

*Claim.*—1st. The combination with one or more floors having hatchways and guards or inclosures arranged around the latter, elevator guide beams, and a cage adapted to slide on the latter, of the clevis embracing the top cage bar, a spring arranged between the clevis and said bar, a hoisting rope and its pulley attached to

said hanger, links pivoted on the pulley axle which passes through the hanger, spring levers connected with said links, and pendent rods and slidable blocks having projections for engaging the guide frame, as shown and described.

**No. 63,485. Heel for Boots and Shoes.**  
(*Talon de chaussures.*)



James Joseph Naughton, New York City, New York, U.S.A., 25th July, 1899; 6 years. (Filed 10th March, 1899.)

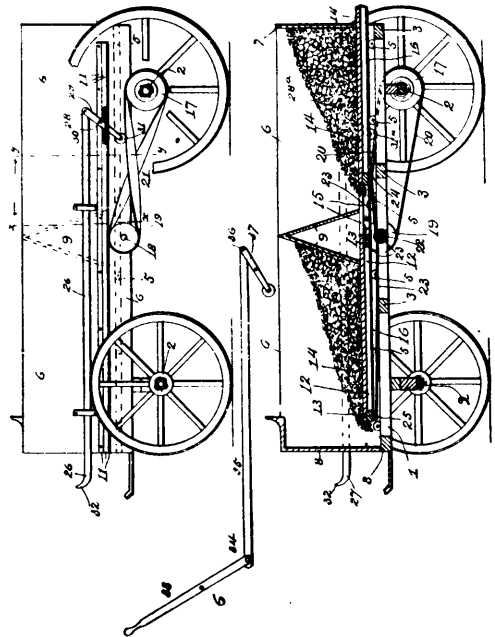
*Claim.*—1st. The combination with a boot or shoe heel, a plate secured to the under face of the said heel, having an opening extending to the forward portion of said heel, the wall of said recess being provided with a groove, and a spring detachably attached to the heel between its under surface and the plate, said spring extending upward at the forward end of the heel and being capable of upward movement, and a projection from the under face of the spring, of a lift provided with a plate adapted to fill the space between the members of the plate attached to the body of the heel, the plate of the lift having a tongue arranged to enter the groove in the plate attached to the said body of the heel, and the lift plate being further provided with an opening arranged to receive the projection from said spring, as described. 2nd. The combination with the heel for a boot or shoe having a recess in its bottom extending from the front to the rear, the upper wall of the forward portion of said recess being inclined, and a horse shoe plate attached to the under surface of said heel, the inner wall of which plate is provided with a groove, the said horse shoe plate being adapted as a fixture upon the heel, of a plate adapted to slide into the grooves of the horse shoe plate and close the opening between its members, the sliding plate being also adapted for direct attachment to the lifts to be added to the heel, and a spring secured to the inner face of the horse shoe plate at the rear, which spring extends forwardly into the inclined portions of the recess in the heel, the said spring being provided with a projection arranged to enter an opening in the sliding plate carrying the lifts, as described. 3rd. The combination with a boot or shoe heel, said boot or shoe heel being provided in its bottom surface with a slot extending centrally from the rear to the front, the forward portion of the horizontal section of said slot having its upper wall upwardly and forwardly inclined, and a horse shoe plate having an upper groove at its inner margin, said horse shoe plate being adapted for attachment directly to the heel, of a sliding plate adapted to enter the grooves in the horse shoe plate and close the openings of said plate, the under faces of the horse shoe and sliding plates being flush when the two are connected, the said sliding plate being adapted for attachment directly to the lifts to be added to the heel, and a spring secured between the body of the heel and the said horse shoe plate, said spring extending forwardly in the inclined portion of the slot in the body of the heel, being provided with an extension arranged to enter the upward extension of the slot, and means, substantially as described, for locking said spring to the sliding plate and at its forward portion to the body of the wheel, as specified.

**No. 63,486. Dumping Wagon.** (*Wagon à bascule.*)

Frank E. Heston, Rushland, Pennsylvania, U.S.A., 25th July, 1899; 6 years. (Filed 13th April, 1899.)

*Claim.*—1st. The combination in a dumping wagon, of the travelling false bed, the belts, pulleys, and drum connecting the wagon

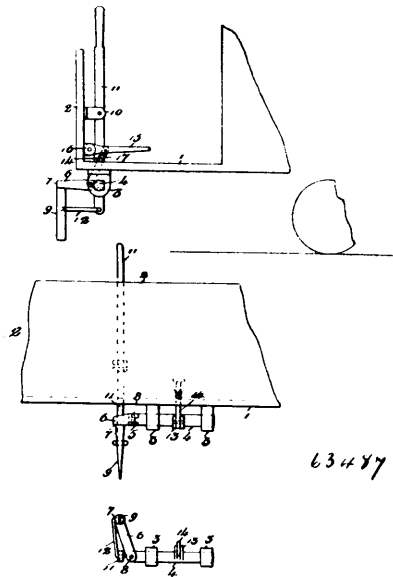
wheels to the bed, to impart motion to the latter, and a cable, and levers having rollers engaging the belts, to control the movement



of the bed. 2nd. The combination, with a fixed wagon body having a cross partition, of a travelling bed having a discharge opening and loosely contained in said body, and means for operating the bed to deposit a load by the forward movement of the wagon. 3rd. The combination, with a wagon having a body provided with a cross partition, a travelling bed having a discharge opening equal in area to the said partition, and loosely contained in said body, a drum, an endless cable upon the drum and connected to the travelling bed, means to impart the motion of the wagon to the said bed, and a lever to control the movement of the bed.

**No. 63,487. Switch Lever.**

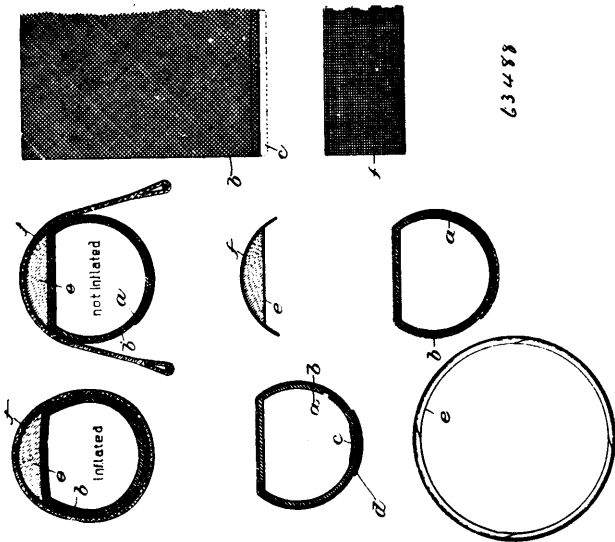
(*Lever pour aiguilles de chemin de fer.*)



Oscar Ward, jr., New Canton, Illinois, U.S.A., 25th July, 1899; 6 years. (Filed 18th February, 1899.)

*Claim.*—A switch thrower, comprising a shaft journalled to the platform of the car, a horizontal member hinged to one end of said shaft, a depending wedge shaped extension forming a part of said member, a rod passing through said platform, one end of which is movably attached to said shaft, a foot lever, one end of which is hinged to the platform, and to which the said rod is movably secured, a coiled spring encircling said rod, and interposed between said lever and platform, a hand lever hinged to the dash, and a connecting rod attached to the depending wedge shaped extension, and lower end of said lever, as and for the purpose described.

**No. 63,488. Pneumatic Tire. (Bandage Pneumatique.)**

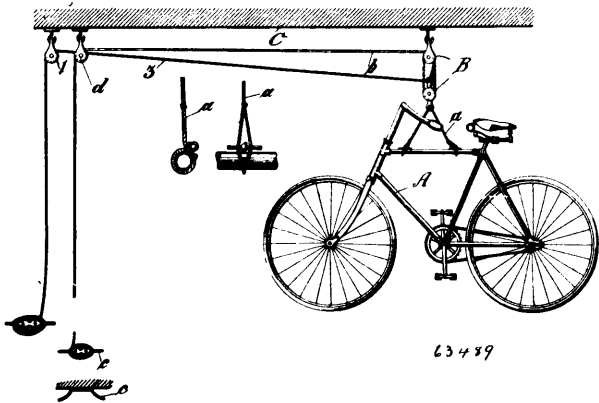


63488

George Henry Clark, Boston, Massachusetts, U.S.A., 25th July, 1899; 6 years. (Filed 1st April, 1899.)

*Claim.*—1st. A pneumatic wheel tire comprising an inflatable air tube, an expansive sheath of fabric containing it, and a non-extensible circular protecting strip, segmental in cross-section, at the tread side of said sheathed tube, all of said parts being vulcanized together and producing, when inflated, an egg shaped tire, substantially as described. 2nd. A pneumatic wheel tire comprising an inflatable air tube, and a substantially non-extensible circular protecting strip, segmental or substantially so in cross section, at the tread side of said tube, composed of one or more pieces joined at the ends, and an outer covering for the tire, substantially as described. 3rd. In a pneumatic wheel tire, an inflatable air tube, an expansive sheath containing it, a non-extensible circular protecting strip at the tread side of said sheathed tube, comprising essentially a circular strip of cork, segmental in cross section, and composed of one or more cork strips scarfed at the ends and secured together, and an outer covering for the tire, substantially as described. 4th. A pneumatic wheel tire comprising an inflatable air tube, contained within an expansive sheath, a non-extensible protecting strip at the tread side of said sheathed tube, composed of a circular strip of cork, segmental or substantially so in cross section, and a non-extensible strip of fabric secured thereto, all of said parts being vulcanized together, substantially as described. 5th. A pneumatic wheel tire having as a co-operative part of it, a textile strip vulcanized to the tread side of the air tube, and a circular strip of cork composed of one or more pieces of cork joined at the ends, placed upon, and secured to said textile strip at the tread side of the air tube, substantially as described. 6th. A protecting strip for pneumatic wheel tires consisting of a circular strip of cork, segmental in cross section and composed of two or more cork strips scarfed at the ends and secured together, and a non-expansive strip of fabric secured to said segmental strip, substantially as described.

**No. 63,489. Means for Suspending Cycles. (Moyen de suspendre les bicycles.)**

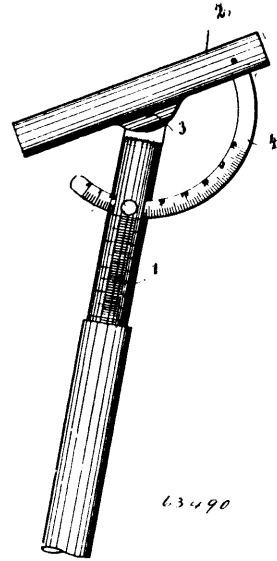


63489

August Sebelin, 83 Niemann's Weg, Kiel, German Empire, 25th July, 1899; 6 years. (Filed 2nd November, 1898.)

*Claim.*—Means for suspending bicycles from ceilings consisting of a sling adapted to engage the top bar of the cycle, a double pulley block connected with said sling and suspended from a ceiling, two separate single pulleys suspended from the ceiling, and suitable ropes connecting said single pulleys with said double pulley block, said ropes being adapted to respectively raise and lower the cycle suspended, substantially in the manner described.

**No. 63,490. Bicycle Saddle Support. (Selle de bicyclet.)**

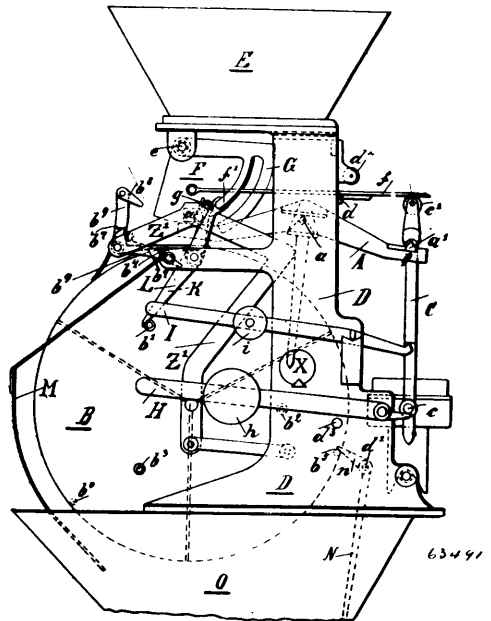


63490

Alfred Bauer, 1 Trost-Brücke, Hamburg, Empire of Germany, 25th July, 1899; 6 years. (Filed 2nd November, 1899.)

*Claim.*—An adjustable saddle support for bicycles and the like, the characteristic feature of which is that the saddle bar 1 is furnished with a graduated scale for regulating the height of the saddle and that the head 2 which actually carries the saddle is hinged, or in some similar manner connected to the saddle bar 1, the angle formed by the head 2 below the hinge 3 being capable of adjustment as required, by means of a bow-shaped piece furnished with a scale, for the purpose of adapting the position of the head 2 and herewith that of the whole saddle to the requirements of the rider and the height of the saddle.

**No. 63,491. Weighing Machine. (Balance.)**

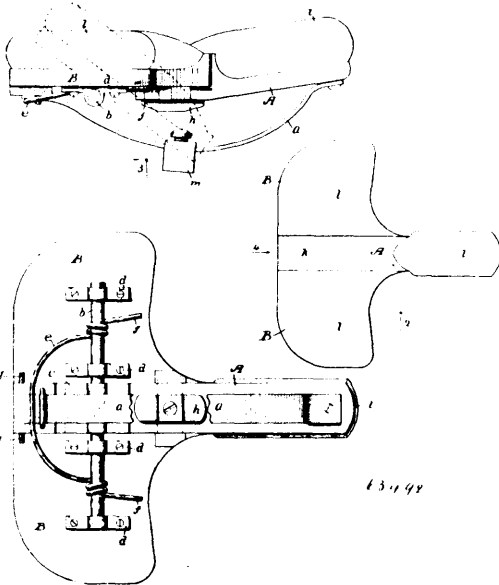


63491

Theobald Douglas, No. 6 Lessingstreet, Berlin, assignee of Carl Schmidt, No 27, Gotz, Kowskystreet, Berlin, Prussia, (German Empire, 25th July, 1899; 6 years. (Filed 4th July, 1898.)

*Claim.*—1st. An automatic weighing apparatus having a weighing drum divided into several compartments for weighing substances of all kinds, characterised by the feed slides or valves, being opened by one of a number of pins  $b^1, b^2, b^3$ , fixed on the weighing drum B engaging double armed levers K and L which are pivoted on the frame when said drum rotates to empty one compartment and bring another compartment under the feed hopper, substantially as hereinbefore described. 2nd. In an automatic weighing apparatus such as described, the arrangement for ensuring a complete emptying of the drum consisting of a curved surface M which may be adjusted towards the axis of the drum and which is adapted to cause the substances in the act of being discharged to press upon the partition of the compartment, with a pressure which may be adjusted, substantially as hereinbefore described. 3rd. In an automatic weighing apparatus such as described, the arrangement of a slide f for bringing the first feed slide or valve F to a standstill and for limiting the swing of the scale beam at the end of the first filling period by bearing against a fixed roller  $d^2$  for the purpose of bringing the scales quickly to a standstill, substantially as hereinbefore described. 4th. In an automatic weighing apparatus such as described, the arrangement of a pendulum N adapted to be held down by the substances being discharged in the event of the latter piling up the discharge hopper and to prevent rotation of the drum in such case by means of suitably arranged finger  $n$  on its upper end and thereby stop the emptying of the filled compartment, until the obstruction to the discharge has been removed, substantially as hereinbefore described.

**No. 63,492. Bicycle Seat. (Siège de bicyclet.)**



George F. Barron and Donald McPherson, both of Palmyra, New York, U.S.A., 25th July, 1899; 6 years. (Filed 16th February, 1899.)

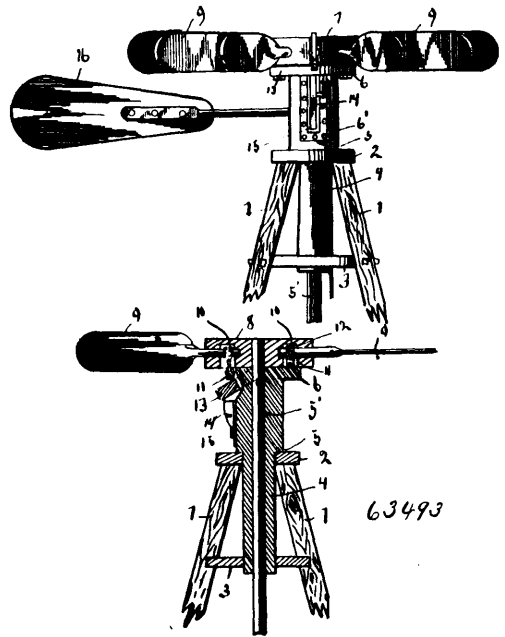
*Claim.*—1st. In a bicycle seat, the combination with a rigid middle piece, of a side piece pivotally secured at each side of the middle piece, the latter being of a greater length than said side pieces, substantially as set forth. 2nd. The combination in a bicycle seat, of a middle piece provided with means for rigidly securing it to the bicycle, and side pieces pivotally secured to the middle piece, the latter projecting forward of the side pieces and having its rear portion of a less height than the side pieces, all substantially as set forth. 3rd. In a bicycle seat, the combination of a rigid middle piece with pivotal side pieces, stops to the rear of the pivotal point for limiting the rearward movement of the side pieces, and a turn button on the middle piece in front of the pivotal point having its ends adapted to engage the side pieces, substantially as shown, for the purpose specified. 4th. In a bicycle seat, the combination of a middle piece secured longitudinally of the bicycle, a rod secured transversely at the middle piece and projecting beyond the sides thereof, a side piece pivotally secured upon each projecting end of the rod, a spring upon the rod for controlling the side pieces, and a button on the middle piece for holding the side pieces, substantially as shown and described. 5th. A bicycle saddle, comprising a fixed pommel and vibrating side sections, all in substantially the same horizontal plane and combining to form the seating surface of the saddle, substantially as specified.

**No. 63,493. Windmill. (Moulin à vent.)**

Leander Bartholomew, Magnet, Missouri, U.S.A., 26th July, 1899; 6 years. (Filed 16th March, 1899.)

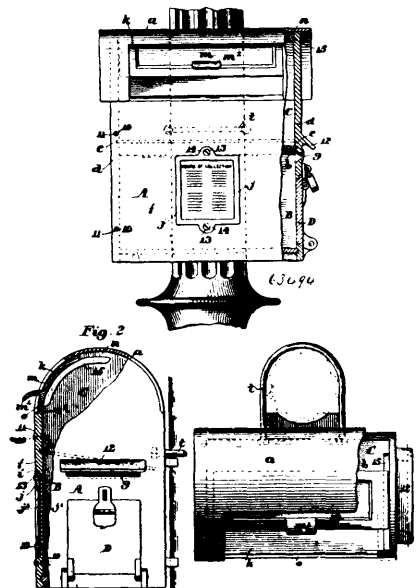
*Claim.*—1st. In a horizontal wind wheel, the combination of a suitable support, a rotatable table or cam track having a vane con-

nected therewith, a hub mounted on said table and track having on its under side an annular groove or channel, oscillating radial vanes



mounted in said hub with shanks extending through said groove, and arms fixed within the groove adapted to turn into and out of the latter to co-operate with the cam track to feather the blades or vanes, substantially as described. 2nd. In a horizontal wind wheel, the combination of a table or cam track, a hub rotatably mounted thereon, the hub being of larger diameter and extending beyond the track and having in its under side within the radius of the track an annular groove, oscillating radial vanes or blades mounted in the hub having shanks extending through the groove, and arms fixed to said shanks within the groove, adapted to turn into and out of the same and to co-operate with the blade or cam track to feather the blades, substantially as described.

**No. 63,494. Mail Box. (Boîte postale.)**

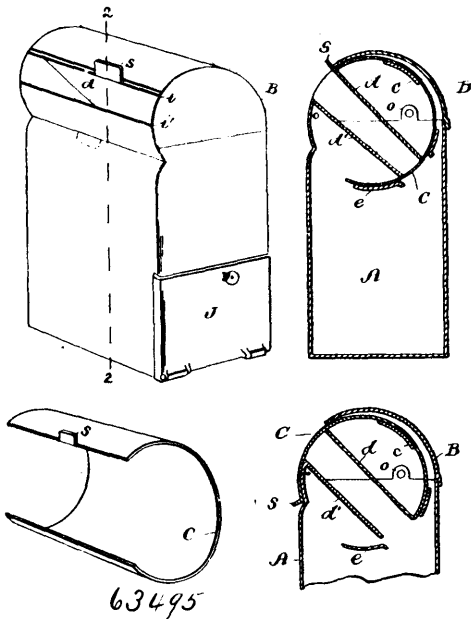


Matthew F. Cheevers, Holyoke, Massachusetts, 26th July, 1899; 6 years. (Filed 22nd March, 1899.)

*Claim.*—A mail box provided with upper and lower compartments, the upper one having a rounded top provided with the opening  $k$ , in its front, and having end walls provided upon their inner sides with the ribs 15, 15, below and near the top whereby the ways  $n$  are produced, the arc-shaped cover  $m$ , having its outer end bevelled so as to catch over bevelled surfaces  $o$  upon the front of the box for the purpose of forming a tight joint, the partition  $b$  placed in grooves made in the inner side of the box, the front of which is made remov-

able, and secured in position by means of rivets, said movable front being grooved so as to receive the front edge of the partition, substantially as shown and described.

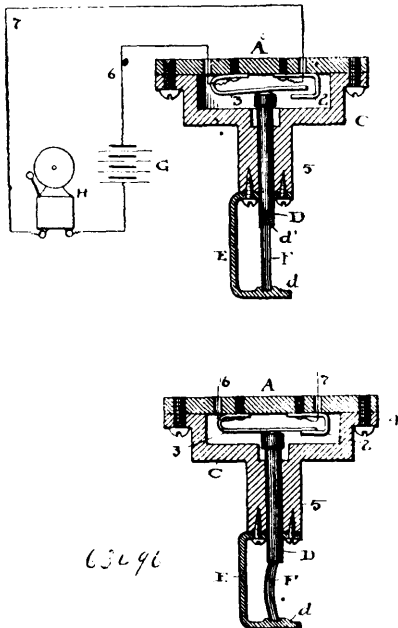
**No. 63,495. Letter Box.** (*Boîte à lettres.*)



John E. Costello, Providence, Rhode Island, U.S.A., 26th July, 1899; 6 years. (Filed 22nd February, 1899.)

*Claim.*—1st. In a letter box, the combination of a case to receive the letters, a cap of semi-circular shape having an open space in front extending the full width of said cap, a plate cylindrical in shape, open at the ends, and fitted to slide in said cap on curved ridges, substantially as described. 2nd. In a letter box, the combination of a case having a cap, a stationary chute held in said cap and attached to it at both ends, a curved plate fitted to slide on curved ridges made on the inside of said cap, and adapted to close the upper end of said chute and open the lower end when drawn forward, and to close the lower end of said chute, and open the upper end when pushed back, substantially as described.

**No. 63,496. Electric Circuit Closing Device.** (*Appareil pour fermer les circuits électriques.*)

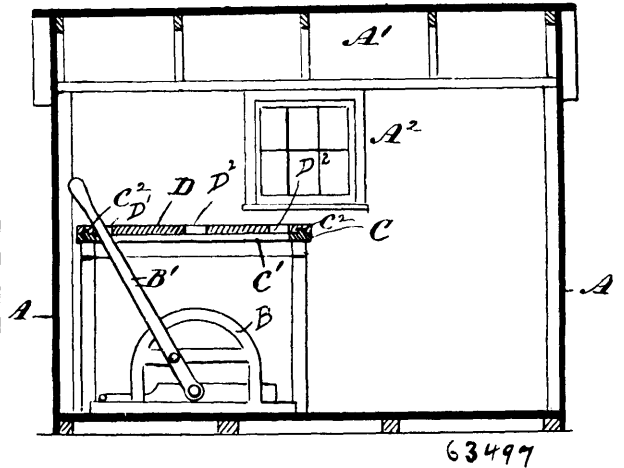


Ferdinand Wilke, Akron, Ohio, U.S.A., 26th July, 1899; 6 years. (Filed 29th May, 1899.)

*Claim.*—1st. In a device, substantially as described, a suitable base and the contact members thereon, a cap fixed to said base and

having a neck provided with a central bore from end to end and a bracket fixed to said cap, in combination with a plunger projecting through said neck at both ends, and a fusible stick engaged between the outer end of the plunger and the outer portion of said bracket, substantially as described. 2nd. The combination of the base and the cap thereon, having an outwardly projecting neck with a bore through its centre, a bracket extending beyond the end of said neck and across the line of said bore, contact points within the cap on said base, one of which is of spring metal, a plunger through said neck and bearing on said spring contact point, and a separate stick engaged at one end by said plunger and at the other end by said brackets, substantially as described. 3rd. In an automatic circuit closing device, the parts thereof comprising the casing, the contact members located in an electric circuit, and means to hold said members normally apart to keep the circuit open, consisting of a plunger engaging one of said contact members, and a fusible stick bearing against the outer end of the plunger and exposed outside said casing, substantially as described. 4th. The combination of the casing, the contact members arranged in an electric circuit, a slidable plunger in said casing bearing against one of said contact members and extending out through the casing, a bracket arm across the line of said plunger and an exposed fusible stick interposed between the plunger and said arm, substantially as described. 5th. The casing and the contact members therein in a normally open circuit, a plunger supported in said casing with one end arranged to press one of said contact members out of contact, a fusible member engaging the opposite end of said plunger and exposed to the outer air, and means to hold said fusible member in operative position against the end of said plunger to keep it depressed, substantially as described.

**No. 63,497. Railway Switch Lock and Switch House.** (*Cabane et levier pour aiguilles de chemin de fer.*)



Harry A. Ghent, Greensville, Ontario, Canada, 26th July, 1899; 6 years. (Filed 29th May, 1899.)

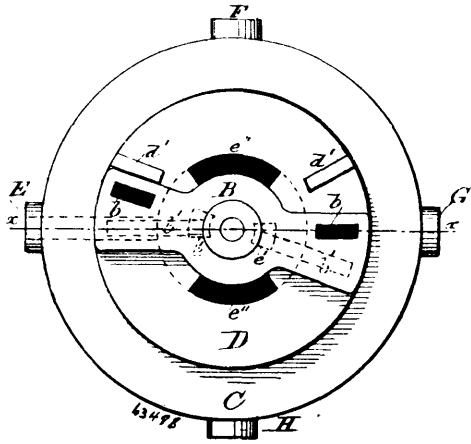
*Claim.*—1st. The combination with a switch stand enclosed by a switch house having a sliding door, of a table top over or above said stand and having a slot in which the switch lever works, and two notched plates on top of said table sliding in opposite directions to engage the switch lever, the plate nearest said door having a projection or finger to engage the door when open and the switch closed, so that when the door is closed by the switchman within the switch house prior to opening the switch, the switchman cannot make his exit from the switch house until he closes the switch to permit the door being opened. 2nd. A switch stand B within a house having a sliding door, a table top C above switch stand having a switch lever B<sup>1</sup>, said top provided with a slot C<sup>1</sup> and receiving said lever, and notched parallel plates D and E sliding to cover said slot and engage the switch lever, one of said plates adapted to engage said door when the switch is open and the door closed.

**No. 63,498. Controlling Valve for Motors.** (*Soupape régulatrice pour moteurs.*)

James Gilbert Cooper, Brooklyn, New York, U.S.A., 26th July, 1899; 6 years. (Filed 20th April, 1899.)

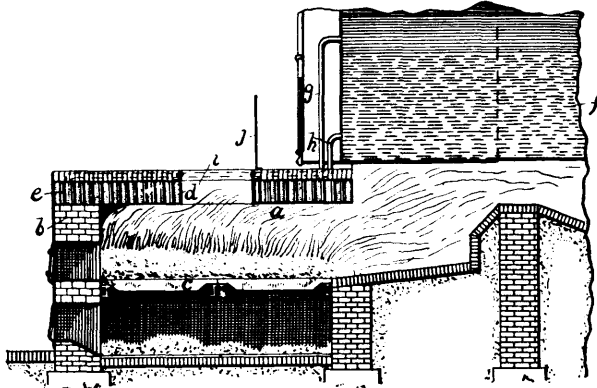
*Claim.*—1st. In combination with a valve seat C and casing A with inlet E, the main valve D having ports as described, stops d, d<sup>1</sup>, and stem f, with the segmental cut off B, provided with the ports b, b, and longitudinal ports b<sup>1</sup>, b<sup>1</sup>, all substantially as specified. 2nd. In combination with a casing A and a valve seat C having inlet openings E, F, and outlet openings G, H, and the ports h, h<sup>1</sup>, with the main valve D, provided with rectangular ports c and segmental ports c<sup>1</sup>, and c<sup>2</sup>, and a segmental cut off valve B, having the through ports b<sup>1</sup> and the oblong semi-circular ports b<sup>2</sup>, and stops

*d d'*, all substantially as set forth. 3rd. In combination with a casing A secured to a valve seat C, having the inlet and outlet open,



ings and ports arranged as described, with a main valve D provided with the ports *e, e', e''*, all arranged, substantially as specified. 4th. In combination with a seat C, valve casing A and contained discs D, B, arranged as described, the handle X and power transmitting device *b* or its equivalent, and stops *d d'*, substantially as and for the purpose set forth. 5th. In combination with a seat C, valve B, with a central disc valve, having suitable ports and actuating a power transmitting device *b*, and stops *d d'*, substantially as specified. 6th. The combination of a seat, a valve casing, having side inlet and outlet or their equivalent, a disc valve provided with stops on its back, with a cut off valve arranged on the back of said disc valve, an actuating device and a transmitting device to the motor, substantially as specified. 7th. In rotary valves, a valve casing having an inlet for steam or the like and an outlet, with a seat with ports, a central disc valve, and a cut off seated on the back of said disc, provided with stops and operating mechanism, as set forth.

**No. 63,499. Boiler Furnace.** (*Fournaise de chaudières.*)



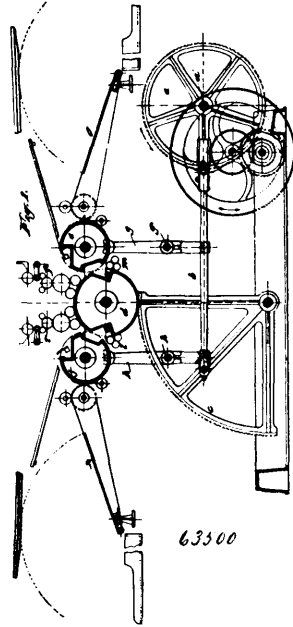
63499

Thomas H. Sears, Holyoke, Massachusetts, U.S.A., 26th July, 1899; 6 years. (Filed 11th January, 1899.)

*Claim.*—1st. The combination with a furnace and a boiler, of a metal water box, comprising a rectangular metal shell *d* arranged over and covering the fuel chamber of the furnace and having interior vertical walls at its central portion to form a rectangular fuel opening over the middle of the rectangular fuel chamber, a door to close the fuel opening, a plurality of spacing tubes formed with circulating ports, arranged between the upper and lower plates of the water box, stay bolts of less diameter than the spacing tubes passed through the tubes to hold the upper and lower plates of the water box in place, and circulating pipes *g h* leading from the boiler and opening into the water box through the top plate thereof. 2nd. The combination in a boiler and furnace of the shell *d* constructed substantially as shown with the circulating pipes extending from the boiler to the shell as shown, stay bolts arranged between the upper and lower plates of the shell and spacing and circulating tubes arranged between the upper and lower plates of the shell and provided with circulating openings arranged closely adjacent to their ends, substantially as shown. 3rd. The combination with a boiler and furnace of a supplemental heater or generator comprising the shell *d* arranged and constructed as shown located directly over the furnace and provided with a door way or opening through its central portion, a door arranged to close said opening, circulating pipes

extending between the boiler and shell, hollow spacing tubes arranged with the shell with their ends bearing against the plates of the shell, said spacing tubes having circulating openings near their ends and bolts extending through the circulating tubes, said stay bolts being of less diameter than the openings in said tubes, all constructed and operating substantially as shown.

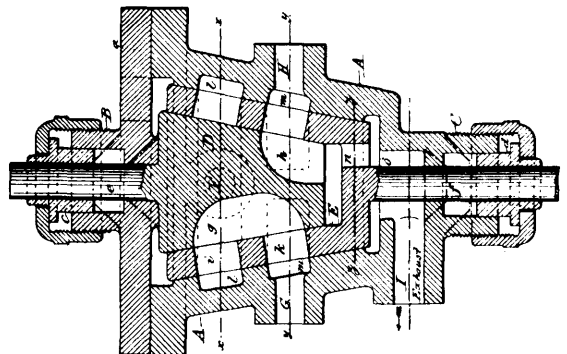
**No. 63,500. Duplicate Printing Machine.**  
(*Machine à imprimer en double.*)



Hugo Koch, Leipzig Comewitz, Saxony, Germany, 26th July, 1899; 6 years (Filed 18th April, 1899.)

*Claim.*—1st. In a printing machine of the class described, the combination with a rocking plate roller, of two printing rollers arranged around said plate roller and adapted to be alternately thrown into gear with the latter, and suitable means for imparting motion to said rocking plate roller, substantially as set forth. 2nd. In a printing machine of the class described, the combination with a rocking plate roller, of two printing rollers arranged on the sides and adapted to be alternately thrown into gear with said plate roller, and means for alternately throwing said printing rollers into gear with said plate roller, substantially as set forth. 3rd. In a printing machine of the class described, the combination of a rocking plate roller, of two printing rollers arranged on the sides of said plate roller, fulcrumed forked levers suitably actuated to alternately throw said printing rollers into gear with said plate roller, a toothed rocking sector meshing with the plate roller, a connecting rod pivotally secured to the sector, and a continuously rotating gear-wheel actuating said connecting rod, substantially as set forth. 4th. In a printing machine of the class described, the combination of two printing rollers alternately rotated and stopped, fulcrumed forked levers, pivotally connected with cam bars, and suitable cams, substantially as and for the purpose set forth.

**No. 63,501. Controlling Valve for Motors.**  
(*Soupape régulatrice pour moteurs.*)



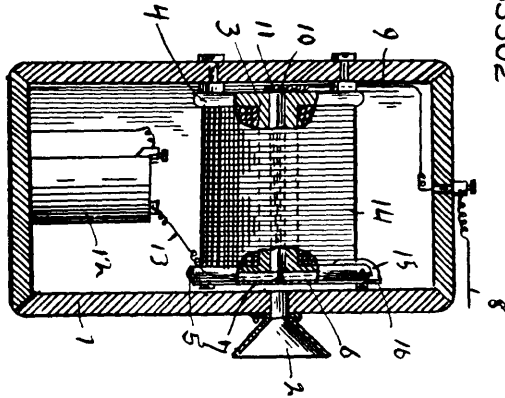
63501

James Gilbert Cooper, Brooklyn, New York, U.S.A., 26th July, 1899; 6 years. (Filed 20th April, 1899.)



*Claim.*—1st. A rotary valve A, consisting of the controlling valve D actuated as described, and provided with ports *g* and *h*, in combination with the floating valve E having ports *i* and *k* communicating with the annular space *l* and *m* in the body of the valve casing, as specified. 2nd The rotary valve A herein described, consisting of the body having annular spaces *l*, *m*, communicating with the ports *i*, *k*, in the floating valve E and the ports *g*, *h* in the controlling valve D, and the openings G, H with opposite ends of the cylinder and exhaust opening I, all as shown and for the purpose set forth.

**No. 63,502. Telephone. (Téléphone.)**

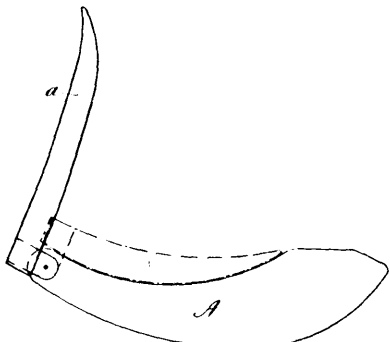
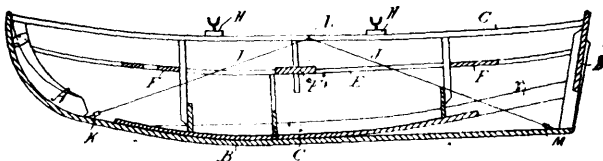


63502

Will E. Byrnes, Adams, Indiana, U.S.A., 26th July, 1899; 6 years. (Filed 3rd May, 1899.)

*Claim.*—1st. In a magneto-telephone, a hollow core, a metallic diaphragm secured opposite one of the heads thereof, a metallic bar constituting a conductor secured at one end to said diaphragm and adjustably secured at its other end to a stationary port, whereby the tension of said diaphragm may be positively controlled, a helix upon said core in electrical connection with a battery or generator and said diaphragm, and connections between said conductor and the line wire. 2nd. In a magneto-telephone, a hollow core having heads formed upon the opposite ends thereof, one of which is provided with a recess in its outer surface, a metallic diaphragm secured to the recessed head having a projecting portion thereon which extends beyond the periphery of said head, a metallic bar constituting a conductor secured at one end to said diaphragm and adjustably secured at its other end to the head of said core opposite said diaphragm, a battery, a line wire, a helix upon said core having one end in electrical connection with said battery, and electrical connections between the other end of said helix and the projection on said diaphragm and between said conductor and the line wire.

**No. 63,503. Collapsible Boat. (Bateau pliable.)**



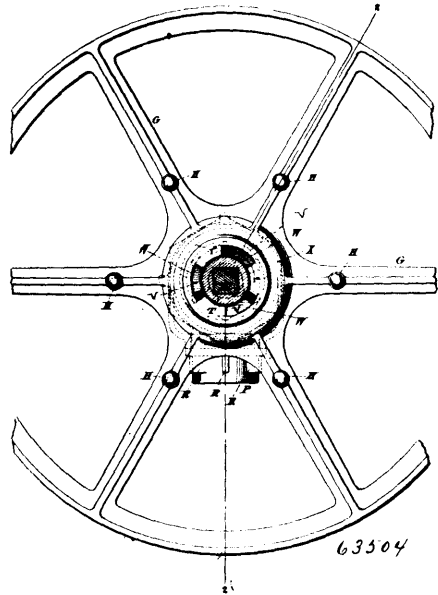
63503

Percy Nesbit, Water Lane, London, assignee of Theophilus Osborn Smith, 35 South Parade, Summertown, Oxford, England, 26th July, 1899; 6 years. (Filed 23rd January, 1899.)

*Claim.*—1st. In a collapsible boat of the character described, comprising a canvas shell, a fixed gunwale, a removable folding stern piece, longitudinal stringers, thwarts supported thereon and a plank

bottom, all as herein set forth, the stem piece A, having a lever *a*, pivoted or hinged to the top or exposed end and depressible against said stem longitudinally, and diagonal wire stays J, at both sides of the boat, said stays attached at one end to the keel near the bow, thence passing upwardly through an eye in the gunwale, and thence downwardly and the end secured to a holdfast in the keel near the stern, to stiffen the boat when in use, and prevent collapsing. 2nd. In a vertically collapsing boat having a stem A, keel B, transom D, stringers E, thwarts F and gunwale G, the stays J, one end secured to the keel near the stem A, thence passing through an eye *L*, in the gunwale amidships, and downwardly to the keel near the stern and secured thereto by a holdfast M. 3rd. In a vertically collapsing boat as described, the stem A, having a lever *a* pivoted or hinged thereto and at the top and folding downwardly against said stem longitudinally and adapted to lock the bow of the boat in the open position.

**No. 63,504. Hose Reel. (Dévidoir pour boyaux à arroser.)**



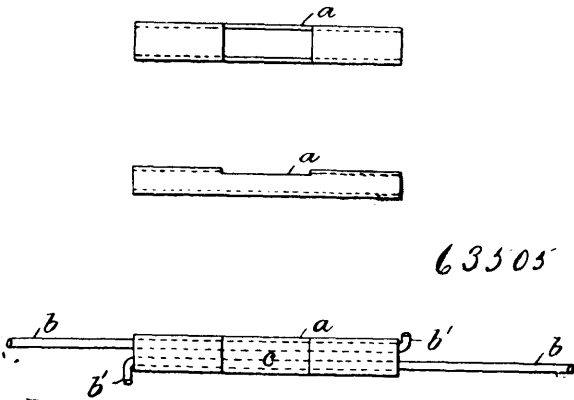
63504

Seth Armitage Crane, Newark, New Jersey, U.S.A., 28th July, 1899; 6 years. (Filed 27th October, 1898.)

*Claim.*—1st. The water supply apparatus, and the valve casing connected therewith having the valve seat and threaded bonnet, combined with the reel mounted upon said valve casing and receiving the hose, the threaded valve stem passing through said bonnet carrying at its inner end the valve and having at its outer end the key portion, combined with the hand wheel upon the outer portion of said valve stem and adapted to open said valve and also to revolve independently of said valve stem when the key portion of the latter has left its engagement with said wheel, substantially as set forth. 2nd. The water supply apparatus, and the valve casing connected therewith and having the openings or ports in its side walls, combined with the reel having its hub mounted upon said valve casing and forming between said hub and said valve casing the water chamber, the hose attaching nozzle connected with said reel, the valve within said valve casing, the stem carrying said valve and projecting through said casing and having the polygonal outer end, the hand wheel mounted upon said polygonal outer end and shidable thereon, and means for connecting said hand wheel with the reel, substantially as set forth. 3rd. The water supply apparatus, the valve casing connected therewith, and the reel having its hub mounted upon said valve casing and provided with the hose attaching nozzle, combined with the valve within said casing, the threaded valve stem carrying said valve and projecting through said valve casing and having the polygonal outer end, and the hand wheel mounted upon said polygonal outer end and having the wings, the said reel having the receiving recesses to receive said wings, substantially as set forth. 4th. The water supply apparatus, and the valve casing and hose reel connected therewith, combined with the valve within said casing, the threaded stem for operating said valve and having the polygonal outer portion, the hand wheel slidable upon said valve stem, and means for detachably connecting said hand wheel with said reel in order that, when desired, the unwinding of the hose may automatically open said valve and that said hand wheel may thereafter be manually used for closing said valve, substantially as set forth. 5th. The water supply apparatus, and the valve casing and reel connected therewith, combined with the valve within said casing, the threaded valve stem for operating said valve and having the polygonal outer portion, and the hand wheel loosely mounted upon said polygonal outer portion of said valve stem, the bore of the hub of said hand wheel being such that during the open-

ing of the valve the valve stem will slide through said hub and the polygonal portion of said stem leave said hub so that said valve upon reaching its open position will remain stationary while the reel and said hand wheel may continue to revolve, substantially as set forth. 6th. The water supply apparatus, and the valve casing and reel connected therewith, said reel having the hub and discs, and said discs from the line of the hub of the hose being deflected onward on diverging lines at an angle to the wall adjacent to which the reel is mounted, combined with the valve within said casing for regulating the water supply to the hose, and means for operating said valve, substantially as set forth.

**No. 63,505. Wire Joint.** (*Joint en fer métallique.*)

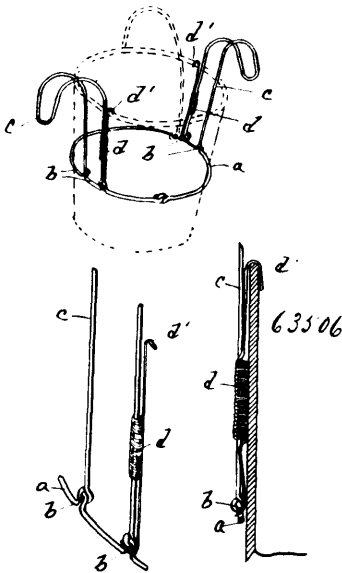


The Neild Sleeve Electric Joint Syndicate, Bloomfield House, London Wall, London, assignees of Harry William Neild, 89 Blackheath Road, Kent, all of England, 28th July, 1899; 6 years. (Filed 2nd May, 1899.)

*Claim.*—1st. A sleeve open at one side for part of its length and coated internally with solder. 2nd. The combination of a sleeve open at one side for part of its length, two conductors lying side by side in the sleeve and solder filling the interstices between the conductors and the sleeve. 3rd. The combination of a sleeve open at one side for part of its length, two conductors lying side by side in the sleeve, their ends protruding beyond the sleeve and being bent at an angle to their length, and solder filling the interstices between the conductors and the sleeve.

**No. 63,506. Milk Pail Holder.**

(*Appareil pour saisir au lait.*)

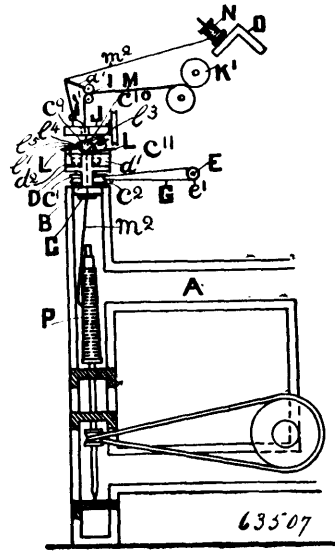


Edwin Cornforth, Thorndike, Maine, U.S.A., 28th July, 1899; 6 years. (Filed 28th June, 1899.)

*Claim.*—1st. In a milk pail holding device, a pail holding ring, a pair of suspending hooks connected thereto, and a pair of spring clamping devices adapted to removably engage over the rim of a pail and hold the device thereon. 2nd. In combination with a pail holding frame provided with a pair of suspension hooks, of a spring-

actuated device carried by each of said hooks, and adapted to engage resiliently over the rim of the pail. 3rd. In combination, a pail holding frame, a pair of suspending hooks, a spring clamping device attached at its lower end to the pail holding frame and formed into a hook at its upper end and a coil spring intermediate its ends, said spring surrounding one of the bars of the suspension hooks.

**No. 63,507. Machine for Spinning, Drawing and Doubling Textile Yarns and Threads.** (*Machine à filer, étendre doubler la laine et le fil à tisser.*)



Theodore Holmes, Joseph Kitchin and Samuel Hargreaves, all of Leeds, England, 28th July, 1899; 6 years. (Filed 31st December, 1898.)

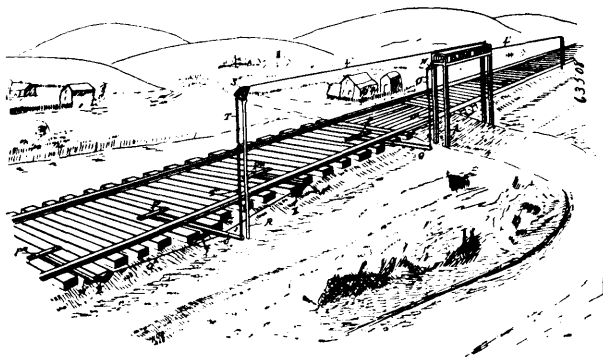
*Claim.*—1st. In machines for spinning, drawing, doubling and twisting textile yarns and threads, the combination of casting D, having its upper part in the form of a box *d*<sup>1</sup>, said casting being fixed to the bar B, as described, spiral spring L fixed to the upper part of said casting by adjusting screws *l*<sup>1</sup>, *l*<sup>2</sup>, *l*<sup>3</sup>, tub C, having its upper end bifurcated and slotted to form a head for the drawing rollers, springs for retaining the drawing rollers in position in the slotted bearings, collar *c*<sup>11</sup> on tube C, under the rollers *c*<sup>6</sup>, *c*<sup>7</sup>, ball bearings *d*<sup>2</sup> around the tube C and under the collar *c*<sup>11</sup>, rollers *c*<sup>6</sup>, *c*<sup>7</sup>, mounted in the revolving bifurcated head of the tube C within the said casting D, and the changeable pin wheel *c*<sup>9</sup> upon the spindle of the drawing roller *c*<sup>6</sup>, all arranged substantially as and for the purpose herein set forth. 2nd. In machines for spinning, drawing, doubling and twisting textile yarns and threads, the combination of the frame A and the bar B mounted thereon, and provided with holes for the reception of tube C, casting D, having its upper part *d*<sup>1</sup> in the form of a box, said casting being fixed to bar B, as described, spiral spring L fixed to the upper part of said casting by adjusting screws *l*<sup>1</sup>, *l*<sup>2</sup>, *l*<sup>3</sup>, tube C having its upper end bifurcated and slotted to form a head for the drawing rollers, springs for retaining the drawing rollers in position in their slotted bearings, collar *c*<sup>11</sup> on tube C, under the rollers *c*<sup>6</sup>, *c*<sup>7</sup>, ball bearings *d*<sup>2</sup> around the tube C and under the collar *c*<sup>11</sup>, rollers *c*<sup>6</sup>, *c*<sup>7</sup>, mounted in the revolving bifurcated head of tube C within the said casting D, the changeable pin wheel *c*<sup>9</sup> upon the spindle of the drawing roller *c*<sup>6</sup>, driving pulley *m* mounted upon the tube C, below the base plate of casting D, cap J hinged to frame A, above the drawing rollers *c*<sup>6</sup>, *c*<sup>7</sup>, provided with a central hole through which the thread or yarn passes to the drawing rollers, and the means herein described for imparting a rotary motion to the tube C, and drawing rollers *c*<sup>6</sup>, *c*<sup>7</sup>, all arranged as and for the purpose set forth.

**No. 63,508. Railway Signal.** (*Signal de chemin de fer.*)

Albert W. Biddinger, Harrison, Ohio, U.S.A., 28th July, 1899; 6 years. (Filed 8th October, 1898.)

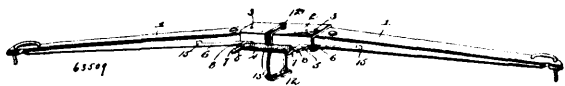
*Claim.*—1st. The combination with a signal, of a tripping lever therefor, which is adapted to be actuated by the train, a lock for said lever, and operating levers, positioned on opposite sides of said tripping lever and actuated by the train, one of said operating levers adapted to lock the tripping lever and the other to unlock the same, substantially as described. 2nd. The combination with a signal, of a tripping lever therefor actuated by the train, a lock for said lever, an operating lever positioned on each side of said tripping lever and operated by the depression of the rail, bell-crank levers,

pivoted adjacent said operating levers, with their outer ends supporting the same, said operating levers alternately engaging the



rail, and an operative connection between the inner ends of the bell-crank levers and the lock, substantially as described. 3rd. The combination with the rail, of a tripping lever adapted to engage said rail and be depressed thereby, a lock for preventing the depression of the lever, means operated by the train for operating said lock to engage and release the tripping lever, and a signal operated by the tripping lever, substantially as described. 4th. The combination of the rail, the ties, positioned a slight distance there-beneath to permit the rail to swing downwardly, a tripping lever, pivotally mounted and extending beneath the rail and transversely thereof, a block positioned a slight distance beneath said lever, a locking bar, pivoted to said lever and adapted to swing there-beneath between the underside thereof and the block, and prevent the depression of said lever, operating means actuated by the train and positioned on opposite sides of the tripping lever, for the purpose of swinging said locking bar, and a signal operated by the tripping lever, substantially as described. 5th. The combination of a support, a series of sections or blades pivoted therein, and a reversing bar to which the sections are connected, of a tripping lever therefor, which is adapted to be actuated by the train, a lock for said lever, and operating levers, positioned on opposite sides of said tripping lever and actuated by the train, one of said operating levers adapted to lock the tripping lever and the other to unlock the same, substantially as described. 6th. The combination of a support, a series of sections pivoted therein, a reversing bar to which the sections are connected, a spring for holding the sections with their faces outward, of a tripping lever therefor, which is adapted to be actuated by the train, a lock for said lever, and operating levers, positioned on opposite sides of said tripping lever and actuated by the train, one of said operating levers adapted to lock the tripping lever and the other to unlock the same, substantially as described. 7th. The combination of a support, a series of sections pivoted therein, a reversing bar to which the sections are connected, a lever intermediately pivoted to the support and connected at one end to one end of the reversing bar, a tripping lever connected to the first named lever at one end, a bell-crank lever pivoted to the opposite end of the support and connected at one end to the opposite end of the reversing bar, a second tripping lever, and a connection between the latter and the opposite end of the bell-crank lever, and a train operating mechanism therefor, comprising a tripping lever which is adapted to be actuated by the train, and positioned a predetermined distance from the signal, a lock for said lever, and operating levers positioned on opposite sides of said tripping lever and actuated by the train, one of said operating levers adapted to lock the tripping lever and the other to unlock the same, substantially as described.

**No. 63,509. Singletree. (Palonnier.)**

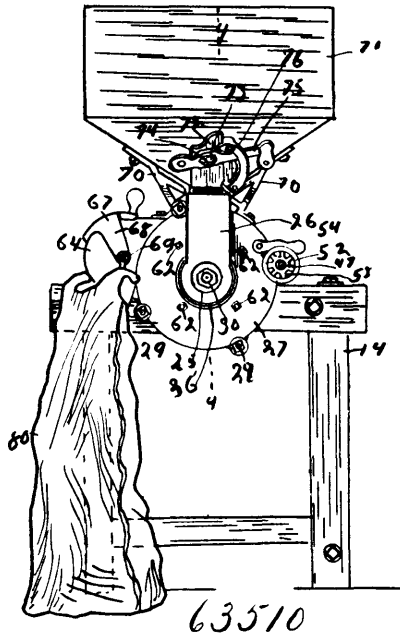


Reuben Ross Pigg, McCoy, Oregon, U.S.A., 28th July, 1899; 6 years. (Filed 13th December, 1898.)

*Claim.*—1st. A device of the class described, comprising a central section, the whiffletree sections pivoted near their inner ends to the central section and arranged to engage the front and back of the same to limit their pivotal movement, and a spring for cushioning the whiffletree sections, substantially as described. 2nd. A device of the class described, comprising a pair of pivotally mounted sections provided with projecting arms having shoulders, and an adjustable spring engaging the shoulders, cushioning the arms and adapted to have its tension regulated by adjusting it on said arms, substantially as described. 3rd. A device of the class described, comprising a sleeve or casing, a pair of sections pivotally mounted on the sleeve or casing and having a limited movement independent of the same, arms extending rearward from the sections, and a coiled spring connecting the arms, substantially as described. 4th.

A device of the class described comprising a sleeve or casing, the pivotally mounted sections arranged at the ends of the sleeve or casing plates secured to the inner ends of the section and having arms projecting rearward therefrom, and a coiled spring connecting the sections and engaging the arms, whereby the sections are cushioned, substantially as described.

**No. 63,510. Grinding Mill. (Moulin à broyer.)**

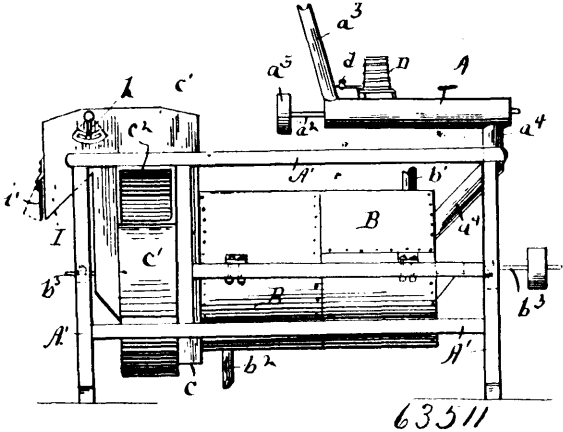


Frank Hamachek, Kewaunee, Wisconsin, U.S.A., 28th July, 1899; 6 years. (Filed 25th May, 1899.)

*Claim.*—1st. In a grinding and crushing mill, the combination of a frame, a rotatable shaft mounted in bearings in said frame and capable of endwise movement in the bearings, a grinding disc fast to the shaft, a complementary disc carried by a fixed part, a pressure lever provided with a projection engaging one end of the shaft, a tension rod passing through the lever, a spring on the rod and bearing against the pressure lever, a collar rigidly mounted on the tension rod, with which collar a projection from the lever is adapted to contact, and a hand wheel on the end of the rod. 2nd. In a grinding and crushing mill, the combination of a frame, a rotatable shaft mounted in bearings in said frame, and capable of endwise movement in the bearings, a grinding disc fixed to the shaft, a complementary disc carried by a fixed part, and a pressure lever provided with a projection, said projection extending through the end of one of the bearings, said bearing provided with an upwardly extending end wall forming an oil reservoir between its inner side and the end of the rotatable shaft, and said projection of the lever provided upon its upper side with an edge which bears upon the upper end of the end wall of the bearing, and also provided with a downwardly extending lug projecting into the oil reservoir. 3rd. The combination of a bearing, a shaft having its end fitting therein, a set bolt, a plurality of discs between the set bolt and the shaft, and a pin on which the discs are loosely mounted, one end of said pin fitting loosely in a recess in the shaft, and the opposite end fitting loosely in a recess in the set bolt. 4th. The combination of a bearing, a shaft having its end fitting therein, a plurality of discs within the bearing and against the end of the shaft, and a pin on which the discs are loosely mounted, said pin fitting loosely in a recess in the end of the shaft. 5th. The combination of a bearing, a shaft having its end fitting therein, a pressure device, a plurality of discs between the pressure device and the shaft, and a pin on which the discs are loosely mounted, one end of said pin fitting loosely in a recess in the shaft, and the opposite end fitting loosely in a recess in the pressure device. 6th. In a disc grinding and crushing mill, the combination of a frame formed or provided with a feed chamber, a shaft journaled in said frame, grinding discs, and a feed wheel mounted on the shaft, said feed wheel being oval in shape, its diameter being largest at the outer end and smallest at the inner end thereof, said feed wheel being provided with a series of concavo-convex and spirally arranged wings, said spirally arranged wings proceeding immediately from the outer and larger end of the feed wheel, and thence gradually increasing in width towards the largest diameter of the feed wheel, and thence gradually diminishing in width toward the inner and smaller end of said feed-wheel, the spiral curvatures increasing toward the inner and smaller end of the feed wheel with the gradually diminishing width of the wings, the concave of the wings being in the direction of the motion of the feed wheel and of the shaft upon which the said feed wheel is mounted. 7th. In a grind-

ing and crushing mill, the combination of a frame, a shell or casing thereon, said shell or casing provided with a projecting circular discharge chamber, having a discharge opening in the peripheral edge thereof, a pivoted gate fitting against the peripheral edge of the discharge chamber and adapted for regulating the opening thereof, and grinding discs within the shell or casing. 8th. In a grinding and crushing mill, the combination with a frame provided with an upwardly extending inlet spout, a hopper mounted above the frame, and having its discharge opening in line with the spout, a cover for the discharge opening, said cover provided with a projecting trunnion, a lever pivoted at one end, and provided medially with elongated slot through which the trunnion passes, said lever also provided with a series of teeth or serrations and that a projecting shoulder, a segment of loop form, adapted to receive the free end of the lever between the sides thereof, the lower side of said loop upon the upper face thereof being provided with teeth with which the teeth of the lever are adapted to engage, and the upper side of the loop being formed with a shoulder, which shoulder, together with the shoulder of the lever, forms a guideway in which the cover is adapted to slide, and a spring normally holding the teeth of the lever in engagement with the teeth of the segment. 9th. In a grinding and crushing mill, the combination of an integral substantially rectangular frame formed with a shell or boxing, a head or plate adapted to fit the shell or boxing, a series of bearings centrally arranged through the frame and head, a shaft longitudinally of and mounted in said bearings, said shaft adapted to have a longitudinal movement in the bearings, grinding discs within the shell or boxing, one fixed rigidly to the shaft, and the other complementary disc fixed rigidly to the inner side of the head, of the shell or boxing, a plurality of discs located within the bearings at the opposite ends of the shaft, pins on which said discs are loosely mounted, a set bolt passing through one bearing and acting against the plurality of discs at that end, and a pressure lever bearing medially against the plurality of discs at the opposite end of the shaft, the pressure of the lever and set bolt being in a diametrical line with the link shape of the frame and within the border of said frame.

**No. 63,511. Process of Manufacturing Flour.**  
(*Procédé pour manufacturer la fleur.*)



August F. Oesterreich, Winneconne, Wisconsin, U.S.A., 28th July, 1899; 6 years. (Filed 4th April, 1899.)

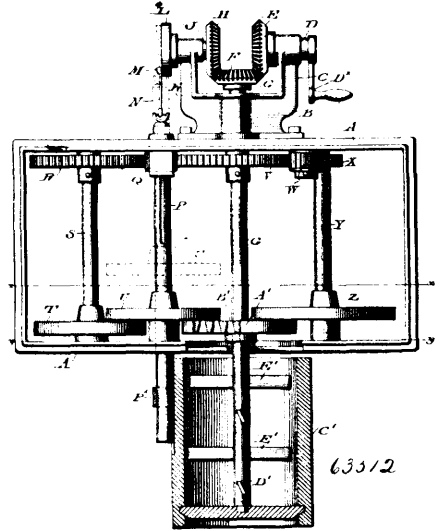
*Claim.*—The continuous process of treating wheat in the manufacture of flour, which consists essentially in first rapidly moving the wheat and slightly moistening it in transit with water without soaking the bran, next passing the wheat through a polisher and at the same time subjecting it to dry heat and mutual attrition whereby it is dried, seasoned and polished, and finally passing the wheat thus prepared, in the bran, to the first break rolls, substantially as described.

**No. 63,512. Apparatus for Separating Skins from Fruits.** (*Appareil pour separer les pelures des fruits.*)

William Thompson Young, Vineland, New Jersey, U.S.A., 28th July, 1899; 6 years. (Filed 8th May, 1899.)

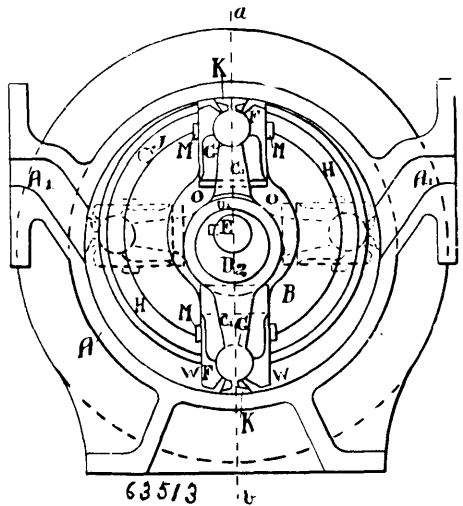
*Claim.*—1st. In a machine of the character named, the combination of a rotary apertured disc or plate, a plurality of discs or plates overlapping the first mentioned disc or plate, one of said last mentioned discs or plates reciprocating relative to said apertured disc or plate, a scraping device for said reciprocating disc or plate, and means for actuating the latter. 2nd. In a machine of the character named, the combination of a rotary apertured disc or plate, a scraping disc therefor, means for rotating said disc, a mashing device or bumper consisting of a rotatable disc overlapping said rotary apertured disc or plate and adapted to have also a reciprocating movement, and a scraping device for said mashing disc, in combination with means for actuating said disc or plates. 3rd. In

a machine of the character named, an upright shaft, a suitable housing in which said shaft is mounted, a gear secured to said shaft,



an idler and a pinion meshing with said gear, a shaft splined to said pinion and adapted to have a rotary and reciprocating movement, a second gear in mesh with said pinion and mounted on a shaft provided with a scraping disc having a roughened surface, a mashing disc carried by the shaft splined to said pinion, an apertured disc carried by the first mentioned shaft and adapted to receive the vegetable being treated, a pinion meshing with said idler, a shaft on which said pinion is mounted, and a disc or plate carried by said shaft.

**No. 63,513. Rotary Engine.** (*Machine rotatoire.*)

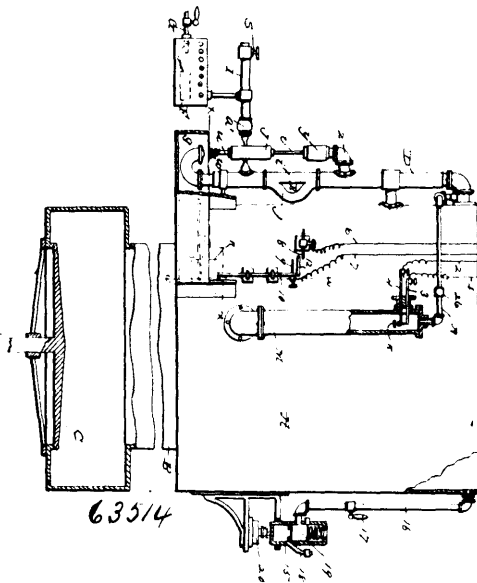


James Baird, Devonport, Auckland, New Zealand, 28th July, 1899; 6 years. (Filed 21st March, 1899.)

*Claim.*—1st. In a rotary engine, the combination with the cylinder having internal hubs arranged at each end thereof, of a shaft extending longitudinally and eccentrically through said cylinder and hubs, a disc secured to the shaft and rotating therewith, a pair of radial piston arms arranged at each end of the disc and each pair of arms having an eye portion which encircles one of said hubs, one pair of said arms being further provided at their outer ends with lateral hubs or bosses and steam tight pieces which fit into suitable receiving parts on the outer ends of the other pair of radial arms, and slide blocks connected to the said lateral hubs or bosses so as to have a sliding movement on the said disc, the parts co-operating, substantially as described. 2nd. In a rotary engine, the combina-

tion with [the cylinder having internal hubs arranged at opposite ends thereof, of a longitudinal shaft extending eccentrically through said cylinder and hubs, a disc centrally mounted upon said shaft and rotating therewith, a pair of inner and outer radial arms located respectively at opposite ends of the disc, and each arm having an eye which encircles the said hubs on the cylinder ends, lateral hubs or bosses on the outer ends of said inner arms, which hubs or bosses fit into suitable receiving parts on the outer ends of the said outer arms, and slide blocks connected to said lateral hubs or bosses so as to have an oscillating movement thereon and a sliding movement on the disc, the parts co-operating, substantially as described. 3rd. In a rotary engine, the combination with a cylinder having internal hubs arranged at opposite ends thereof, of a longitudinal shaft extending eccentrically through said cylinder and hubs, a disc centrally mounted upon said shaft and having oppositely disposed recesses or cavities, a pair of inner and outer radial arms located respectively at opposite ends of the disc, and each arm having an eye which encircles the said hubs on the cylinder ends, lateral hubs or bosses on the outer ends of one pair of said arms, which interlock with corresponding receiving parts on the opposite pair of arms, and slide blocks connected to said lateral hubs or bosses so as to have an oscillating movement thereon and a sliding movement in the recesses or cavities in the said disc, the parts co-operating, substantially as described. 4th. In a rotary engine, the combination with the cylinder having internal hubs arranged at opposite ends thereof, of a longitudinal shaft extending eccentrically through said cylinder and hubs, a disc centrally mounted upon said shaft, a pair of arms located respectively at opposite ends of the disc, and each arm having an eye which encircles the said hubs on the cylinder ends, laterally extending circular bosses G, and steam packing pieces K, on the outer ends of one pair of arms, a circular tenon L on the end of said circular piece K, a rectangular tenon T, on the end of said packing piece K, and recessed parts L<sup>1</sup> and T<sup>1</sup>, on the outer ends of the opposite pair of arms, into which recessed parts the said bosses and tenons fit, and slide blocks F, connect to said circular bosses so as to oscillate thereon, and also arranged to have a sliding movement on the disc, substantially as described. 5th. In a rotary engine, the combination with the cylinder having a central partition therein dividing the same into two compartments, internal hubs arranged within each compartment at opposite ends thereof, a longitudinal shaft extending eccentrically through said cylinder and hubs, discs centrally mounted upon said shaft, one in each cylinder compartment, two pairs of radial arms located respectively at opposite ends of the said discs, and each arm having an eye which encircles one of the said cylinder hubs, one pair of arms in each cylinder compartment being provided at their outer ends with radial bosses and steam tight packings which fit into receiving parts on the opposite pair of arms respectively, and slide blocks connected to said radial bosses so as to have an oscillating movement thereon and a sliding movement on the said discs, substantially as described.

**No. 63,514. Gas Engine. (Machine à vapeur.)**



Frederick J. F. Brugniere, New Orleans, Louisiana, U.S.A., 28th July, 1899; 6 years. (Filed 20th February, 1899.)

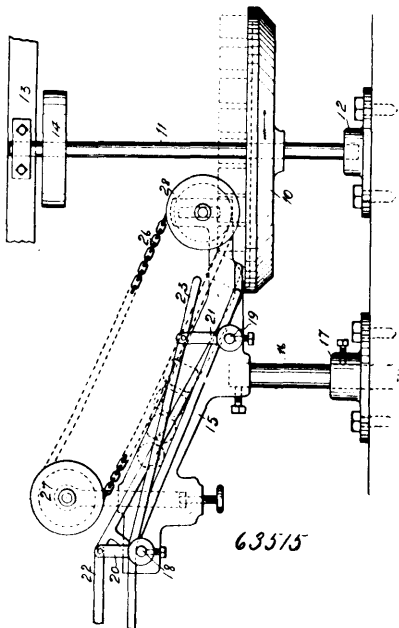
**Claim.**—1st. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, a closed vessel having an inlet and an outlet for water, an ignition tube disposed vertically at the side of the vessel and communicating at its lower end with said vessel adjacent to the bottom thereof, a gas supply pipe communicating with

interior of the chamber, a pipe connected with the gas supply pipe and also connected with the ignition tube and provided with means for permitting the passage of gas to the ignition tube and checking its return, and suitable means in said tube for igniting the explosive, substantially as specified. 2nd. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel within which the explosions are produced, the said vessel having an outlet for liquid, an exhaust pipe connected with interior of the vessel and adapted to serve as a conduit to convey explosive to the vessel, a valve controlling the outer end of said pipe, a pipe I connected with an explosive source of supply, a valve casing connected with said pipe I, a pipe K connecting said casing and the exhaust pipe, a cut-off valve arranged in the casing, and having a port for connecting the pipes I, K, and also having a stem adapted to be moved by the movement of the valve controlling the outlet of the exhaust pipe, a cylinder arranged above the valve cylinder and connected with the exhaust pipe, and a piston in said cylinder connected with the cut-off valve, substantially as specified. 3rd. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel having an inlet for water and an inlet for gas and also having a valve controlled outlet for particles of combustion and a valve controlled outlet for liquid, and a receptacle arranged without the vessel and containing the said outlets, the said receptacles having its walls extended above the outlets so as to enable it to retain a sufficient quantity of liquid to seal the outlets, substantially as specified. 4th. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel within which the explosions are produced, the said vessel having a valve controlled suction pipe and also having an outlet for liquid, and exhaust pipe connected with the interior of the vessel, an ignition tube connected at one end with the interior of the vessel, a valve controlling the outer end of the exhaust pipe, a pipe I, connected with an explosive source of supply, a valve casing connected with said pipe I, a pipe K, connecting said casing and the exhaust pipe, a cut-off valve arranged in the casing and having a port for connecting the pipes I, K, and also having a stem adapted to be moved by the movement of the valve controlling the outlet of the exhaust pipe, a cylinder arranged above the valve cylinder and connected with the exhaust pipe, a piston in said cylinder connected with the cut-off valve, and an igniting device arranged in the ignition tube, substantially as specified. 5th. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel having a valve controlled suction pipe and a valve controlled outlet for liquid, an ignition tube connected at one end with the interior of the vessel, a valve controlling the outer end of the exhaust pipe, a pipe I, connected with air and gas sources of supply, a valve casing connected with said pipe I, a pipe K connecting said casing and the exhaust pipe, a cut-off valve arranged in the casing and having a port for connecting the pipes I, K, and also having a stem adapted to be moved by the movement of the valve controlling the outlet of the exhaust pipe, a cylinder arranged above the valve cylinder and connected with the exhaust pipe, a piston in said cylinder with the cut-off valve, an igniting device arranged in the ignition tube, a movable device arranged so as to be moved by the discharge of liquid from the vessel, and connections between the movable device and the ignition device, substantially as specified. 6th. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel, a cylinder having a filling tube and a removable cap closing the same, a pipe connecting said cylinder and the vessel, a spring backed piston arranged in the cylinder and controlling communication between the cylinder and the pipe, and a heating device arranged below the cylinder, substantially as specified. 7th. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel, having an inlet for liquid and also having a discharge for particles of combustion, a source of explosive supply, a valve casing connected with the interior of the vessel and the source of supply, and a cut-off valve in said casing for controlling communication between the source of explosive supply and the interior of the vessel, said valve being operative by the discharge of particles of combustion from the vessel, by the suction created in the vessel and by gravity, substantially as specified. 8th. An apparatus for producing a vacuum or partial vacuum by explosions of gas, comprising a closed vessel and a discharge pipe for particles of combustion communicating with the interior of the vessel, the said discharge pipe being formed in two sections with the muffler E, formed by the conduits J, J, interposed between and connected to the contiguous ends of said sections, substantially as specified. 9th. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel within which the explosions are produced, the said vessel having a valve controlled suction pipe and also having an outlet for liquid, a source of explosive supply, a discharge pipe for particles of combustion communicating with the interior of the vessel, a conduit connecting the source of explosive supply and said discharge pipe, an automatic cut-off valve arranged in said conduit and operative by the discharge of particles of combustion from the vessel, by the suction created in the vessel and by gravity, and suitable means for igniting the explosive in the closed vessel, substantially as specified. 10th. In an apparatus for the purpose described, a carbureter comprising a tank, pipes extending through the side walls of the tank and across the bottom of the same and having their ends open and also having apertures in their trans-

verse portions, a hydrocarbon supply pipe connected with the interior of the tank and having a valve, and a float arranged in the tank and connected with the valve, all combined substantially as specified. 11th. In an apparatus for producing a vacuum or partial vacuum by explosions, the combination of a closed vessel having an inlet for liquid and an inlet for explosive and also having a valve controlled outlet, suitable means for igniting explosive in the vessel, and a liquid receptacle containing the said valve controlled outlet and being adapted to contain a sufficient quantity of liquid to form a liquid seal of the outlet, substantially as specified. 12th. In an apparatus for producing a vacuum or partial vacuum by explosions, the combination of a closed vessel having an inlet for liquid and an inlet for explosive and also having a valve controlled outlet for particles of combustion, suitable means for igniting explosive in the vessel, and a receptacle for liquid containing the said outlet, said receptacle being connected with the vessel so as to be supplied at each discharge of liquid therefrom and being adapted to retain a sufficient quantity of liquid to form a liquid seal of the outlet, substantially as specified. 13th. In an apparatus for producing a vacuum or partial vacuum by explosions, the combination of a closed vessel having an inlet for liquid and an inlet for explosive and also having a valve controlled outlet for liquid, suitable means for igniting explosive in the vessel and a receptacle containing the said outlet for liquid, the said receptacle being adapted to retain a sufficient quantity of liquid to form a liquid seal for the outlet. 14th. In an apparatus for producing a vacuum or partial vacuum by explosions, the combination of a closed vessel having an inlet for liquid and an inlet for explosive and also having a valve controlled outlet for liquid and a valve controlled outlet for particles of combustion, suitable means for igniting explosive in the vessel, and a receptacle containing both of the said outlets, said receptacle being adapted to be supplied with liquid at each discharge of the same from the vessel and being also adapted to retain sufficient liquid to seal both outlets, substantially as specified. 15th. In an apparatus for producing a vacuum or partial vacuum by explosions of gas, the combination of a closed vessel having a valve controlled suction pipe and a valve controlled outlet for liquid, and also having a discharge outlet for particles of combustion, a source of explosive supply and a valve, controlling communication between the source of explosive supply and the vessel, and operative by the explosion in the vessel to close communication between the source of explosive supply and the vessel and by gravity to establish communication between said source of explosive supply and the vessel, substantially as specified.

**No. 63,515. Device for Assembling and Cooling Cans.**

(Appareil pour rassembler et refroidir les boites en ferblanc.)



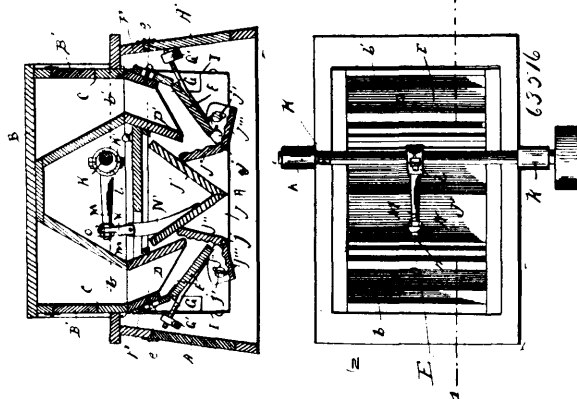
Fred B. Fulton, Vancouver, and Daniel Cook, Eburne, British Columbia, Canada, 28th July, 1899; 6 years. (Filed 23rd December, 1898.)

Claim.—1st. In an apparatus for assembling cans in an upright position after coming from the soldering machine, a wheel or disc 10 suitably mounted on a vertical shaft 11, with means of imparting slow movement thereto, an annular groove 10<sup>a</sup> around the upper surface of the said wheel, over which the newly soldered ends of the cans are caused to rest while cooling, and means for conveying the cans to and from the said wheel, as specified. 2nd. In combination with a wheel 10 having an annularly formed groove around its upper surface, a chute consisting of a frame 15 adjustably mounted on a

column 16, secured to a suitable support, support bars 18 and 19, extending laterally from the same frame, brackets 20 and 21, adjustably secured to said bars, and supporting rails 23, 24 and 25, arranged over the bars 18 and 19, with their lower ends in proximity to the upper surface of said wheel 10, as and for the purposes set forth. 3rd. In a device for assembling cans in an upright position while the solder is cooled, a wheel 10 having a groove 10<sup>a</sup> around its upper surface, in combination with a chute for delivering the cans thereto and turning them as specified, and of means for delivering the cans from the said wheel to a chute and turning them back to their first position, substantially as and for the purposes specified.

**No. 63,516. Feed Roller for Grist Mills.**

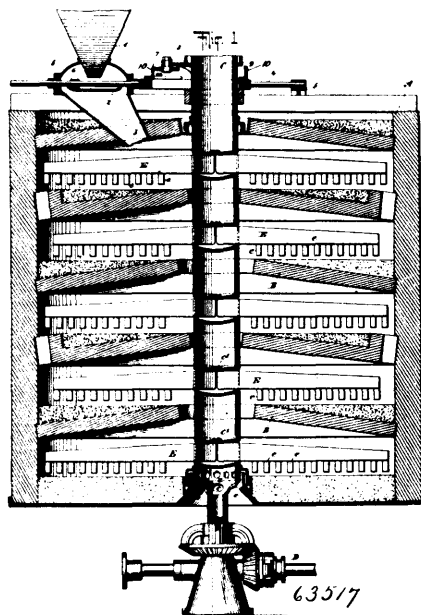
(Rouleau d'alimentation pour moulins à farine.)



John F. Hines, Roaring Spring, Pennsylvania, U.S.A., 28th July, 1899; 6 years. (Filed 12th April, 1899.)

Claim.—In a feeding and feed regulating device for mills, the combination with the feed box having the feed chutes or hoppers, one at each end portion thereof, and hinged or pivoted counter-weighted valves at the bottom of the said chutes, and the adjustable pieces to which said valves are attached, of the spring supported shaker having the feed plates J<sup>11</sup>, J<sup>111</sup>, at each end portion thereof, the plates J<sup>11</sup>, being curved and the plates J<sup>111</sup>, adjustable, the central drive or actuating shaft having an eccentric, the strap fitted thereto, and an adjustable connection between said strap and the central portion of the said shaker, substantially as specified.

**No. 63,517. Roasting Furnace.** (Fournaise à rôtir.)

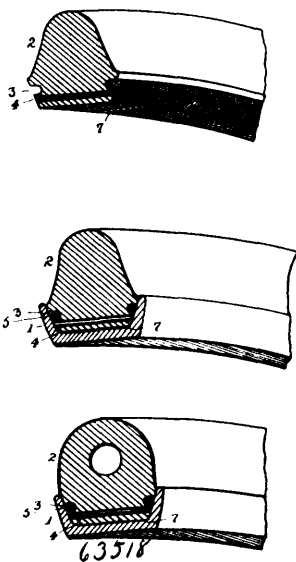


John Brown Francis Herreshoff, New York City, New York, U.S.A., 28th July, 1899; 6 years. (Filed 4th January, 1899.)

Claim.—1st. In a roasting furnace, the combination of a hollow shaft having inwardly extending pockets, combined with stirrer arms entering said pockets with means substantially as described for locking the stirrer arms in said pockets and with means to permit circulation of a cooling medium through said shaft. 2nd. In a roasting

furnace, the combination of an upright hollow shaft provided with interior passages or pockets opening to the outside of the shaft, the top walls of which are recessed, with stirrer arms adapted to enter the passages or pockets and provided with lugs entering the said recesses and with means for passing a cooling fluid through the shaft and around the passages or pockets therein to cool the junction of the stirrer arms with the shaft. 3rd. In a roasting furnace the combination of a hollow shaft having passages extending there-through laterally, stirrer arms entering the said passages from opposite sides and adapted to abut against each other within the passages and means substantially as described for locking the said stirrer arms in said passages and with means to permit circulation of a cooling medium through said shaft.

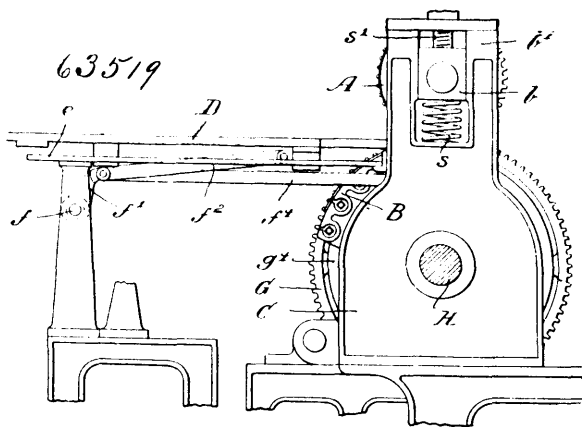
**No. 63,518. Vehicle Tire. (Bandage pour voitures.)**



James A Swinehart, Akron, Ohio, U.S.A., 31st July, 1899; 6 years. (Filed 18th April, 1899.)

*Claim.*—1st. An improved tire for vehicles, consisting of a metallic band to surround the wheel, having a channel in its outer periphery, in combination with a rubber band adapted to fit said channel and project above it, said rubber band having in its base transverse metallic rods at intervals with their ends flush with said tire, longitudinal grooves in the sides of said rubber band immediately above said transverse rods, and endless wire bands secured in tension in said grooves, substantially as shown and described. 2nd. An improved rubber tire, consisting of a band of rubber having a portion adapted to fit a channelled metal tire, and having longitudinal grooves in the sides of the part arranged to enter the metal tire, and transverse rods in its base arranged at intervals immediately below said grooves and with their ends flush with the sides of the metal tire at their points of location, substantially as shown and described. 3rd. An improved tire, consisting of a band of rubber having a portion adapted to fit a channelled metallic tire, and having longitudinal grooves in the sides of the part adapted to fit a channelled metal tire, with transverse rods in its base arranged at intervals immediately below said grooves with their ends flush with the sides of the metal, and a layer of fibrous fabric attached to the base of said tire, substantially as shown and described. 4th. An improved rubber tire, consisting of a band of rubber having a portion adapted to fit a channelled metal tire and a portion to extend above said metal part, and having longitudinal grooves in the sides of the part adapted to fit the metal tire with transverse rods in its base arranged at intervals immediately below said grooves, with their ends flush with the sides of the metal, and endless wire bands secured in tension in said grooves, and having a longitudinal opening in the part to extend above said metal, said opening being approximately one-third of the diameter of said tire, substantially as shown and described.

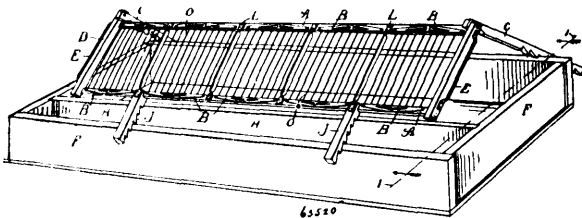
**No. 63,519. Feeding Device for Printing Presses. (Appareil d'alimentation pour presses à imprimer.)**



Eugene Semple Bradford, Brooklyn, New York, U.S.A., 21st July, 1899; 6 years. (Filed 25th May, 1899.)

*Claim.*—1st. In a machine of the character described, impress and plate cylinders, a feed board provided with a reduced or pointed front adapted to be moved on guides to and from said impression and plate cylinders so that the paper or other matter to be printed upon placed on said board may be brought accurately into the bite of said cylinders and also register accurately with a plate carried by one of said cylinders, a rock shaft connected by an arm and link with said board, an arm and link or bar connected with a pivoted bent lever provided with a roll engaging in a cam groove of an adjustable disc carried by a gear wheel and means for actuating said wheel, substantially as and for the purposes described. 2nd. In a machine of the character described, impress and plate cylinders, a feed board reciprocated on guides to and from said impression and plate cylinders to cause the matter to be printed upon to be securely delivered into the bite of said cylinders and thereby to register accurately with the plate carried by one of said cylinders, a rock shaft connected by an arm and link with said board and a link or bar connected with a bent lever provided with a roll, said roll engaging a cam groove of a rotary disc, substantially as and for the purposes described.

**No. 63,520. Sand Screen. (Crible à sable.)**



Conrad Ephraim Smith, Plainfield, Illinois, U.S.A., 31st July, 1899; 6 years. (Filed 27th February, 1899.)

*Claim.*—1st. The sand screen shown and described consisting of the combination of the frame A, D, having the stay bars L, plate B, having the integral studs S, and keepers r, screen wires o, having each end formed in a loop for fitting on said studs and the brace bars C, and arms J, provided with notches on their under sides for adjustably supporting said screen on a waggon box, all arranged to operate substantially as and for the purpose set forth. 2nd. In a sand screen the combination of the frame A, D, metal plate B, having the integral studs S, integral keeper r, and screen wires o, having their ends adapted to fit on said studs substantially as and for the purpose set forth.





## TRADE-MARKS

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

6982. REINHARDT & COMPANY, Toronto, Ont. Beer, 4th July, 1899.
6983. JAMES MOFFAT DOUGLAS & SON, Tantallon, Assiniboia, N.W.T. An Infant and Invalid Food, 4th July, 1899.
6984. JAMES MOFFAT DOUGLAS & SON, Tantallon, Assiniboia, N.W.T. A Pure and Natural Cream, 4th July, 1899.
6985. FRANZ JAHN, Toronto, Ont. Toilet Articles and Toilet Preparations, 6th July, 1899.
6986. THE R. GREENE MANUFACTURING COMPANY, London, Ont. Clothing, 6th July, 1899.
6987. THE FARMERS' TRADING COMPANY, LIMITED, Portage la Prairie, Man. Binder Twine, 6th July, 1899.
6988. FRANCIS U. KAHLE, Toronto, Ont. Medical Compounds, 6th July, 1899.
6989. JAMES FRANCIS KELLOCK, Perth, Ont. Pills, 6th July, 1899.
6990. CLEMENS DORR AND CARL RUBITSCHUNG, trading as CLEMENS DORR & COMPANY, Gernersheim, Germany. General Trade Mark, 11th July, 1899.
6991. ISRAEL ROOS, Frankfort-on-the-Main, Germany. Pharmaceutical Products, 11th July, 1899.
6992. CHARLES G. NORRIS, Lyndonville, Vermont, U.S.A. Medicines for the Cure of Diseases of Cows, 12th July, 1899.
6993. CHARLES F. ROSS, Toronto, Ont. Patent Medicine, 13th July, 1899.
6994. YBOR MANRARA COMPANY, New York, N.Y., U.S.A., and Havana, Cuba. Cigars, Cigarettes and Cheroots, 14th July, 1899.
6995. CHAS. A. BULL, Montreal, Que. A Bronze Fluid, 17th July, 1899.
6996. STOTT & JURY, Bowmanville, Ont. A Remedy for the Feet, 20th July, 1899.
6997. GORDON, MACKAY & COMPANY, LIMITED, Toronto, Ont. Dry Goods, 21st July, 1899.
6998. WILLIAM R. MACK, Cornwall, Ont. A Breakfast Food, 22nd July, 1899.
6999. ROBERT LINCOLN SIMPSON AND DAVID JAMES JOHNSTON, Toronto, Ont. Tea, 26th July, 1899.
7000. THE PORT HOPE BREWING AND MALTING COMPANY, LIMITED, Port Hope, Ont. Malt Stout, 29th July, 1899.
7001. THE ROCK CITY TOBACCO COMPANY, Québec, Qué. Tabac coupé et en torquette, à chiquer et à fumer, 31 juillet, 1899.



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