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RECORD

Vol. XXI.—No. 6.

JUNE 30th, 1893.

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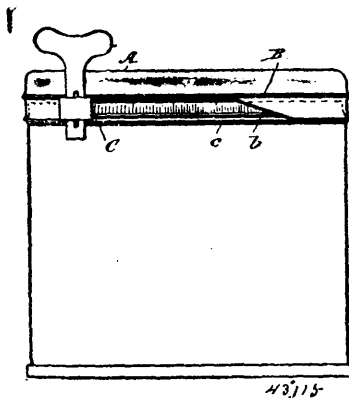
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No. 43,115. Metal Can. (*Boîte métallique.*)

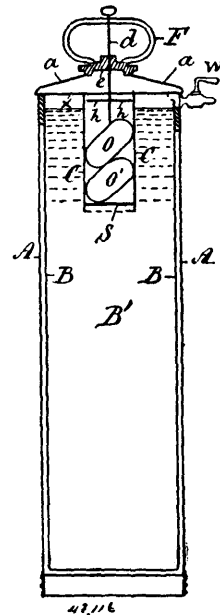


William Pratt, Montreal, Quebec, Canada, 2nd June, 1893; 5 years.

Claim.—1st. A metal can, box or receptacle, having upon its perimeter varying weakening lines running one into the other, for the purpose set forth. 2nd. In a metal can, box or receptacle of the class described, a cover having a removable strip and tongue portion, forming a part of its perimeter and formed by varying weakening lines running one into the other and the whole made from one piece of sheet metal. 3rd. In a metal can, box or receptacle of the class described, a cover having a removable strip and tongue portion formed by a weakening line and a slit running into same and freeing such tongue portion and the whole made from one piece of sheet metal. 4th. A metal can, box or receptacle, having upon its perimeter a single horizontal main weakening line and a branch weakening line at an angle to the main line, for the purpose set forth. 5th. A metal can, box or receptacle, the cover rim of which has a single main weakening bead around its perimeter, about midway of its depth and a branch bead from said main bead to the edge of the rim, for the purpose set forth. 6th. In a metal can, box or receptacle of the class described, a cover having its detachable strip and tongue portion formed in one with same and the whole from one piece of sheet metal. 7th. A metal can, box or receptacle, the cover of which has a continuous weakening line around its perimeter with a slit running into same, for the purpose set forth.

No. 43,116. Chemical Fire Engine.

(*Machine chimique d'incendie.*)



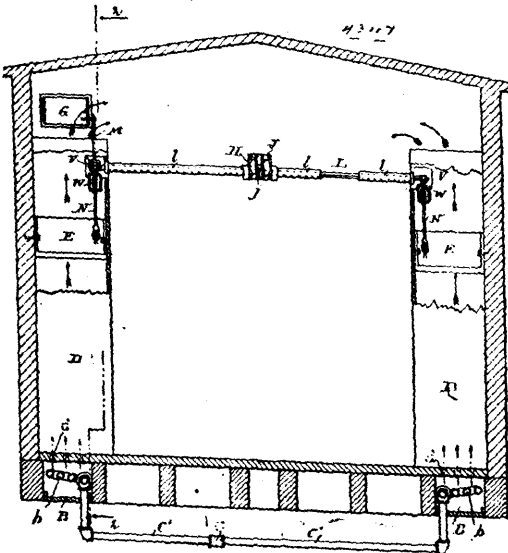
Charles Patton, Collingwood, Ontario, Canada, 2nd June, 1893; 5 years.

Claim.—1st. In a chemical portable fire extinguisher, the exterior case A, having a glass lining B, cemented thereto around the top edge to hold the lining immovably and prevent the extinguishing fluid having contact with said case and corroding the same, as set forth. 2nd. In a chemical fire extinguisher, the combination, with a chamber B', containing the extinguishing fluid, of glass bulbs or phials O, O', within a pocket C, within said chamber, each bulb or phial containing a gas producing chemical and hermetically sealed or otherwise closed, as set forth for the purpose described. 3rd. In a chemical fire extinguisher, the combination, with a cylinder B', containing the extinguishing fluid, said chamber closed at the top by a cover a, and provided with an outlet valve or cock W, of a break rod d, sliding through said cover, a tubular chamber or pocket C, pendant with said chamber B', and in alignment with said break rod, and glass bulbs or phials O, O', within said pocket, as and for the purpose set forth. 4th. In a chemical fire extinguisher, the combination, with a case or vessel A, provided with a glass lining B, forming a cylindrical chamber B', containing the extinguishing fluid, of an open chamber or pocket C, within said cylindrical chamber, glass or fragile bulbs or phials O, O', containing gas producing chemicals and stored in said pocket, and a break rod d, adapted by depression to break said bulbs, as set forth for the purpose described.

No. 43,117. Fruit Car Heating Apparatus.

(Appareil de chauffage pour chars à fruits.)

Fig. 2.



The Consolidated Car Heating Company, assignee of James Finney McElroy, all of Albany, New York, U.S.A., 3rd June, 1893; 6 years.

Claim.—1st. In an apparatus for heating fruit cars, a hot air chamber placed beneath the car, a series of piping placed within said hot air chamber, in communication between said hot air chamber and the interior of the car, a pipe connecting said piping in the hot air chamber with the train pipe, substantially as described and for the purpose set forth. 2nd. In an apparatus for heating fruit cars, said piping placed within a chamber outside of the car, a communication between the interior of the car and the chamber in which said piping is located, substantially as described and for the purpose set forth. 3rd. In an apparatus for heating fruit cars, a series of piping connected with the steam bearing train pipe placed exterior to the car, a communication between said piping and the interior of the car, substantially as described and for the purpose set forth. 4th. In an apparatus for heating fruit cars, a series of piping suitably connected, a steam bearing train pipe connected therewith, a hot air chamber exterior to the car within which said piping is placed, a hot air box placed within the car, a communication between said hot air boxes and said pipe containing chamber, said hot air boxes communicating with the upper portion of the car, substantially as described and for the purpose set forth. 5th. In an apparatus for heating fruit cars, a series of piping suitably connected, steam bearing train pipe connected therewith, a hot air chamber exterior to the car within which said piping is placed, a hot air box placed within the car, a communication between said hot air boxes and said pipe containing chamber, said hot air boxes communicating with the upper portion of the car, substantially as described and for the purpose set forth. 6th. In an apparatus for heating fruit cars, a box placed at each end and on each side of a fruit car below the floor, a series of piping placed within each of said boxes, said piping connected with the steam bearing train pipe, within the car at each corner thereof a hot air duct communicating with said pipe containing boxes and opening into the car, a cold air duct extending from near the bottom of the car communicating with the lower portion of the boxes in which the piping is contained, a valve placed in hot air duct, a thermostat operating to open and close said valve, substantially as described and for the purpose set forth.

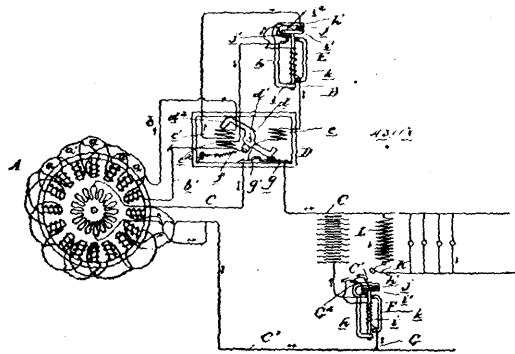
No. 43,118. Lighting Cars by Electricity.

(Éclairage des chars par l'électricité.)

The Consolidated Car Heating Company, of Wheeling, Virginia, assignee of James Finney McElroy, of Albany, New York, all in the U.S.A., 3rd June, 1893; 6 years.

Claim.—1st. In an electric system of lighting cars, the combination of a generator of alternating currents provided with two sets of field coils, two main leads extending through the cars, a shunt circuit divided into two branches connected to alternate field coils, and a current director operated by the passage of the current through said shunt circuit to divert the current waves of one direction to one branch of said shunt circuit and those of the opposite direction to the other branch of said circuit, substantially as

described. 2nd. In an electric system of lighting cars, the combination of a generator of alternating currents provided with two sets of



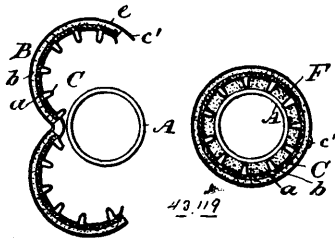
field coils, two main leads extending through the cars, a shunt circuit divided into two branches, one for each set of field coils, a current director operated by the passage of the current through said shunt circuit to divert the current impulses of one direction to one branch and those of the opposite direction to the other branch of said shunt circuit, and current regulating devices comprising a choke coil in the shunt circuit whose iron core is immersed or withdrawn from the coil by the operation of a controlling magnet in the branches of the shunt circuit, substantially as described. 3rd. In an electric light equipment for cars, the combination of two main conductors, means for supplying the same with an alternating current, a storage battery and lamps respectively in circuit with one of the main conductors and with separate branches of a feeder from the other main conductor, and a current director in said feeder operated by the current passing through said feeder to divert the current impulses of like direction alternately to one and the other branch of said feeder, substantially as described. 4th. In an electric light equipment for a car, the combination of two main conductors forming part of the main leads of an alternating current generator, a storage battery and lamps respectively in circuit with one of the main conductors and with separate branches on a feeder from the other main conductor, a current director operated by the current passing through said feeder to divert the current impulses alternately over one or the other branch of the feeder, a resistance in a shunt circuit with the lamps, and a switch in the lamp circuit for cutting out the lamps and closing the circuit through the resistance, substantially as described. 5th. In an electric light equipment for a car, the combination of two main conductors, of an alternating current generator, a storage battery in circuit with one of said main conductors, and with one branch of a feeder from the other main conductor, lamps in multiple with the same main conductor and with another of said feeder, carbon discs or like bodies having their conductivity increased or decreased by an increase in pressure, included in each branch of said feeder, and a magnetic device operated by the current impulses passing in opposite directions through the feeder to alternately compress the carbon discs in the branches thereof, substantially as described. 6th. In an electric system of lighting cars, the combination with a supply circuit including translating devices in two separate branches thereof, of two piles of carbon discs one in each branch of said circuit, an electro-magnet in said circuit arranged to compress with its core, one or the other of said piles of carbon discs by a contraction or expansion on its length respectively, and a permanent magnet extending with its poles in proximity of the poles of the electro-magnet, whereby upon the passage of an alternating current through said circuit, the core of said electro-magnet is alternately lengthened and shortened, and thereby correspondingly compresses one or the other pile of carbon discs to divert the current impulses of one direction to one branch and those of the opposite direction to the other branch, substantially as described.

No. 43,119. Non-heat Conducting Cover for Steam Pipes. (Couverture non-conductrice de la chaleur pour tuyaux à vapeur.)

William Harvey Norris, Spokane, Washington, and Thomas Pin Hornsby, Portland, Oregon, all of U.S.A., 3rd June, 1893; 6 years.

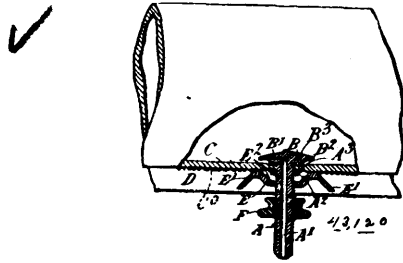
Claim.—1st. In a non-heat conducting covering for steam pipes, substantially as described, the combination with a jacket, of the end collars M, formed by bending fluted sheets of metal into circles, the said collars having their ends loosely lapped, and also having the struck up wings E, adapted to engage the ends of the jacket, and the non-conducting fillings interposed between the end collars and the pipe on which the covering is mounted adapted to create a dead air space within the jacket between the end collars, substantially as and for the purpose set forth. 2nd. In a non-heat conducting covering for steam pipes and the like, the combination with a jacket comprising two longitudinal sections flexibly connected together, the

middle collar C, formed from a sheet of fluted metal, and the intermediate collars D, formed from fluted wire, interposed between the



jacket and the pipe upon which it is mounted, of the end collars M, formed by bending fluted sheets of metal into circles, the said collars having the struck up wings B, adapted to engage the ends of the jacket, and the non-conducting fillings interposed between the end collars and the pipe on which the covering is mounted adapted to create a dead air space within the jacket between the end collars, substantially as and for the purpose set forth.

No. 43,120. Valve. (*Souape.*)



The Pneumatic Tyre and Booth's Cycle Agency, Dublin, Ireland, assignees of Charles Kingston, Coventry, England, 3rd June, 1893; 6 years.

Claim—1st. The combination, with a receptacle for containing fluid under pressure, of a valve, the flanged head of which is placed inside the said receptacle and the stem of which projects through the wall thereof, the said stem being provided with an axial hole communicating with the interior of the receptacle by an orifice in that face of the head which comes in contact with the wall of the receptacle, and means for forcing the said wall against the said face of the head, substantially as and for the purpose set forth. 2nd. The combination, with the air tube of a pneumatic tyre, of a valve constructed with a flanged head placed inside said air tube and a stem projecting through the wall of the air tube, said stem being provided with an axial hole which communicates with the interior of the air tube by an orifice in that face of the head which comes in contact with the wall of the air tube, and means for forcing the said wall of the air tube against the said face of the head, substantially as and for the purposes set forth. 3rd. The combination, with the air tube of a pneumatic tyre, of a valve constructed with a flanged head placed inside said air tube, and a stem projecting through the wall of the air tube, said stem being provided with an axial hole which communicates with the interior of the air tube by an orifice in that face of the head which comes in contact with the wall of the air tube, and by a second orifice in another part of the head, which orifice is covered with a piece of elastic material adapted to be deformed when air is pumped into the air tube and which constitutes a non-return valve, and means for forcing the under side of the head against the wall of the air tube, substantially as described. 4th. The combination, with the air tube of a pneumatic tyre, of a valve constructed with a flanged head, having an orifice in that face which comes in contact with the wall of the air tube, and a washer adapted to be pressed against the air tube and thus force the wall of said air tube against the said face of the valve head, substantially as and for the purpose specified. 5th. The combination of the rim of a wheel, the air tube of a pneumatic tyre secured thereto, a valve constructed with a flanged head having an orifice in that face which comes in contact with the wall of the air tube, a washer adapted to slide on the valve stem and a nut adapted to be screwed against the rim of the wheel and draw the valve head outwards so as to clamp the wall of the air tube between the head of the valve and the washer on the stem, substantially as and for the purposes set forth. 6th. The combination of the rim of a wheel, the air tube of a pneumatic tyre secured thereto, a valve constructed with a flanged head having an orifice in that face which comes in contact with the wall of the air tube, a washer adapted to slide on the valve stem, a nut adapted to be screwed against the rim of the wheel and draw the valve head outwards so as to clamp the wall of the air tube between the head of the valve and the washer on the

stem, and an arm secured to said nut and adapted to engage with a spoke of the wheel whereby the nut which operates the valve is prevented from slacking back when in use, as and for the purpose specified.

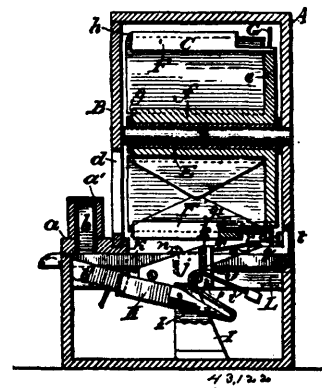
No. 43,121. Incandescent Electric Lamp.
(*Lampe électrique à incandescence.*)



Henry Sachs Kalisk, assignee of Eugene McQuat, both of Boston, Massachusetts, U.S.A., 3rd June, 1893; 18 years.

Claim—1st. The above described method of making an incandescent electric lamp, consisting of the following steps: 1st, uniting to the interior of an adhesively hot glass tube, two platinum wires; 2nd, causing the said tube to collapse by heat, so that the edges of the tube shall seam together and form a globular mass around the wires; 3rd, drawing the wires away from each other and outwardly dragging the adhering glass with them so as to ensure better contact and to leave the glass in better form for resisting fracture, substantially as described. 2nd. In an incandescent electric lamp, the method of manufacture consisting of the following steps: 1st, placing the prepared tubular "mount" with attached filament loosely into the open neck lamp bulb; 2nd, drawing down the neck of the bulb while the "mount" is within it, and cutting off the former at a point where it is at least as small as the end of the "mount" tube; 3rd, melting together the unexpanded open end of the "mount" tube, and the drawn out neck of the lamp bulb; 4th, pushing the "mount" and adjacent parts inward, until the filament is properly located, and the end of the neck of the bulb assumes the form of an inwardly projecting cone, substantially as described.

No. 43,122. Vending Apparatus.
(*Appareil de vente.*)

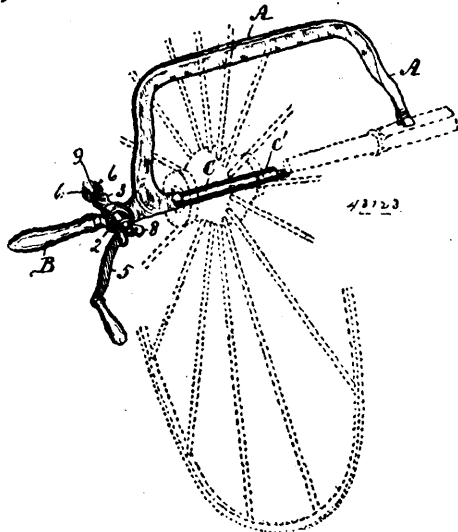


The Hess Postal Facility and Supply Company, Philadelphia, assignees of Christian Hess, Steelton, all of Pennsylvania, U.S.A., 3rd June, 1893; 6 years.

Claim—1st. A vending apparatus comprising a suitable movable carrier for the articles, a slide adapted to be grasped by the operator and in direct engagement with the carrier for giving a step by step movement to the same, said slide provided also with means whereby in its outward movement it acts against an article for delivering the same, and a coin operated detent for said slide, substantially as described. 2nd. A vending apparatus comprising a rotatable carrier having pins upon its periphery, a slide adapted to be grasped by the operator and in direct engagement with the pins to rotate the carrier, a coin operated dental engaging said slide, and a projection carried by said slide for forcing out the articles from the carrier, substantially as described. 3rd. A vending apparatus comprising a rotatable carrier having pins or projections upon its periphery, a slide adapted to be grasped by the operator, a coin operated detent for said slide, said slide having an inclined slot for the passage

of the pins and acting directly on said pins, whereby the carrier is rotated, and a projection on the end of the slide adapted in the outward movement thereof to force out the articles from the carrier, substantially as described. 4th. A vending apparatus comprising a rotatable carrier having pins or projections upon its periphery, a slide adapted to be grasped by the operator and in direct engagement with the pins, a coin operated detent for said slide, a plate or plates on said slide having an inclined slot formed therein for the passage of the pins, whereby the carrier is rotated, and a projection on the end of the slide, adapted in the outward movement thereof to force out the articles from the carrier, substantially as described. 5th. In the described apparatus, a suitable rotatable carrier having a slotted sleeve or hub to fit over the axis, and peripheral strips slotted correspondingly and cut away at the inner end, in combination with a suitable coin operated slide provided with means for forcing out the articles from the slot, substantially as described. 6th. In combination with the casing, the axle attached thereto, the carrier having a slotted sleeve fitting over said axle, a disc at the inner end of said sleeve, slotted strips extending beyond the plane of the periphery of the disk at their front, but at the rear flush therewith, the articles being held in said slots and at the rear projecting beyond said slots, pins arranged on said disc behind and upon either side of the projecting edge of the articles, a suitable coin operated slide provided with a cam for rotating the carrier, and a projection for engaging the projecting edge of the article and forcing out the same, substantially as described. 7th. In a vending apparatus, a coin chute, a pivoted trough normally registering with the end thereof, a rearward projection on said trough, a slide having a notch, a detent engaging said notch and pivoted at the opposite end to the casing and extending over the projection on the trough, a carrier, means upon the slide for operating the carrier and delivering the article, and an incline on the slide for raising the detent and thereby tilting the trough, substantially as described.

No. 43,123. Combined Axle Nut Wrench and Lifter.
(Clé à écrou et chèvre combinées pour essieux.)



James Robertson, Anslow Barrington Rudd and Henry H. Neilson, all of Perth, Ontario, Canada, 3rd June, 1893; 6 years.

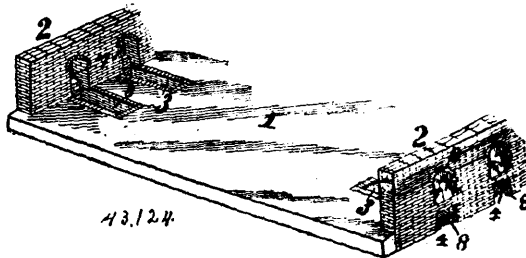
Claim.—1st. An axle lifter, consisting of a curved bar or frame A, one end terminating outwardly in a handle B, and having an arm C, extending inwardly, as set forth. 2nd. A combined axle lifter and nut remover composed of the curved bar or frame A, adapted to span a wheel hub, one end terminating in an outwardly extending handle B, and having an arm C, extending inwardly toward the opposite end of the bar, and an axle nut remover or wrench journaled in a hole near the intersection of said handle and arm, and consisting of the bifurcated spring jaws 6, inserted in a rotary head 3, and provided with a thumb nut 8, said tubular head provided with a crank handle 5, as and for the purpose set forth.

No. 43,124. Brick Kiln. (Four à briques.)

Henry J. Kinzel, assignee of John C. Kinzel, both of Knoxville, Tennessee, U.S.A., 3rd June, 1893; 6 years.

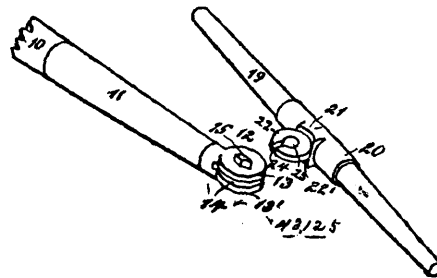
Claim.—In a brick kiln, the combination of the bed or base, the short independent side walls, having front openings for the furnace doors and ash pits, parallel pairs of open furnaces extending inwardly from said front openings in the side walls and opening their entire length directly into the space inclosed by said walls and the body of the kiln, the casing composed of upwardly sloping terraces supported upon said side walls, the end walls composed of

dirt banked up and overlapping the lower edges of the ends of the supported terraces, and an inclosing covering and cap composed of



closely laid planking completely covering the outer faces of said walls and curved over and capping the top of the same and meeting the faces of the overlapping terraces, substantially as set forth.

No. 43,125. Neck Yoke. (Volée de bout de timon.)

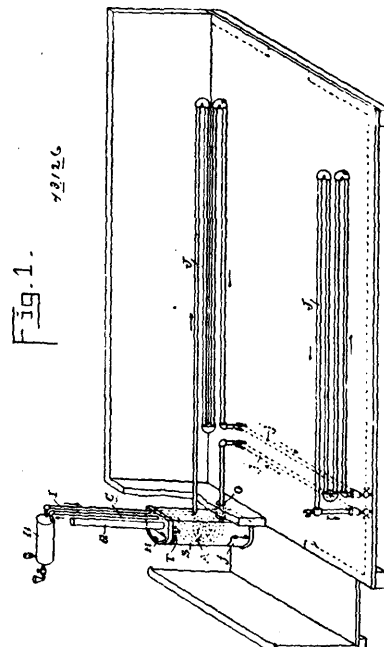


James S. Brown and Harry Albert Marks, both of Eureka, California, U.S.A., 5th June, 1893; 6 years.

Claim.—The combination, with the pole or tongue, of the ferrule on the forward end thereof, constructed with a clevis-like projection in front, composed of an upper arm or cheek, and a lower arm or cheek with a space in between them and with a bolt hole down through them, the neck yoke with its attached sleeve having a lug in its rear, formed with a flat projecting cheek adapted to fit in between the cheeks on the end of the pole ferrule and provided with a keyhole bolt opening up through it, cutting through the edge of it in the rear, and a fixed or non-rotatable pivotal bolt of reduced flattened construction where it passes through the cheek on the lug of the neck yoke, substantially as shown and described and for the purposes herein set forth.

No. 43,126. Apparatus for Heating Street Cars.

(Appareil pour chauffer les chars de rue.)

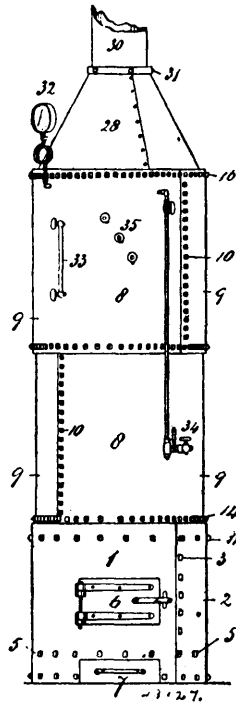


The Consolidated Car Heating Company, assignee of James Finney McElroy, all of Albany, New York, U.S.A., 5th June, 1893; 6 years.

Claim.—In a street car heater, the combination of a drum, a

water circulating coil arranged concentrically with said drum, the adjacent spirals of said coil fitting closely together, an insulating material placed between the coils and the walls of the heater, an insulating material placed outside the interior wall of the drum, an enveloping shell communicating with the open air and also communicating with the interior of the car near the floor thereof, substantially as described and for the purpose set forth.

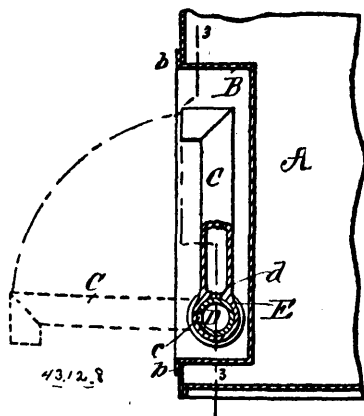
No. 43,127. Upright Steam Boiler. (*Chaudière verticale.*)



The Kootenay Columbia Prospecting and Mining Company, assignees of James Kelly, all of Ottawa, Ontario, Canada, 5th June, 1893; 6 years.

Claim.—1st. An upright steam boiler constructed in separable parts or sections secured together by bolts and nuts, each section constructed of one or more plates united by bolts and nuts, whereby the plates or the sheets composing a section can be separated or detached and transported, and put together by replacing the bolts and nuts, as set forth. 2nd. A steam boiler constructed of plates secured together by nuts and bolts, a packing surrounding the bolts at the head and nut, and a washer against which the nut screws whereby the packing is compressed to fill interstices, and the plates capable of separation for transportation and reconstruction, by removal of the bolts, replacing the same and renewing the packing, as set forth. 3rd. A steam boiler having one end of the flues provided with an exterior screw thread and nut screwing thereon, and a packing and washer intervening the crown plate and said nut, whereby the joint is made tight by the packing, and the flue removable, at set forth. 4th. In a steam boiler, the combination with the flue plates 12, 15, of the removable flues 13, and a tube 20, surrounding the central flue interveningly of the flue plates, for the purpose set forth.

No. 43,128. Faucet. (*Robinet.*)

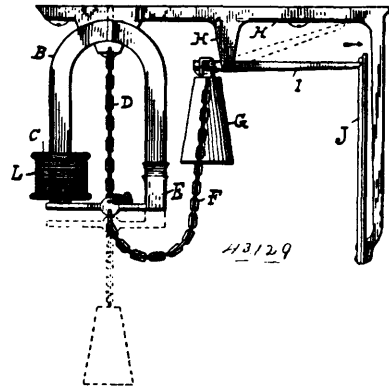


Samuel Ingham Merrill, Los Angeles, California, U.S.A., 5th J une, 1893; 6 years.

Claim.—The combination with the chamber B, open at its front, and the tapering tubular barrel D, having its large end opening through the lower end of one side wall of chamber B, closed at its opposite end and provided between its ends with a lateral opening c, the outer tapering sleeve E, upon the barrel D, and having a lateral opening d, to register with opening c, a spiral spring on the smaller end of barrel D, and bearing at one end against the smaller end of sleeve E, and bearing at its opposite end on the adjacent side wall of the chamber B, and the lever spout C, secured to sleeve E, over its openings c, substantially as set forth.

No. 43,129. Automatic Electric Fire Alarm.

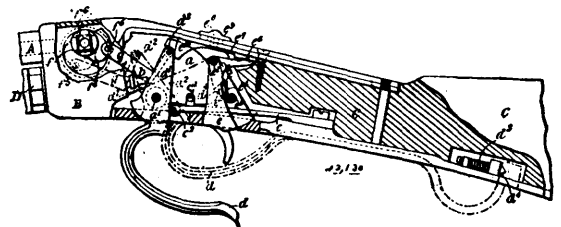
(*Avertisseur électrique automatique d'incendie.*)



Leonidas Gorham Woolley, Grand Rapids, Michigan, U.S.A., 5th June, 1893; 6 years.

Claim.—1st. An automatic electric fire alarm comprising a permanent magnet, an armature therefor, an induction coil, a stored power for suddenly separating the armature and magnet, and a thermostatic releasing device, substantially as specified. 2nd. An automatic electric fire alarm comprising a permanent magnet, an armature therefor, an induction coil or helix in a permanently closed circuit with a signalling apparatus, a stored power for suddenly separating the armature and magnet, and a thermostatic releasing device, substantially as set forth. 3rd. An automatic electric fire alarm comprising a permanent magnet, an armature therefor, an induction coil, a means for suddenly separating the armature and magnet to produce a momentary current in the coil, and a thermostatic holding and releasing device holding the means until the temperature effects it sufficiently to release it, substantially as specified. 4th. An electric fire alarm comprising a permanent magnet, an armature therefor, an induction coil, a weight connected with the armature, and a thermostatic device for holding and releasing the weight, substantially as set forth. 5th. An automatic electric fire alarm comprising a magnet, carrying a coil, an armature therefor, a weight connected with the armature, a pivoted lever supporting the weight, and a thermostatic device for holding and releasing the lever, substantially as specified. 6th. An automatic electric fire alarm comprising a magnet carrying an induction coil, an armature therefor a weight connected with the armature, a pivoted lever supporting the weight, and a strip composed of dissimilar metals having one end permanently held and its opposite free end engaging the lever, whereby heated temperature expands the metals unevenly and releases the lever to allow the weight to suddenly remove the armature, substantially as specified.

No. 43,130. Small Arm. (*Armes à feu portatives.*)



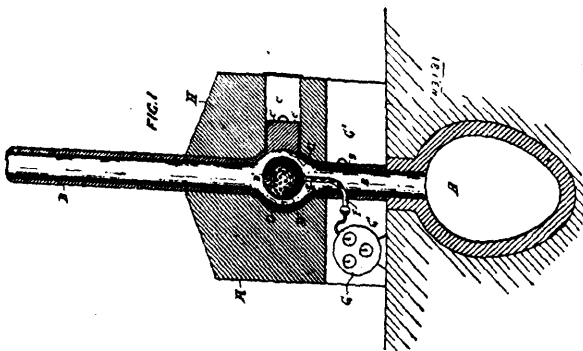
The International (Geffard) Gun and Ordnance Company, London, England, assignee of John Stewart Wallace, Belfast, Ireland, 5th June, 1893; 6 years.

Claim.—1st. In a rifle or other small arm, the combination, with the lock mechanism, of a hammer which is wholly situated within the breech, that is to say does not project therefrom, substantially as described. 2nd. In a rifle or other small arm, the combination,

with the lock mechanism, of a plug through which the bullet or projectile is introduced into the gun, said plug being connected with the lock mechanism and rotated thereby to open the aperture when the hammer is cocked, substantially as described. 3rd. In a rifle or other small arm, the combination, with the lock mechanism, of a plug through which the bullet or projectile is introduced into the gun, said plug being connected by means of a crank arm and link with the cocking lever and thereby rotated to open the aperture when the cocking lever is operated to cock the hammer, substantially as described. 4th. In a rifle or other small arm, the combination of a plug through which the bullet or projectile is introduced into the gun, a cocking lever secured to the said plug, a pin fixed eccentrically in the end of the plug, and a link engaging with the said pin and with the hammer, so that the hammer will be cocked when the plug is rotated to open the aperture, substantially as described. 5th. In a rifle or other small arm, the combination of a hammer wholly contained within the breech, and a cocking lever pivoted to the stock, said lever having a pin for engaging with the hammer to effect the cocking, substantially as described. 6th. In a rifle or other small arm, the combination of a hammer wholly contained within the breech, a cocking lever pivoted to the stock, and a bell crank lever pivoted within the stock, one leg of said bell crank lever being adapted to engage with a recess formed in the hammer, and the other leg being coupled to the cocking lever, substantially as described. 7th. In a rifle or other small arm, the combination, with the cocking lever, the hammer and the trigger of a tail piece formed on the trigger and a sliding block adapted to be automatically moved by the cocking lever when cocking the hammer into a position above the said tail piece, in which position it locks the trigger, substantially as described. 8th. In a rifle or other small arm, the combination with the lock mechanism of a spring lever having two limbs pivoted within the stock, one of said limbs being adapted to engage with and lock the trigger, and the other being adapted to engage with a notch in the hammer and to lock the hammer when so engaged, and a thumb lever for moving the said locking lever out of the locking position, substantially as described. 9th. In a rifle or other small arm, the combination with the lock mechanism of a bifurcated spring lever pivoted within the stock and adapted to engage with and lock both the hammer and the trigger, and a projection formed on the hammer to prevent disengagement of the hammer and locking lever until the hammer is properly cocked, substantially as described. 10th. In a rifle or other small arm, the combination with the cocking lever of lock mechanism having a hammer wholly contained within the breech, said hammer having the rear notches formed on its periphery, substantially as described. 11th. In a rifle or other small arm, the combination of a gun barrel having a coned end, and slots or openings formed in the barrel and plug through which the bullet or projectile is introduced into the barrel, said slots being arranged so that the aperture can be opened and closed by turning the plug, substantially as described. 12th. In a rifle or other small arm, operated by compressed or liquified gas, the combination with the reservoir containing the stored energy, and the lock mechanism of a valve, the face of which is rounded or bevelled off to reduce the area thereof, substantially as described for the purpose specified. 13th. In a rifle or other small arm operated by compressed or liquified gas, the combination with the reservoir containing the stored energy, and with the lock mechanism, of an equilibrium valve operated by the hammer, substantially as described.

No. 43,131. Sewer Ventilator.

(Ventilateur pour égouts.)



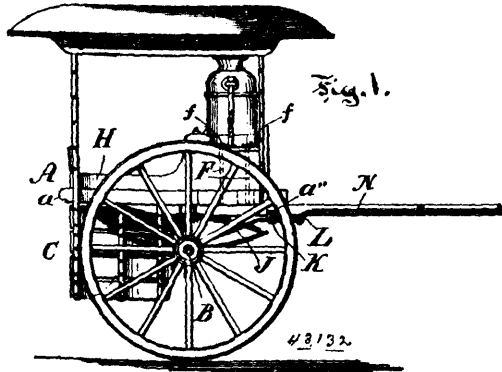
Robert McKenzie, Sydney, New South Wales, Australia, 5th June, 1893; 6 years.

Claim.—1st. In uptake shafts from sewers, a chamber formed within an uptake shaft, in combination with a shell which is capable of being raised to an intense heat by gas or otherwise whereby a draught from the sewer is created, the foul gases that are drawn past the shell, decomposed, and the noxious germs destroyed, as herein specified. 2nd. A perforated shell, provided with a false bottom below which is introduced a gas jet or burner, and filled

with asbestos or other incombustible material, the whole appliance being capable of being brought to an intense heat by the action of the gas burner when lighted, for the purpose of causing an up draught and destroying the foul gases and noxious germs that are thereby drawn from the sewer, as described. 3rd. The combination of an uptake shaft from sewers with a perforated plate or grating having a "Bunsen Burner" placed below it, and asbestos, or other incombustible material above it, the grating and asbestos being capable of being raised to an intense heat by the action of the gas burner, for the purpose of causing an up draught and destroying the foul gases and noxious germs that are thereby drawn from the sewers, as herein specified.

No. 43,132. Two Wheeled Vehicle.

(Voiture à deux roues.)

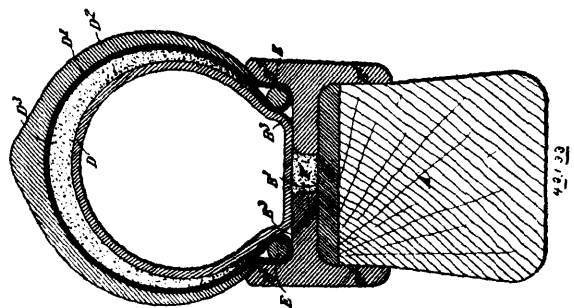


Manly Breaker Boone, Galveston, Texas, U.S.A., 5th June, 1893; 6 years.

Claim.—1st. In a two wheeled vehicle, the combination, with the frame of the vehicle, of a drop box in the rear of the axle, a removable box located in front of the axle, and guides extending the length of the vehicle to convey the box to its place, substantially as set forth. 2nd. In a two wheeled vehicle, the combination, with the frame of the vehicle, of a drop box in the rear of the axle, a removable box located in front of the axle, guides extending the length of the vehicle to convey the box, and an adjusting device for adjusting the position of the box in front of the axle, substantially as and for the purpose described. 3rd. In a two wheeled vehicle, the combination, with the frame of the vehicle, of a drop box in the rear of the axle, a seat extending centrally the length of the drop box, a removable box located in front of the axle, and guides extending the length of the vehicle to convey the box to its place, substantially as set forth. 4th. In a two wheeled vehicle, the combination, with the frame of the vehicle, of a drop box in the rear of the axle, a seat extending centrally the length of the drop box, a removable box located in front of the axle, guides extending the length of the vehicle to convey the box to its place, and an adjusting device for adjusting the position of the box in front of the axle, substantially as described. 5th. In a two wheeled vehicle, the combination, with the frame of the vehicle, of the axle, the V-shaped axle brace, the loop secured to the front of the frame, the single tree secured to the tongue of the axle brace, the shafts secured to the frame, and the shaft braces secured to the front of the frame and the shafts, substantially as described.

No. 43,133. Wheel for Velocipedes.

(Roue de velocipèdes.)



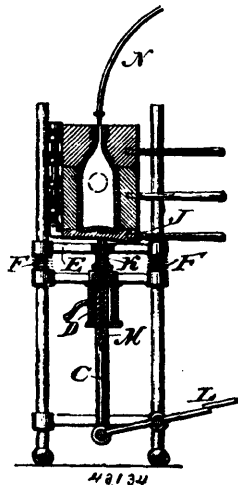
The Pneumatic Tyre and Booth's Cycle Agency, Dublin, Ireland, assignee of Charles Kingston Welch, Coventry, England, 5th June, 1893; 6 years.

Claim.—1st. The combination of a pneumatic tyre and a wheel rim formed with a central depression and outwardly extending side flanges, the portion of the said rim between the said central depres-

sion and the side flanges being approximately cylindrical, substantially as described for the purpose specified. 2nd. The combination of a pneumatic tyre, a rim formed with a central depression and outwardly extending side flanges and a filling for the said central depression, substantially as described for the purpose specified. 3rd. The combination of a felloe of a wheel, a rim formed in two parts, each having an approximately cylindrical portion and an outwardly extending flange, the said parts of the rim being secured on the felloe with an annular space between said parts, said space forming the central depression in the rim, and a pneumatic tyre secured on the rim by endless inextensible cores at the edges of the tyre cover, substantially as described. 4th. The combination, with a pneumatic tyre, of a hollow rim made of one strip of metal bent to form a central groove and outwardly extending side flanges, the portion of the rim between the said central groove in the side flanges being approximately cylindrical and the edges of the metal strip being joined at the bottom of the groove, substantially as described for the purpose specified. 5th. The combination of a wheel rim formed with a central depression and outwardly extending side flanges, and a pneumatic tyre having its inelastic envelope constructed from a seamless, endless band of textile fabric, substantially as described for the purpose specified. 6th. The combination of a wheel rim formed with a central depression and outwardly extending side flanges, and a pneumatic tyre having a padding of felt interposed between the air tube and the inexpandible jacket, substantially as and for the purpose specified.

No. 43,134. Machine for Making Glass Bottles.

(Machine pour la fabrication des bouteilles en verre.)



Thomas W. Synmott, Wenonah, New Jersey, U.S.A., 5th June, 1893; 6 years.

Claim.—1st. In a machine for making glass bottles, a rotatable mould composed of hinged top, side and bottom sections, said side sections having journals extending therefrom and bearings for said journals, substantially as and for the purpose set forth. 2nd. A machine for making glass bottles, having a receiver for compressed air and a hollow plunger which is provided with a port, said plunger freely extending through said receiver, whereby the plunger may be placed in communication with said receiver and air forced into the molten glass in a mould and a rotatable mould mounted above said plunger, substantially as described. 3rd. A machine for making glass bottles, having a mould, said mould having journals thereon and being composed of hinged sections, a frame supporting the same, a movable cross head mounted on said frame, an air receiver and a plunger movable in said receiver, and which is adapted to be passed through said cross head into said mould, substantially as described. 4th. A machine for making glass bottles, having a movable hollow plunger which is adapted to enter the bottle forming mould and an air receiver surrounding and in which said plunger is movable, the plunger having a port in its side leading to the interior thereof whereby communication between the receiver and plunger may be established to direct air into the molten glass with a rotatable mould, substantially as described.

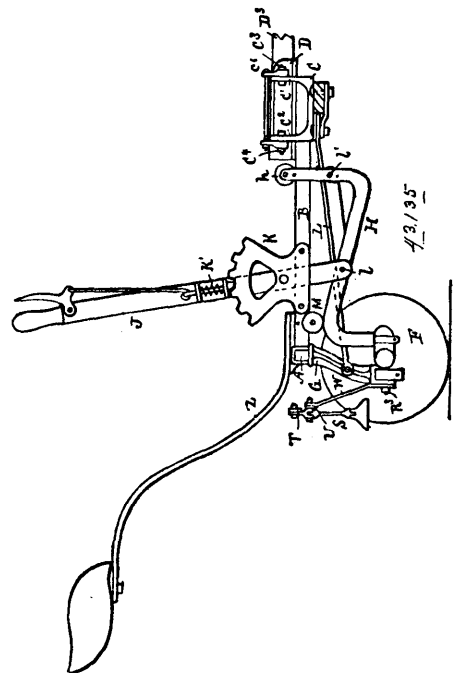
No. 43,135. Disc Harrow and Pole.

(Herse à disque et timon.)

Elijah A. Ovenshire, Detroit, Michigan, U.S.A., 6th June, 1893; 6 years.

Claim.—1st. In a disc harrow, the combination with a frame, of harrow sections provided with independent axles E, E', having a jointed connection with the frame, forwardly projecting bars B B', connected at their rear ends with said frame, shifter bars connected at their rear ends with said axles and having movable engagement upon the bars B B', at their forward ends, operating levers to

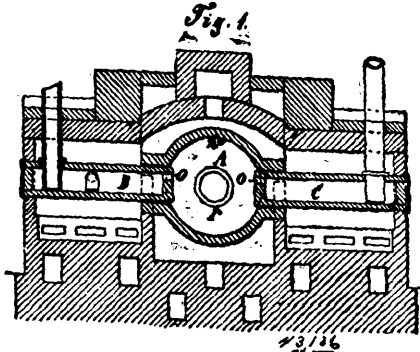
operate the shifting bars, and mechanism to hold the levers in given position, the shifter bars constructed to permit the shifting of the axles horizontally without changing the depth of cut of the harrow



disces, substantially as described. 2nd. In a disc harrow, the combination with a frame, of axles E E', provided with cutter discs and jointly connected with said frame, forwardly projecting bars B B', shifter bars connected with said axles at their lower ends and having a movable engagement with the bars B B', at their forward ends, operating levers connected with the shifting bars, the body of said shifter bars extending on a horizontal plane when the bars B B', are raised to decline rearward, substantially as described. 3rd. In a disc harrow, the combination, with a frame, of axles jointly connected therewith, forwardly projecting bars B B', forming a portion of said frame, shifter bars B B', operating levers connected with the shifter bars, rollers connecting the shifter bars with the bars B B', said shifter bars having a movable engagement with bars B B', substantially as described. 4th. In a disc harrow, the combination with a frame, constructed with forwardly projecting portions B B', axles carrying the discs, having a jointed connection with the frame, shifter bars connected with the axles at their rear ends and upon said forwardly projecting bars at their front ends, operating levers engaged with the shifting bars, the engagement of the shifter bars upon the bars B B', being vertically adjustable and longitudinally movable, substantially as set forth. 5th. In a disc harrow, the combination of scrapers, said scrapers constructed with a hinged arm S', a scraper having a swiveled connection with the lower end of said arm, said scraper having a spring tension upon the disc, substantially as set forth. 6th. In a disc harrow, the combination of a scraper constructed with arms S', S', having a jointed connection, the scraper having a swiveled engagement with the lower end S', the arms S', S' provided with arms V, V', a spring bolt uniting the latter arms, and means to adjust the tension of the spring bolt, substantially as set forth. 7th. In a disc harrow, a ball bearing in combination cones N, N', a tubular connection P, having a screw threaded engagement with said cones, one of said cones being adjustable upon said tubular connection, substantially as set forth. 8th. In a ball bearing, the combination of the cones N N', a tube having a screw threaded connection therewith, a hub R surrounding the inner ends of said cones, balls located between the inner ends of said cones and said hub, one of said cones being adjustable, substantially as set forth. 9th. In a ball bearing, the combination of the cones N, N', a connecting tube P, having a screw threaded engagement therewith, the hub R, engaging the inner ends of said cones, said inner ends spirally recessed and provided with a worm packing in said recess, substantially as and for the purpose set forth. 10th. The combination with an implement of the character described, of an evener plate, a movable pole plate jointly connected with said evener plate and arranged to be thrown over to one side of the evener plate, substantially as described. 11th. In an implement of the character described, an evener plate constructed with laterally extended arms, a movable pole plate constructed with laterally extended arms, the arms of said evener plate and pole plate jointly connected at their outer ends, substantially as set forth. 12th. The combination with an implement of the character described, of an evener plate, a movable pole plate hinged to the evener plate, and means to lock the pole plate in

a given position, substantially as set forth. 13th. The combination with an implement of the character described, of an evener plate, a movable pole plate, said plates provided with laterally extended arms jointly connected at their outer ends, said arms provided with perforated lugs, and bolts to engage adjacent lugs to lock the pole plate in a given position, substantially as set forth. 14th. The combination with an implement of the character described, of a movable pole plate arranged to be swung over to one side the longitudinal centre of the implement, and means to lock said pole plate in a given position, substantially as set forth. 15th. The combination with an implement of the character described, of an evener attaching device and a pole attaching device constructed to be moved over to one side of the evener attaching device and to be engaged in a longitudinal line therewith, substantially as described.

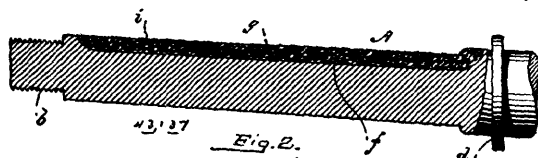
No. 43,136. Process of Obtaining Metals and Metalloids. (*Procédé pour l'isolation des métaux et métalloïdes.*)



Hermann Niewerth, Berlin, Germany, 6th June, 1893; 6 years.

Claim.—1st. A process for the isolation of metals and metalloids, distinguished by the fact that the raw material of the metal or metalloid and the reducing agent which is designed to unite with or to separate the substance, which in the raw material is firmly combined with the metal or metalloid, are brought into contact under the influence of warmth, and of the obscure or luminous discharges of frictional electricity, or the substitutes for it, which have been described, and allowed to act upon each other under this combined influence. 2nd. For the isolation of metals or metalloids by the process described, the process of rendering the atmospheric air which is drawn in when a lowering of pressure occurs in the reducing chamber innocuous so far as the process described is concerned, by converting it into a gas which has no effect upon the process.

No. 43,137. Lubricator for Axles. (*Boîte à graisse.*)



Charles Wilder Brewer, Cambridge, Massachusetts, U.S.A., 6th June, 1893; 6 years.

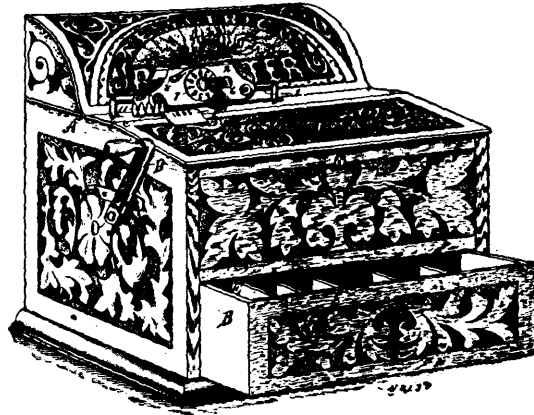
Claim.—1st. An axle provided with a main groove in its journal adapted to receive an absorbent pad, and a supplemental groove, or oil duct opening into said main groove, substantially as and for the purpose set forth. 2nd. In a device of the character described, an axle provided with a longitudinal groove in its journal, and an oil duct opening therein, said duct being of less depth than said groove, and arranged longitudinally in one wall thereof, in combination with an absorbent pad disposed in said groove, substantially as described. 3rd. In a device of the character described, the axle A, provided with the groove f, and duct i, formed in one wall thereof, substantially as and for the purpose set forth. 4th. In a device of the character described, an axle having a longitudinally arranged groove in its journal, and an oil duct formed in one wall thereof, said duct and groove opening through the hub flange, substantially as and for the purpose set forth.

No. 43,138. Recorder for Cash. (*Registre à monnaie.*)

Charles H. Coles, Owosso, Michigan, U.S.A., 6th June, 1893; 6 years.

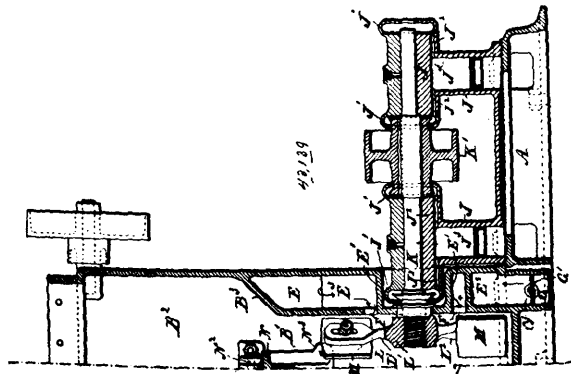
Claim.—1st. In a cash recorder, a money drawer, a locking bolt, a rotatable disc provided with a cam slot, means for rotating said disc, an electric alarm circuit and bell within the case of said recorder, adapted to be operated by the opening and closing of said drawer, substantially as described. 2nd. In a cash recorder, a pair of paper feeding rolls adapted to feed forward the paper passing

over them at different rates of speed, and to expel the paper passing over one of said rolls from the case, substantially as and for the pur-



pose described. 3rd. In a cash recorder, two independent record rolls adapted to feed forward independent strips of paper at different rates of speed, one of said rolls being adapted to direct one of said strips of paper forward within the machine, and the other of said rolls being adapted to feed forward the other of said strips of paper through the case and to the outside of said machine, and means, substantially as described, for feeding forward the two rolls. 4th. In combination with a cash recorder, duplicate printing wheels mounted in a travelling frame, adapted to carry said wheels simultaneously into printing contact with separate recording sheets, and means for revolving said wheels concurrently, substantially as described. 5th. In combination with a cash recorder, duplicate printing wheels, a travelling frame carrying said wheels, means for revolving said printing wheels, and a guide adapted to cause the imprint to be made in vertical lines along the strip of paper, substantially as and for the purpose described.

No. 43,139. Pulverizer for Grain and Dry Substances. (*Moulin à broyer.*)



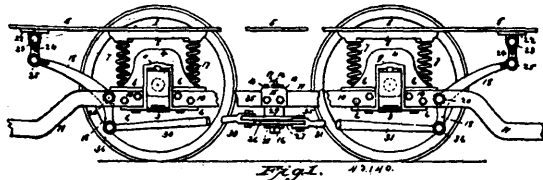
The Central Cyclone Company, assignee of Sydney Straker, all of London, England, 6th June, 1893; 6 years.

Claim.—1st. In a pulverizing and disintegrating machine, the combination with the beater, of an uptake, the upper portion of which is of greater dimension or cross sectional area than the lower portion thereof, the walls of the said two portions being vertical, and joined on two sides by means of intermediate sloped surfaces, substantially as described. 2nd. In a pulverizing and disintegrating machine, the combination with the beaters and the casing, of a baffle plate against which the particles projected from the beaters impact after impacting against each other, substantially as described. 3rd. In a pulverizing and disintegrating machine, the combination with the casing and the beaters, of beater blades secured to the beater arms so as to be rotatable thereon to present in succession the several edges of one face to the worm, substantially as described. 4th. In a pulverizing and disintegrating machine, the combination with the casing and the beaters, of beater blades secured to the beater arms so as to be rotatable and reversible thereon to present in succession the several edges of both faces to be worn, substantially as described. 5th. In a pulverizing and disintegrating machine, the combination with the casing and the beaters, of beater blades, provided with lugs which enter recesses formed in the beater arms, and are secured to the said arms by bolts, the said lugs being smaller than the said recesses so that the blades may be adjustable

on the arms to enable the beater to be balanced, substantially as described. 6th. In a pulverizing and disintegrating machine, the combination with the casing, of air passages which pass through the bed plate of the machine and open into the pulverizing chamber in large annular orifices surrounding the beater shaft, substantially as described for the purpose specified. 7th. In a pulverizing and disintegrating machine, the combination with the beaters and the beater shafts and bearings, of a sight feed lubricator having a valve spindle U on which is mounted adjustable nut V formed with projections V², a stationary collar having shallow notches Q⁷ in which the projections V² can rest, the valve being retained in the working position, when the projections are so situated, deeper notches Q⁸ wherein the projections can be dropped for the purpose of closing the valve, and a spring U³ for preventing the accidental lifting of the valve, substantially as described.

No. 43,140. Car Truck and Equalizer.

(Châssis de char et régulateur.)



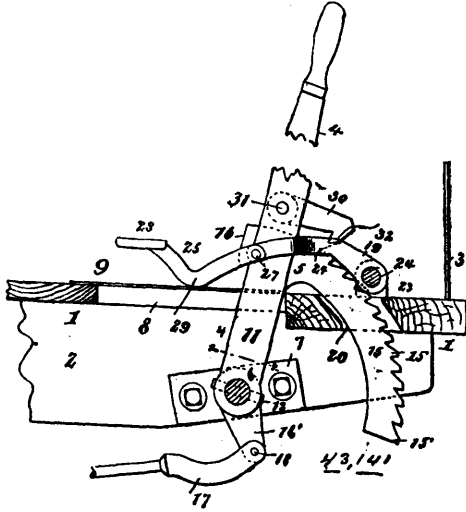
John A. Brill, assignee of Walter S. Adams, both of Philadelphia, Pennsylvania, U.S.A., 6th June, 1893; 6 years.

Claim.—1st. A truck having side bars, upwardly extending levers pivotally secured to said side bars, and devices for securing the said upwardly extending levers to the car body or upper chord of the truck and for uniting them longitudinally and transversely, substantially as described. 2nd. The combination in a truck, of wheels and running gear for the same, side bars supported on the running gear, upright levers pivotally secured to the side bars, an upper chord or car sill, springs between said upper chord or sill and the running gear, and means for securing said upper chord or sill to the upright levers, and for uniting them longitudinally and transversely, substantially as described. 3rd. In a truck, the combination of the upright levers pivotally supported on the truck, a car sill or upper chord supported on said upright levers, the upright levers on both sides of the truck being mechanically united by longitudinally and transversely disposed rods and levers, substantially as described. 4th. In a truck, upright levers pivotally supported upon said truck, a car sill or upper chord supported on said upright levers, longitudinal rods secured to said upright levers below their fulcrum, the said upright levers and longitudinal rods on both sides of the truck being mechanically united, substantially as described. 5th. In a truck, the combination of the following instrumentalities for holding or supporting a car body on a truck, comprising the upper chord or car sill, springs without spring posts or housings between said chord or sill and the running gear of the truck, and upon which the upper chord or car sill is supported, and upright levers uniting the said chord or sill and running gear, and longitudinal rods connecting the upright levers, substantially as described. 6th. The following instrumentalities for supporting a car body on a truck frame: running gear, side bars supported on the running gear, an upper chord or car sill, springs between the chord or sill and the side bars, upright levers pivotally secured to the side bars and to the chord or sill and longitudinal and transverse rods and levers secured to the upright levers, substantially as described. 7th. The following instrumentalities for supporting a car body on a truck, comprising the side bars supported on the running gear, upright levers pivotally secured to the side bars, links pivotally secured to the upright levers, an upper chord or car sill supported upon said links, and springs between said upper chord or sill and the side bars, substantially as described. 8th. The following instrumentalities for supporting a car body on a truck, comprising a stationary element of the truck structure, a sill or upper chord, springs between the stationary part of the frame and the upper chord or sill, and articulated devices between said stationary parts of the frame and said upper chord or sill, substantially as described. 9th. In a truck having side bars, the combination of the upper chord or car sill, upright levers fulcrumed on the side bars, and secured to the upper chord or sill, longitudinal rods secured to the upright levers below their fulcra, and transverse levers uniting the longitudinal rods, substantially as described. 10th. In a truck having side bars, the combination of the upper chord or car sill, upright levers fulcrumed on the side bars, and secured to the upper chord or sill, longitudinal rods secured to the upright levers below their fulcra, transverse levers, and springs between the said chord or sill and side bars, substantially as described. 11th. An equalizing device having upright levers and longitudinal rods, the said upright levers being adapted to be secured to the upper chord of the truck or sill of the car, the longitudinal rods being transversely connected, substantially as described. 12th. An equalizing device having upright levers, longitudinally parallel rods, and transverse levers alternately connected with the longitu-

dinal rods, and a fulcrum for each transverse rod, substantially as described. 13th. An equalizing device having upright levers, longitudinally parallel rods, and transverse levers alternately connected with the longitudinal rods, and a mutual fulcrum for the transverse rods, substantially as described. 14th. In a truck having side bars extending outwardly from the axle boxes, an upper chord or car sill extending past said axle boxes, and equalizing levers extending between the extended upper chord or sill and the extended side bars and connected by horizontal rods, substantially as described. 15th. In a truck, having side bars extending past the axle boxes, an upper chord or car sill supported above and extending between and past said axle boxes, equalizing levers extending between the extended upper chord or sill and side bars, and devices for longitudinally connecting said levers, substantially as described. 16th. In a truck having side bars extending past the axle boxes, an upper chord or car sill extending past said axle boxes, equalizing levers extending between said extensions, and devices for transversely connecting said levers, substantially as described. 17th. In a truck, having side bars extending past the axle boxes, an upper chord or car sill extending past said axle boxes, equalizing devices extending between the extended upper chord or sill and the side bars, and devices for longitudinally and transversely connecting said levers, substantially as described. 18th. A truck having an upper chord and side bars, with equalizing levers united by transverse levers and longitudinal rods, supported on the side bars and secured to said upper chord, substantially as described. 19th. A truck having contiguous side bars spaced apart, an upper chord, equalizing levers supported on said side bars between the juxtaposed members thereof and secured to the upper chord, and longitudinal rods connecting the said upright levers, substantially as described. 20th. In a truck, an equalizing device having upright levers supported on the side thereof, horizontal rods secured to the upright levers which extend under the said side bars, and a support for the inner ends of said horizontal rods, which support is located below the horizontal plane of the axles, substantially as described. 21st. In a truck, having side bars, an equalizing device, having horizontal rods on both sides of the truck, transverse levers connecting the horizontal rods, and a support for said transverse levers carried by the side bars, substantially as described. 22nd. A truck having side bars, an equalizing device comprising upright levers and horizontal rods supported upon the side bars, transverse levers uniting said horizontal rods, said transverse levers being carried by the side bars and supported below the horizontal axis of the axles, substantially as described. 23rd. In an equalizing device, the combination with the side bars of the axle box frame, the upright levers 18, fulcrumed on said bars, the arms of which extend above and below said side bars, upwardly extending links 24, supported on the levers 18, devices for connecting the upright levers, and an upper chord or car sill 5, supported on said links, substantially as described. 24th. In an equalizing device, the combination of the side bars of the axle box frame, with the upright levers 18, fulcrumed to the side bars, devices for connecting the upright levers, an upper chord or car sill 5, the journal blocks 22, secured to said upper chord or sill, and the links 24, pivotally uniting said journal blocks and levers 18, substantially as described. 25th. The side bars 11, the levers 18, fulcrumed on said side bars, devices for connecting the upright levers, the upper chord 5, springs between the side bars and upper chord, the journal blocks 22 secured to the upper chord, and links 24 uniting the levers 18 and journal blocks, substantially as described. 26th. Side bars 11, the upright levers 18 fulcrumed on said side bars, the upper end of said levers 18 having links 24, the upper chord or car sill 5 supported on said links, horizontal rods 30, 31, 32, 33 secured to the levers 18, transverse levers 26, 27 secured to said horizontal rods, substantially as described. 27th. An equalizing device comprising an upper chord or car sill 5, links 24 depending therefrom, levers 18 suitably supported and united to said links, horizontal rods 30, 31, 32, 33 united to said levers 18, and transverse levers 26, 27 uniting said horizontal rods, substantially as described. 28th. An equalizing device comprising the levers 18 suitably supported, links 24 on said levers, horizontal rods 30, 31, 32, 33 secured to said levers, and transverse levers 26, 27 connecting said horizontal rods, substantially as described. 29th. An equalizing device comprising the levers 18, links 24 on said levers, horizontal rods 30, 31, 32, 33 secured to said levers below their fulcra, transverse bars 26, 27 uniting said horizontal rods, the bar 26 being secured to the rods 30, 33, and the bar 27 to the rods 31, 32, substantially as described. 30th. An equalizing device having horizontal rods and a plurality of transverse levers, each one of said levers being secured at each end to a horizontal rod leading in opposite directions, said levers crossing each other, substantially as described. 31st. The horizontal rods 30, 31, 32, 33, and the transverse levers 26, 27, said horizontal rods being in operative connection with the upper chord, the lever 26 being secured to the rods 30, 33, and the lever 27 to the rods 31, 32, substantially as described. 32nd. The combination of the side bars 11, transverse beam 12, strap 13 uniting the said bars and beam 12, the bolt 16 depending from the said beam 12, and the transverse bars 26, 27 fulcrumed on said bolt and operatively connected with other levers to the upper chord or sill, substantially as described. 33rd. The side bars 11, transverse beam 12 supported on said side bars, a bolt 16 hung from said beam 12, transverse levers 26, 27 fulcrumed on said bolt, and the thimble 29 between the beam 12, and transverse levers, the levers 26, 27 being operatively connected

with other levers to the upper chord or sill, substantially as described. 34th. The side bars 11, transverse beam 12 supported on said side bars, a bolt 16 hung from said beam, and a thimble 29 supported about the bolt 16, levers combined with a car sill or upper chord supported by the said bolt, substantially as described. 35th. The side bars 11, bell crank levers 18 having bosses 19 fulcrumed between the side bars, one arm of said lever extending below said side bars, the other arm extending above it, links having bifurcated ends pivoted to the upper arm of said levers, journal block embraced by one end of the links, and an upper chord on said links, and means for connecting the levers 18, substantially as described. 36th. The side bars, the levers 18 fulcrumed thereto, the longer arm thereof extending upwardly and outwardly, and the short arm downwardly away from its fulcra, and means for connecting said short arms, substantially as described.

No. 43,141. Actuating Apparatus for Car Brakes, Etc. (*Appareil pour actionner les freins de chars.*)



John A. Brill, assignee of Victor Angerer, both of Philadelphia, Pennsylvania, U.S.A., 6th June, 1893; 6 years.

Claim.—1st. In a brake operating device, the combination of a main lever, a supplemental lever, both levers having a mutual fulcrum, a segmental rack on the supplemental lever, a stop on the supplemental lever, whereby said lever may be operated to apply the brakes, a controlling pawl pivotally secured to engage with the segmental rack, another pawl for holding said rack in a given position, and a device for withdrawing said controlling pawl from the rack, substantially as described. 2nd. In a brake operating device, the combination of a main lever, a supplemental lever, both levers having mutual fulcrum, a segmental rack on the supplemental lever, whereby the said lever may be operated to apply the brakes, a controlling pawl pivotally secured to the main lever and adapted to engage with the segmental rack, and another pawl for holding the said rack in a given position, substantially as described. 3rd. In a brake operating device, the combination of a main lever, a supplemental lever, both levers having a mutual fulcrum, a segmental rack on the said supplemental lever, a stop on the supplemental lever, whereby the said lever may be operated to apply the brakes, a pawl pivotally secured to the main lever and adapted to engage with the segmental rack, another pawl for holding said rack in a given position, and means for releasing said last mentioned pawl from said rack, substantially as described. 4th. In a brake operating device, the combination of a main lever, a supplemental lever, both levers having a mutual fulcrum, a segmental rack on the said segmental lever, a stop on the segmental lever, whereby the said lever may be operated to apply the brakes, a pawl pivotally secured to the main lever and adapted to engage with the segmental rack, another pawl for holding said rack in a given position, and means for releasing said last mentioned pawl from said rack, comprising a jointed foot lever having a foot plate and bearings for said foot lever, substantially as described. 5th. The combination in devices for actuating car brakes, &c., of the controlling lever composed of a main section and supplemental section adapted for connection with the mechanism to be actuated by the lever, the lever fulcrum at which the sections are jointed together, the pawl and ratchet coupling connection by the actuations of which the lever sections may be connected to rock together in one direction or left free to rock independently of each other, and like devices by the actuations of which the supplemental sections of the lever are locked and released, substantially as described. 6th. The combination in devices for actuating car brakes of the jointed controlling lever composed of a main section, and a supplemental section having a rack at its end, and adapted for connection with the mechanism to be actuated by the lever, and

pawls for engagement with the rack of the supplemental lever, and by the actuations of which the lever sections are coupled and uncoupled, and the supplemental lever sections locked and released, substantially as described. 7th. The combination in devices for actuating car brakes of the jointed controlling lever composed of a main section, and a supplemental section having a stop, and rack and adapted for connection with the mechanism to be actuated by the lever, and a pawl for engagement with the rack of the supplemental section, one of which is carried by the main section, and by means of the combined or independent action of these connecting devices the lever sections are coupled and uncoupled, and the supplemental lever sections locked and released, substantially as described. 8th. The combination in devices for actuating car brakes of the jointed controlling lever composed of a main section, and a supplemental section having a rack, and adapted for connection with the mechanisms to be actuated by the lever, pawls for engagement with the rack of the supplemental lever sections and by the actuations of which the lever sections are coupled and uncoupled, and the supplemental lever sections locked and released, and pawl controlling devices by the actuations of which the lever sections are uncoupled preparatory to freeing the supplemental lever section from its holding pawl, substantially as described. 9th. In devices for actuating car brakes, etc., the combination of the jointed controlling lever composed of the main section and the supplemental section with a rack, a pawl on the main section, another pawl and pawl controlling devices mounted independently of the sections, the independently mounted pawl being adapted to raise the pawl carried by the main lever out of the said track, substantially as described. 10th. In devices for actuating car brakes, the combination, substantially as set forth, of the main lever section, the supplemental lever section, the fulcrum pivot about which the lever sections rock, the pawl and rack connections between the supplemental sections and the platform support, a pawl carried by the main lever section, and pawl controlling devices supported independently of either section, whereby said main section and its attached pawl, and the pawl controlling devices may be used in different positions, substantially as described. 11th. The combination with the bifurcated lever 4, mounted on the spindle 6, of the lever 5, secured to the spindle 6, between the forks 11, the transverse stop 16, on the lever 5, for contact with the lever 4, and the crank arm 16¹, on the spindle 6, substantially as described. 12th. The combination with the bifurcated lever 4, pivotally secured to the spindle 6, a pawl 30, having the finger 32, pivotally secured to the lever 4, of the lever 5, fixed to the spindle 6, within the forks of the lever 4, a transversely disposed stop 16, on the lever 5, for contact with the lever 4, a segmental rack 15, extending from the lever 5, and a pawl 19, suitably pivoted over the said rack, and a crank arm 16¹, fixed to the spindle 6, substantially as described. 13th. The combination with the bifurcated lever 4, pivotally secured to the spindle 6, a pawl 30, having the finger 32, pivotally secured to the lever 4, of the lever 5, fixed to the spindle 6, within the forks of the lever 4, a transversely disposed stop 16, on the lever 5, for contact with the lever 4, a segmental rack 15, extending from the lever 5, a pawl 19, suitably pivoted over the said rack, an inclined way 33 on said pawl, the pawl 30 being adapted to ride on said inclined way, a suitably supported jointed foot lever 24¹, 25, extending from the pawl 19, and having a foot plate 28, and a crank arm 16¹, fixed to the spindle 6, substantially as described. 14th. The combination with the platform or support 1, having longitudinal sills 2, a spindle 6, rotatively secured to the sills, of a bifurcated lever 4, pivotally secured to the spindle, a slot 8 in the platform through which the rod 4 passes, a pawl 30, having the finger 32 pivotally secured to the lever 4, a lever 5, fixed to the spindle 6 within the forks of the lever 4, a stop 16 on the lever 5, a segmental rack 15, extending from said lever, a slot 20 in the platform for said rack, a pawl 19, suitably pivoted over said rack, an inclined way 33 on said pawl, a suitably supported jointed foot lever 24¹, 25, extending from the pawl 19, and having a foot plate 28, and a crank arm 16¹, fixed to the spindle 6, substantially as described.

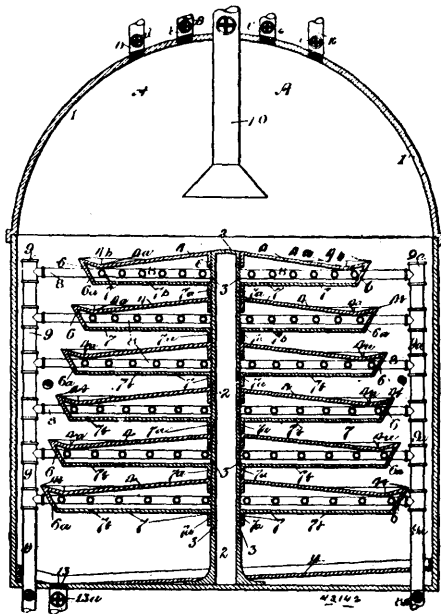
No. 43,142. Apparatus for Vaporizing Oil.

(*Foyer à hydrocarbures.*)

Robert H. Laird, Toronto, Ontario, Canada, 6th June, 1893; 6 years.

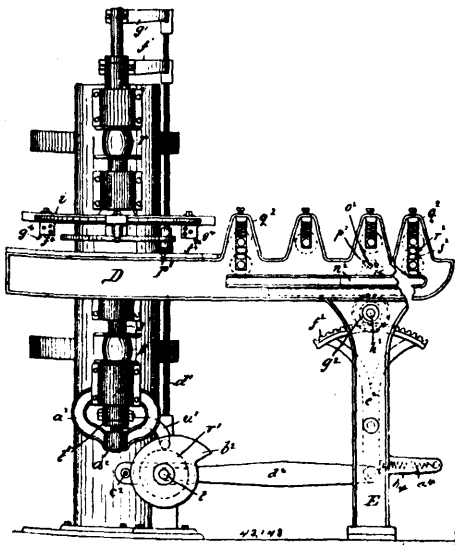
Claim.—1st. In an apparatus for vaporizing oil, the combination of an outer shell, a standard centrally located within said outer shell, a series of perforated metallic distributing plates within said outer shell, a series of pipes located on the under side of each of the said distributing plates and entering the apparatus from the said outer shell, brackets secured to the said standard and adapted to support the said distributing plates, a vapour dome located within said outer shell and above the said distributing plates, a supply pipe adapted to feed the oil to the said distributing plates, and pipes adapted to carry off the vapours from the said vapour dome, substantially as described. 2nd. In an apparatus for vaporizing oil, the combination of an outer shell, a series of metallic distributing plates within said outer shell, each of said distributing plates having its upper surface downwardly inclined from the middle to a point near the periphery and upwardly inclined from said point to its periphery, means for supplying oil to said apparatus, means for supplying heat to the said distributing plates and means for conducting away the vapour as they are generated, substantially as

described. 3rd. In an apparatus for vapourizing oil, the combination of the outer shell, a series of metallic distributing plates



suitably supported within said outer shell, the upper face of each of the distributing plates inclined downwardly from its middle to a point near its periphery and inclined upwardly from said point to its periphery, a downwardly projecting flange encompassing its edge, said flange inclined inwardly to enable the distributing plate next below it to overlap the lower edge of said flange, a supply pipe entering said outer shell and adapted to feed the oil to the distributing plates, a vapour dome within said outer shell and pipes entering said outer shell and adapted to carry away the vapours from the said vapour dome, substantially as described.

No. 43, 143. Wood Working Machine.
(Machine à travailler le bois.)

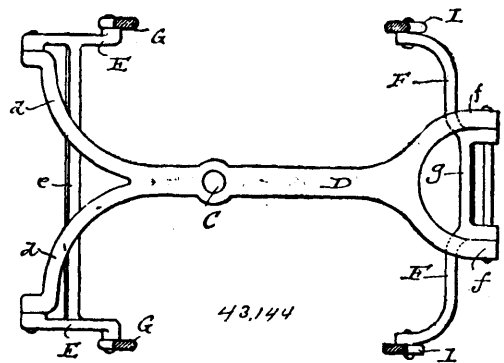


James Henry Reed, Lynn, Massachusetts, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. A wood working machine comprising a horizontal table or bed upon which the wood is supported while it is being cut, a vertically movable clamp member co-operating with the said table or bed, two vertically movably cutter heads, means for rotating the said cutter heads, vertical rods carrying the movable clamp member and horizontal table or bed aforesaid, vertical sleeves carrying the cutter heads and surrounding the said rods, levers operatively connected with the said sleeves, and the rod of the movable clamp member, rods d^1 , e^1 , yokes $m^1 m^1$, cams b^1 , c^1 , in engagement with said

yokes, and cam b^1 acting upon the lever connected with the sleeve of the lower cutter head and horizontal shaft t , carrying the said cams, substantially as described. 2nd. The combination in a wood working machine, with a horizontal bed for the wood, of a vertically movable rotary cutter head and cutters, mechanism for rotating said cutter head, and moving the same vertically, a vertically movable clamp member for holding the wood, and actuating mechanism therefor, with a sliding cross bar, and feed dogs thereon, and actuating mechanism for said cross bar, whereby after a disc is cut, and the clamp is withdrawn the wood will be led forward to subject another portion thereof to the cutters, substantially as shown and described. 3rd. The combination in a wood working machine, with a horizontal bed for the wood and clamping and cutting mechanism therefor, of the cam b^2 , the connection d^2 , the vertical lever e^2 , and its sector, the gear g^2 , the rack and pinion k^2 , j^2 , and the cross frame and feed dogs pivoted thereon, substantially as shown and described. 4th. The combination, with disc forming mechanism, of a receptacle for blanks, a pusher for moving said blanks successively forward to the said mechanism, means for operating the said pusher and gauges for the blanks disposed adjacent to the disc forming mechanism, and opposite sides thereof, and of the line of feed, the blanks lying between the said gauges, while the discs are being produced therefrom, substantially as described. 5th. The combination, with disc forming mechanism, of a receptacle for blanks, a pusher for moving said blanks, successively forward to the said mechanism, means for operating the said pusher, and gauges for the blanks disposed adjacent to the disc forming mechanism, and on opposite sides thereof, and of the line of feed, the blanks lying between the said gauges while the discs are being produced therefrom, one of said gauges being pressed yieldingly towards the other, substantially as described. 6th. The combination, with a disc forming mechanism of a receptacle for blanks, a pusher for moving said blanks successively forward to the said mechanism, means for operating the said pusher, gauges for the blanks disposed adjacent to the disc forming mechanism, and on opposite sides thereof, and of the line of feed, the blanks lying between the said gauges while the discs are being produced therefrom, and devices acting to move one of the said gauges toward the other at intervals to compress the blanks edgewise, substantially as described.

No. 43, 144. Chair. (Chaise.)



Fred. Albert Dennett, Sheboygan, Wisconsin, U.S.A., 7th June, 1893; 6 years.

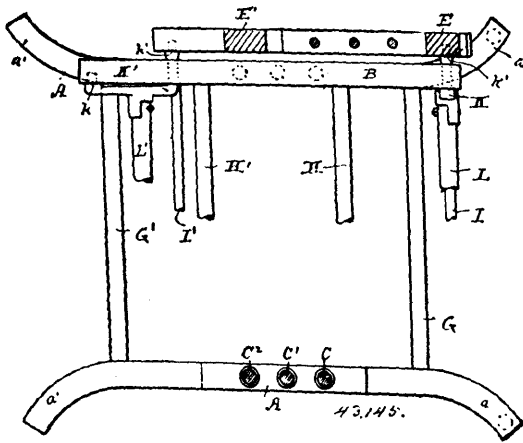
Claim.—1st. In a chair, the combination of a stationary base, and a pivotal seat having an oscillating rocking movement, substantially as set forth. 2nd. In a chair, the combination of a stationary base, a spindle free to turn in the base, and an oscillating rocking seat connected to the spindle, substantially as set forth. 3rd. In a chair, the combination of a stationary base, a spindle free to turn in the base, a bar extending in opposite directions from the spindle, links pivotally connected to the bar, and a seat having depending arms also pivotally connected to the links, substantially as set forth. 4th. In a chair, the combination with a base, of a bar supported thereon, and a seat connected to the bar in such a manner as to have an oscillating rocking movement, substantially as set forth.

No. 43, 145. Chair. (Chaise.)

Fred. Albert Dennett, Sheboygan, Wisconsin, U.S.A., 7th June, 1893; 6 years.

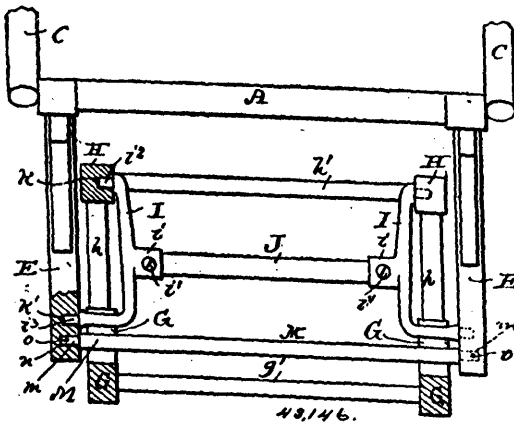
Claim.—1st. An improved base for rocking chairs, comprising upper and lower base sections united together in pairs, entirely within the extremities of each of said sections, and pivot hangers wholly external to the points of union of said base sections, substantially as set forth. 2nd. An improved base for rocking chairs, comprising upper and lower base portions united together solely within the ends, pendent hangers connected pivotally to the ends of the upper base portions and a chair body pivotally connected to the lower ends of said hangers entirely external to the points of union of said base portions, substantially as set forth. 3rd. An improved base for

rocking chairs, comprising upper and lower base sections united together in pairs wholly within the extremities of each of said sec-



tions, pivotal hangers entirely external to the points of union of said base sections, and cross pieces connecting the pivotal hangers at about midway of their length, substantially as set forth. 4th. An improved base for rocking chairs, comprising upper and lower base sections united together in pairs wholly within the extremities of each of said sections, in combination with a chair body, supports extending downward from the bottom rails of the chair body, pivotal hangers having one of their ends connected to the extremities of the upper base portions and their other ends to the bottom rail supports of the chair body, entirely external to the points of said base portions, substantially as set forth.

No. 43,146. Chair. (Chaise.)



Fred. Albert Dennett, Sheboygan, Wisconsin, U.S.A., 7th June, 1893; 6 years.

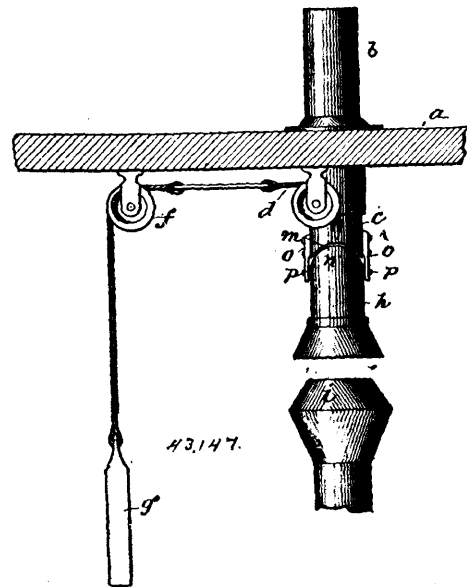
Claim.—1st. The combination with a suitable base provided with standards, and swinging hangers pivoted thereon, of a chair body provided with pendant supports arranged in pairs at the front and rear of said body and upon the outside of said standards, and pivotally connected with said swinging hangers, and tie rods connecting the lower ends of said supports adjacent to their connections with said swinging hangers, and adapted to prevent said supports from spreading apart, substantially as and for the purpose set forth.

No. 43,147. Smoke Funnel. (Tuyau de cheminée.)

Henry W. Goodridge and Charles Jonsson, both of Chicago, Illinois, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. The combination with the fixed stack *b*, of the stack *c* sliding therein and provided at its lower end with opposite concavities *m*, and the swinging funnel *h* pivotally connected with the sliding stack, and provided at its upper end with convexities *n*, which enter the said concavities of the sliding stack, substantially

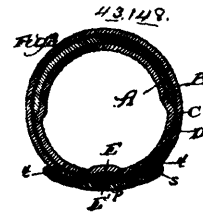
as described. 2nd. The combination with the fixed stack *b*, of the stack *c* sliding therein and provided at its lower end with pendant



hangers or arms *o*, and opposite concavities *m*, and the swinging funnel *h* pivoted to the hangers or arms, and provided at its upper end with convexities *n* which enter the said concavities of the sliding stack, substantially as described.

No. 43,148. Pneumatic Tire.

(Bandage pneumatique.)

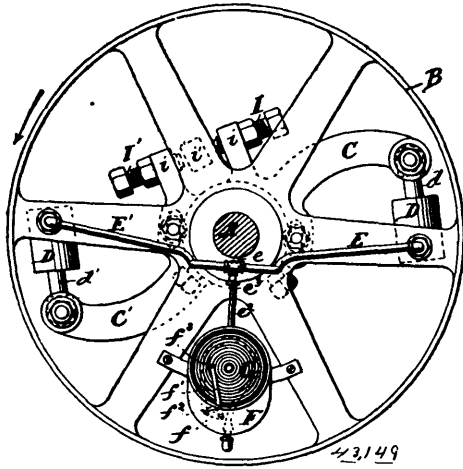


John Fullerton Palmer, Riverside, Illinois, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. A pneumatic tire for bicycles, comprising an air tube, having applied to its outer surface a partial tube of soft rubber with an inelastic backing, whereby any apertures occurring in the inner tube may be sealed, substantially as described. 2nd. The method of applying a protective coating of rubber or like material to the air tube of a pneumatic tire, which consists in applying the rubber or similar material to a backing, having a curvature opposite to that of the tube, and thereupon reversing the curvature of the backing and applying it to the pneumatic tube to cause the rubber or similar material to lie between the tube and backing, substantially as described. 3rd. The method of applying rubber or like material to the air tube of a pneumatic tire, which consists in applying the rubber or similar material to a flexible backing and thereupon applying the backing to the tube, curving the backing with the rubber or similar material on the interior so as to present the curvature of the pneumatic tube, whereby the rubber or similar material shall be compressed by reason of its mode of application to the air tube, substantially as described. 4th. The method of applying a protective coating of rubber or similar material to the air tube, of a pneumatic tire, which consists in curving a flexible backing, such as canvas, so as to present in transverse section a curvature opposite to that of the air tube, then applying to the outer face of the backing in part of its width the layer or coating of rubber or similar material, then reversing the curvature of the backing and protective material carried thereby and applying the same to the rubber tube in such manner that the protective material shall be between the backing and tube, substantially as described. 5th. In a pneumatic tire for bicycles, the combination with the air tube, of a protective layer B, of soft rubber or the like, an inclosing casing of canvas or the like having, when secured, the flaps C¹, beaded at the lateral extremities, as shown, and the outer covering D, having the longitudinal grooves *s*, to receive the beaded edges of the flaps, substantially as described. 6th. A pneumatic tire comprising, in combination, air tube A, protective layer B, on the tread portion, protective layer F, on the inner side of the tube

inclosing casing C, and felly H, substantially as described. 7th. In a pneumatic tube for bicycles, the combination with the air tube A, of an inclosing casing of flexible material C, and a loop or strip E, between the stitched edges of the casing and the tube, substantially as and for the purpose set forth.

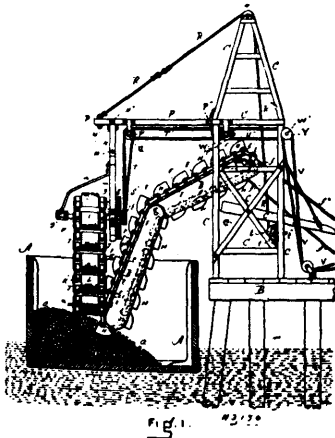
No. 43,149. Dynamometer. (*Dynamomètre.*)



Edgar James Wood, New York, State of New York, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. In combination, a power transmitting device, a power applying device having a yielding connection with the power transmitting device, a record receiving disc or strip free to travel, an indicator arm adapted to be moved when the power transmitting and power applying devices move relatively to each other, and means for operating the record receiving disc or strip independently of the power transmitting and power applying devices, substantially as set forth. 2nd. In combination, a power transmitting device, a power applying device having a yielding connection with the power transmitting device, a record receiving disc or strip free to travel and mounted on a support fixed relatively to the movements of the power transmitting and power applying devices, an indicator arm adapted to be moved when the power transmitting and power applying devices move relatively to each other, and means for operating the record receiving disc or strip independently of the power transmitting and power applying devices, substantially as set forth. 3rd. In combination, a power transmitting device, a device for applying power to the power transmitting device, means for confining a body of fluid to form a connection between the power transmitting and power applying devices, and an indicator under the control of said confined body of fluid for indicating the varying loads upon the power transmitting device, substantially as set forth. 4th. In combination, a power transmitting shaft, a pulley loosely mounted on the shaft, means for confining a body of fluid to form a connection between the pulley and shaft, an indicator arm under the control of said body of fluid, and a dial having a pre-determined movement past the indicator arm, substantially as set forth. 5th. In combination, a power transmitting shaft, a pulley loosely mounted on the shaft, means for confining a body of fluid to form a connection between the pulley and the shaft, an indicating device held against movement with the pulley, and a fluid connection between the indicating device and the said means for confining a body of fluid, substantially as set forth.

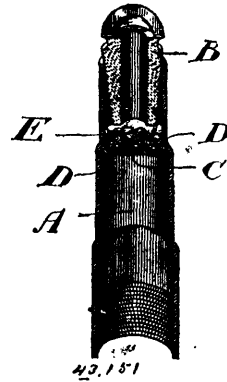
No. 43,150. Conveyer for Coal. (*Transport à charbon.*)



Theodore Harding Lewis, East Boston, Massachusetts, U.S.A., 7th June, 1893; 6 years.

Claim.—In a coal conveying apparatus, the combination of a jointed conveyer supported by the main portion of the frame, a pair of adjustable auxiliary conveyers arranged to be rotated, swung and spread apart at their lower ends, and a frame hinged to the main frame for supporting said auxiliary conveyers, substantially as set forth.

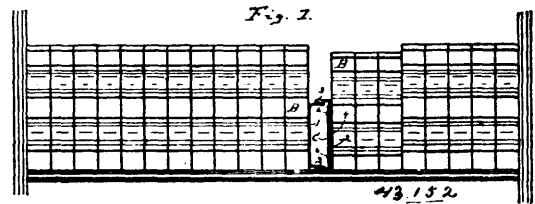
No. 43,151. Gas Burner. (*Bec à gaz.*)



John William Hayward, Toronto, Ontario, Canada, 7th June, 1893; 6 years.

Claim.—1st. A perforated disc, placed in a burner a short distance from the bottom of the tip, a small piece of cotton wool being placed between the disc and the bottom of the disc, substantially as and for the purposes specified.

No. 43,152. Book Support. (*Support pour livres.*)



Artems Hiram, and Jacob Astor, both of Wichita, Kansas, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. A book support for libraries, consisting of a two part frame of wire or other equivalent material, the said parts being yieldingly connected together, and adapted to exert force in opposite directions, substantially as and for the purpose set forth. 2nd. A book support for libraries, consisting of the two part wire frame, the said parts being yieldingly connecting together and adapted to exert pressure in opposite directions and of a card holder incorporated in the construction of one frame part, substantially as and for the purpose set forth. 3rd. The herein described book support comprising the opposite frame parts 1 and 2 connected together by means of bends or coils as set forth, and the card holder fixed to one of said parts and consisting of the parts to form a back support, and the spring arms for clamping the face of a card, substantially as specified and shown.

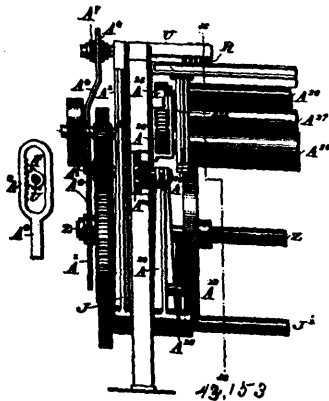
No. 43,153. Machine for Making Nets.

(*Machine pour faire des filets.*)

Henry W. Thurston, Woodside, New York, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. Shuttles in combination with a table with races on which they are supported, shuttle carriers alternately engaging with opposite ends of said shuttles, and means for alternately releasing said carriers from said shuttles, substantially as described. 2nd. A double pointed shuttle with means for holding a bobbin therein and a recess in each end, substantially as described. 3rd. A double pointed shuttle with recesses in its ends, and a bobbin supported thereon. 4th. Shuttles in combination with a table having races on which said shuttles are supported, hooks on said tables, means for operating said hooks, and a central passage in said table, said hooks being on opposite sides of the said passage, and alternately engaging with the shuttles, substantially as described. 5th. The shuttles and shuttle races, a table for said races having a central passage in combination with rotatable heads with hooks mounted on said tables, arms carrying said heads, means for operating said arms, and cams on the frame, said heads, arms and cams being in pairs, one of each

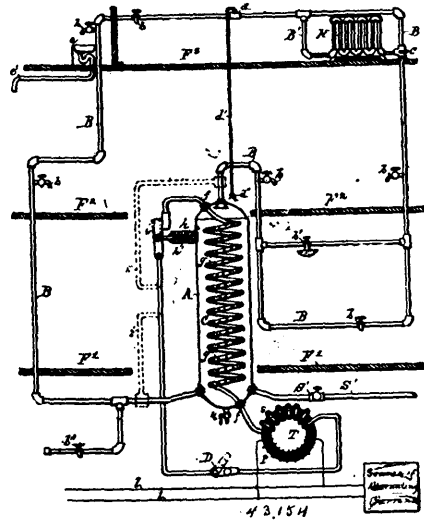
of which is on opposite sides of said passage, and the races extending from side to side of the table, and each shuttle being adapted to be



engaged alternately by the opposite hooks. 6th. The hooks R, the pinions S, secured to the shanks thereof, the tubular bar U, on which said hooks are mounted, the sliding rack T, in said bar U, the lever W, engaging with said rack bar, and operating mechanism for said lever, combined, substantially as described, whereby reciprocating rotary motions are imparted to said hooks, and the latter with their supports are carried in opposite directions over the central passage of the shuttle supporting table, for the purpose set forth. 7th. In a net weaving machine, a shuttle with recesses in opposite ends, and races on a table, rising and falling hooks guided on said table, arms carrying the heads of said hooks, and means for operating said arms, in combination with rotary hooks, a tubular bar on which said hooks are mounted, a rack in said bar, pinions in said bars meshing with said rack, a lever for oscillating said rack, and means for operating said lever, and cams for throwing off the hooks from the shuttles, said cams being on opposite sides of the centre of the table, substantially as described. 8th. In a net weaving machine, a shuttle with recesses in opposite ends, and races on the table, rising and falling hooks guide on said table arms carrying the heads of said hooks, and means for operating said arms, in combination with rotary hooks, a tubular on which said hooks are mounted, rising and falling arms carrying said tubular bar, and means for operating said arms, a rack in said bar, pinions in said bar meshing with said rack, a lever for oscillating said rack, means for operating said lever, and cams for throwing off the hooks from the shuttles, said cams being on opposite sides of the centre of the table, substantially as described. 9th. The shuttle, the tables with races and rising and falling hooks thereon, heads, oscillating arms which carry the same, the hooks, and means for supporting and rotating the same, rising and falling arms carrying said means, and means for operating said arms, in combination with cams which are mounted on the ends of the table and located in the paths of the oscillating and rising and falling arms, and the hooks aforesaid. 10th. The hooks, the carrying heads thereof, the oscillating arms supporting the carriers, rising and falling cams, arms carrying said hooks, and cams for operating the latter named arms, in combination with cams on opposite sides of said oscillating arms, and rising and falling arms and heads, substantially as described. 11th. A hook carrier, means for supporting the same, a pinion on said carrier, and a rising and falling rack mounted on the frame and engaging with said pinion, in combination with the cams on said carrier, and posts against which the cams abut, said posts being on opposite sides of said cams, substantially as described. 12th. A bar having a rack fitted thereto, and hooks with pinions mounted thereon, in combination with rising and falling arms A¹, means for vibrating said arms on which said bar is mounted, the oscillating arm or lever W, which is connected with said rack bar, and the cams A²¹ on the device which carries the hooks and connected parts, and the posts A²² on opposite sides of said cams whereby the hooks are rotated, and the bar receives reciprocating motions, substantially as described. 13th. The rollers A²⁷, A²⁸, in combination with a ratchet on the shaft of one of said rollers, a pawl mounted on an arm or lever engaging said ratchet, a slide engaging with said lever arms A²⁰, A¹⁶ connected with said slide, a shaft carrying said arms, and means for operating said arms, combined, substantially as described. 14th. The rollers A²⁷, A²⁸, a pawl and ratchet, a lever carrying said pawl, and a slide engaging said lever, in combination with means for operating said slide consisting of the arms A¹⁶ and A²⁰, and a wheel engaging the arm A¹⁶, as described. 15th. The rollers A²⁷, A²⁸, a ratchet on the roller A²⁷, a pawl engaging said ratchet and a lever carrying said pawl, said rollers A²⁷, and A²⁸ being geared together, in combination with a slide which engages said lever, and means for operating said slide, the latter being provided with a screw which may be set nearer to and further from the lever for adjusting the feeding action of said rollers.

No. 43,154. Electric Water Heater.

(Réchauffeur d'eau électrique.)



Mark Wesley Dewey, Syracuse, New York, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. The method of supplying hot water for consumption purposes, consisting in subjecting water to a heating effect produced by an electric current in a part of an electrical circuit, circulating said water in a pipe leading to one or more localities and provided with outlets for releasing or drawing the water from the pipe at said locality or localities, and controlling the current to maintain the water at a constant temperature. 2nd. The method of supplying hot water for consumption purposes, consisting in subjecting water to a heating effect produced by a current in a part of an electric circuit, circulating said water in a pipe leading to and from one or more localities and provided with outlets for releasing or drawing the water from the pipe at said locality or localities, and controlling the current to maintain the water at a constant temperature. 3rd. The method of supplying hot water for consumption purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said medium through a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released or drawn from said pipe, and automatically controlling the current to maintain the water at a constant temperature. 4th. The method of supplying hot water for consumption or heating purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and automatically controlling the current to maintain the water at a constant and predetermined temperature by the heat or pressure of the water. 5th. The method of supplying hot water for consumption for heating purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and controlling the electric current by the pressure of the water in the reservoir. 6th. The method of supplying hot water for consumption or heating purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and automatically controlling the electric current to maintain the water at a constant temperature. 7th. The method of supplying hot water for consumption or heating purposes, consisting in filling a reservoir and circulating pipe with water, allowing the escape of air from the highest part of the pipe while it is filled, subjecting the water contained in the reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and automatically controlling the temperature of the water by causing it to control the electric current. 8th. The method of supplying hot water for consumption or heating purposes consisting in subjecting water contained in a reservoir and pipe connected therewith to a heating effect produced by a current in a portion of an electric circuit composed of said pipe

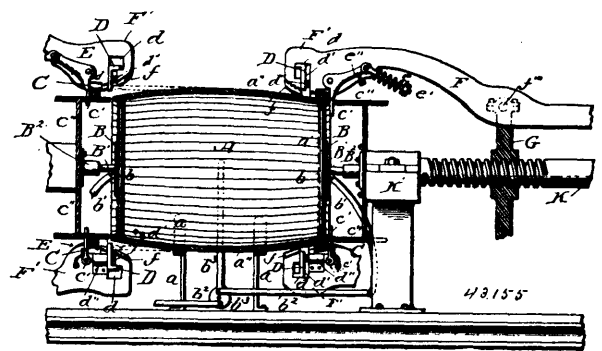
and circulating the water in the pipe leading from and to the reservoir and through one or more localities, whereat the water may be released from the pipe or utilized for heating purposes. 9th. The method of supplying hot water for consumption purposes, consisting in subjecting water under pressure and contained in a reservoir and in pipe connected therewith to a heating effect produced by a current in a portion of an electric circuit, circulating the water in the pipe leading from and to the reservoir and through one or more localities, whereat the water may be released from the pipe, supplying the reservoir and pipe with water while it is released at said locality or localities, and controlling the electric current by the variation in the temperature of the water. 10th. The method of supplying hot water for consumption purposes consisting in filling a reservoir and circulating pipe connected therewith with water under pressure, allowing the escape of air from the highest part of the pipe while the reservoir and pipe are filled, subjecting the water contained in the reservoir or pipe to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in the pipe leading from and to the reservoir and through one or more remote localities whereat the water may be released from the pipe, supplying the reservoir and pipe with water while it is released at said locality or localities, and controlling the electric current by the variation of the pressure of water in the reservoir to maintain the water at a constant temperature. 11th. In a system for supplying hot water for consumption purposes, a suitable source of electricity, a reservoir containing water, a heating conductor extending through the reservoir and connected to the source, a distributing pipe extending from the upper part of said reservoir to and through one or more remote localities and returning to the lower part of the reservoir, faucets for the pipe at said localities to release the water, a water supply pipe connected to said reservoir to admit water to the latter and distributing pipe while the water is being released at one or more of the localities, and means to control the current to maintain the water at constant temperature. 12th. In a system for supplying hot water for consumption purposes, a suitable source of electricity, a reservoir containing water, a heating conductor extending through the reservoir and connected to the source, a distributing pipe extending from the said reservoir to and through one or more remote localities and returning to the reservoir, faucets for the pipe at said localities to release the water, a water supply pipe connected to said reservoir to admit water to the latter and distributing pipe while the water is being released at one or more of the localities, and suitable means to automatically control the current to maintain the water at a constant temperature. 13th. In a system for supplying hot water for consumption purposes, a suitable source of electricity, a reservoir containing water, a heating conductor extending through the reservoir and connected to the source, a distributing pipe extending from the said reservoir to and through one or more remote localities and returning to the reservoir, faucets for the pipe at said localities to release the water, a water supply pipe connected to said reservoir to admit water to the latter and distributing pipe while the water is being released at one or more of the localities, and an automatic electric current controller in circuit with the heating conductor and operated by the expansion and contraction of the heated water in the reservoir. 14th. In a system for supplying hot water for consumption purposes, a suitable source of electricity, a reservoir containing water, a heating conductor extending through the reservoir and connected to the source, a distributing pipe extending from the upper part of said reservoir to and through one or more remote localities and returning to the lower part of the reservoir, faucets for the pipe at said localities to release the water, an air outlet at the highest part of the pipe, a water supply pipe connected to said reservoir to admit water to the latter and distributing pipe while the water is being released at one or more of the localities, and means to control the electric current operated by the water. 15th. In a system for supplying hot water for consumption purposes, a suitable source of electricity, a reservoir containing water, a heating conductor extending through the reservoir and connected to the source, a distributing pipe extending from the upper part of said reservoir to and through one or more remote localities and returning to the lower part of the reservoir, faucets for the pipe at said localities to release the water, an air outlet at the highest part of the pipe connected by a pipe with a faucet near the reservoir, a water supply pipe connected to said reservoir to admit water to the latter and distributing pipe while the water is being released at one or more of the localities, and means to automatically control the electric current.

No. 43,155. Machine for Forming and Hooping Barrels. (*Machine pour la fabrication des barils.*)

James Pleukharp, Columbus, Ohio, U.S.A., 8th June, 1893; 6 years.

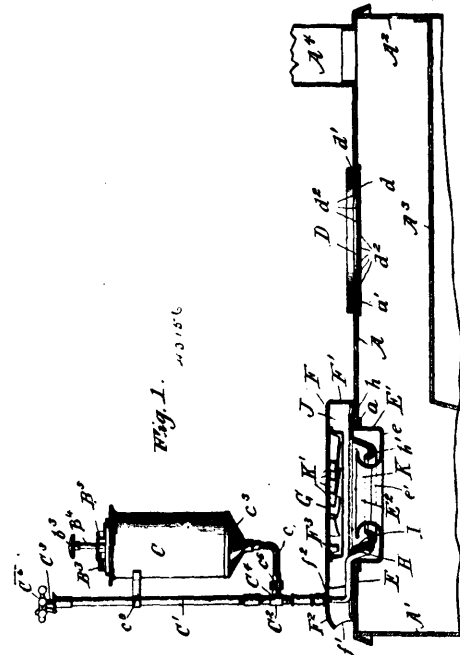
Claim.—1st. In a barrel making machine, the combination, with the threaded shaft K, the disc G, mounted on the shaft K, means for rotating the shaft K to move the disc G thereon, the plate H, and the feed screws I for moving the plate H, to and from the disc G, of the levers F, for compressing the staves and driving the hoops mounted on and covered by the disc G, and having engagement at their outer ends with the plate H, to be positively moved to and from the said shaft K, substantially as described, for the purpose specified. 2nd. The hereinbefore specified barrel forming and

hooping machine, comprising sliding discs at each end thereof, a series of jaw levers, one for each stave, carried by said discs, sliding



plates for controlling the outer ends of the levers, sliding head plates for carrying the barrel heads, supports for the hoops, hoop drivers carried by the said levers, a ring supported by the ends of the said levers and adapted to square the ends of the barrel, and mechanism for operating the several parts, substantially as described. 3rd. In a barrel making machine, the combination, with the support G, and the levers F, mounted on the said support G, and adapted to tilt thereon, of the sliding plate H, having engagement with the levers F, and the slides f', adjustably connected with the levers F, to control the movement of the levers on their pivot, substantially as described, for the purpose specified. 4th. In a barrel making machine, the combination with the disc G, and the levers E, mounted thereon, of the plate H, adapted to engage with the ends of the levers F, and the packing h, substantially as and for the purpose set forth. 5th. In a barrel making machine, the combination of the levers F, arranged in a circle and having their heads recessed, provisions for moving the levers F longitudinally and about their pivoted support, the ring D, inserted in the recesses in the heads of the said levers F, and having the lateral flange d, which extends into an enlarged portion of the said recess, the springs d', between a side of the recess in the heads and the ring D, the hoop support c', the fingers c', for drawing the hoops from the support c', and the self adjusting hoop drivers E, pivotally connected with the said levers F, substantially as set forth. 6th. In a barrel machine, the combination with sliding disc G, levers F, carried thereby, and the plate H, of the side screws I, passing through box nuts provided on plate H, and having gear wheels D', D'', and gearing for operating said screws I from a counter shaft, substantially as set forth.

No. 43,156. Oil Burner. (*Brûleur d'huile.*)



Almon H. Calkins, Evanston, Illinois, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. The combination with an open receptacle or holder and a discharge pipe leading from the bottom of the same, of a tank adapted for insertion within the holder closed both at its bottom and

top and provided with an outlet at its bottom and a filling orifice at its top, said tank being provided with a valve for controlling the exit of oil from the bottom of the tank, having a valve stem extending upwardly through the top of the tank, substantially as described. 2nd. The combination with an open receptacle or holder, and a discharge pipe leading from the bottom of same, of a tank adapted for insertion within the holder closed both at its bottom and top, and provided with an outlet at its bottom and a filling orifice at its top, said tank being provided with a valve for controlling the exit of the oil from the bottom of the tank, consisting of a casting secured to the bottom wall of the tank, and provided with vertical passage screw threaded in its upper part, with lateral openings leading from the interior of the tank to said central passage, a valve seat located in the said central passage below the said lateral openings, and a valve stem having screw threaded engagement with said casting, provided at its lower end with a valve plug adapted to fit the said seat and extending upwardly through the top of the tank, substantially as described. 3rd. The combination with an open receptacle or holder, a tank adapted for insertion therein and an outlet pipe or passage leading from the bottom of said holder, of a vertical pipe or tube connected with said outlet passage and extending upwardly to a point above the tank, and a valve for controlling the outlet passage provided with a valve stem leading upwardly through said pipe or tube to a point above the top of the same, substantially as described. 4th. The combination with an open topped receptacle or holder and a discharge pipe or passage leading from the bottom thereof, of a tank adapted for insertion into the holder and closed at top and bottom, said tank being provided with a filling opening in its top and an outlet in its bottom, and a valve closing the outlet provided with a valve stem leading upwardly through the top of the tank, and a joint between the bottom of the tank and the holder, consisting of interlocking parts by which the outlet passage of the tank may be joined to the discharge pipe of the holder, substantially as described. 5th. The combination, with a supply tank and discharge pipe therefor, of a regulating valve in the supply pipe, a hand wheel controlling the valve, a movable detent on the hand wheel, and stationary ratchet teeth adapted for engagement with said detent, substantially as described. 6th. The combination with an open topped receptacle or holder, a tank adapted for insertion therein, a discharge pipe or passage leading from the bottom of the holder, of a pipe connected with said discharge passage and leading upwardly to a point above the tank, a valve for controlling the discharge pipe provided with the valve stem leading upwardly through said pipe, a hand wheel attached to the said valve stem, a detent on the hand wheel, and ratchet teeth on the pipe adapted for engagement with said detent, substantially as described. 7th. A burner comprising a circular shell or casing provided in its side wall with a peripheral air inlet opening or openings, and with a central exit opening for products of combustion, and an oil vapourizer and burner, consisting of two circular plates having their adjacent surfaces parallel with and close to each other, and an oil supply pipe supplying oil to the space between said plates, said plates being arranged within the casing concentrically with the side walls thereof and being adapted for the exit of vapour or gas from between their margins, so as to maintain a circular flame adjacent to the said air inlet opening or openings, substantially as described. 8th. A burner comprising a circular shell or casing adapted at its bottom to fit a hole in the top of a stove and provided in its side wall with a peripheral air inlet opening or openings, and in its bottom with a centrally arranged exit opening for the downward escape of products of combustion, and an oil vapourizer and burner consisting of two circular plates having their adjacent surfaces parallel with and close to each other and arranged concentrically within the casing, and an oil supply pipe supplying oil to the space between the plates, substantially as described. 9th. A burner comprising a circular shell or casing provided with a peripheral air inlet opening or openings and a central exit opening for products of combustion, two burner plates located concentrically within said casing, the adjacent surfaces of which are parallel with and close to each other, an oil supply pipe supplying oil to the space between said plates, and an outer shell or wall forming an air chamber around the inner shell and provided with an air inlet opening or openings, substantially as described. 10th. A burner comprising a circular shell or casing, provided with a peripheral air inlet opening or openings and a central exit opening for products of combustion, two burner plates located concentrically within the casing, the adjacent surfaces of which are parallel with and close to each other, and an oil supply pipe supplying oil to the space between said plates, the sides of said air inlet openings being oblique or inclined to give rotary motion to the air entering the casing, substantially as described. 11th. An oil burner for the top of a stove, comprising a shell or casing adapted to fit the hole in the top of a stove, and having a peripheral air inlet opening or openings, and a central exit opening in its bottom for the downward escape of products of combustion, burner plates located within the casing, an oil supply pipe supplying oil between said plates, and a depending air inlet pipe connected with the outer casing, substantially as described. 12th. The combination with a stove, of an oil burner comprising a shell or casing, provided with a peripheral air inlet opening or openings and with a central exit opening for products of combustion, burner plates located within said casing and

an oil supply pipe supplying oil between said plates, of an auxiliary air supply pipe discharging opposite and adjacent to the exit opening of the burner casing, substantially as described. 13th. The combination with a stove, of an oil burner comprising a shell or casing provided with a peripheral air inlet opening or openings, and with a central exit opening for products of combustion, burner plates located within the casing, and an oil supply pipe supplying oil to the space between said plates, said casing being provided with oblique or inclined surfaces giving rotary motion to the flames within the casing, and an auxiliary air supply pipe discharging opposite and adjacent to the exit opening of the burner casing, substantially as described. 14th. An oil burner comprising a casing provided with a central exit opening for products of combustion, and two annular burner plates arranged concentrically within the casing, said casing being provided with an annular slot or opening located adjacent to the burner plates for admission of air to the flame, and said annular burner plates being sustained at a distance from the walls of the casing so that air from the said inlet opening may pass both above and below the plates and thereby obtain access to both sides of the flame, substantially as described. 15th. An oil burner comprising a casing adapted to fit at its bottom within a hole in the top of a stove and provided in said bottom with a central exit opening for products of combustion, two annular burner plates located within the casing and surrounding the central exit opening, said casing being provided with an annular slot or opening adjacent to the burner plates for admission of air to the flame and said annular burner plates being sustained at a distance from the wall of the casing so that air from the said slot may pass both above and below the plates and thereby have access to both sides of the annular flame, and an outwardly extending annular deflector placed around the central exit opening in the bottom of the casing and operating to deflect air passing below the burner plates outwardly toward the inner surface of the flame, substantially as described. 16th. An oil burner comprising an exterior casing the bottom of which is adapted to fire within the hole in the top of a stove, and which is provided with a central exit opening, two annular burner plates located within the casing concentric with the central exit opening thereof, and a plurality of spiral deflectors attached to and depending from the top wall of the burner casing, substantially as described. 17th. An oil burner comprising a casing consisting of a bottom plate provided with a central depending part having a central exit opening and a top plate having a vertical side wall fitting the margins of the bottom plate, and a depending inner flange forming an air chamber around the burner, annular burner plates sustained within the casing concentrically with the central exit opening thereof, and spiral deflectors attached to and depending from said top plate, over the burner plates, substantially as described. 18th. An oil burning device comprising an outer casing having a central exit opening, an annular burner and an annular air chamber surrounding the casing and provided with an air inlet opening, and oil supply pipe extending through said air inlet opening to the burner, whereby the said oil supply pipe is kept cool by the air entering the air chamber substantially as described. 19th. A burner for liquid fuel comprising a casing adapted to fit at its bottom within a hole in the top of a stove, and provided in said bottom with central exit opening for products of combustion, a burner located within the casing and consisting of two annular plates surrounding the central exit opening, said casing being provided with a combustion chamber, and an annular air duct or passage extending around the combustion chamber and communicating with the same by means of an annular slot or opening located adjacent to the burner plates, substantially as described. 20th. A burner for liquid fuel comprising a casing adapted to fit its bottom within a hole in the top of a stove, and provided in said bottom with a central exit opening for products of combustion, a burner located within the casing and consisting of two annular plates surrounding the central exit opening, said casing being provided with a combustion chamber, an annular air duct or passage extending around the combustion chamber and communicating with the same by means of an annular slot or opening located adjacent to the burner plates, and a partition W, extending outwardly from the margin of the lower burner plate and dividing said air duct or passage into two separate passages, J, J', substantially as described. 21st. The combination with a stove having a hole or holes in its top and an oil burner, of a perforated plate or cover adapted to be placed over one or more of the holes in the stove top, substantially as described. 22nd. The combination with a perforated plate adapted to be placed over a hole in the top of the stove, of an annular support adapted to be placed over the said perforated plate, substantially as described. 23rd. The combination with a perforated plate adapted to be placed over a hole in the top of the stove, of an annular support adapted to be placed over said perforated plate, the margin of said annular support being of greater diameter at one side thereof than the other, substantially as described.

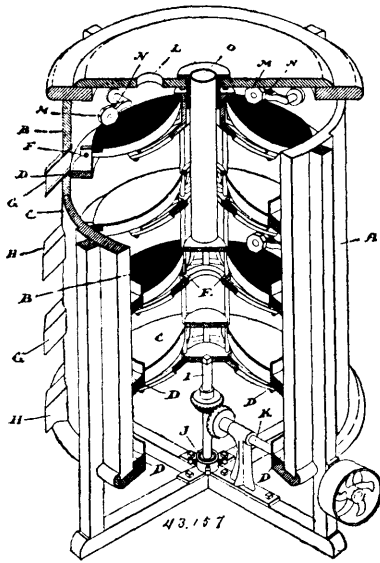
No. 43,157. Rotary Scalper.

(Machine rotatoire à ébarbillonner.)

William Hewitt Meldrum and Henry Richard Shaw, both of Peterborough, Ontario, Canada, 8th June, 1893; 6 years.

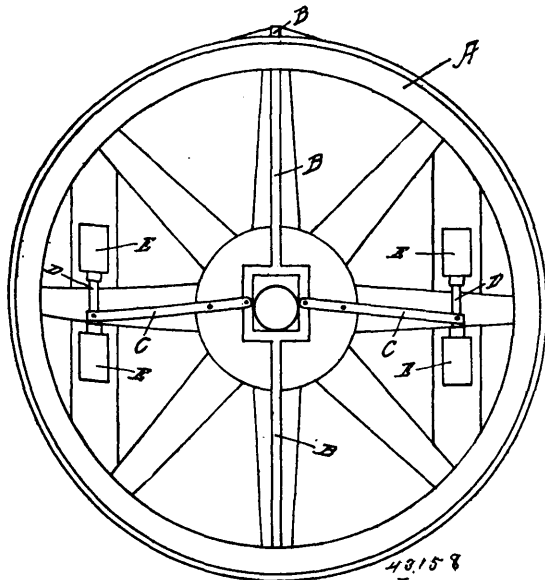
Claim.—1st. A conically shaped revolving screen arranged within a casing and designed to receive the stock, substantially as and for the purpose specified. 2nd. A conically shaped revolving screen

arranged within a casing and designed to receive the stock, in combination with a flanged ledge located below the outer edge of the



screen, and of a series of scoops connected to the outer edge of the said revolving screen, substantially as and for the purpose specified. 3rd. A conically revolving screen arranged within a casing and designed to receive the stock, a conically shaped revolving conveyer located below the conically shaped revolving screen, in combination with ledges located below the outer edges of the screen and conveyer, and of scoops connected to the said screen and conveyer, substantially as and for the purpose specified. 4th. A conically shaped revolving screen arranged within a casing and designed to receive the stock, in combination with means for imparting a vibratory motion to the said revolving screen, substantially as and for the purpose specified.

No. 43,158. Air Pump. (Pompe à air.)

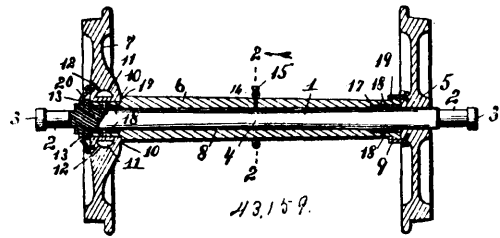


Duncan G. McBean, Winnipeg, Manitoba, Canada, 8th June, 1893; 6 years.

Claim.—The combination on a wheel A, of the rod B, projecting through or beyond the tire of wheel A, the lever arms C, working pumps E, at each end of pistons D, substantially as and for the purpose hereinbefore described.

No. 43,159. Car Wheel and Axle.

(Essieux et roues de chars.)

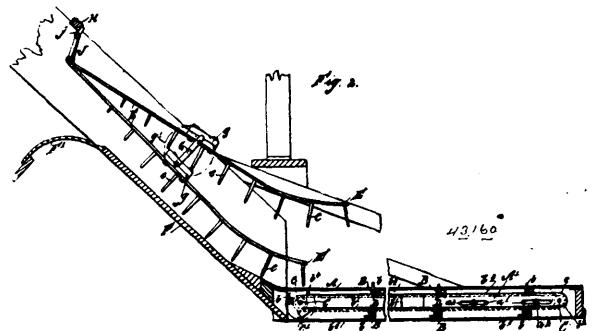


Wallace R. Kirk, Kansas, and John P. Jackson, Independence, both of Missouri, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. A combined car axle and wheel, comprising a tubular outer axle member having one end inserted into the hub of one of the wheels, an inner solid axle member extending longitudinally through the tubular member, and a ring or annular shoulder carried by one end of the solid axle member and abutting against that end of the tubular member which passes through the wheel hub, and also against the outer end of said wheel hub, substantially as set forth. 2nd. A combined car axle and wheel, comprising a wheel having an oil cavity in its centre, an outer tubular axle member inserted at one end into the hub of the wheel and having a longitudinal bore or channel, and a number of oil conduit tubes connected each at its outer end to the wall of the wheel cavity, and at its inner end communicating with the bore of said axle member, substantially as set forth. 3rd. A combined car axle and wheel comprising a wheel, a tubular outer axle member having one end inserted into the hub of the wheel, and an inner solid member extending longitudinally within the tubular member and provided at its outer end with a frusto conical portion, and a ring or collar surrounding said portion and abutting against the outer end of the hub of the adjacent wheel, substantially as set forth. 4th. A combined car axle and wheels, comprising a tubular outer axle section having an external oil cavity or reservoir, and provided with a number of radial channels communicating with the bore of the tubular section and with said reservoir, substantially as set forth. 5th. A combined car axle and wheels, comprising a solid axle section and an outer tubular axle section, the inner solid section being of such length as to extend through the hubs of both wheels, and dust guards secured to the webs of said wheels and surrounding the ends of the solid tubular axle sections, substantially as set forth.

No. 43,160. Binding and Reaping Machine.

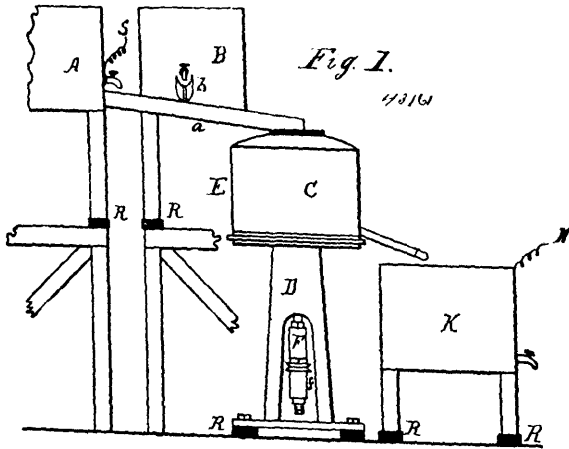
(Lieuse et moissonneuse à grain.)



James Ford, Soughton Hall, Mains, Edinburgh, Scotland, 8th June, 1893; 6 years.

Claim.—1st. In self binding reaping machines, forming the conveyor rake rods B, with bends or projections b^2 , in combination with the groove or recess b^3 , whereby the rake rod's teeth are automatically withdrawn from the grain in a vertical position, substantially as described and shown in the accompanying drawing. 2nd. In self binding reaping machines, the carriers D, substantially as and for the purpose described and shown in the accompanying drawing. 3rd. In conveyor rakes of self binding reaping machines, the adjustable parts A', of framing, substantially as and for the purpose described and shown in figure 2 of the drawings. 4th. In self binding reaping machines, the arrangement of the series of oscillating or joggling elevating rake rods E, having teeth e, all substantially as and for the purpose described and shown in the accompanying drawing. 5th. In self binding reaping machines, the oscillating or joggling elevator rakes, in combination with the metal conveyor rakes and grooved or slit grain table, substantially as described and shown in the accompanying drawing.

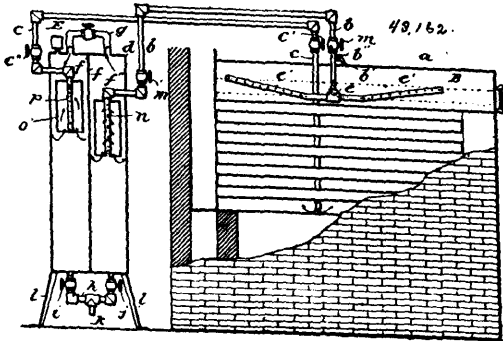
No. 43,161. Emulsifier. (Emulseur.)



George W. Tower, jr., Detroit, Michigan, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. In an emulsifier, the combination of a fixed casing having an outlet pipe, a spherical bowl adapted to rotate within said casing, and provided with an annular opening around its circumference horizontally, and a perforated cup or cups within said bowl and arranged to rotate with said bowl, and a conduit adapted to conduct oil and milk into said bowl, and a conduit adapted to conduct oil and milk into said inner cup, substantially as and for the purposes described. 2nd. In an emulsifier, the combination of a fixed casing having an outlet pipe, a spherical bowl adapted to rotate within said casing and provided with an annular opening around its circumference horizontally, perforated cup or cups centrally located in said bowl and adapted to rotate therewith, a cone shaped bottom to said case, and a conduit leading into said inner cup, adapted to receive oil and milk from separate tanks and deliver them to said cup partially mixed, substantially as described. 3rd. The combination of a milk tank, a butter oil tank, conduits leading from said tanks into an emulsifier, consisting of an outer casing, a spherical bowl adapted to rotate in said casing and provided with an annular opening around the circumference of said bowl, horizontally, and a perforated cup centrally located in said bowl and adapted to rotate therewith and receive the supply of butter, oil and milk, substantially as described. 4th. In an emulsifier, the combination of an outer casing, a spherical bowl adapted to rotate within said casing and provided with an annular opening around its circumference horizontally, said opening fitted with a wire screen, cup or cups centrally located in said bowl and adapted to rotate therewith, and a conduit adapted to supply milk and butter oil to said inner cup.

No. 43,162. Boiler Cleaner. (Nettoyeur de chaudière.)

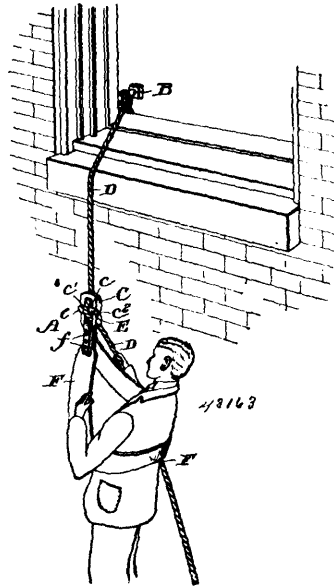


Jerome Q. Cook, Huntington and Henry M. Williams, Fort Wayne, both of Indiana, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. A boiler cleaner having a receiver B with perforations at different levels between the high and low water levels, substantially as described. 2nd. The boiler cleaner having a receiver consisting of a pipe or pipes perforated and inclined to extend between the high and low water levels, substantially as described. 3rd. The combination of a boiler receiver adapted to receive the surface water at different levels, a receptacle communicating with the receiver through a pipe perforated within the receptacle and provided with a surrounding deflector open at the lower end, and a second receptacle communicating with the first at the upper end, substantially as described. 4th. In a boiler cleaner,

a boiler provided with a receiving pipe emptying near its bottom, and a discharge pipe provided with obliquely perforated branching arms, in combination with an exterior mud drum divided into compartments, being connected by pipes, the ends of said receiving and discharge pipes entering said compartments and provided with open bottom cylinders, and a steam pipe entering said discharge pipe whereby circulation is increased, all arranged and adapted to operate in the manner substantially as described. 5th. In a boiler cleaner, receiving and discharge pipes leading to and from a mud drum having two compartments, the end of the receiving pipe entering one compartment, and the end of the discharge pipe leading from the other compartment, both of said ends being perforated and surrounded by open bottom vertical cylinders, in the manner and for the purpose described. 6th. In a boiler cleaner, the combination of a boiler provided with receiving and discharge pipes leading to and from the exterior mud drum, and a vertical partition in the drum, dividing the latter into two compartments, said compartment being connected at the top by a valved exterior pipe and at the bottom by a similar pipe, as and for the purpose described. 7th. In a boiler cleaner, an exterior mud drum divided into two compartments, and receiving and discharge pipes leading to a boiler, the ends of said pipes in the compartments being perforated and surrounded with open bottom cylinders, the discharge pipe entering the compartments at a point lower than that of the receiving pipe, and exterior pipes connecting the compartments, substantially as described. 8th. The receiver of cast metal contracted at the top and then expanded and contracted toward the bottom, connected with the inlet pipe and deflector, substantially as described.

No. 43,163. Fire Escape. (Sauveteur d'incendie.)



Leon Durocher, assignee of Charles Edmond Sansoucy, both of Duluth, Minnesota, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. A friction device for a fire escape comprising a casting having a central opening and an articulating tongue secured in said casting about centrally of the opening and adapted to extend across said opening, substantially as and for the purpose described. 2nd. A fire escape comprising a friction device formed of a casting having a central passage through it, an articulating tongue secured in said casting and adapted to extend across the said opening on either side of the casting, a body supporting belt secured to the lower end of the casting and a rope adapted to be passed through the opening over and under the tongue, substantially as described. 3rd. A fire escape comprising a friction device formed of a casting having a central elongated opening, an articulating tongue secured in said casting about midway the length of the opening and adapted to extend across the said opening on either side of the casting, notches in the casting to receive the end of the tongue and the lower end of the aperture bevelled, a body supporting belt secured to the lower end of the casting, a rope passed through the said opening over and under the tongue, and means for securing the rope to a building, substantially as described.

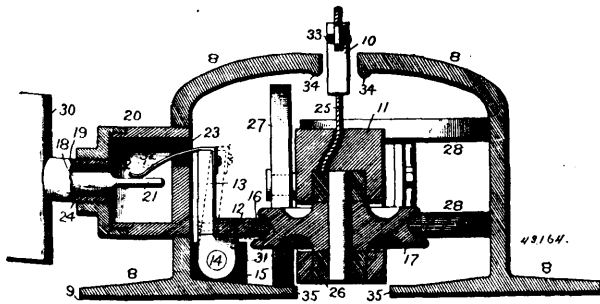
No. 43,164. Underground Conduit.

(Conduit souterrain.)

Charles P. Tatero, Spokane, Washington, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. The combination in a conduit for an electric railway of two similarly shaped side portions of the conduit body, one being

turned end-for-end, and the two located side-by-side at a distance apart to leave a slot at the top and one at the bottom, the base of



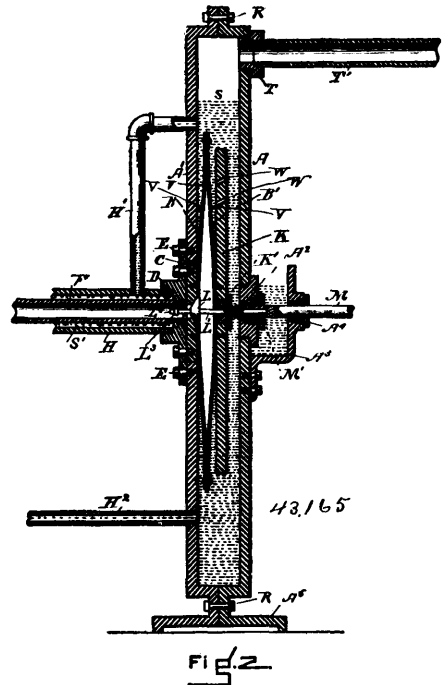
the sides being in the shape of an inverted T, the inner flange of each being adapted to serve as a wheel track, substantially as described. 2nd. The combination in a conduit for an electric railway, of a conduit body formed as an open slotted tunnel, a series of rails pivotally mounted in the conduit, a line wire located outside of the conduit and having branch ends, switches for communicating between the said rails and branch ends by the movement of the rails, a trolley attached to a car and adapted to travel in the conduit, one or more wheels mounted upon the trolley to engage the said rail and to move it in passing, and electric connection with the said wheels whereby a motor upon the car may receive electro-motive force, substantially as described. 3rd. The combination, in a conduit for an electric railway, of a line wire having a series of branches and located beside a conduit, switches for the said branches, a series of rails located within the conduit and connected with the said switches and pivotally hung, whereby they will disconnect the switches by the free action of gravity, substantially as described. 4th. The combination, in a conduit for an electric railway, of a series of rails pivotally hung and switches connected therewith to be opened by gravity, substantially as described. 5th. The combination, in a conduit for an electric railway, of a conduit body consisting of two similar side portions having base flanges one of which may serve as a rail, and the two side portions separated to form an open slot between them, a rail located in the conduit and adapted for electric connection with a line wire, and a trolley fitted to travel in the conduit and having two wheels to engage the said rail and one wheel in the same plane and opposite to them midway to engage the back of the conduit, and having two other wheels journaled to travel vertically on the bottom of the conduit on the side thereof to which the said rail is attached, and further having another wheel midway of the trolley and above the first named wheel, to travel on the back of the conduit, and a free connection between the trolley and a car, substantially as described. 6th. The combination, in a conduit for an electric railway, of a trolley body, two wheels thereon in a horizontal plane and adapted to engage a rail, two other wheels thereon in a vertical plane and on the same side of the body as the first two wheels, and two horizontal wheels located one above the other midway and on the opposite side of the body to the four wheels mentioned and means for freely connecting the trolley both electrically and mechanically with a car, substantially as described. 7th. The combination, in a conduit for an electric railway, of a slotted and tunnelled conduit body, a trolley adapted to travel in the tunnel and having a bail to project up through the slot at two points some distance apart and means for connecting the bail with a car, substantially as described. 8th. The combination, in a conduit for an electric railway, of a trolley body mounted upon two vertical wheels in line of each other at one side of the body, means for electric communication between the trolley and a live rail, a horizontal wheel on the trolley body near its top and opposite to and midway between the said vertical wheels, substantially as described. 9th. The combination, in a conduit for an electric railway, of a conduit body, one or more line rails therein, a line wire for conducting electro-motive force located along beside the conduit body and provided with a series of branch wires, electric switches between the said branches and line rails, and an electric converter located upon each branch of the line wire in circuit therewith, substantially as described. 10th. The combination, in a conduit for an electric railway, of a line wire located along a railway for conducting electro-motive force, and provided with branches, means for establishing temporary electric communication between the said branches and a motor upon a car, and an electric converter located upon and in circuit with each of the said branches, substantially as described.

No. 43,165. Vacuum Pump. (Pompe à vide.)

William Emery Nickerson, Cambridge, Massachusetts, U.S.A., 8th June, 1893; 18 years.

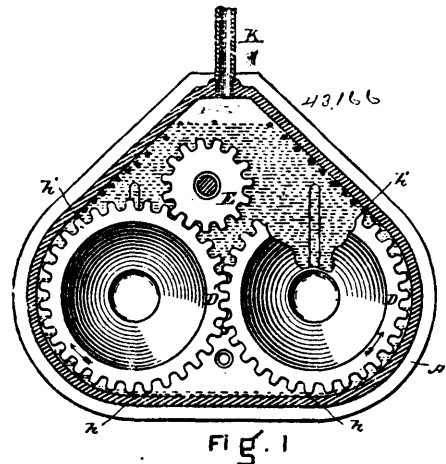
Claim.—1st. In a vacuum pump, the combination of the diaphragms B, B', having a to-and-fro motion in relation to each other, the pipe F connecting the space between the said diaphragms to the articles to be exhausted, the valve L in connection with the pipe F, and openings V, V, as described, with a sealing liquid, a small

quantity of which is introduced into the space between the diaphragms at each of their successive separations, thereby serving



to completely expel all air at each successive closing of the same, substantially as and for the purpose set forth. 2nd. In a vacuum pump, the combination of diaphragms B, B', having to-and-fro motion in relation to each other, the pipe F connecting the space between the said diaphragms to the articles to be exhausted, the valve L in connection with the pipe F, and openings V, V with a case A, A' filled with a suitable liquid, as described, enclosing said diaphragms, and pipe T' connecting it to an auxiliary exhaust device, substantially as and for the purpose set forth.

No. 43,166. Vacuum Pump. (Pompe à vide.)

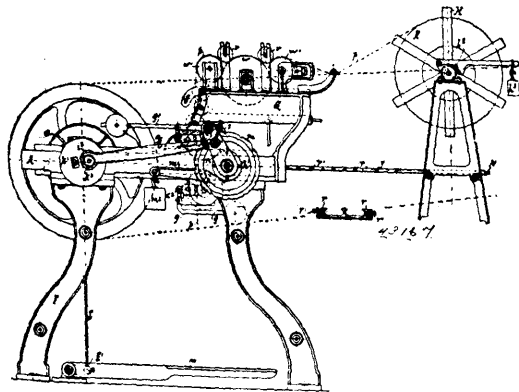


William Henry Nickerson, Cambridge, Massachusetts, U.S.A., 8th June, 1893; 18 years.

Claim.—1st. In a rotary pump, the combination of a piston case adapted to hold a sealing liquid, rotary pistons immersed in said sealing liquid and so located in relation to each other that the sealing liquid lies above and around the piston and on the bottom of the case so that the teeth of the pistons dip into it, while a clear space is left about the inlet port, with an inlet port connected by a pipe with the article to be exhausted, said inlet port being above the level of the liquid in the bottom of the case and below the level of the centres of the pistons, and an outlet port located above the pistons, substantially as and for the purpose set forth. 2nd. In a rotary pump, a case adapted to receive and retain a sealing fluid, in combination with rotary pistons having conically recessed ends adapted to fit accurately upon corresponding conical parts formed on the interior of the case, said conical parts being thereby adapted

for bearings for the pistons to rotate upon, no other bearings being required, substantially as and for the purpose set forth. 3rd. In a rotary vacuum pump, the combination of rotary pistons and their case adapted to hold a sealing liquid above the level of the lowest dip of the members of the pistons and also to hold a sealing liquid above the level of the centres of the pistons, as described, with an inlet port connected by a pipe with the articles to be exhausted, said inlet being above the level of the liquid in the bottom of the case, and below the level of the centres of the pistons and the outlet port and pipe L, adapted to convey the excess of the sealing liquid from above the pistons to beneath them, substantially as and for the purpose set forth. 4th. In a rotary pump, the combination of a case adapted to contain rotary pistons, and to hold above said pistons a sealing liquid, and also to hold a sealing liquid at the bottom of the case, as described, two rotary co-acting pistons, the bearings of which do not extend through the case, and inlet and outlet ports, as described, with a gear located within the said case, adapted to drive the said rotary pistons, and a shaft for said gear, adapted to transmit motion to it from without the case, substantially as and for the purpose set forth. 5th. In a rotary pump, the combination of rotary pistons and their case, adapted to hold a sealing liquid above the pistons, and in the bottom of the case, as described, and an outlet port located above said pistons, with an inlet port located below the centres of the pistons and above the normal level of the sealing liquid in the bottom of the case, said port having a pipe connecting the pump to the article to be exhausted and extended upward to a height which exceeds the level of the sealing liquid in the case, so that when the pump is not in action the sealing liquid in it will not run out of the case through the inlet port, substantially as and for the purpose set forth.

No. 43,167. Machine for Making Paper Links.
(*Machine pour la fabrication des mailles en papier.*)

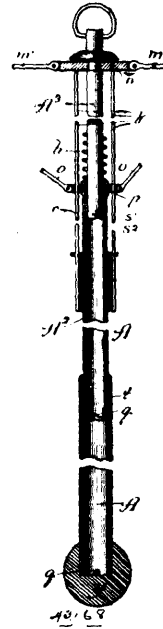


Ernest Rockmühl and Wilhelm Karthaus, both of Barmen, Rittershausen, Rhenish Prussia, Germany, 8th June, 1893; 6 years.

Claim.—1st. In a machine for making paper links or lamellae for jointed driving belts, the combination, with a pressing mechanism for forming bars corresponding in cross section to the component gummed paper layers punched from an intermittently fed strip provided on one side with adhesive, of a clamping channel for the bars, into which the latter are forced and the gummed paper layers thus pressed, and a cutting mechanism for severing the pieces forming the lamellae from the bars coming from the channel, substantially as described. 2nd. The combination, with a machine for making paper bars of a cutting mechanism comprising a knife M, a continuously rotating shifting sleeve O, for actuating the knife, a lever P, having an incline for shifting the sleeve, and a slide b², actuated by the bar coming from the machine to release the lever, substantially as described. 3rd. In a cutting mechanism, the combination, with a slide b², of a plate b³, arranged underneath the slide for supporting the article to be cut, and a lever c², e³, actuated by the knife at the end of its cutting stroke for moving back the plate b³, and slide b², to release the pieces severed by the knife, and allowing them to drop out, substantially as described. 4th. In a machine for making links or lamellae from cohering paper layers, the combination, with mechanism, substantially as described, for intermittently feeding a paper strip, and supplying one side thereof with adhesive, of a pressing and punching mechanism, a channel for receiving the layers from the punching mechanism, and causing them to cohere, and a cutting mechanism for acting on the bar formed by said cohering layers as said bar emerges from the channel, substantially as described. 5th. The combination, with a pressing and punching mechanism for punching layers or pieces from a paper strip, and a channel for receiving the punched out pieces of a pair of feed rollers b b¹, located above the punch, a pair of feed rollers c c¹, located below the punch, a ratchet or disc m, for actuating the feed rollers, a crank shaft for intermittently rotating the disc m, and for actuat-

ing the punch, the pawl i, lever n, link q, and crank disc k¹, for conveying motion from the crank shaft to the disc m, an eccentrically actuated link i², for lifting the pawl out of action, and a cutting mechanism started by and made to act on the layers emerging from the channel, substantially as described. 6th. The combination, with a pressing and punching mechanism for punching layers or pieces from a paper strip, a channel for receiving the punched out pieces, and mechanism, substantially as described, for intermittently feeding the strip, of a paste tank G, a paste roller w, distributing rollers w¹, press rollers v, for pressing the strip against the paste roller and distributing rollers, and a cutting mechanism started by and made to act on the layers emerging from the channel, substantially as described.

No. 43,168. Umbrella. (*Parapluie.*)



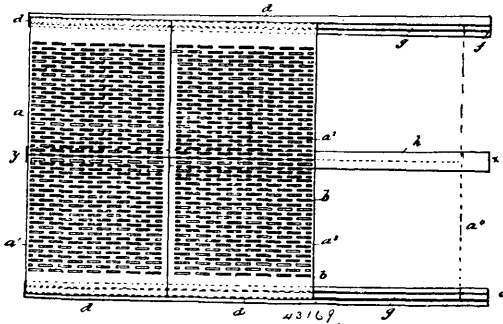
Howard Sanford Whitcomb, Chicago, Illinois, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. In a folding umbrella, the combination of an umbrella stick, A, formed in sections, consisting of a rod, A³, and a handle portion telescoping therewith, ribs m pivotally connected with the rod A³, braces o pivotally connected with the handle portion, and a sleeve, l, below the rod A³ and rigidly connected therewith, substantially as described. 2nd. In a folding umbrella, the combination of an umbrella stick, A, formed in sections, consisting of a rod A³, and a handle portion telescoping therewith, bearing p, for the brace rods, on the handle portion, bearing n, for the ribs, on the rod A³, sleeve l and rods k connecting the sleeve l and bearing n, substantially as described. 3rd. In a folding umbrella, the combination of an umbrella stick, A, formed in sections, consisting of a rod, A³, and a handle portion telescoping therewith, rib sections m¹ pivoted to the rod A³, pivot bearings t, on the sections m¹ pivoted to the rod A³, pivot bearings i, on the sections m², provided with lugs i², rib sections m² pivoted to the bearings t, brace rods pivotally connected at opposite ends respectively to the handle portion and lugs i², and a sleeve l, rigidly connected with the rod A³, substantially as described. 4th. In a folding umbrella, the combination of an umbrella stick, A, formed in sections, consisting of a rod, A³, and a handle portion telescoping therewith, ribs m formed in sections m¹ m², connected pivotally together, braces o, rib bearing n on the rod A³, brace bearing p on the handle portion, sleeve l, and rods k connecting the sleeve l and rib bearing n, substantially as described. 5th. In a folding umbrella, the combination of an umbrella stick, A, formed in sections, consisting of a rod, A³, and a handle portion telescoping therewith, ribs m formed in sections m¹ m², connected pivotally together, braces o, rib bearing n on the rod A³, loose brace bearing t on the handle portion and held thereon against independent longitudinal movement, and provided with openings k¹, sleeve l, rods k passing loosely through the openings k¹ in the bearing p and connecting the sleeve l and rib bearing, a groove s¹, in the handle portion and a lug r¹, on the rod A³, substantially as and for the purpose set forth. 6th. In a folding umbrella, the combination of an umbrella stick, A, formed in sections, consisting of a rod, A³, and a handle portion telescoping therewith, ribs m, braces o, rib bearing n on the rod A³, brace bearing p on the handle portion, sleeve l, rods k connecting the sleeve l and rib bearing, and a spring h, between the said rib and brace bearings, substantially as described. 7th. In a folding umbrella, the combination

of the telescoping umbrella stick sections A¹, A², A³, rib bearing n on the section A³, loose brace bearing p on the section A², sleeve l, k connecting the sleeve l and the rib bearing, locking means between the adjacent ends of the extended sections, and locking means, as the pin q and sockets q¹ on the sections A¹, A², for securing the said sections together against independent rotation when telescoped, substantially as and for the purpose set forth.

No. 43,169. Floor for Cattle Sheds.

(Plancher pour hangars à bestiaux.)

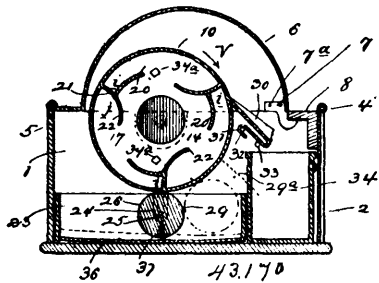


Archibald Buchanan, jr., Ayr, Scotland, 8th June, 1893; 6 years.

Claim.—1st. Floors for stables, cattle sheds and the like, having metal gratings a, made with hinged parts d, which are fitted in grooves on the supporting girders, substantially as hereinbefore set forth. 2nd. The combination with metal gratings, serving as a floor for stables, cattle sheds and the like, of supporting girders which taper lengthwise, so as to support the gratings in an inclined position, substantially as hereinbefore set forth. 3rd. The combination, with metal gratings having hinged parts d, and serving as a floor for stables, cattle sheds and the like, of supporting girders which are grooved throughout their length for the reception of the said hinged parts, substantially as hereinbefore set forth. 4th. Floors for stables, cattle sheds and the like, consisting of metal gratings, which have hinged parts d, at one side, the gratings being supported on two tapering grooved side girders, and central flat girders, which is also tapered, substantially as hereinbefore set forth.

No. 43,170. Ice Cream Freezer.

(Congélateur de crème.)

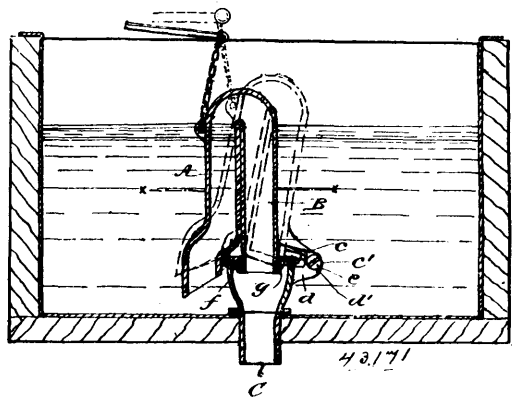


Thomas Haskell Besse, Buffalo, New York, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. In an ice cream freezer, the combination of a refrigerating cylinder for holding the refrigerating material, mounted in bearings to keep it in position in the frame, a handle for turning it, a transfer roller mounted in bearings within the cream box, and upon which the refrigerating cylinder rests, and is supported slightly above its bearings, and a scraper for taking the cream from the periphery of the refrigerating cylinder, as it is formed, substantially as described. 2nd. In an ice cream freezer, the combination of a refrigerating cylinder, having an opening in one side to receive the refrigerating material and mounted in suitable bearings in the frame, so as to rest and be supported on a transfer roller, a handle for turning it, a transfer roller in close contact with and operated by the movement of the periphery of the refrigerating cylinder, a box for holding the cream, within which the transfer roller is mounted in suitable bearings, a scraper for taking the frozen cream off from the periphery of the refrigerating cylinder as it turns, and a receptacle for receiving it, substantially as described. 3rd. In an ice cream freezer, the combination of a refrigerating cylinder, a means, substantially as above described, for keeping the refrigerating material to the peripheral case of the refrigerating cylinder, the refrigerating cylinder being mounted in bearings to keep it in position in the frame, and provided with a handle for turning it, a transfer roller

mounted in bearings within the cream box and upon which the refrigerating cylinder rests and is supported slightly above its bearings, and a scraper for taking the cream from the periphery of the refrigerating cylinder as it is formed, substantially as described. 4th. In an ice cream freezer, the combination with the refrigerating cylinder, of a series of curved plates 22 extending in from the peripheral case radially toward the centre, and then in a curve which inclines between the centre and the peripheral case, and a series of plates 20 attached to the plates 22, extending in nearly an opposite direction, for keeping the refrigerating material in towards the peripheral case, substantially as described. 5th. In an ice cream freezer, the combination with the refrigerating cylinder, of a series of plate projecting inward from the inner side of the peripheral case and terminating in a double series of plates projecting in substantially opposite directions therefrom, so as to form pockets i and j, into which the refrigerating material is continually thrown against the inner sides of the peripheral case while the refrigerating cylinder is being operated, substantially as described. 6th. In an ice cream freezer, the combination with the refrigerating cylinder, of a removable S-shaped scraper formed in one piece, a cross bar 33, upon which the bent portion rests, and a hook bend 31 on the scraper which clasps over the cross bar 32, substantially as and for the purposes described.

No. 43,171. Syphon for Cisterns. (Siphon pour citernes.)

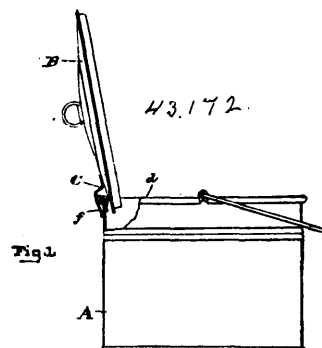


David Lancaster Dwinell, Montreal, Quebec, Canada, 8th June, 1893; 6 years.

Claim.—1st. A movable syphon for cisterns normally acting in conjunction with the flush pipe to effect an unobstructed closed water passage between the intake of the syphon proper and said flush pipe, and adapted upon being moved to temporarily effect an opening or break in such water passage, for the purpose set forth. 2nd. A hinged syphon for cisterns adapted when in a vertical position relatively to the flush pipe proper to effect an unobstructed closed water passage between the intake of such syphon, and when tilted temporarily out of the vertical to establish an opening between its base and the top of said flush pipe proper, for the purpose set forth. 3rd. The combination of the flush pipe proper, the syphon proper and a hinge connection between them, for the purpose set forth. 4th. The combination of the flush pipe proper, the syphon proper, lateral projections from each and a hinge connection between such projections, as shown and described.

No. 43,172. Holder for Vessel Lids.

(Porte couvercle de vaisseaux.)

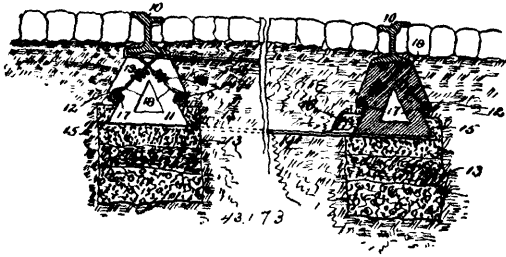


Michael Murray, Baltimore, Maryland, U.S.A., 8th June, 1893; 6 years.

Claim.—1st. A lid for buckets, pots, kettles and like vessels, having a holder consisting of prongs adapted to set astride of the

rim of the vessel and support the lid in an upright position. 2nd. The combination of a vessel, such as a bucket, pot or kettle, having a top rim, a lid or cover for the vessel and a lid holder having prongs which co-act with the said top rim and also the rim of the lid, and support the said lid in an upright position.

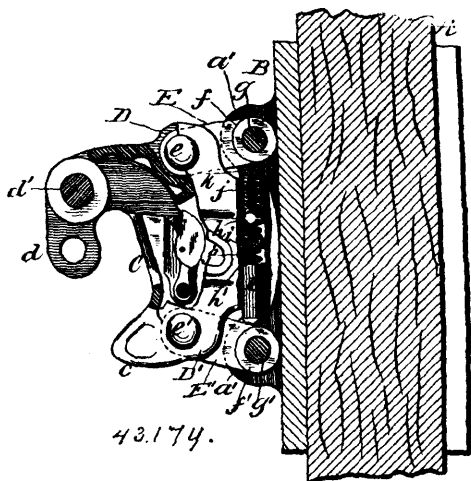
No. 43,173. Sleeper Block for Railway Rails.
(Bloc de traverse pour rails de chemin de fer.)



Reuben Dillon Culver, Veedersburg, Indiana, U.S.A., 9th June, 1893; 18 years.

Claim.—1st. The combination, with the sleeper blocks, of the rods arranged upon the sides of the same, the rail arranged upon the blocks, and the securing bolts connecting the rails and rods, substantially as shown and described. 2nd. The combination, with the sleeper blocks, of the longitudinal rods arranged upon opposite sides of the blocks, the rails upon the blocks and the securing bolts connecting the rails and rods and crossing each other between the sleeper blocks, substantially as shown and described. 3rd. The combination, with the sleeper blocks, having ridged tops, of the rails having angled bases and resting upon said ridged tops, the longitudinal rods arranged upon the sides of the blocks and the diagonally crossing bolts arranged between the blocks and connecting the rail and rods, substantially as shown and described. 4th. The combination, with the sleeper blocks, of the rails thereon, the rods upon the sides and the spring bolts connecting the rods and rail, substantially as shown and described. 5th. The combination, with the sleeper blocks, of the rails thereon, the rods upon the sides, the crossing bolts connecting the rails and rods between the blocks and having a bent end to engage the rod and a spiral shank, substantially as and for the purpose described. 6th. The combination, with the sleeper blocks, having shoulders on the sides of the longitudinal rods arranged upon the sides and beneath the shoulders, the rails upon the sleeper blocks and the securing bolts connecting rods and rail between the blocks, substantially as shown and described. 7th. The combination, with the sleeper blocks, having shoulders on the sides of the rail upon the blocks, the rods upon the sides and beneath the shoulders, the spring bolts connecting the rail and rods between the blocks, substantially as shown and described. 8th. The combination, with the sleeper blocks, having shoulders on their sides, the rails arranged upon the blocks, the longitudinal rods upon the sides of the blocks and beneath the shoulders, the securing bolts connecting the rail and rods between the blocks, the crossie rods connecting the bases of the rails between the blocks, substantially as shown and described.

No. 43,174. Car Coupler. (Attelage de chars.)

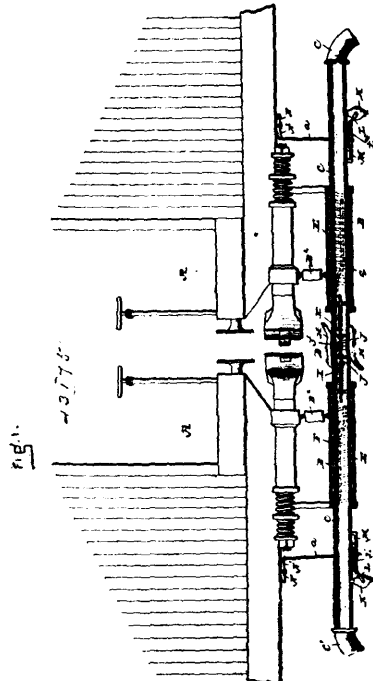


Willard F. Richards, Buffalo, New York, U.S.A., 9th June, 1893; 18 years.

Claim.—1st. Combined locomotive tender coupler and buffer, in which the buffer is provided with bearings, within which the coupler

is capable of a limited lateral movement, substantially as described. 2nd. In a combined locomotive tender coupler and buffer, the combination of a rigid buffer and a coupler pivoted thereto by links, and being capable of a limited lateral movement with relation to said buffer, substantially as described. 3rd. A coupler provided with spring pockets or recesses, in combination with springs in said pockets, and links pivoted to said coupler at a point beyond and in front of said springs, and a rigid buffer to which the inner ends of said links are pivoted, substantially as described. 4th. A coupler pivoted to a rigid buffer by lateral links converging at their outer ends, and normally held in a central position by means of springs confined in recesses in said coupler, and impinging with opposing forces upon the said links, substantially as described. 5th. A buffer having perforated lugs or projections, and two horizontal ribs or webs, in combination with a coupler head pivoted in said lugs by lateral links, and having a bearing and working between the horizontal ribs or webs, substantially as described.

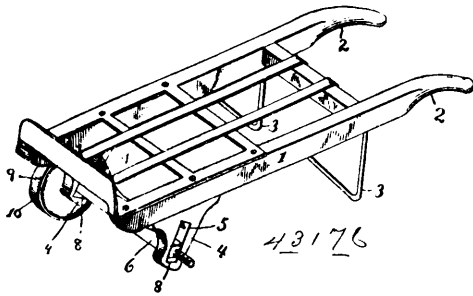
No. 43,175. Coupling for Air Brakes.
(Joint pour freins atmosphériques.)



Leonidas Sennett, Russell, Kentucky, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. The combination with the adjacent cars, pipe sections depending therefrom, and air pipes adapted to move longitudinally in said pipe sections, of relief valves on said air pipes, and a means for automatically opening the said valves, when the air pipes are moved longitudinally, substantially as shown and described. 2nd. The combination with the adjacent cars, pipe sections depending therefrom, and air pipes adapted to move longitudinally in said pipe sections, of relief valves on the rear ends of said air pipes, and a suitable connection between the said valves and the rear end of the depending pipe sections, whereby when the air pipes are moved forward the valves will be opened, substantially as shown and described. 3rd. The combination with the adjacent cars, pipe sections depending therefrom, and forwardly moving air pipes in said pipe sections, of relief valves on the rear ends of said air pipes, cranks projecting from the stems of the said valves, forwardly extending rods secured to the said cranks and which when raised are adapted to engage the said pipe sections, and a means for raising the said rods, substantially as shown and described. 4th. The combination with the adjacent cars and forwardly moving spring actuated air pipes in said pipe sections, of relief valves on the rear ends of said air pipes, cranks projecting from the stems of said valves, rods pivotally secured to the said cranks and which project forward to engage the said depending pipe sections when raised, and a rock shaft for raising the said rods, substantially as shown and described. 5th. The combination of the adjacent cars, pipe sections depending therefrom, spring actuated air pipes adapted to move in said pipe sections, a means for partially turning the said pipes in their forward movement, a suitable coupling for said pipes, valves in the ends of the air pipes, valves depending from the rear ends of the air pipe, and a means for automatically opening the said valves when the air pipes are moved forward in the depending pipe sections, substantially as shown and described.

No. 43,176. Hand Truck. (Camion à bras.)

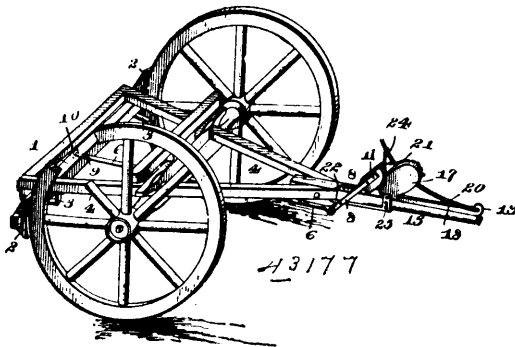


Eddy S. Rayburn and Charley A. Bell, both of San José, California, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. In a hand truck, the combination of a frame, depending bearing castings secured to the frame and provided with elongated openings, an axle arranged in the opening, and a spring centrally secured to the axle, and having its ends bearing against the tops of the openings, substantially as described. 2nd. In a hand truck, the combination of a frame, castings depending therefrom and provided with inclined elongated openings, an axle arranged in the openings, and a cushioning spring interposed between the axle and the tops of the openings, substantially as described. 3rd. In a hand truck, the combination of a frame, depending bearing castings having elongated openings, an axle arranged in the openings, and a spring centrally clipped to the axle and composed of separate leaves having their ends separated and arranged within the elongated openings and interposed between the axle and the tops of the openings, substantially as described. 4th. In a hand truck, the combination of a frame, bearing castings depending from the same and provided with inclined elongated openings, elastic blocks arranged in the openings at the bottom thereof, an axle arranged in the openings and bearing upon the elastic blocks, and a spring centrally clipped to the axle and having its ends arranged in the openings, and interposed between the tops of the same and the axle, substantially as described.

No. 43,177. Brake for Vehicles. (Frein de voiture.)

(Frein de voiture.)



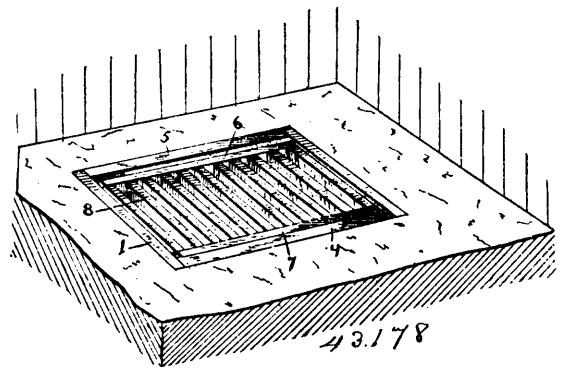
Martin J. Bobo, Rockmart, Georgia, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. The combination, with a running gear, of a brake bar carrying brake shoes, a short brake lever fulcrumed on the tongue, and having its lower end connected with the brake bar, and a cam lever fulcrumed on the tongue in advance of the brake lever, and having its head engaging the upper end of the brake lever, substantially as described. 2nd. The combination, with a running gear, of a brake bar carrying brake shoes, a short brake lever fulcrumed to the tongue and having its upper end rounded and having its lower end connected with the brake bar, and the cam lever fulcrumed on the tongue in advance of the brake lever, and having a cam head at its rear end engaging the rounded portion of the brake lever and connected with the latter, substantially as described. 3rd. The combination, with a running gear, of a brake bar arranged in rear of the fore wheels and carrying brake shoes, a brake lever fulcrumed on the tongue and consisting of a yoke receiving the tongue and provided at its lower end with a rounded cross piece, and a connecting rod provided at its front end with an eye receiving the cross piece, and having its rear end adjustably secured to the brake bar, and a cam lever fulcrumed on the tongue in advance of the brake bar, and provided at its front end with a flexible connection, and having at its rear end, a cam head engaging the brake lever, substantially as described.

4th. The combination with a running gear, of a brake bar arranged in rear of the fore wheels and carrying brake shoes, a brake lever fulcrumed on the tongue and consisting of a yoke, and a cap having a curved face, a connecting rod provided at its front end with an eye receiving the yoke and having its rear end secured to the brake bar, a cam lever fulcrumed on the tongue in advance of the brake lever, and having at its rear end a cam head engaging the brake lever, and a chain connecting the brake lever with the cam head of the operating lever, substantially as described. 5th. The combination with a running gear, of a brake bar carrying brake shoes, a short brake lever fulcrumed on the tongue, and having its lower end connected with the brake bar, a cam lever fulcrumed on the tongue in advance of the brake lever, and having its head engaging the upper end of the brake lever, a ratchet mounted on the tongue adjacent to the brake lever, and a pawl mounted on the brake lever and arranged to engage ratchets, substantially as described. 6th. The combination with a running gear, of a brake bar arranged in rear of the fore wheels and carrying brake shoes, a brake lever fulcrumed on the tongue, and consisting of a yoke and a cap having a curved face, a rod connecting the yoke with the brake bar, a ratchet arranged on the upper face of the tongue between the arms of the yoke, a pawl mounted within the cap and arranged to engage the ratchet, a cam lever fulcrumed on the tongue in advance of the brake lever and having its head engaging the cap, and means for operating the pawl and the cam lever, substantially as described.

No. 43,178. Drain for Stall Floors. (Egout pour planchers de stable)

(Egout pour planchers de stable)



Gutthilf L. Ludwig, Raton, New Mexico, U.S.A., 9th June, 1893; 6 years.

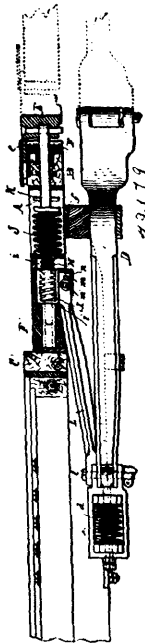
Claim.—A drainer for stables comprising a box designed to be placed in the centre of a stall and to be supported above the ground and provided in its bottom with perforations, and having one of its sides inclined, and a removable grating having an inclined side corresponding to that of the box and arranged within the latter, and consisting of opposite side bars, and a series of transverse bars arranged at intervals, substantially as described.

No. 43,179. Car Buffer. (Tampon de choc pour chars.)

Thomas Ashley Bissell, Buffalo, New York, U.S.A., 9th June, 1893; 6 years.

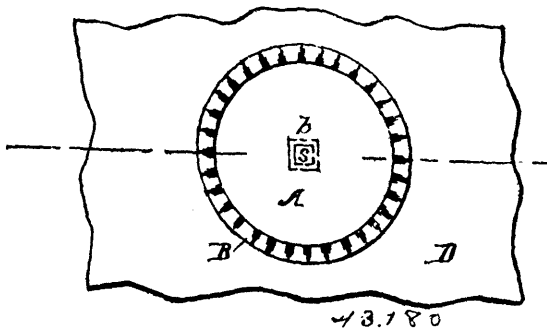
Claim.—1st. The combination with the stationary platform of a railway car, the longitudinally movable draw bar, and a buffer or platform extension movable on the stationary platform, of a follower socket guided on the stationary platform, a spring for projecting the buffer or platform extension, bearing with its inner end against the bottom of the follower socket, and a coupling bar attached at one end to said socket and at its opposite end to the draw bar, substantially as set forth. 2nd. The combination, with the stationary platform of a railway, car and longitudinally movable draw bar, of a buffer or platform extension movable on the main platform, a movable abutment or follower guided on the main platform, a spring for projecting the buffer or platform extension, bearing against said abutment, and a coupling bar attached at one end to the draw bar and having its other end movably attached to said abutment and provided with a shoulder bearing against said abutment, substantially as set forth. 3rd. The combination, with the stationary platform of a railway car, and the longitudinally movable draw bar, of a buffer or platform extension movable on the main platform, a movable abutment or follower having a pin or projection, a projecting spring for the buffer or movable platform, bearing against said abutment, and a coupling bar attached at one end to the draw bar and having at its other end a longitudinal slot in which the pin of the abutment is arranged, substantially as set forth. 4th. The combination, with the stationary platform of a railway car, and the longitudinally movable draw bar, of a buffer or platform extension movable on the main platform, a movable abutment or follower having a pin or projection, a projecting spring for the buffer or mov-

able platform, bearing against said abutment, and a coupling bar attached at one end to the draw bar and having at its other end a



longitudinal slot in which the pin of the abutment is arranged and a shoulder bearing against the abutment, whereby the latter is caused to move outward with the draw bar, substantially as set forth.

No. 43,180. Lace Fastener for Shoes and Other Articles. (*Agrafe pour lacets de chaussures, etc.*)



Alexander Klinger, Telluride, Colorado, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. In a lace or cord fastening device of the character described, the combination of the upper or outer button with the inwardly projecting post having an angular form, the lower or inner button having means for fastening it to a shoe, and the crossing bar springs beneath and bearing against the back of the inner button, said central post being in angular engagement with said springs and inner button and holding the whole together, and also serving to prevent the buttons from turning independently, substantially as shown and described. 2nd. The combination of the upper or outer button A, with its attached angular post b, having a reduced angular end s, the lower or inner button B, in engagement with said post and provided with outer circumferentially arranged fastening hooks c, and the crossing bar springs C, bearing against the back of said inner button, and permanently secured to the post, substantially as shown and described.

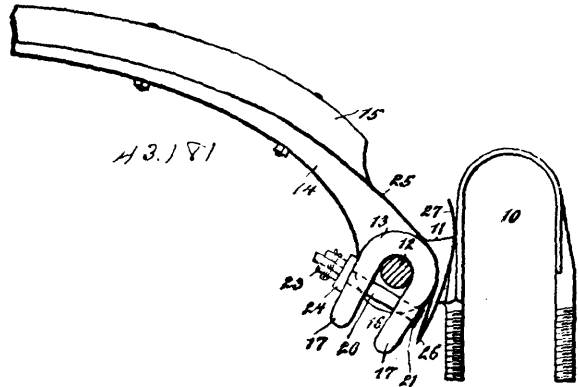
No. 43,181. Thill Coupler.

(*Armon de limonière.*)

Nicholas I. Woolsey, Lawrence, New York, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. The combination with the axle clip and coupling bolt carried by the clip, of the thill iron, having a knuckle with a downwardly extending slot to receive the coupling bolt, and an

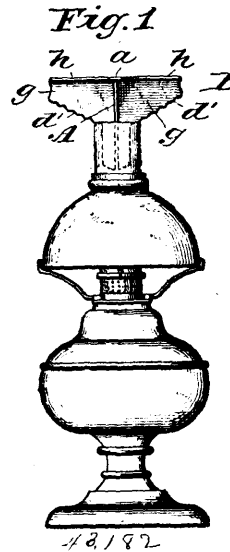
anti-rattling spring held on the back portion of the thill iron, and having an upwardly extending free end to abut with the axle clip, substantially as described. 2nd. The combination with the axle clip and the coupling bolt carried thereby, of the thill iron, having



a head with downwardly extending parallel jaws adapted to receive the coupling bolt between them, the said jaws being transversely bored and having cam grooves at one end of the bore and a fastening pin extending through the bore of the jaws, the pin having end lugs to enter the cam grooves, substantially as described.

No. 43,182. Heating Device for Lamps.

(*Appareil de chauffage pour lampes.*)

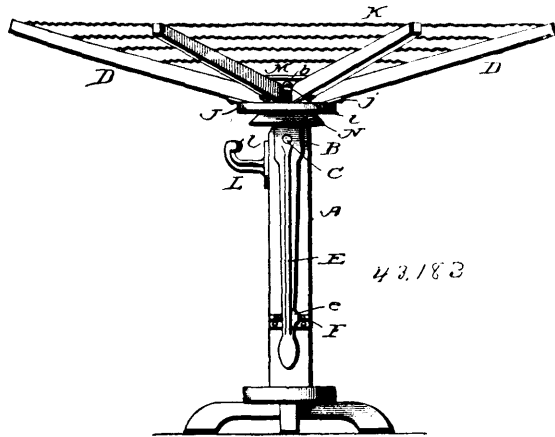


Harriet Sophie Lowry, Harrisburg, Virginia, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. A heating attachment for lamp chimneys, consisting of the winged plates adapted to be connected together at an angle to each other, the upper edges of said plates intersecting each other at an angle in the same horizontal plane, causing them to stand flush with each other, substantially as shown and described. 2nd. A heating attachment for lamp chimneys, consisting of the winged plates, adapted to be connected together at an angle with each other, and having their upper edges folded over and standing at right angles to their vertical portions, these folded over portions of said plates, intersecting each other in the same horizontal plane, causing them to stand flush with each other, substantially as shown and described. 3rd. A heating attachment for lamp chimneys, consisting of the winged plates adapted to be connected together at an angle to each other, and having their upper edges folded back and standing at right angles to their vertical portions, and the lower edges of their wings corrugated, the folded back and right angled upper edge portions of said plates intersecting each other at right angles in the same horizontal plane, causing them to stand flush with each other, substantially as shown and described. 4th. A heating attachment for lamp chimneys, consisting of the winged plates connected together at right angles, the lower edges of the wings cor-

rugated, the upper edges of said plates intersecting each other at right angles in the same horizontal plane, causing them to stand flush with each other, substantially as shown and described. 5th. The heating attachment for lamp chimneys, consisting of the winged plates adapted to be connected together at right angles and having their upper edges folded back and standing at right angles to their vertical portions, and the lower edges of their wings corrugated, the folded back and right angled upper edge portions of said plates intersecting each other at right angles in the same horizontal plane, causing them to stand flush with each other, substantially as shown and described.

No. 43,183. Clothes Drier. (Séchoir à linge.)

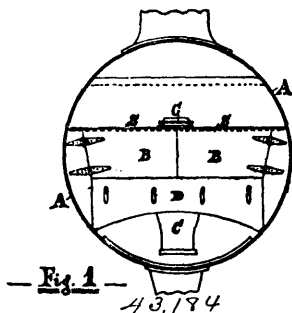


John McKinnon, Kingston, Idaho, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. The combination, with the tilting and rotatable reel, of a ring or band secured to and projecting vertically downward from and at right angles to the plane of the said reel, and a combined rest and brake secured to the reel support and having its outer portion extended laterally and conformed to the circumference of the said band, substantially as and for the purpose described. 2nd. The combination, with a tilting and rotatable reel and a combined rest and brake, of a counterbalancing spring, substantially as and for the purpose described. 3rd. In a clothes line reel, the combination, with a post, a [] iron set astraddle the end of the post and pivotally connected therewith, and having a journal projected vertically therefrom, a lever connected with the said [] iron, and a ratchet plate to engage with the said lever, of a cap and washer on the said journal, the reel adapted to rotate on the said journal, and a deflector held at the centre of the reel, substantially in the manner shown, for the purpose described.

No. 43,184. Diaphragm for Steam Boilers. (Diaphragme pour chaudières à vapeur.)

(Diaphragme pour chaudières à vapeur.)

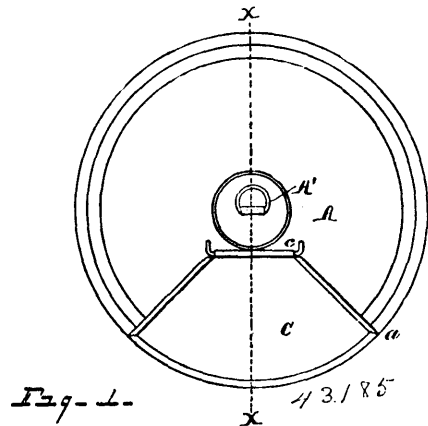


William King, Ottawa, Ontario, Canada, 9th June, 1893; 6 years.

Claim.—1st. In combination with the doors of the diaphragm, a diaphragm plate of such form that its lower edge slopes upward and inward from the sides of the smoke box, substantially as shown and described. 2nd. In combination, with the smoke box, a diaphragm the lower side of which is concaved by having cut from it a circular elliptical or otherwise curved segment, or a segment of triangular, rhomboidal or other outline approximating a curve, substantially as shown and described. 3rd. In combination, with the smoke box and the exhaust nozzle, a diaphragm having its lower edge cut away to compensate for the space occupied by the exhaust nozzle, all

substantially as shown and described. 4th. In combination, with the smoke box, a diaphragm located therein and curved on its lower edge, substantially as shown and described. 5th. In combination, with the smoke box and an exhaust nozzle placed at about the centre of the diaphragm, a diaphragm located in the smoke box and having its lower edge curved upward from the ends toward the centre.

No. 43,185. Lid Strainer. (Couvercle-filtreur.)

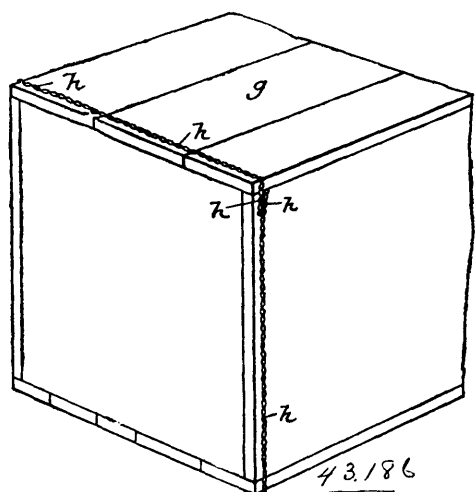


Hannah S. Diack, Detroit, Michigan, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. A lid strainer having in combination a lid, provided with a strainer, and a hinged cover located over the strainer, substantially as described. 2nd. A lid strainer consisting of a lid, provided with a strainer, side walls united to and forming a part of the lid bounding the strainer laterally, and a hinged cover located over the strainer and closing down upon said side walls, substantially as set forth. 3rd. A lid strainer consisting of a lid formed with a raised rim at its periphery, and provided with a strainer located within said rim, walls D, D¹, united to and forming a part of the lid located at the sides of the strainer, and a hinged lid closing down at its sides upon said walls and at its front edge upon said rim and forming a chamber between the lid and the underlying walls, rim and strainer, substantially as described.

No. 43,186. Twisted Metal Band. (Ruban métallique tordu.)

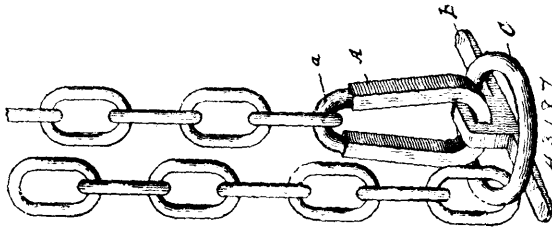
(Ruban métallique tordu.)



John Atkens Bowler, City of New York, New York, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. A twisted solid metal band consisting of an unbroken central web and beaded edges. 2nd. A twisted metal band having beaded or thickened edges projecting on both sides of a thin central unbroken web, and integral therewith. 3rd. A twisted metal band consisting of two cylindrical or wire edges, and a thin central unbroken web connecting said edges, and integral therewith.

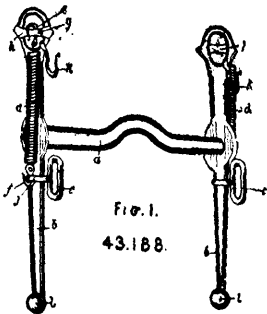
No. 43,187. Boom Chain. (Chaîne d'estacade.)



Asa Mutchenbacker, Rosseau Falls, Muskoka, Ontario, Canada, 9th June, 1893; 6 years.

Claim.—In combination with a toggle, of a toggle, link shaped, so that the toggle can only revolve at one portion of it, substantially as and for the purpose specified.

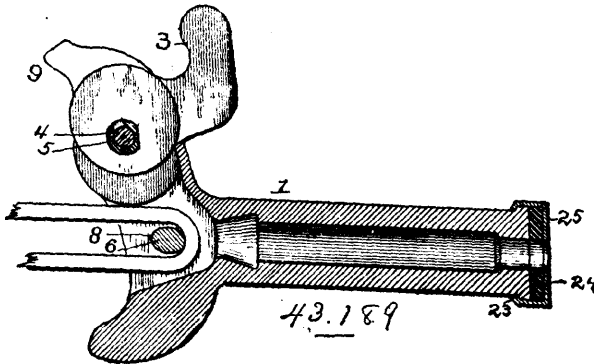
No. 43,188. Bridle Bit. (Mors de bride.)



Stanley Eskell Clifford, South Kensington, Middlesex, England, 9th June, 1893; 6 years.

Claim.—1st. In bits for bridles automatically regulating the pressure of the curb by means of springs, substantially as set forth. 2nd. In bits for bridles, the use of a spring or springs for regulating the distance of the rein rings from the mouth bar, substantially as set forth. 3rd. The improved bits for bridles, substantially as described and shown.

No. 43,189. Car Coupler. (Attelage de chars.)

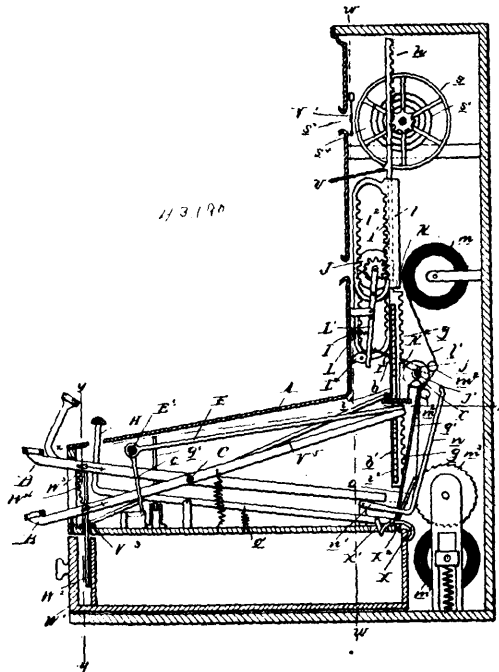


Perry Brown, Sharonville, Ohio, U. S. A., 9th June, 1893; 6 years.

Claim.—1st. A car coupler, having a swinging clutch with a substantially circular knuckle and an eccentrically placed pivot, as set forth. 2nd. In a car coupler, a swinging clutch having a substantially circular knuckle, and with its joint bored eccentrically, substantially as set forth. 3rd. In a car coupler, a swinging clutch having a substantially circular knuckle, provided with eccentric hubs, substantially as set forth. 4th. In a car coupler, a swinging clutch with a substantially circular knuckle, and a pivoted pin set eccentrically therein and in the ears of the knuckles, substantially as set forth. 5th. A car coupler, having a pin for coupling with a link, and a swinging clutch constructed to be locked by said link coupling pin, substantially as described. 6th. A car coupler, having a swinging clutch provided with a substantially circular knuckle, having hubs surrounding the pivotal centre and set in eccentric recesses in the ears, whereby the strain from said link is brought on the widest part of the metal of the years, substantially as described. 7th. The combination, with a draw bar 1, having a rib 23, of a

cushion 24, and a cap 25, surrounding and inclosing the cushion on all sides and provided with flanges turned over said rib, substantially as described. 8th. In a twin jaw car coupler, the combination of a draw bar, a pin adapted to couple with a link, and a clutch having an arm swinging in the path of the coupling pin, substantially as described. 9th. In a car coupler, the combination of a draw bar, a coupling pin, and a detent for supporting the same, with a swinging clutch having an arm swinging under the detent and throwing it backward, substantially as described. 10th. A pivoted clutch draw bar, having a knuckle with a solid outer surface and provided with a series of recesses forming horizontal ribs cast around the hole for the pivotal pin, substantially as and for the purpose specified. 11th. A clutch for a draw bar, provided with a series of ribs on its inner face, and a hardened or chilled plate bearing against said ribs to receive the wear, substantially as described. 12th. In a coupling, a pivoted jaw having notches 13 and 14, in combination with a pivotal pin having a key on its side, substantially as described.

No. 43,190. Cash Register. (Registre de monnaie.)



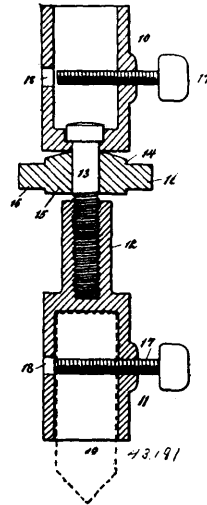
Joseph Augustus Treat, Stuart, Iowa, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. In a cash register, the combination, with a series of keys comprising a cipher key, a register mechanism, and a register actuating mechanism differentially moved by each key having a lost motion equal to its movement by the cipher key, substantially as described. 2nd. In a cash register, the combination, with a series of numeral keys, and a cipher key, a register mechanism, a rack for actuating said register, and a single rod differentially moved by each key for actuating said register mechanism upon the operation of a numeral key only, substantially as described. 3rd. In a cash register, the combination of registering wheels, and actuating means for imparting a progressive or retrograde to said wheels, substantially as described. 4th. In a cash register, the combination of registering wheels, and a single actuating mechanism therefore adapted to impart a progressive or retrograde movement thereof, substantially as described. 5th. In a cash register, the combination of registering wheels, actuating mechanism therefore, and a transfer mechanism, whereby said wheels may be given a progressive or retrograde movement, substantially as described. 6th. In a registering mechanism, the combination of an actuating gear wheel, a mechanism for moving said wheel in opposite directions consisting of racks upon opposite sides thereof, and means for causing an engagement between said gear wheel and either of said racks, substantially as described. 7th. The combination of registering wheels, an actuating gear wheel therefore, a single actuating mechanism, and means for moving said wheel in opposite directions consisting of a frame of racks on said frame on opposite sides of said gear wheel, and means for causing an engagement between said gear wheel and either of said racks, substantially as described. 8th. The combination of a series of registering wheels, an actuating gear wheel, a single actuating mechanism, means for moving said wheel in opposite directions, and a carrying mechanism acting in the movement in both directions, substantially as described. 9th. The combination in a registering mechanism adapted to add or subtract, of

registering wheels, an actuating gear wheel journaled in a swinging frame, racks upon opposite sides of said wheel, means for moving said wheel into engagement with either rack, and means for actuating said racks, substantially as described. 10th. In a registering mechanism, registering wheels journaled in a swinging frame, actuating racks upon opposite sides thereof, and means for engaging said wheels with either rack, substantially as described. 11th. In a registering mechanism, the combination with an actuating gear wheel, a numbered register wheel, a reversible pawl connection between the two, and racks for actuating said gear wheel in opposite directions, substantially as described. 13th. In a registering mechanism, the combination with an actuating gear wheel, a numbered register wheel, a pawl connecting the two racks for actuating said gear wheel in opposite directions, and means for causing an engagement between said gear wheel and either rack, and for reversing said pawl, substantially as described. 14th. In a registering machine, the combination with a single series of operating levers and a series of actuating devices for different denominations, of a plate actuated by all the levers, having fingers adapted to engage with the actuating devices, of a higher denomination at each successive operation, substantially as described. 15th. In a registering machine, the combination with a single series of operating levers, and a series of actuating bars for mechanism of different denominations, of a lifting plate actuated by all the levers and of fingers on said plate adapted to engage with the actuating bars of higher denominations at each successive operation, substantially as described. 16th. In a registering machine, the combination with a single series of operating levers, and a series of actuating bars for mechanism of different denomination, of a lifting plate actuated by all the levers, of fingers on said plate adapted to engage with the actuating bars of a higher denomination at each successive operation, and a shifting and return mechanism for said plate, substantially as described. 17th. In a registering machine of the kind described, a series of actuating bars of different denominations, a lifting plate having a corresponding number of fingers, and means for engaging said fingers successively with the bars of successively higher denomination, substantially as described. 18th. In a cash register of the kind described, the combination with the lifting plate of a shifting device therefor comprising a spring, a stationary rack bar, a corresponding shifting rack bar, an arm on the plate and a spring pawl on said arm engaging with the rack bars, substantially as described. 19th. In a cash register of the kind described, the combination with the lifting plate, of a shifting device therefor comprising a spring, a stationary rack bar, a corresponding shifting rack bar, an arm on the plate, a spring pawl on said arm engaging with the rack bar, and a lever for returning said plate to its initial position, substantially as described. 20th. In a recording mechanism for cash registers, type wheels having the digits, a cipher sign, and a blank between the 9 and cipher, substantially as described. 21st. In a recording mechanism for cash registers, the combination with a bank of keys comprising digits and a cipher, of a rack adapted to be actuated thereby, the type wheel actuated by said rack having the digits a cipher sign and a blank between the 9 and cipher, substantially as described. 22nd. In a recording mechanism for cash registers, the combination with the type wheels and a printing mechanism, of an auxiliary type plate having characters thereon adapted to record the additive or subtractive character of a sum, substantially as described. 23rd. In a recording mechanism for cash registers, the combination with the type wheels, and a printing mechanism, of an auxiliary type plate having plus and minus signs thereon, and mechanism for moving said plate to record one of said signs in connection with each number printed, substantially as described. 24th. In a recording mechanism for cash registers, the combination, with the type wheels and a printing mechanism, of a numbering wheel and means for rotating said wheel to print its number consecutively in connection with each sum recorded, substantially as described. 25th. In a recording mechanism for cash registers, the combination, with the type wheels and a printing mechanism, of a numbering wheel having its finger arranged in a punctuation mark, substantially as described. 26th. In a cash register, the combination of indicating wheels, having a blank normally exposed to view, a cipher sign and the nine digits and of indicating mechanism for exhibiting any of said fingers, substantially as described. 27th. In a cash register, the combination of indicating wheels, having a cipher sign and nine digits thereon, a blank on said wheel normally exposed, a series of digit keys and a cipher key and connecting mechanism, whereby upon the actuation of a key a figure corresponding to its value is exhibited on the wheel, substantially as described. 28th. In a cash register, the combination of a cash drawer, of a lever adapted to be actuated at the completion of each registration, for throwing out said drawer, substantially as described. 29th. In a cash register, a cash drawer, a series of keys, and means for locking the drawer during the movement of a key, substantially as described. 30th. In a cash register, a cash drawer, a series of keys, means for locking the drawer during the movement of a key, and a lever for releasing the lock and throwing open the drawer, substantially as described. 31st. In a cash register, a cash drawer, a series of keys, means for locking the drawer during the movement of a key, and a lever for releasing the lock and throwing open the drawer, substantially as described. 32nd. In a cash register, the combination of a series of keys, a series of actuating rods, a latch for holding said rods in their adjusted position, a tripping device for said latch, a lever for throw-

ing said tripping device into operative position, and means for operating said tripping device upon the succeeding operation of a key, substantially as described. 33rd. In a cash register, comprising a series of keys, a series of registering actuating bars and a single actuating plate, of a re-setting lever, a lock for said lever applied after its actuation and means for withdrawing said lock upon the actuation of a key, substantially as described. 34th. In a cash register, the combination of the plate E, the re-setting lever H, the lock Y, latch Y³, arm Y¹, and hook Y², substantially as described. 35th. In a cash register, the combination, with a series of actuating rods, a pawl for each rod, and a tripping bar for releasing all the pawls, substantially as described. 36th. In a cash register, the combination, with a series of actuating rods, a ratchet bar on each rod, an independent spring pawl for each rod, a tripping bar common to all the pawls, and a tripper actuated by the operation of a key, substantially as described. 37th. In a cash register, the combination with a hood for obscuring the indication, of a resetting lever for moving said hood to expose the indication, substantially as described. 38th. In a cash register, the combination with the keys, a resetting lever, and a hood, means for moving said hood upon the operation of a key to secure the indication, and means for moving said hood to expose the indication upon the operation of the resetting lever, substantially as described. 39th. In a cash register, the combination with the keys, the resetting lever, the hood, the hood rod V⁶, the actuating rods, the pawls ¹, for holding up said rods, the pawl V³, for the hood rod, the tripper V⁹, lever V⁵, and means on the keys for actuating said lever, substantially as described. 40th. In a cash register, the combination with the resetting lever, of means to prevent a retrograde movement until said lever has completed its stroke, such as the pawl W, and rack W¹, substantially as described.

No. 43,191. Jack. (Cric.)



John Callahan, Durango, Colorado, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. An improved carpenters' and builders' jack, composed of two sockets and set screws applied thereto, as shown, a screw 13 having a head swivelled in one socket and a threaded portion which works in the tubular threaded shank of the other socket, and an adjusting head 14, secured to the screw 13, between the sockets, as shown and described. 2nd. A carpenters' and builders' jack, composed of two sockets, 10 and 11, having rectangular recesses and open at their outer and opposite ends, set screws working through one side of each socket, and a screw 13, having a head 14 secured to it, said screw connecting the two sockets adjustably, as shown and described.

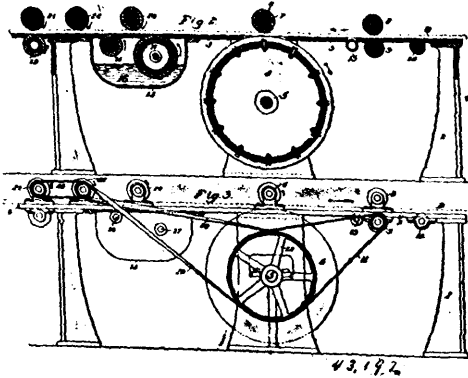
No. 43,192. Machine for Graining Wood.

(Machine pour greneler le bois)

William Watson Grier, Hutton, Pennsylvania, U. S. A., 9th June, 1893; 6 years.

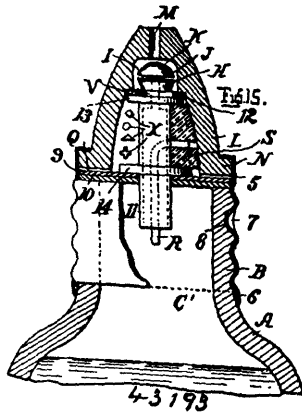
Claim.—1st. In a machine for graining wood, an indenting roller composed of individual types having sharp edges adapted to indent the article to be grained, said types being set in a form with their edges substantially parallel, and having intervals corresponding with the pattern to be produced, substantially as described. 2nd. In a machine for graining wood, an indenting roller composed of a series of flat or plate types having cutting edges arranged in substantially parallel lines, and having intervals corresponding with the pattern to be produced, the space between the types being filled with a matrix of plastic material which maintains the relation of the types and binds the same together, substantially as described. 3rd. In a machine for graining wood, &c., an indenting cylinder having

types disposed so as to produce on the wood a pattern, said types having sharp edges and being set in a bed of plastic material, such



as glue, with their edges substantially parallel and secured to the cylinder by bolts, substantially as described. 4th. In a machine for graining wood, an indenting roller situate beneath the path of the article to be grained, and a filler coating device also situate on the under side of the article and on the delivery side of the roller, substantially as described. 5th. In a machine for graining wood, the combination with the indenting mechanism, of a filler containing vessel situate on the delivery side of the indenting mechanism, on the underside of the article to be treated, and a roller adapted to revolve in the vessel and to bear on the article to apply filler to the latter, substantially as described. 6th. In a machine for graining wood, &c., the combination with the indenting mechanism, of a brush adapted to bear on the article before its indentation and a blast pipe, substantially as described. 7th. In a machine for graining wood, &c., an indenting surface composed of individual types having projections adapted to indent the wood, and a supporting roller or frame to which said types are keyed, substantially as described. 8th. In a machine for graining wood, &c., an indenting roller composed of types disposed so as to produce on the wood a pattern, adapted to indent the article to be grained, said types being set in a plastic matrix and held thereby and having lateral projections or indentations adapted to hold the plastic matrix, substantially as described.

No. 43,193. Bottle. (Bouteille.)



Harvey Isaac Leith, Providence, Rhode Island, U.S.A., 9th June, 1893; 6 years.

Claim.—1st. The combination of a bottle, a valve upon and closing the mouth thereof, an apertured cap over the mouth and valve and fastened to the exterior of the bottle, and an air tube, connecting the interior of the bottle with the outside air. 2nd. The combination of a bottle, a valve upon and closing the mouth thereof, an apertured cap over the mouth and valve, sealing material, as for example, wax, connecting the cap to the bottle, and an air tube connecting the interior of the bottle with the outside atmosphere. 3rd. The combination of a bottle, a valve upon and closing the mouth thereof, an apertured cap over the mouth and valve and sealed to the bottle, and a capillary tube connecting the interior of the bottle with the outside atmosphere. 4th. The combination with the neck of a bottle, of a cap fitting over the mouth thereof and provided with an aperture, a valve fitting over the mouth and opening into the cap, and a capillary tube connecting the interior of the bottle with the interior of the cap. 5th. The combination of a bottle having a neck provided with the usual mouth, an apertured cap placed over the mouth and resting upon the shoulder of the bottle, a ring

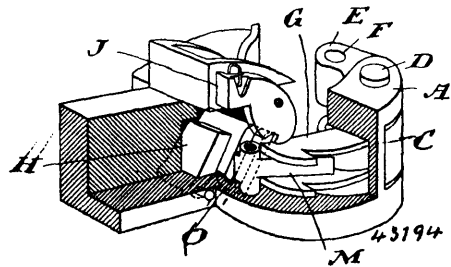
surrounding the foot of the cap and secured to the bottle, a sealing material applied to the bottle between the said ring and the said cap, a perforated membrane stretched over the mouth of the bottle, the perforations being directly over the lip in such a manner as to be closed thereby, a tube extending from the interior of the bottle to the interior of the cap and terminating against the said membrane, a deflector, consisting for example of a cone secured to the upper side of said membrane and located below the aperture in the cap and provided with feet resting upon the lip of the bottle. 6th. The combination of a bottle, an apertured cap over the mouth thereof, and sealed thereto, and an elastic ring compressed in between said bottle and the said cap. 7th. The combination of a bottle, a valve upon and closing the mouth thereof, a cap located over the neck and the mouth of the bottle and sealed to the bottle, and provided with an aperture and an air conduit extending from the interior of the bottle to the interior of the cap and terminating with its end against the said valve within the bottle. 8th. The combination of a bottle, an apertured cap covering the mouth thereof and sealed thereto, a membranous valve, such, for example, as thin sheet rubber, covering the mouth of the bottle, and a protector over the membrane and resting upon the neck of the bottle. 9th. The combination, with the neck of a bottle and with a cork fitting therein, of a detachable tube, an immovable cap enclosing the valve and located over the said tube, a seal connecting the cap to the bottle and a tube, or air passage, connecting the interior of the bottle with the outside atmosphere. 10th. The combination, with the neck of a bottle of a perforated cork fitting tightly therein, a detachable tube fitting in said cork and normally closed by a valve, an apertured cap over the valve and sealed to the said bottle, and an air bulb having air communications with the interior of the bottle. 11th. The combination, with the neck of a bottle and with a perforated cork fitting therein, of a detachable tube, a valve upon and closing the outer end thereof, a cap over the valve, a seal connecting the cap to the bottle, an air tube having slits within the interior of the bottle and extending through and beyond said tube, a porous mass fitted on the end of said tube and against the neck of the bottle and all but touching the said cap, and means for closing hermetically that portion of the interior of the cap containing the valve from that portion containing the porous material. 12th. The combination, with a bottle, of a valve closing the mouth thereof and consisting of a flexible perforated sheet, a disc fastened upon the sheet and overlapping the edge of said mouth, an apertured cap over the valve and containing a protector which normally rests upon said disc. 13th. The combination, with a bottle, of a perforated cork C, fastened in the neck thereof, a detachable tube D, fitting in said cork, a tapering cap having a mouth M, at the upper or smaller portion, and a flange N, at the larger end, having grooves Q, and resting against the flange O, on the neck B, of the bottle, a flange F, on the upper end of the tube D, a seal P, connecting the flange O, to the cap non-hermetically, a tube R, having slits I, closed at one end within the bottle and extending through the tube D, into that portion of the interior of the cap below the flange F, a porous substance surrounding the extremity of the tube R, and all but in contact with the inner surface of the cap, and an air bulb U, connecting with the interior of the bottle through the grooves Q and tube R. 14th. The combination of a bottle having a threaded lip or neck, a perforated cap located over the mouth of the bottle and having radial grooves in the lower part thereof and between itself and the bottle a metallic or similar hard washer, and a yielding washer located between the cap and the bottle, a flange upon the end of the cap opposite to the end containing the perforations, a threaded collar screwed upon the said lip and bent over the said flange, a seal connecting the collar to the bottle, the collar being compressed into an indentation in the said lip, the cap being divided into upper and lower compartments, a tube connecting the interior of the bottle with the upper compartment, from which it is separated by a valve, a tube passing partially the first named tube from the interior of the bottle to the lower compartment, and blocks, of a substance expansible by liquids fitting in the lower compartment and pressing upon opposite sides of the last named tubes. 15th. The combination with the neck of a bottle of a yielding washer, placed over the mouth thereof, an apertured cap upon the washer, a tube passing through the washer and connecting the interior of the bottle with the interior of the cap, and a seal connecting the cap to the bottle. 16th. The combination with a bottle, of a cap covering the mouth thereof, and divided into two compartments, a tube connecting the upper compartment with the neck of the interior of the bottle, an air tube connecting the interior of the bottle with the lower compartment which is open to the atmosphere, and chemically prepared substances, changeable in appearance under the influence of liquids or heat, located in the lower compartment. 17th. The combination with the neck of a bottle, of a perforated cap over the mouth thereof, and provided with a flange, a coiler turned over the flange, a seal connecting the coiler to the bottle, an air conduit, or passage, leading from the outside atmosphere to the interior of the bottle, and chemically prepared substances, changeable under the influence of liquids or heat, located in the air conduit.

No. 43,194. Car Coupler. (Attelage de chars.)

Richard K. Dorsey, Allandale, Ontario, Canada, 9th June, 1893; 6 years.

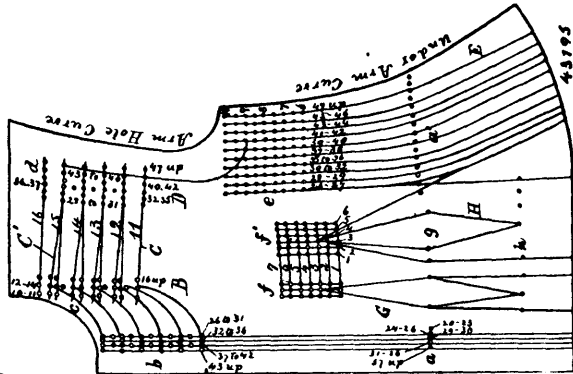
Claim.—1st. A block C, pivoted in the mouth of the draw head A, and having extending from it the arms E and G, in combination with the swinging block H, and pivoted latch L, arranged substan-

tially as and for the purpose specified. 2nd. A block C, pivoted in the mouth of the draw-head A, and having extending from it the



arms E and G, a notch *b*, formed in the arm G, and arranged to engage with the shoulder D, on the draw-head A, in combination with the swinging block H, and pivoted latch L, arranged substantially as and for the purpose specified. 3rd. A block C, pivoted in the mouth of the draw-head A, and having extending from it the arms E and G, the arm M, pivoted at N, and extending behind the arm G, in combination with the swinging block H, operated by a latch J, and arranged to engage with a projection O, formed on the pivoted arm N, substantially as and for the purpose specified. 4th. A block C, pivoted in the mouth of the draw-head A, and having extending from it the arms E and G, a notch *b*, formed in the arm G, and arranged to engage with the shoulder D, on the draw-head A, the arm M, pivoted at N, and extending behind the arm C, in combination with a swinging block H, operated by a latch J, and arranged to engage with a projection O, formed on the pivoted arm N, substantially as and for the purpose specified.

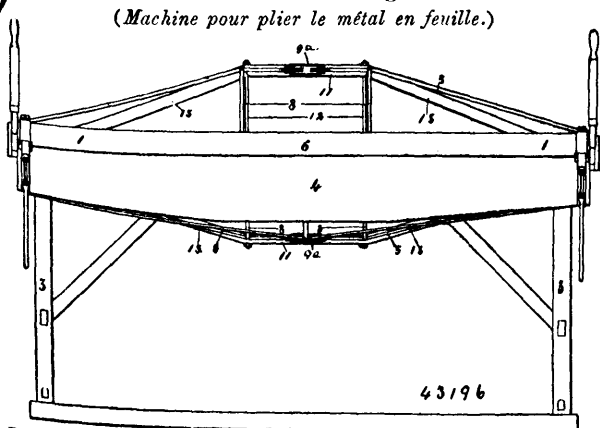
No. 43,195. Pattern for Dresses. (Patron de vêtement.)



Benjamin Viau, New York City, State of New York, U. S. A., 9th June, 1893; 6 years.

Claim.—The front pattern provided with the series of gage points *a*, and the series of perforations *b* and *a'*, upon the waist line, and provided with the parallelogram of holes *b*, for the front of the neck, the parallelogram of holes *c*, for length of waist under arm, and the parallelogram of holes *f* and *f'*, for the tops of the darts, the said parallelograms being arranged as described, and being provided with the scale numbers corresponding to the various measures, as and for the purpose set forth.

No. 43,196. Machine for Bending Sheet Metal. (Machine pour plier le métal en feuille.)



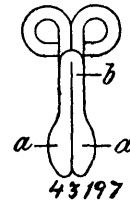
John Hooper Crocker, Shelburne, Ontario, Canada, 9th June, 1893; 6 years.

Claim.—1st. In a cornice brake, or metal folding machine, the upper and lower leaves provided with a tension truss as described,

inclining in the direction, and for the purpose set forth and shown. 2nd. In a cornice brake, the combination on the same side of the leaves, of the tension truss inclined as specified, and the king post truss secured to stand vertical at the rear edge of said leaves, substantially as shown and set forth.

No. 43,197. Hook. (Crochet.)

FIG. 1

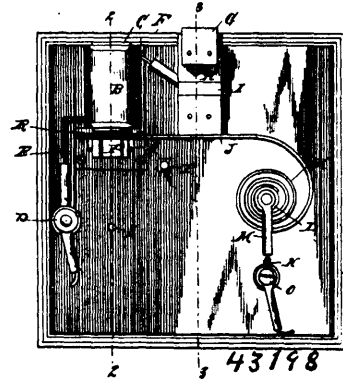


James Clement Newey, Birmingham, England, 9th June, 1893; 6 years.

Claim.—1st. In a spring hook for the purpose aforesaid, the formation of a flattened out portion of compressed metal for imparting resilience to the bill, facilitating the insertion of the hook between the bill and the back, and securing the same when inserted, substantially as hereinbefore described and illustrated by the drawings, 2nd. In a spring hook, for the purpose aforesaid, the combination of a flattened out portion *a*, with a straight bill *b*, and indentations *c*, substantially as hereinbefore described and illustrated by the drawing. 3rd. In a spring hook, for the purpose aforesaid, the combination of a flattened out portion *a*, an indented bill *b'*, and a straight back, substantially as hereinbefore described and illustrated by the drawing. 4th. In a spring hook, for the purpose aforesaid, the combination of a flattened out portion *a*, an indented bill *b'*, and an indented back, substantially as described.

No. 43,198. Automatic Circuit Breaker. (Frein automatique de circuits.)

(Frein automatique de circuits.)

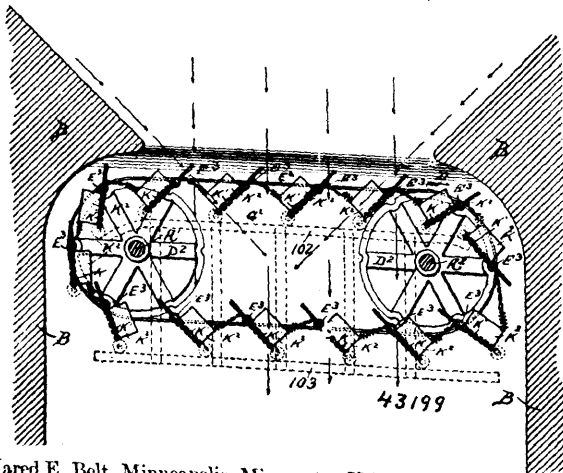


Delos Irish, George H. Stover and Joseph R. Slater, all of Salt Lake City, Utah, U.S.A., 10th June, 1893; 6 years.

Claim.—1st. In a circuit breaker, the combination of an electro-magnet arranged in the working circuit, a weighted drop armature arranged at one end of the magnet, a stationary contact arranged in the magnet circuit, and a movable spring supported contact adapted to be held normally out of contact with the stationary contact and controlled by said drop armature, substantially as set forth. 2nd. In a circuit breaker, an electro-magnet, a weighted drop armature arranged at one end of the magnet, a stationary contact block, and a movable spring supported contact block adapted to be held in engagement with the stationary block by said drop armature, substantially as set forth. 3rd. In a circuit breaker, the combination of the base board, the electro-magnet adjustably secured to said base board, and arranged in the working circuit, a weighted drop armature pivoted at one end to said base board adjacent to one end of the magnet, a stationary bracket arm adjustably secured to the base board adjacent to the magnet, the stationary concaved contact carbon secured to the outer end of the bracket arm, a spring post secured to the base board, a coiled spring secured to the outer end of said post and provided with a spring arm terminating in an insulated end adapted to be engaged by said drop armature, a concaved contact carbon secured to said spring arm, a stop pin arranged adjacent to the spring arm to limit the same, and wires leading from

the magnet to the stationary bracket arm, and from the coiled spring to the line of use, substantially as set forth.

No. 43,199. Water Motor. (*Moteur à eau.*)



Jared E. Belt, Minneapolis, Minnesota, U.S.A., 10th June, 1893; 6 years.

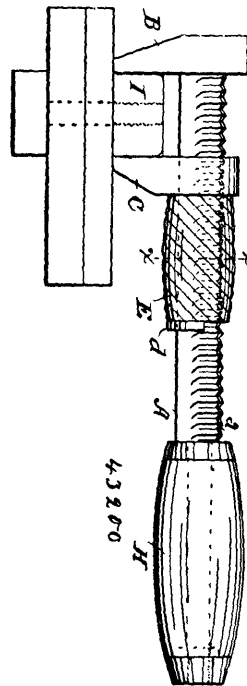
Claim.—1st. A running water motor consisting of two or more shafts A^1 , A^2 , having sheaves or pulleys D^1 , D^2 , belts passing around said sheaves, and connected at intervals by cross bars E^1 , plates K^1 , hinged to said cross bars, wings K^2 , hinged to the ends of said plates and held flexibly in inclined relations to the flow of the water, substantially as and for the purpose set forth. 2nd. The combination, with the two pairs of carrying wheels, of belts to operate over the same, cross bars extending between said belts, wings or plates arranged thereon, and adjustable bars adapted to support the lower edges of the moving blades, and whereby the inclination of said blades may be changed at will, substantially as described. 3rd. The combination, in a water motor, of the two pairs of pulleys, the belts operating thereon and carrying cross rods, flights arranged upon said cross rods, crank arms connected with said flights, and an independent adjusting device whereby the inclination of said blades may be changed without stopping the motion of the motor, substantially as and for the purpose specified. 4th. The combination, with the two shafts, of pulleys arranged thereon, with the belts operating over said pulleys, the cross rods, flights arranged upon said cross rods, chains connecting the lower edges of said flights with said belts or the cross rods, crank arms arranged upon the ends of said cross rods, chains connecting the lower edges of said flights or blades, friction pulleys upon the outer ends of said crank arms, and parallel connecting and adjusting bars whereby the inclination of said blades may be altered without stopping the motion of the motor, substantially as described. 5th. The combination, with the two shafts and the pulleys mounted thereon, with the belts operating over said pulleys, the cross rods, the flights arranged upon said cross rods, the chains extending from the lower edges of said flights to connections with said belts or the cross rods, and springs interposed in said chain, substantially as and for the purpose specified. 6th. The combination, with the two shafts, of the pairs of pulleys mounted thereon, the belts operating over said pulleys, cross rods connecting said belts, flights arranged thereon, crank arms upon said cross rods, the adjustable bars 102 and 103, the latter having curved ends, said bars being rigidly connected to the slide whereon said bars are adapted to be moved, and means for so moving said bars to adjust the inclination of said blades, substantially as and for the purpose specified.

No. 43,200. Wrench. (*Clé à écrou.*)

John A. Barker, Pasadena, California, U.S.A., 10th June, 1893; 6 years.

Claim.—1st. The wrench set forth, consisting in the combination of the bar, having an unthreaded side and having the fixed jaw at one end thereof arranged to project from the unthreaded side of the bar and having the opposite side of the bar provided with segmental spiral cam threads, the movable jaw provided with the shank grooved to receive and arranged to fit upon the unthreaded side of the bar and provided at the end with the nut retaining projection d , and having the outside of one of the walls of the groove chamfered to receive the segmental thread of the locking nut, and the locking nut fitted upon and surrounding the bar and shank and provided with internally arranged segmental threads adapted to be chamfered against the wall of the groove and adapted to engage the spiral cam threads of the bar, so that when the locking nut is rotated to force the segmental threads into engagement with each other the effect will be to force the sliding jaw toward the fixed jaw, and at the same time force the shank against the bar and clamp the two firmly together. 2nd. The combination of the bar having an unthreaded and having

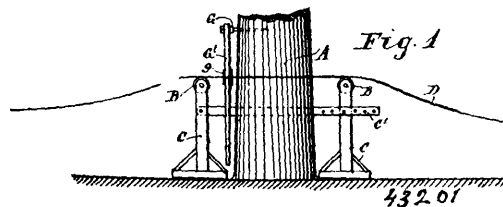
the fixed jaw at one end thereof arranged to project from one side of the bar and having the opposite side of the bar provided with seg-



mental cam threads, a movable jaw provided with a shank grooved to receive and arranged to fit upon the unthreaded side of the bar and having the outside of one of the walls of the groove chamfered to receive the segmental threads of the locking nut, and the locking nut fitted upon and surrounding the bar and shank and provided with internally arranged segmental threads adapted to be chamfered against the wall of the shank and adapted to engage the segmental cam threads of the bar. 3rd. The combination set forth, of the bar provided with segmental cam threads, a sliding jaw having its shank arranged to slide along such bar and a locking sleeve encircling such shank and provided with segmental internal threads arranged to engage the cam threads on the bar to clamp the shank of the sliding jaw against the bar when the sleeve is rotated in one direction and to release the shank therefrom when the sleeve is rotated in the other direction, whereby the sleeve and jaw may be moved along the bar and locked, and the wear of the threads will be taken up by the cam shape of the threads upon the bar and the sleeve locked upon the bar thereby.

No. 43,201. Tree Felling Saw.

(*Scie pour abattre les arbres.*)

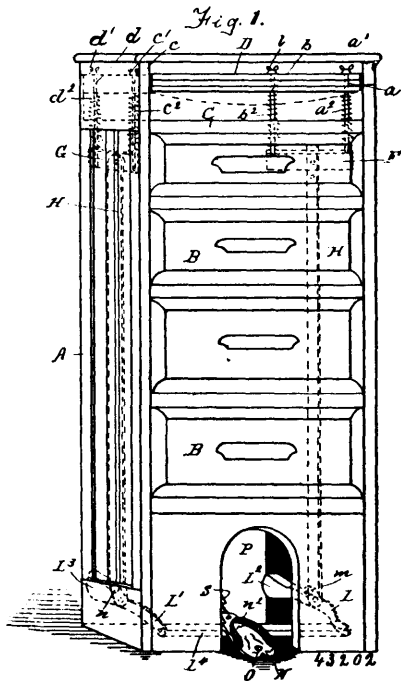


George E. Desmond, Brule, Wisconsin, U.S.A., 10th June, 1893; 6 years.

Claim.—1st. A device for felling trees and similar work, comprising a flexible saw and suitable guiding devices for directing the saw to its work, the said guiding devices being so arranged as to direct the working portion of the saw to its work in a plane offset from the plane passing through the driving portions of the saw, or the driving connections therefrom, and parallel with the plane of the feed, whereby the tree or other object may be sawed at a point either below or above the plane of the driving connection, substantially as described. 2nd. The combination with the flexible saw and driving connections for the same, of a framework provided with guide rollers for the working portions of the saw placeable in planes offset from the plane of the driving connections, either above or below the same, whereby the tree or other object may be sawed off either above or below the plane of the driving connections, substantially as described. 3rd. The combination with a frame having two or more parallel guide rollers, spaceable apart from each other, on each of the opposite sides of a tree or other object to be sawed, and a flexible saw passing

over one of the outer rollers and under one of the inner rollers, on each side of the tree or other object, whereby the tree may be sawed from its stump below the surface of the ground, substantially as described. 4th. The combination with the flexible saw, of the guide frame having its parts which straddle the tree constructed so that they may stand at an angle dipping downward below the surface of the ground, and suitable guides for the saw located at the outer and inner edges of each of the said parts of the frame, for directing the saw and holding it to its work below the surface of the ground, substantially as and for the purpose set forth. 5th. The combination with the saw, of a brad or detent engageable with the tree or other object to be sawed, as a base of resistance, and a hand lever pivoted to said brad or detent and applicable to the back of the saw for holding the same to its work, substantially as described. 6th. The combination with the saw, of a brad or detent engageable with the tree or other object to be sawed, as a base of resistance, and a hand lever pivoted to said brad or detent, and provided with a keeper engageable with the back of the saw, for holding the saw to its work, substantially as described. 7th. The combination with the saw, of the brad or detent, engageable with the tree or other object to be sawed, of the hand lever pivoted to the brad or detent, and the keeper carried by the hand lever and provided with antifriction rollers, engageable with the saw, substantially as and for the purpose set forth. 8th. The combination with the flexible saw, of the flexible driving connection uniting the two ends of the saw and forming therewith an endless flexible body, and a laterally adjustable guide for the end of said flexible body automatically adjustable into the line of strain on the saw, substantially as described. 9th. The combination with the flexible saw, and the flexible driving connection, uniting the two ends of the saw and forming therewith an endless flexible body, of an end guide for said flexible body, consisting of a laterally movable trolley mounted on an anchored support, and provided with a guide sheave or pulley for the saw driving connection, substantially as described. 10th. The combination with the flexible saw and the flexible driving connections uniting the two ends of the saw and forming therewith an endless flexible body, of a pair of end guides for said flexible body, each consisting of a laterally movable trolley mounted on an anchored support and provided with a guide sheave or pulley, for the saw driving connection, automatically adjustable laterally, under the driving strain on the saw, and guiding devices for the working portion of the saw placeable in planes offset vertically from the plane of the driving connections, either above or below the same, substantially as and for the purposes set forth.

No. 43,202. Letter Press. (*Presse pour lettres.*)



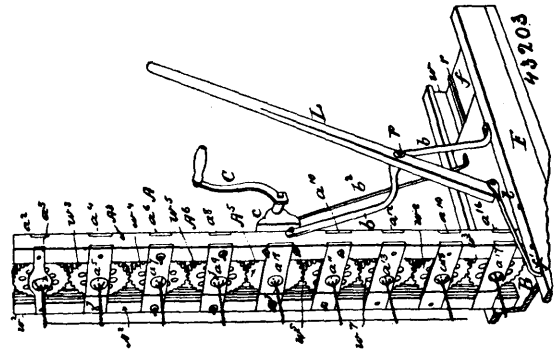
Ernest Feige, Saginaw, Michigan, U.S.A., 10th June, 1893; 6 years.

Claim.—1st. In a letter press cabinet, the combination of a frame, of levers pivoted to the sides thereof at its lower end, of tie rods extending therefrom, and yokes situated at its upper end, connecting rods encircled by springs and supporting the adjustable platen at the upper end and carried by said yokes, a table below the platen, means whereby said platen may be adjusted with reference to said table, and means for operating the levers, whereby the

platen is brought near to the table, substantially as described. 2nd. In a letter press cabinet, the combination of a frame, of levers pivoted to the sides thereof at its lower end, of tie rods extending therefrom, and yokes situated at its upper end, connecting rods encircled by springs and supporting the adjustable platen at the upper end and carried by said yokes, a table below the platen, means whereby said platen may be adjusted with reference to said table, means for operating the levers whereby the platen is brought near to the table, and means for locking the same in the dependent position, substantially as described. 3rd. In a letter press, a table, and a platen adapted to be brought forcibly toward the said table, said platen being curved upon its under side, whereby the spring of the platen, due to the pressure, tends to straighten the same and produce a uniform pressure upon the object placed between the platen and the table, substantially as described. 4th. In a letter press, the combination of a platen, a frame and table, means for forcibly bringing the platen nearer the table, and a foot actuated mechanism for locking the same in position and unlocking the same, substantially as described.

No. 43,203. Wire Fence Machine.

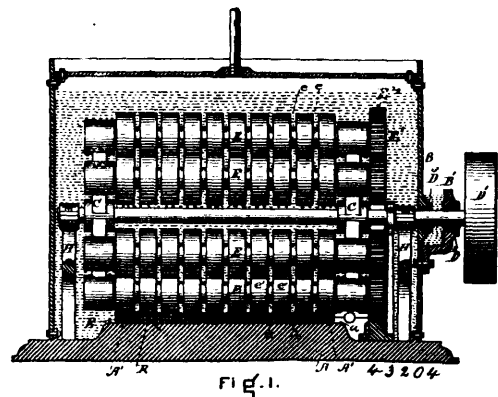
(*Machine à clôture de fil de fer.*)



Philip Trick, Crestline, Ohio, U.S.A., 10th June, 1893; 6 years.

Claim.—1st. A machine for making wire fences, which embraces a bed frame or support, which is provided with longitudinal ways, and with engageable openings, and a vertical column or standard, which is mounted upon a base or platform, which is movable within and along the longitudinal ways, and which is provided with a pivoted lever, which is adapted to engage the openings in the bed frame. 2nd. A machine for making wire fences, which embraces a supporting bed frame, which is provided with longitudinal ways, and with engageable surfaces or openings, a platform or base which is received by its edges in the longitudinal ways in the supporting bed frame, a vertical column or standard which is mounted upon the platform or base, and an operating lever, which is pivoted to a fixed part, which is secured to the base and to the column or standard, and which is adapted to engage the bed frame, and which when thus engaged, is operative to move the base and its superposed column or standard along the ways in the bed frame.

No. 43,204. Vacuum Pump. (*Pompe à vide.*)

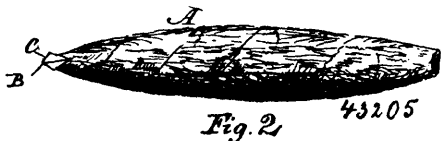


Henry Sachs Kaliske, Boston, assignee of William Emery Nickerson, Cambridge, and Adolph Berrenberg, Sumnerville, all in Massachusetts, U.S.A., 10th June, 1893; 18 years.

Claim.—1st. In a vacuum pump, the combination of elastic compressible pipes, and rolls having mechanism adapted to force said

rolls along the pipes and collapse the same, with a sealing liquid within the pipes to completely seal them at the collapsed points, substantially as and for the purpose set forth. 2nd. In a vacuum pump, the combination of the elastic compressible pipes and rolls E, E, for collapsing them, operating as described, with mechanism whereby the rolls E, E, rotate on their axes faster than they would if left free to roll on the pipes R, R, substantially as and for the purpose set forth. 3rd. In a vacuum pump, the combination of elastic compressible pipes and rolls E, E, for collapsing them as described, with mechanism whereby the said pipes are made to slowly rotate on their central lines, substantially as and for the purpose set forth.

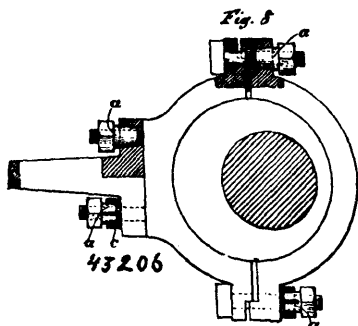
No. 43,205. Cigar. (Cigare.)



Patrick Jones, Woodstock, Ontario, Canada, 10th June, 1893; 6 years.

Claim.—1st. The manufacture of cigars with a split end, and paper inserted in the split, and the outer corners folded over it, substantially as and for the purpose specified. 2nd. The manufacturing of cigars with a split B, in the mouth end of a cigar A, and paper C, inserted in the said opening, and the outer corners folded over on the cigar, substantially as and for the purpose specified.

No. 43,206. Nut Screw Clamp. (Arrête-écrou.)

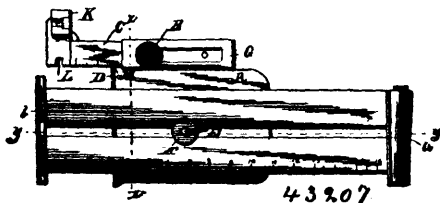


Cajetan Banovits, Budapest, Hungary, 10th June, 1893; 6 years.

Claim.—1st. A lock nut having an extension as *a*², arranged and adapted to operate, substantially as described. 2nd. The combination, with a body having a recess or opening, substantially as described: of a lock nut having an extension adapted to engage with the walls of said recess and thereby lock the parts firmly together, substantially as and for the purpose set forth. 3rd. The combination of a bolt, a plate or other body provided with a recess or opening, and a nut provided with an extension, said extension being arranged to turn around said bolt, and to engage with and become locked in said recess as the nut is screwed down into place upon said bolt, substantially as shown and described.

No. 43,207. Sewing Machine Attachments.

(Attache pour machine à coudre.)

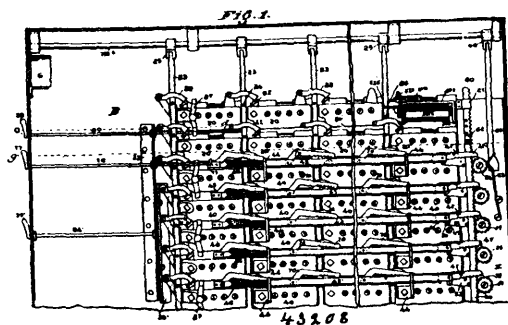


Rachel A. Shellard, Virginia, Nevada, U.S.A., 12th June, 1893; 6 years.

Claim.—1st. An attachment for sewing machines, having a presser foot bar, a base plate, and a reversible and invertible sliding plate mounted upon said base plate and provided at opposite ends and upon opposite faces with guides, substantially as specified. 2nd. An attachment for sewing machines, having a presser foot bar, a

base plate provided with a slotted guide fitting upon said bar and carrying a gauge flange, a reversible and invertible sliding plate mounted upon the base plate and carrying guides, and means to lock said parts in the desired relative positions, substantially as specified.

No. 43,208. Voting Machine. (Machine à voter.)



Jacob Hiram Myers, Rochester, New York, U.S.A., 12th June, 1893; 6 years.

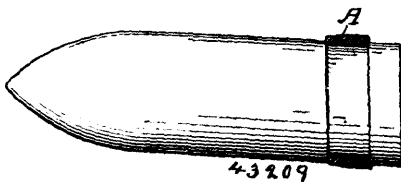
Claim.—1st. In a voting machine, the combination with two or more series of keys and two or more series of corresponding counters, of a progressively moving bar, a stop for arresting it after a predetermined movement, and two or more series connecting devices actuated by any of the keys of a series and each operating independently on the movable bar, substantially as described. 2nd. In a voting machine, the combination with two or more series of ballot indicating devices, as keys, and two or more movable bars, one for each series, actuated by the operation of the keys, of a progressively moving bar and connections between it and the bars actuated by the keys, and a stop for arresting the movement of said progressively moving bar, substantially as described. 3rd. In a voting machine, the combination with two or more series of ballot indicating devices, as keys, two or more movable bars, one for each series, actuated by the operation of the keys, and retaining devices for said keys, of a progressively moving bar, a stop for arresting it and ratchet connections between the key bars and the bar having the stop, whereby the last mentioned bar may be moved by any of the key bars, substantially as described. 4th. In a voting machine, the combination with two or more series of ballot indicating devices, as keys, two or more movable bars, one for each series actuated by the keys, having a pawl thereon, and retaining devices for the keys, of a progressively moving bar, a stop for arresting it, and ratchet connections connected to said bar with which the pawls on the key bars co-operate, substantially as described. 5th. In a voting machine, the combination with two or more series of ballot indicating devices as keys, two or more movable bars each having pawls thereon corresponding to the keys in the series, and a pawl actuating a stop device, of a movable bar, a stop for arresting it, and ratchet connections therewith actuated by the pawls on the key bars, substantially as described. 6th. In a voting machine, the combination with two or more series of balloting indicating devices as keys, a series of movable bars having a series of pawls thereon corresponding to the keys in the series and a pawl actuating a stop device, of a movable rack bar and a stop for arresting it, pinions engaging the bar and ratchet wheels connected to them with which the pawls on the bars co-operate, substantially as described. 7th. In a voting machine, the combination with two or more series of ballot indicating devices, as keys, a series of movable bars having pawls thereon, counters having slides actuated by the keys and engaging the pawls on the bars, and the pawls on the bars engaging a stop device, of a movable rack bar and a stop for arresting it, pinions engaging the bar and ratchet wheels connected to them with which the pawls on the bars co-operate, substantially as described. 8th. In a voting machine, the combination with two or more series of ballot indicating devices as keys, a series of movable bars having a series of pawls thereon, of the movable rack bar and the stop for arresting it, pinions engaging the rack and ratchet wheels connected to them, pawls mounted on each of the movable bars and normally out of engagement with the ratchet wheels, but adapted to engage and rotate them when the movable bars are actuated, substantially as described. 9th. In a voting machine, the combination with a series of progressively movable bars, a series of ballot indicating keys operating on each bar, retaining devices for the keys, a series of ratchet wheels and connections between them for causing their simultaneous operation, and a stop for arresting them after a predetermined movement, of pawls on the movable bars engaging the ratchet wheels, substantially as described. 10th. In a voting machine, the combination with a series of progressively movable bars and retaining devices therefor, a series of ballot indicating keys for each bar, springs for retracting them and key retainers, a series of counters actuated by the keys, and a series of ratchet wheels, one for each bar, connections between them for causing their simultaneous operation, and a stop for arresting them after a predetermined movement, of pawls

arranged on the bars adapted to engage the ratchet wheels and releasing devices for releasing the key retainers, substantially as described. 11th. In a voting machine, the combination, with a series of progressively movable bars, and retracting devices therefor, a series of ballot indicating keys operating on each bar, springs for retracting them and key retainers, a series of ratchet wheels connected for simultaneous operation, a stop for arresting them after a predetermined movement, and a spring projection engaging one of the wheels for positioning them, of pawls arranged on the bars adapted to engage the ratchet wheels and releasing devices for releasing the key retainers and the spring projection, substantially as described. 12th. In a voting machine, the combination, with two or more movable bars having pawls thereon and adapted to be actuated by ballot indicating keys, of two or more ratchet wheels engaged by said pawls connected for simultaneous operation and a stop for arresting them after a predetermined movement, substantially as described. 13th. In a voting machine, the combination, with two or more series of ballot indicating keys, two or more movable bars, one for each series having pawls thereon, of two or more ratchet wheels arranged to be engaged by said pawls and connected for simultaneous operation and a stop for arresting them after a predetermined movement, substantially as described. 14th. In a voting machine, the combination, with two or more movable bars adapted to be actuated by ballot indicating keys, two or more ratchet wheels connected for simultaneous operation, and a stop for arresting them after a predetermined movement, of pawls arranged on the movable bars normally out of engagement with the wheels, but adapted when moved to engage and actuate said wheels, substantially as described. 15th. In a voting machine, the combination, with two or more series of ballot indicating keys, two or more movable bars, one for each series, springs for actuating said bars in one direction, and devices for retaining the bars when actuated against the spring, of two or more ratchet wheels connected for simultaneous operation, a stop for arresting them and pawls on the movable bars engaging the ratchet wheels, and devices for releasing the retaining devices and allowing the bars to return to normal position, substantially as described. 16th. In a voting machine, the combination, with the movable bar adapted to be actuated by a ballot indicating key, of the pawl pivoted on the bar, a ratchet wheel adapted to be entered by the pawl and a lug co-operating with the pawl holding it out of engagement when moved in one direction, and permitting its engagement with and causing the actuation of the wheel when moved in the other direction, substantially as described. 17th. In a voting machine, the combination, with the movable bar adapted to be actuated by a ballot indicating key, of the pawl pivoted on the bar, having two projections, a ratchet wheel adapted to be engaged by the pawl, a stationary lug arranged to engage one or the other of the projections on the pawl, depending on the position of the latter, and retaining devices for holding the pawl in one of two positions, substantially as described. 18th. In a voting machine, the combination, with the movable bar adapted to be actuated by a ballot indicating key, of the pawl pivoted on the bar, and having a projection therefor, a ratchet wheel adapted to be engaged by the pawl, a stationary lug arranged to be engaged by the projection on the pawl when moved in one direction, thereby permitting only a limited motion of the bar, and a retaining device for holding the pawl in this position, substantially as described. 19th. In a voting machine, the combination, with the movable bar adapted to be actuated by a ballot indicating key, of the pawl 47 pivoted on the bar having the projections 48 and 49, the ratchet wheel with which the pawl engages the stationary lug 50, and the spring 53 co-operating with the pawl, substantially as described. 20th. In a voting machine, the combination, with the movable bar adapted to be actuated by a ballot indicating key, and retaining devices for holding the bar when actuated, of the pawl 47 pivoted on the bar, the ratchet wheel with which it engages, the retaining spring 63, and the movable releasing bar 65, substantially as described. 21st. In a voting machine, the combination, with a ballot indicating key, a counter actuated thereby, and a movable bar operated by the movement of the key, of a locking device for preventing the movement of said bar when desired, substantially as described. 22nd. In a voting machine, the combination, with a ballot indicating key located in a booth or chamber, a counter actuated thereby, and a movable bar operated by the movement of the key, of a locking device for co-operating with said bar and preventing its movement, actuated from the exterior of the booth when desired, substantially as described. 23rd. In a voting machine, the combination, with a series of ballot indicating keys, of a progressively moving bar actuated by the movement of any of the keys in the series, and a locking device for preventing the movement of said bar when desired, substantially as described. 24th. In a voting machine, the combination, with a booth or chamber, and a series of ballot indicating keys actuated from the interior thereof, of a bar actuated by the movement of any of the keys in the series and having a projection thereon, a shaft having a hook adapted to co-operate with the projection and lock the bar when turned to one position and adapted to be operated from the exterior of the chamber, substantially as described. 25th. In a voting machine, the combination with a booth or chamber, the series of ballot indicating keys located therein, and the sliding blocks arranged between them, of the shaft extending to the exterior of the booth and having a projection for engaging one of the blocks and thereby preventing the operation of any key in the

series, substantially as described. 26th. In a voting machine, the combination with the plate or support, having a series of apertures therein, a series of ballot indicating push keys on one side of the plate operating through said apertures and counters on the other side actuated thereby, of a bar sliding on the plate, having a series of fingers or projections, and means for moving said bar to bring the fingers in line with said apertures and prevent the operation of the keys when desired, substantially as described. 27th. In a voting machine, the combination with the partition or support, the ballot indicating keys and counters actuated thereby, of the angular plate moving on the support, having fingers or projections for co-operating with the keys and the shaft, having the eccentric portion for controlling said plate, substantially as described. 28th. In a voting machine, embodying a booth or chamber containing ballot indicating devices, the combination with the door, of a clock mechanism and connections between said door and clock, whereby the latter will be set when the door is closed, substantially as described. 29th. In a voting machine, embodying a booth or chamber containing ballot indicating devices, the combination with the door, of a clock mechanism, having a movable hand and elastic connections between said door and hand, whereby when the door is closed the hand will be returned to the starting point or zero, substantially as described. 30th. In a voting machine, embodying a booth or chamber containing ballot indicating devices, the combination with the door, of a clock having a movable hand, the lever actuated by the movement of the door and the elastic connections between the lever and hand, substantially as described. 31st. In a voting machine, the combination with the booth or chamber, having entrance and exit doors, of ballot indicating apparatus located in the booth and interlocking devices between the said entrance and exit doors, whereby the former cannot be opened until the latter is closed, substantially as described. 32nd. In a voting machine, the combination with the booth or chamber, having entrance and exit doors, ballot indicating apparatus located inside the booth and connected to the exit door, so as to reset or release when the door is moved, of a lock for securing the entrance door and connections between said exit door and the lock, preventing the opening of the entrance door until the exit door is closed, substantially as described. 33rd. In a voting machine, the combination with the booth or chamber having entrance and exit doors, ballot indicating apparatus located inside the booth and connected to the exit door so as to be reset or released when the door is moved, of a spring bolt for securing the entrance door and connections between it and the exit door whereby said bolt is held retracted when the exit door is closed, substantially as described. 34th. In a voting machine, the combination with a booth or chamber and ballot indicating devices located therein, of a curtain or cover for concealing said indicating devices, operated from the exterior of the booth, substantially as described. 35th. In a voting machine, the combination with a booth or chamber, and ballot indicating devices located therein, of a shaft capable of rotation from the exterior of the booth, a curtain connected thereto arranged to cover the ballot indicating devices, substantially as described. 36th. In a voting machine, the combination with a series of counters, ballot indicating devices, as keys, for actuating them, and interlocking devices between the keys for preventing the operation of more than a predetermined number, of a cover plate for normally concealing a working surface, as paper, an operating device as a key, for removing the cover plate, said device being connected with the first mentioned interlocking devices between the ballot indicating keys, substantially as described. 37th. In a voting machine, the combination with a series of counters, ballot indicating devices, as keys, for actuating them, retaining devices for the keys actuated, of a cover plate for normally concealing a marking surface, as paper, an operating device, as a key, for removing said cover plate from the paper, a retaining device for engaging the key when actuated, interlocking devices between the key and the ballot indicating keys, whereby only a predetermined number may be operated, releasing mechanism for releasing all of the keys, and connections between it and the cover plate for restoring the latter to normal position, substantially as described. 38th. In a voting machine, the combination with a series of counters, ballot indicating devices, as keys, for actuating them, retaining devices for the keys actuated, of a cover plate for normally concealing a marking surface, as paper, a winding device or reel for moving the paper, an operating device as a key for removing said cover plate, a retainer engaging the key when actuated, interlocking devices between the key and the ballot indicating keys whereby only a predetermined number may be operated, releasing mechanism for releasing all of the keys actuated, and connections between the releasing mechanism, the winding reel and the cover plate whereby the reel will be operated and the cover plate restored to normal position when the keys are released, substantially as described. 39th. In a voting machine, the combination, with the plate, having an aperture therein, the paper support in rear of the aperture, the movable cover plate, the arm or extension connected to the cover plate and the movable support for said arm adapted to hold the cover plate over the aperture, of the movable key arranged when operated to remove the arm support, remove the cover plate from the aperture and become engaged with the arm, substantially as described. 40th. In a voting machine, the combination, with the plate having the aperture and the frame secured thereto having the paper support and the paper rolls journaled therein, of the two arms pivoted to said

frame having the cover plate thereon, the extension on one of the arms adapted to engage a key, a support for the extension, a key adapted to engage and move the support and become engaged by the extension, substantially as described. 41st. In a voting machine, the combination, with the plate having the aperture, the paper support in rear of the aperture, the cover plate and the arm connected thereto, of the spring operated block adapted to support the arm on the plate, and the spring retracted key for moving the said block and becoming engaged with the arm, and resetting devices for raising the cover plate, substantially as described. 42nd. In a voting machine, the combination, with the plate, having an aperture therein, the paper support in rear of the aperture and the movable cover plate, of the key for removing the cover plate from the aperture, the retainer for holding the key when actuated connected to the cover plate, and the movable bar for returning the cover plate to normal position and releasing the key, substantially as described. 43rd. In a voting machine, the combination, with the plate, having an aperture, the paper support in rear of the aperture, the movable cover plate and rolls containing paper, one of them having a ratchet wheel thereon, of the movable key, the sliding block, the key retainer thereon connected to the cover plate, the pawl carried by the cover plate and the movable bar for resetting the plate, substantially as described. 44th. In a voting machine, the combination, with a series of ballot-indicating keys, counters actuated thereby and sliding blocks arranged between the keys, of a plate having an aperture therein, a cover plate normally covering the aperture, a key for removing said cover plate from the aperture and arranged to operate the blocks arranged between the other keys, substantially as described. 45th. In a voting machine, the combination, with the stationary key casing, having the lug therein, of the ballot indicating push key movable in the casing having the solid inner end, the hollow body portion and the central recess, and the key retracting spring located within the hollow body of the key and engaging the lug, substantially as described. 46th. The ballot indicating key provided with the hollow body and the lugs thereon, in combination with the key casing, the spring operating to project the key, and the spring washer surrounding the key and arranged between the lugs on the key and the casing for reducing the shock, substantially as described. 47th. In a voting machine, the combination, with the stationary key casing having the lug therein provided with the longitudinal projection, of the ballot indicating push key having the solid inner end, the hollow body portion and the central recess, and the key retracting spring located within the hollow body of the key engaging the lug, substantially as described. 48th. In a voting machine, the combination, with the ballot push key having the bevelled end, of the counter embodying a casing having a slot in the top and at the front and rear, a train of registering wheels, and a slide having a bevelled end with which the key co-operates, and the lateral lugs operating in the slots in the casing, substantially as described. 49th. In a voting machine, the combination, with a booth or chamber, and a series of ballot indicating keys located therein, a movable bar having pawls thereon corresponding to the keys in the series, said pawls being operated upon immediately by the keys and a locking device for arresting the movable bar operated from the exterior of the booth, substantially as described.

No. 43,209. Projectile. (Projectile.)



Philip Henry Holmes, Gardiner, Maine, U. S. A., 12th June, 1893; 6 years.

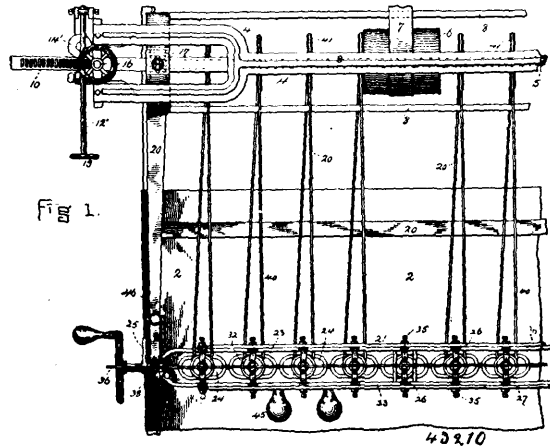
Claim.—1st. A projectile having a solidified and hardened guiding portion composed of compressed fibre, and a binder which will be formed by the rifling of the gun, and which will turn the projectile, substantially as described. 2nd. A solidified and hardened guide for projectiles, consisting of compressed fibre and an oil binder, substantially as described. 3rd. A compressed and hardened guide for projectiles formed of compressed fibre and saturated with a drying oil as a binder.

No. 43,210. Carving Machine. (Outil de sculpteur.)

Hanson Hoyt Adams, Everett, Massachusetts, U. S. A., 12th June, 1893; 6 years.

Claim.—1st. In a carving machine, the combination, with fixed uprights, a rigid support pivotally mounted in said uprights and movable endwise therein, means whereby vertical adjustment of said support as a whole on said uprights is effected, and a horizontal extension frame secured at one end to said support, of a tool carriage rocking transversely in the free end of said frame, a non-revoluble pattern tool and one or more revoluble cutting tools mounted in said carriage, substantially as specified. 2nd. In a

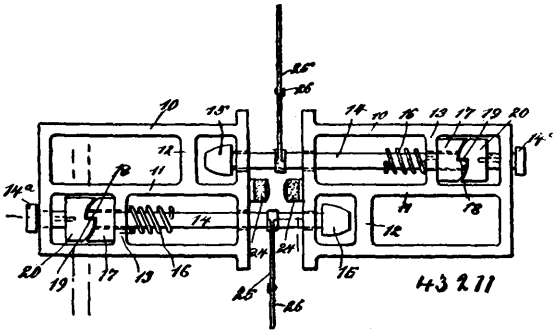
carving machine, the combination, with fixed uprights, a support pivotally mounted in said uprights and movable endwise therein, means whereby vertical movement of said support as a whole on said uprights is effected, a frame attached to said support to swing



therewith, and a carriage mounted to rock transversely in the free end of said frame, of a series of independent tool heads pivotally mounted in said carriage, a non-revoluble pattern tool, and one or more revoluble cutting tools secured in said heads and adapted for universal movement, substantially as explained. 3rd. In a carving machine, the combination, with a work table, a support free to move endwise and to rock on its axis and in which is supported a countershaft, a frame attached at one end to said support and rocking or swinging therewith, and an axially rocking tool carriage in the free end of said frame, of a series of tool heads adapted to swing pivotally in planes coincident with the longitudinal axis of the carriage, one or more revoluble cutting tools, and a single pattern tool in the lower end of said heads, and mechanism for rotating said cutting tools independently from said countershaft, substantially as described. 4th. In a carving machine, an endwise movable swinging frame, means for adjusting said frame as a whole vertically and for moving it as a whole horizontally when required, an axially rocking tool carriage composed of an apertured plate with upright ears arranged in pairs at intervals thereacross, and upright end arms 37, connected with said bar 36, combined with independent tool heads, means for clamping them together when desired, and a bar 36, passing between said arms 37, a non-revoluble pattern tool, a series of revoluble cutting tools, and means for actuating the cutting tools, substantially as set forth and stated. 5th. In a carving machine, the combination, with a swinging frame having horizontal and vertical adjustment and a tool carriage adapted to rock axially in its free end and be held in any position, of a series of tool heads oscillating at right angles to the rocking movement of the carriage and mounted thereupon, a series of revoluble spindles in said head, operating tools, a longitudinally movable rod pivotally attached to each tool head to produce simultaneous and similar movement of every head, and a clamp whereby the said rods and connected parts may be held in desired position for adjustment, substantially as set forth. 6th. In a carving machine, a swinging frame capable of horizontal and vertical adjustment, an axially rocking tool carriage in its free end, composed of an apertured plate 23, its journal supports, the upright ears in pairs thereacross, a reciprocating bar 36, and end arms 37, combined with a series of tool heads, each composed of a frame 28, trunnions 35, a revoluble spindle to receive a cutting tool and furnished with a pulley, and guide rolls 48, all operating substantially as explained. 7th. In a carving machine, the combination with a swinging frame, an axially rocking tool carriage in its free end, a series of tool heads pivotally mounted in said carriage, a non-revoluble pattern tool, and a series of revoluble cutting tools adapted for universal movement, of an oscillating hanger frame which upholds the pivoted end of the swinging frame, the fixed supports, and mechanism to provide right line movement of the hanger frame upon its supports, substantially as stated. 8th. In a carving machine, a rigid swinging frame, a support capable as a whole of horizontal endwise movement and also vertical adjustment, and the counterpoise springs or weights combined with a tool carriage adapted to rock upon its axis parallel with the horizontal axis on which the frame swings, a pattern tool and one or more cutting tools, and tool heads which receive said tools and are capable of adjustment pivotally in planes coincident with the longitudinal axis of the tool carriage, substantially as explained. 9th. The fixed uprights 3, an oscillating extension frame 20, upon which is mounted a pivotal tool carriage with rocking tool heads, combined with a movable support 4, which interconnects said extension frame with the uprights and is composed of end heads 9, supporting shafts 10, and longitudinal connecting bars 8, and with the pivotally supported shaft and its toothed wheel 12, and hand wheel 13, said toothed wheel adapted to be engaged with

one of the shafts 10 when desired, substantially as specified and set forth. 10th. In combination with fixed uprights, a movable support capable of vertical and longitudinal adjustment thereupon, an oscillating extension frame pivoted at one end to said support, the pivotal tool carriage with rocking tool heads in the free end of said frame, and a counter shaft 5 actuated by some prime motor, and having journal supports in the end heads of said support, a series of pulleys upon said shaft, and belt therefrom to operate the individual cutting tools in the tool heads, substantially as explained.

No. 43,211. Car Coupler. (Attelage de chars.)

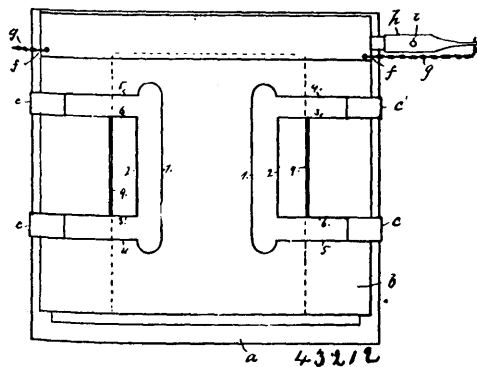


Gamaliel Jenkins, Queensbury, and Solomon W. Russell, Glen's Falls, all of New York, U.S.A., 12th June, 1893; 6 years.

Claim.—1st. A car coupling, comprising a frame, having a spring pressed draw bar held to slide therein, and having a flattened head, the draw bar being held to turn by means of its tension spring, a clutch to fix the position of the draw bar, an elongated mouth produced in the end of the frame at one side of the draw bar, and a cross rib arranged behind the mouth, substantially as described. 2nd. A car coupling, comprising a frame having an elongated mouth on one side and a cross rib behind the mouth, a sliding spring pressed draw bar arranged longitudinally in the opposite side of the frame, and having a flattened head at one end, a spring held to twist the draw bar, a lever mechanism for turning the draw bar against the tension of the spring, and a fastening clutch to hold the draw bar in place, the fastening clutch being released by pressure endwise upon the draw bar, substantially as described. 3rd. A car coupling, comprising a frame having a flat front end with a central bumper thereon, an elongated mouth produced at one side of the bumper, a cross rib held behind the mouth, a sliding draw bar held longitudinally in the frame on the opposite side of the bumper, a flattened head produced at the front end of the draw bar, a spring arranged to twist the draw bar, and a clutch to fix the position of the draw bar, the clutch being adapted to be released by endwise pressure on the draw bar, substantially as described. 4th. In a car coupling, the combination, with the spring turned draw bar having a fixed hub thereon, of a lug fixed to the draw bar frame and held to enter a segmental recess in the hub, substantially as described.

No. 43,212. Pad and Pencil Holder.

(Coussinet et porte-crayon.)



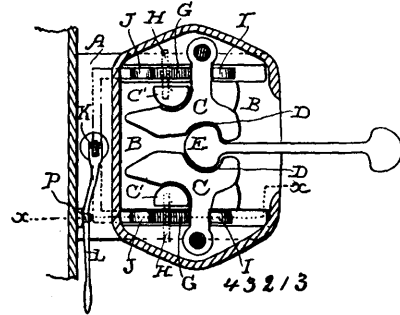
John Edward McEachran, Montreal, Quebec, Canada, 12th June, 1893; 6 years.

Claim.—1st. In a pad and pencil holder for a telephone table, the combination, with said table of the sheet metal *b*, having side spring clamps *c*, the whole substantially as and for the purposes set forth. 2nd. In a pad and pencil holder for a telephone table, the combination, with the said table of the sheet of metal *b*, having side spring clamps *c*, and curl *d*, for holding the pad, the whole substantially as and for the purposes set forth. 3rd. In a

pad and pencil holder for a telephone table, the combination, with said table of the sheet of metal *b*, having side spring clamps *c* and curl *d*, for holding the pad, said curl being provided with a sleeve *k* for holding the pencil, and having rings and chains for attaching the pencil, &c., &c., thereto, the whole substantially as and for the purposes set forth. 4th. In a pad and pencil holder for a telephone table, the combination, with said table of the plate *b*, having side spring clamps *c*, a curled top suitable for holding the pad in place, and side clamps for holding the pad transversely in place, the whole substantially as and for the purposes set forth.

No. 43,213. Car Coupler. (Attelage de chars.)

Fig. 1



Frank Merick Ryan and Walter T. Smith, both of San Francisco, California, U.S.A., 12th June, 1893; 6 years.

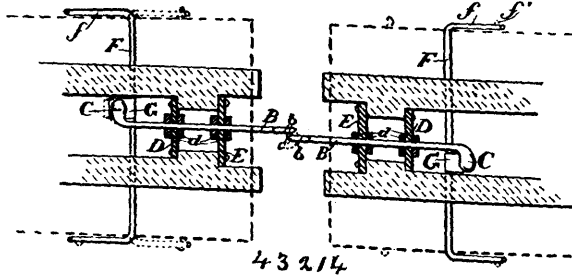
Claim.—1st. A coupling consisting of the levers fulcrumed to move in a horizontal plane about the central line of the coupling, jaws formed in the meeting faces of said levers, a coupling bar having a head which is clasped by said jaws, vertically swinging levers having hooks or lugs at the front which engage the shanks of the coupling levers to lock them in position when the jaws are closed whereby the bar is retained and the coupling completed, substantially as described. 2nd. In a car coupling, the levers fulcrumed at their outer ends to move in a horizontal plane, having jaws formed in their meeting faces to receive and hold the head of a coupling bar, levers fulcrumed to swing in vertical planes having lugs or hook adapted to engage and hold the front portion of the coupling lever shanks after the coupling is made, and other hooks or lugs which move upwardly behind the shanks of the coupling levers simultaneously with the withdrawal of the front locking lugs, whereby the jaws are released and forced open to release the head of the coupling bar, substantially as herein described. 3rd. In a car coupling, the horizontal fulcrum levers having recesses and jaws formed in their meeting faces to receive and hold the head of a coupling bar, and elastic stops against which the rear of the levers abut when the jaws are closed and the coupling completed. vertically swinging levers fulcrumed beneath the coupling levers, having hooks at the front adapted to engage the shanks of the coupling levers and retain them in position when the coupling is completed, and other hooks or lugs adapted to engage the rear of the shanks of the coupling levers when the front hooks are disengaged so as to force the coupling jaws open to release the head of the coupling bar, hand levers and connections between them and the locking lever whereby the latter may be actuated to open the coupling, substantially as herein described. 4th. A car coupling consisting of levers fulcrumed to swing in a horizontal plane about the central line of the coupling bar, jaws formed in the meeting faces of said levers, a coupling bar having heads to be clasped by the jaws, vertically swinging levers having lugs at the front and rear, which engage corresponding sides of the coupling lever shanks, a hand lever and connection whereby the locking lugs are actuated, and a spring connected therewith whereby the parts are allowed to yield to pressure when cars come together, and are returned so as to leave the jaws open when the cars are separated, substantially as herein described.

No. 43,214. Car Coupler. (Attelage de chars.)

John Danford Ripson, Thorold, Thomas Francis Brown and William Manley German, both of Welland, all in Ontario, Canada, 12th June, 1893; 6 years.

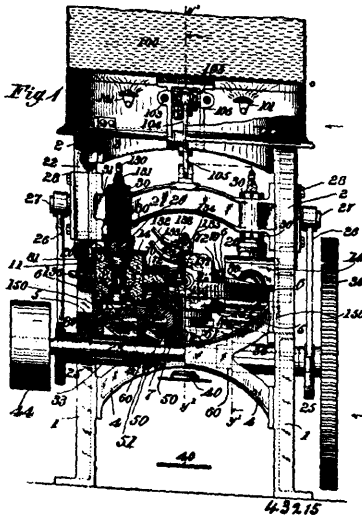
Claim.—1st. In a car coupling, the draw bar *B*, supported as specified, and having the hooked end *b*, and weighted bent end *C*, and means whereby the weighted bent end is raised and lowered, as and for the purpose specified. 2nd. In a car coupling, a draw bar provided with the hooked outer end supported in plates slightly to one side of the centre of the car and held in position longitudinally by collars attached to the draw bar and having a weighted bent inner end which is lifted by a tilting plate secured on a rod journaled in the bottom of the car, and provided with handles, as shown, and lowers of its own gravity, as and for the purpose specified. 3rd. The combination, with the draw bar *B*, provided with the hooked end *b*, supported in the plates *D*, and *E*, and held in position longitudinally by the collars *d*, and having a weighted

end C, of the tilting plate G, rod F, arm f^{11} , rod g , crank H, vertical rod I, provided with a handle i , having a notch k , and the



catch K, as and for the purpose specified. 4th. The combination, with the draw bar B, supported as specified, and having the hooked end b , and weighted bent end C, and means whereby the weighted bent end is raised and lowered, of the buffers L, supported on the studs l , and held normally from the end of the car by the springs M, as and for the purpose specified.

No. 43,215. Mould for Plastic Material.
(Moule pour matieres plastiques.)

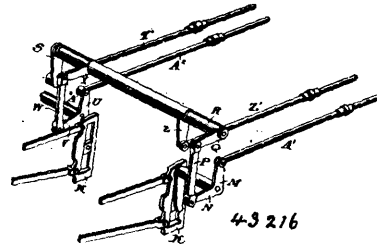


Hallack Abbey Penrose, New London, Connecticut, assignee of Henry Fitch Parker, New York city, New York, all in U.S.A., 12th June, 1893; 6 years.

Claim.—1st. In a machine for moulding plastic material, the combination with a series of rotary mould blocks each containing a series of dies, of a rotary carriage for carrying the blocks into successive positions for feeding, compressing, cooling and ejecting the material, substantially as hereinbefore set forth. 2nd. In a machine for mould plastic material, the combination with means for feeding and compressing the material, and a series of rotary mould blocks each containing a series of dies, of a rotary carriage for carrying the blocks, and means for intermittently rotating said carriage and said blocks, substantially as and for the purposes hereinbefore set forth. 3rd. In a machine for moulding plastic material, the herein described arrangement of the rotary mould blocks in a circle upon a rotary carriage, and in combination therewith two diametrically opposite compressing rams above one portion of the carriage, and two diametrically opposite feeding devices for the composition above another portion of the carriage, and means for actuating said rams and feeding devices and said carriage alternately, substantially as hereinbefore set forth. 4th. In a mould for shaping plastic material, the combination of a lower die contoured above the surface which surrounds it, an upper die, and a valvular part surrounding the upper die, movable with reference thereto, adapted to close in advance of the upper die, and to prevent the overflow of the plastic material after it has been fed upon the lower die and before it is compressed, substantially as hereinbefore set forth. 5th. The rotary carriage and hollow mould blocks revolvably mounted thereon, provided with means for water circulation irrespective of the positions of said carriage and said blocks. 6th. The combination with a suitable hollow support, such as a block 14, of dies 201 separable therefrom, arranged substantially as herein shown. 7th. In a machine for moulding plastic material, a suitable hollow support, such as a block 14, for a hollow die, provided with a transverse partition 200 extending from the central part of the die into the

interior of the hollow support, and an inlet and an outlet for a cooling medium on opposite sides of said partition, substantially as hereinbefore set forth.

No. 43,216. Locomotive. (Locomotive.)

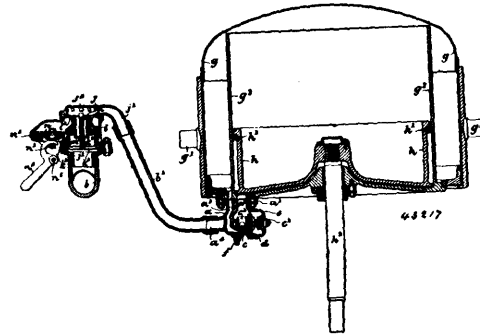


Jackson Richards, Philadelphia; Barclay Walton, Wincote, and John Andrew Wiedersheim, Philadelphia, all in Pennsylvania, U.S.A., 12th June, 1893; 6 years.

Claim.—1st. A four cylinder balanced engine provided with valve gear having two links and two sets of eccentrics for its four valves, a shaft, a rocker arm connected with the right hand outer cylinder valve, mechanism connected with the left hand outer valve and the said shaft, substantially as described, for moving said valve in an opposite direction to movement of said right hand valve, a rocker arm connected with the left hand inner valve, and mechanism, substantially as described, connected with the right hand inner cylinder valve and a sleeve fitting loosely on said shaft for moving said valve in an opposite direction to said left hand inner cylinder valve, said parts being combined, substantially as described. 2nd. A balanced four cylinder engine, having the valve gear for its four valves provided with two links and two sets of eccentrics, a shaft, a rocker arm connected with one of the outer valves, an arm connected by a rod with said shaft at one end, and an arm on the outer end of the shaft connected with the outer valve, a rocker arm connected with one of the inner valves, and an arm connected with a sleeve loosely mounted on the said shaft and connected by an arm to the other inner valve, said parts being combined, substantially as described. 3rd. A locomotive engine, having a saddle, steam passage in said saddle, and a valve in each of said passages seated on said saddle, substantially as described. 4th. A locomotive engine, having a saddle, steam passages in said saddle, and a valve in each of said passages having its head on the side of said saddle, substantially as described.

No. 43,217. Vacuum Automatic Brake.

(Frein automatique à vide.)

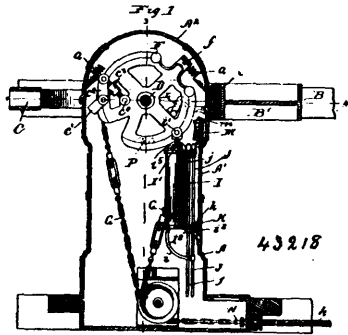


The Vacuum Brake Company, London, assignee of James Gresham Salford, Manchester, all in England, 12th June, 1893; 6 years.

Claim.—1st. In ball valve apparatus for controlling vacuum automatic brakes, providing the movable stem c^1 , whereby the ball valve c is unseated, with means, both above and below, for preventing the escape of the said valve from the hole or cavity in the stem, substantially as herein described. 2nd. In vacuum automatic brake apparatus, forming the movable stem whereby the ball valve is pulled off its seating, substantially as herein described, and so that the stem can only be placed in position in its correct attitude. 3rd. In vacuum automatic brake apparatus comprising supplementary valve mechanism for admitting air quickly to the train pipe in case of emergency, the employment of an additional valve for controlling the communication between the supplementary valve mechanism and the atmosphere, substantially as herein described, such additional valve serving to exclude dust and dirt. 4th. In vacuum automatic brake apparatus comprising an additional valve for controlling the communication between the supplementary or emergency valve mechanism and the atmosphere, the employment of means for holding down that valve against its seating, substantially as herein described. 5th. With vacuum automatic brake apparatus, the use of supplementary or emergency valve mechanism attached to the

train pipe and mounted separately from and independently of the controlling valve for ordinary working, communication between the two sets of valve mechanism being effected by means of a flexible tube, substantially as herein described. 6th. In vacuum automatic brake apparatus, mounting the supplementary emergency valve in a casing adapted for serving as an union between the train pipe and the flexible tube connected to the controlling valve for ordinary working, substantially as herein described.

No. 43,218. Railway Gate. (Barrière de chemin de fer.)



Alexander J. McDonald, assignee of Isaac T. Dyer, all of Chicago, Illinois, U.S.A., 12th June, 1893; 6 years.

Claim.—1st. The combination, with the chain wheel, of adjustable link c^3 , arm c^2 , U-shaped piece c^1 , and the sidewalk gate and its journals, substantially as set forth. 2nd. In a railway gate, a sidewalk gate journalled in the post upon journals c , a U-shaped piece c^1 , rigid with said journals, an arm c^2 , rigid with the U-shaped piece, an adjustable link c^3 , pivotally joined to said arm and to the wheel F , and said wheel, all combined and operating substantially as set forth. 3rd. The combination, with the wheel F , of the pivotally supported cylinder for operating said wheel, a gravity pawl for locking the wheel in both positions, a second cylinder and piston for releasing said pawl, and separate air supply pipes connected to the ends of the operating cylinder by the flexible connections, said supply pipes being also both connected to the releasing cylinder, substantially as specified. 4th. The combination, with the wheel F and its operating cylinder and locking pawl, of the pneumatic cylinder M , and its piston for releasing said pawl, and separate supply pipes J and j , each joined to both said cylinders, substantially as specified. 5th. The combination, with the main cylinder and the releasing cylinder of pipes J and j , pipe J being joined to one end of the main cylinder, and pipe j to the other end thereof, and both pipes opening together at their ends and connecting with the releasing cylinder by a single passage m^1 , substantially as specified. 6th. The air supply pipes J and j , opening together and each provided with a check valve, as shown, a pawl releasing cylinder, a passage connecting said pipes with said cylinder, and a normally open discharge valve located in said passage, in combination with the gate operating cylinder, the wheel and the locking pawl, substantially as specified. 7th. The air supply, opening together as shown, and each provided with a check valve, and one of them being also provided with a normally open discharge valve, in combination with the pawl releasing cylinder and its pistons, the gate operating cylinder, the gate, the gate wheel and the pawl, substantially as specified. 8th. The railway gate, wherein are combined roller bearings for the gate supporting and operating journals, chain wheels mounted upon said journals and having arms f , spring buffers a , with which said arms come in contact, a pivotally supported pneumatic operating cylinder and piston joined to said wheel and actuating the same, a gravity pawl for locking said wheel, a pneumatic cylinder and piston for releasing said pawl, and separate air supply pipes each joined to both said cylinders, substantially as set forth. 9th. The combination, in a railway gate, of the chain wheel, the operating cylinder I , and a pivotal support for said cylinder, consisting of the arm R^2 , pivot i^2 , and bracket K , substantially as set forth. 10th. The combination, in a railway gate, of the gate supporting journal D , boxes E , and rollers d , made of piping, substantially as set forth.

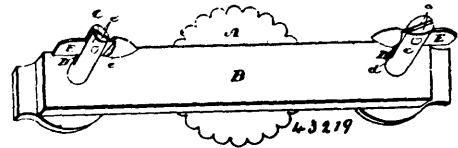
No. 43,219. Fastener for Brooches. (Agrafe pour broches.)

(Agrafe pour broches.)

Adrien Eugene Thouret and William Young Martin, all of Toronto, Ontario, Canada, 12th June, 1893; 6 years.

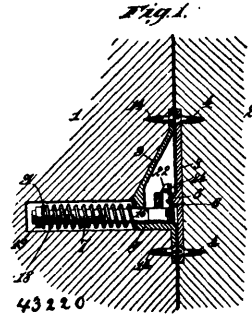
Claim.—1st. A fastening for brooches and the like consisting of the bifurcated pin secured to said brooch, having a pin pivoted in the bifurcation thereof and adapted to be swung at right angles thereto, substantially as described. 2nd. In a fastening device, the bifurcated pin C , having its end bevelled, and the pin E , pivoted in the bifurcation and having the enlarged head with inclined shoulders adapted to fit the bevelled end of the pin C , substantially as described. 3rd. In a fastening device, the pin C , having a bifurcation

or passageway therein, the pin E , pivoted therein and provided with



an enlarged head, the portion of said head in proximity to the pin e , being bevelled or contracted, substantially as and for the purpose specified. 4th. In a fastening device the pin C , having a bifurcation or passageway therein, with the end wall of said passageway bevelled or inclined, a pin pivoted in said passageway having its inner end bevelled to fit said inclined wall, and its outer end enlarged and pointed, substantially as and for the purpose specified.

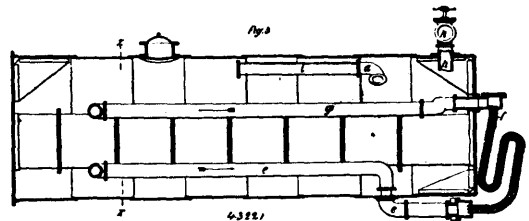
No. 43,220. Spring Hinge. (Penture à ressort.)



John S. Levis, assignee of Edwin A. Leland, all of Brooklyn, New York, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. In a spring hinge attachment, a pocket or casing composed of a base 8, rear wall 9, having orifice 15, side walls 10, and flanged front 12, substantially as described. 2nd. The combination in a double acting spring hinge, of a chambered metallic casing adapted to set in a recess in the door frame, and having its rear wall provided with an orifice 15, a rigid spindle or bolt 7, acted on by a spring and slidable through the said orifice in the rear wall of the casing, and having at its outer end an upwardly projecting cylindrical pintle 6, which normally lies in the chamber of the casing, and the plate 3, having an eye 5, to engage the pintle on the spindle or bolt, substantially as described. 3rd. The combination in a double acting spring hinge, of a metallic plate having an eye, a metallic pocket or case having an orifice in its rear wall, a movable spring pressed spindle or bolt extending through said orifice and carrying a vertical, cylindrical pintle having a bevelled or inclined portion at the rear side of its upper end against which the eye of the metallic plate operates in hanging the door to move the spindle or bolt in an outward direction and thereby place the spring under increased tension, substantially as described. 4th. The combination in a double acting spring hinge, of a metallic plate 3, having an eye 5, a metallic pocket or case composed of the flanged face plate 12, horizontal base 8, inclined rear wall 9, and side walls 10, the rear wall containing an orifice, a lengthwise movable spring pressed spindle or bolt extending through the orifice in the pocket or case and carrying a cylindrical pintle which is formed with a bevelled or inclined portion 22 at the rear side of its upper end for engagement with the eye on the plate so that the spindle or bolt is moved outward when the door is hung, substantially as described.

No. 43,221. Steam Generator. (Générateur de vapeur.)



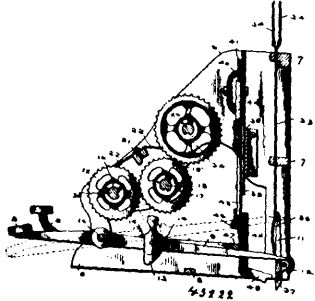
Hugh McPhail, Edward Simpson and Charles H. Simpson, all of Wakefield, England, 14th June, 1893; 6 years.

Claim.—1st. The method of producing dry and superheated steam, which consists in passing the steam from a generator through one or more superheaters placed in the flue or flues and superheating it to a much higher temperature than that of the boiler, and then through pipes, chambers or coils in the water space of the said generator, sub-

stantially as hereinbefore described for the purpose specified. 2nd. The combination, with a generator, of a superheater or superheaters placed in the flue or flues, pipes for conducting the steam to the superheater or superheaters, and other pipes for conducting the superheated steam from the superheater or superheaters through the water space of the generator, substantially as described for the purpose specified.

No. 43,222. Cash Register.

(Registre à monnaie.)



The Boston Cash Register Company, Northampton, Massachusetts, assignee of Fortune L. Bailey, Freeport, Indiana, all in the U.S.A., 14th June, 1893; 6 years.

Claim.—1st. In a registering machine, the combination of a wheel, an actuating lever, and a dog mounted on such lever, such dog and lever so constructed that the dog, when such lever is operated, will engage and move such wheel a certain distance and then be stopped by such lever, substantially as shown and described. 2nd. In a registering machine, a wheel, an actuating lever, a gravitating dog riding loosely on such lever, and adapted when such lever is operated, to engage and move such wheel, and a stop adapted to limit movement of such dog, while actuating such machine, a wheel, an actuating lever, and a gravitating dog riding loosely on such lever and adapted when such lever is operated, to engage and move such wheel a certain distance, and then lock on such lever, so that it cannot move such wheel further until the lever is lowered and again operated, substantially as shown and described. 3rd. In a registering machine, a wheel, an actuating lever, and a gravitating dog riding loosely on such lever and adapted when such lever is operated, to engage and move such wheel a certain distance, and then lock on such lever, so that it cannot move such wheel further until the lever is lowered and again operated, substantially as shown and described. 4th. In a registering machine, a wheel, an actuating lever, a gravitating dog mounted loosely on such lever, and lugs on each side of such dog, to prevent such dog from slipping too far backward and forward on such lever, such dog adapted to engage and move such wheel a certain distance and then lock on such lever, so that such wheel cannot be moved further until such lever is lowered and again operated, substantially as shown and described. 5th. In a registering machine, a wheel, an actuating lever, a gravitating dog loosely mounted on such lever, lugs on the lever on each side of such dog, to prevent the same from sliding too far backward and forward upon such lever, and shoulders or projections on the side of such dog, above and below such lever, to prevent the upper end of such dog from tipping too far, such dog adapted to engage and move such wheel a certain distance and then lock on such lever, so that such wheel cannot be moved further by such lever until the dog is lowered and the lever again operated, substantially as shown and described. 6th. In a registering machine, a wheel, an actuating lever, a gravitating dog mounted loosely thereon, a lug on such lever on each side of such dog to prevent the same from sliding too far backward and forward, such dog having a recess in its side for the lever to fit and operated in loosely, and a shoulder on each end of such dog, adapted to bear against the upper wheel a certain distance, and then be locked on such lever by such shoulders and lugs, so that it cannot move such wheel further until the lever is again operated, substantially as shown and described. 7th. In a registering machine, two series of toothed registering wheels, the wheels of the lower series provided with a lug or tooth adapted at each revolution of such wheels to contact with the corresponding wheels in the second series and move the same one notch, a series of levers pivoted on a shaft in the machine, a dog loosely mounted on each of such levers with lugs on such levers to prevent the dog from moving too far backward and forward, and shoulders on such dog above and below the lever, whereby such dog will contact with the lower registering wheel and move the same one notch and then lock on the lever, substantially as shown and described. 8th. In a registering machine, two wheels, an actuating lever, a gravitating dog mounted loosely on such lever, and lugs on such lever to prevent the dog from slipping too far backward and forward on such lever, such dog adapted to engage one of such wheels and move it a certain distance and then contact with the other wheel and lock so that such wheel cannot be moved further by such dog until it is dropped and the lever again operated, substantially as shown and described. 9th. In a cash register, a double series of registering wheels loosely mounted on independent shafts within the framework, an intermediate series of wheels

adapted to operate the lower registering wheels, and at a certain point to move the upper ones, a series of independent levers pivoted on the shaft within the framework and dogs carried thereon and adapted to engage with and turn one of the intermediate wheels, substantially as shown and described. 10th. In a cash register, a double series of toothed registering wheels loosely mounted on independent shafts within the framework, an intermediate series of toothed wheels adapted to operate the lower register wheels, and at a certain point to move the upper ones, a series of independent levers pivoted on a shaft within the framework, and dogs carried loosely thereon adapted to engage with and turn one of the intermediate wheels one notch, and at the same time to lock between such intermediate wheels and lower registering wheels, substantially as shown and described. 11th. In a cash register, a framework, two series of toothed registering wheels mounted on independent shafts therein, a series of intermediate wheels engaging with the lower registering wheels, such intermediate wheels having on one side a single tooth, whereby when they have made a single revolution they engage with and move the upper registering wheels one notch, and a series of independent key levers with dogs mounted thereon adapted to engage with and operate the intermediate wheels, substantially as shown and described. 12th. In a cash register, a framework, a double series of toothed registering wheels loosely mounted on independent shafts within such framework, a series of toothed wheels mounted on an intermediate shaft, such wheels engaging with the lower series of registering wheels, and each provided with a supplemental tooth in line with and adapted to engage with the upper series of registering wheels, flat springs secured to a cross bar within the framework, their ends engaging with the teeth of the two sets of registering wheels, a series of operating levers pivoted on a shaft within the framework, dogs loosely mounted on such levers, their heads adapted to engage with the lower registering and intermediate toothed wheels, moving the same, and locking them together until the lever drops to its normal position, substantially as shown and described. 13th. In a cash register, two series of registering wheels loosely mounted on shafts within the framework, a series of toothed registering wheels mounted on an intermediate shaft, such wheels engaging with the lower registering wheels, and, at certain points, with the upper ones, spring washers keyed on the shafts between the registering wheels, such washers cut on one side, an end thereof slightly sprung to one side to form a projection for engaging with a notched on the side of such wheels, a series of operating levers pivoted on a shaft having bearings in the framework, and dogs loosely mounted on such lever adapted to engage with and rotate the intermediate wheels and lock the same with the lower registering wheels, substantially as shown and described. 14th. In a cash register and indicator, a framework, a pair of shafts having bearings therein, each carrying a series of toothed registering wheels, a series of toothed wheels mounted on an intermediate shaft, such wheels engaging with the lower registering wheels, and, at certain points, with the upper ones, a series of independent levers pivoted on a shaft within the framework, dogs loosely mounted thereon adapted to engage with and move the intermediate wheels a single notch, and lock the same with the lower registering wheels until the lever returns to its normal position, in combination with the suitable indicating tablets operated through such key levers, substantially as shown and described. 15th. In a cash register and indicator, a double series of toothed registering wheels loosely mounted on independent shafts within the framework, a series of toothed wheels loosely mounted on an intermediate shaft, such wheels engaging with the lower registering wheels, and, at a certain point with the upper ones, flat springs secured to a cross bar within the framework, their ends engaging with the teeth of two registering wheels, spring washers keyed to the shafts between the registering wheels, such washers cut on one side, an end thereof sprung to one side so as to form a catch to engage with a notch on the sides of the wheels, a pawl and ratchet mechanism attached to the outer ends of the two registering shafts for rotating the same, a stop mechanism attached to the opposite end of such shafts, a series of independent operating levers pivoted to a shaft within the framework, end dogs loosely mounted on such levers and adapted to engage with the intermediate wheels, whereby they are rotated, and locked with the lower registering wheels, substantially as shown and described. 16th. In a cash register and indicator, a framework, two series of toothed registering wheels mounted upon shafts, a series of toothed wheels mounted upon an intermediate shaft, such wheels engaging with the lower series of registering wheels, and, at a certain point, with the upper one, cut washers keyed to the several shafts between each of the wheels, one end of such washers being sprung to one side so as to form a catch adapted to engage with a notch in its wheel, ratchet wheels rigidly mounted on one end of each of the registering shafts, an arm carrying a pawl loosely mounted within the same and adapted to revolve them, a notched wheel mounted on the opposite ends of the registering shafts, and a pivoted dog bearing when in line with the same, whereby it will engage with such notch in line with the same, substantially as shown and described. 17th. In a cash register and indicator, a framework supported within an enclosing casing, a double series of toothed registering wheels loosely mounted on independent shafts therein, a series of toothed wheels mounted on an intermediate shaft, such wheels engaging with the lower registering wheels and, at certain points, with the upper ones, a series of independent levers pivoted on a

shaft and adapted to operate the registering mechanism, a series of indicating tablets mounted upon shanks which are supported on the inner ends of such levers and adapted to be raised by them, the lower ends of such shanks when raised engaging with notches on the arms of a pivoted rack, a pivoted cross bar lying across the tops of and adapted to be raised by the movement of any of such levers and to contact with a projection on a vertical moving bar, such bar carrying a pivoted trigger engaging a bell hammer operating on a suitable bell, a dog pivoted on the lower end of such vertical moving bar and a spring controlled drawer in the lower part of the casing, its rear end engaging with such dog, whereby it is retained within the casing and a pivoted trigger on the back of such drawer engaging with a lug on the bottom of the pivoted rack as the drawer is forced out, tripping the same and thereby releasing any tablet shanks that may be raised, substantially as shown and described.

18th. In a cash register, the combination of a shaft with a series of registering wheels mounted thereon, means for rotating the same, a groove in such shaft, spring washers riding loosely on said shaft between such wheels, such washers having a lug on the inner side of the same adapted to fit in the groove in such shaft to hold such washers in place, such washers cut on one side, one end thereof sprung to one side so as to engage with notches on the side of the wheel when the shaft is turned for the purpose of resetting such registering wheels, substantially as shown and described.

19th. In a cash register, the combination of a shaft with a series of registering wheels mounted thereon, means for rotating the same, a groove in such shaft, spring washers riding loosely on such shaft between such wheels, such washers having a lug on the inner side of the same adapted to fit in the groove in such shaft to hold such washers in place, such washers cut on one side, an end thereof sprung to one side so as to engage with notches on the side of the wheel, a pawl and ratchet mechanism mounted on one end of such shaft, and a ratchet wheel on the opposite end adapted to engage with a pivoted dog bearing on the periphery of such wheel, substantially as shown and described.

20th. In a cash register, the combination of a shaft with a series of registering wheels mounted thereon, means for rotating the same, spring washers mounted in such shaft between such wheels so as to rotate with such shaft when the shaft rotates, such washers cut on one side, an end thereof sprung to one side so as to engage with notches on the side of the wheel when the shaft is turned for the purpose of resetting each registering wheel, substantially as shown and described.

21st. In a cash register and indicator, a frame work, a registering mechanism therein, independent levers pivoted on a shaft within such frame work and carrying dogs for operating such registering mechanism, the rear end of such levers resting between the arms, of a pivoted rack and a series of indicating tablets mounted upon shanks supported above such levers and resting thereon, the shanks of such tablets adapted to engage with notches formed in the arms of such racks when raised by the levers, substantially as shown and described.

22nd. In a cash register and indicator, a casing with a registering mechanism therein, operating levers pivoted on a shaft within the frame work of such register, the rear end of such levers resting between the arms of a pivoted rack bar, a series of indicating tablets mounted upon shanks, such shanks supported upon the levers and adapted to engage with notches in the arms of such rack when raised, and a lug formed on the lower part of such rack whereby it may be tripped and the raised tablet released, the rack bar returning to its normal position by gravity, substantially as shown and described.

23rd. In a cash register and indicator, a frame work, a suitable registering mechanism therein, a series of independent levers pivoted on a shaft within such frame work for operating such registering mechanism, the rear ends of such levers supported between the vertical arms of a pivoted rack, a series of indicating tablets mounted upon shanks, such shanks supported above and by such levers, the shanks of such tablets adapted to engage with notches in the arms of such rack when raised by the levers, and a lug on the under side of such rack adapted to be tripped by a trigger pivoted to a drawer below, in its outward movement thereby releasing the raised tablet or tablets, substantially as shown and described.

24th. In a cash register and indicator, independent levers pivoted on a shaft, and adapted to operate a registering mechanism, the rear end of such levers supporting shanks upon which suitable indicating tablets are mounted and the lower end of such shanks bent backward so as to engage in the notches in the arms of a pivoted rack bar, when the shanks are raised by the levers, substantially as shown and described.

25th. In a cash register and indicator, independent levers pivoted on a shaft and adapted to operate a registering mechanism, the rear end of such levers operating between the arms of a pivoted rear bar, and supporting shanks upon which indicating tablets are mounted, the lower end of such shanks bent backward so as to engage in the notches in the arms of the pivoted rack bar, when the shanks are raised by the levers, substantially as shown and described.

26th. In a cash register and indicator, independent levers pivoted on a shaft and adapted to operate a registering mechanism, the rear end of such levers operating between the arms of a pivoted rack bar and supporting shanks upon which indicating tablets are mounted, the lower end of such shanks resting partially upon such levers, the remaining portion of the lower end of such shanks projecting sufficiently from such levers laterally to enable any of them when raised by such levers to engage with and rest in a notch in an arm of the rack bar beside such lever, substantially as shown and described.

27th. In a cash register and

indicator, independent levers pivoted on a shaft, and adapted to operate a registering mechanism, the rear end of such levers operating between the arms of a pivoted rack bar, and supporting shanks upon which indicating tablets are mounted, the lower end of such shanks bent backward, and resting partially upon such levers, the remaining portion of the lower end of such shanks projecting sufficiently from such levers laterally as to enable any one of them when raised by such levers to engage with and spring into a notch in the arm of the rack bar beside such lever, substantially as shown and described.

28th. In a cash register and indicator, independent levers pivoted on a shaft, and adapted to operate a registering mechanism, the rear end of such levers resting between the arms of a pivoted rack, and supporting shanks upon which suitable indicating tablets are mounted, such shanks movable vertically, and so held in place at the upper end and middle of them as to spring the lower end of the shanks backward, whereby they will spring into notches in the arms of such pivoted rack when the shanks are raised by the levers, substantially as shown and described.

29th. In a cash register and indicator, independent levers pivoted on a shaft and adapted to operate registering mechanism, the rear end of such levers resting between the arms of a pivoted rack, and supporting shanks upon which suitable indicating tablets are mounted, the lower end of such shanks resting partially upon such levers, the remaining portion of the lower ends of such shanks projecting sufficiently from such levers laterally as to engage with notches in the arms of the rack bar when raised, such shanks movable vertically, and so held in place at the upper end and middle of them as to spring the lower end of the shanks backward, whereby they will spring into notches in the arms of such pivoted rack, when the shanks are raised by the levers, substantially as shown and described.

30th. In a cash register and indicator, independent levers pivoted on a shaft and adapted to operate, registering mechanism, the rear end of such levers resting between the vertical arms of a pivoted rack bar, such arms having a notch near their upper end, shanks upon which suitable indicating tablets are mounted, such shanks supported below by such levers, and so held in place at the upper end and middle of them, and so bent at their lower end as to spring the lower end into the notch in the arm of such rack bar, when such shanks are raised by such levers, substantially as shown and described.

31st. In a cash register and indicator, independent levers pivoted on a shaft and adapted to operate a registering mechanism, the rear end of such levers resting between the vertical arms of a pivoted rack bar, such arms having a notch near their upper end, shanks upon which suitable indicating tablets are mounted, such shanks supported below by such levers, and so held in place at the upper end and middle of them, and so bent at their lower end as to spring the lower end into the notch in the arm of such rack bar when such shanks are raised by such levers, substantially as shown and described.

32nd. In a cash register, actuating levers pivoted on a shaft, a cross bar resting on such levers, a bell and suitable connecting parts supported on a plate within the machine, and a bar adapted to move vertically on the face of such plate, such bar having a projection at its lower end with which the cross bar, after being raised by the key levers, is adapted to contact, whereby the vertical moving bar is raised, and through its connections the bell is rung, substantially as shown and described.

33rd. In a cash register and indicator, actuating levers pivoted on a shaft, a cross bar resting on such levers, its ends bent and pivoted to such lever shaft, a bell and suitable connecting parts supported on a plate within the machine, a bar adapted to move vertically on the face of such plate, a lug attached to such bar near the middle thereof, with which the cross bar after being raised by the key levers is adapted to contact and through its connections ring the bell, a drawer and a dog pivoted to the lower end of such vertical moving bar, adapted to release such drawer when such bar is raised, substantially as shown and described.

34th. In a cash register and indicator, a drawer in the lower part of the same, a pivoted trigger attached to such drawer, a pivoted rack having notched arms to support tablet shanks when raised, and such rack having at its lower end a lug, such pivoted trigger adapted to move the lug forward as the drawer is drawn out, whereby the arms of the rack bar are thrown backward and the tablet shanks are dislodged so that they drop, substantially as shown and described.

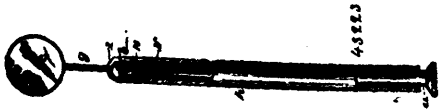
35th. In a cash register and indicator, a pivoted rack bar with notched arms above to support the tablet shanks when raised, and with a lug below adapted to be thrown forward by a trigger attached to such drawer when the drawer is drawn out, whereby the arms of the rack bar are thrown back and the raised tablets dropped, such rack bar being so pivoted that the arms extend upward, inclined slightly forward when the rack bar is released, substantially as shown and described.

36th. In a cash register and indicator, a drawer in the lower part of the same and wheels provided with stub axles working in grooved or slotted bearings in the sides of the casing of the machine, such drawer supported by and operating on such wheels, substantially as shown and described.

37th. In a cash register and indicator, a suitable enclosing casing, a drawer in the lower part of the same, flanged wheels provided with stub axles working in grooved or slotted bearings in the sides of the casing, and flanged tracks formed on the

sides of such drawer and adapted to be supported by and move longitudinally on such wheels, in combination with a spring for throwing the drawer outward, and a pivoted dog actuated by the key levers engaging such drawer and normally retaining it within the casing, the drawer being released when such dog is operated, substantially as shown and described.

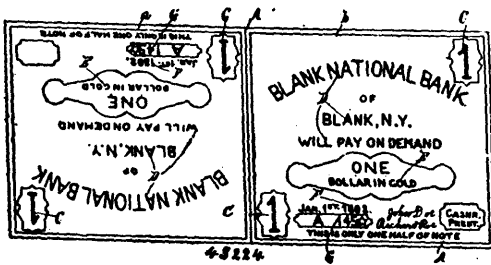
No. 43,223. Mouth Mirror. (*Miroir pour la bouche.*)



Robert Fulton Philips, San Diego, California, U.S.A., 14th June, 1893; 6 years.

Claim.—In a ball and socket mouth mirror, the combination of the hollow handle *h* with its socket *I*, furnished with the slot *d*, the interior shaft with head *a*, and screw *F*, meshing with the female screw *E*, and serving with its concave end to hold the ball *b*, with the mirror and its shafting *g*, attached to the said ball *b*, all as and for the purpose described.

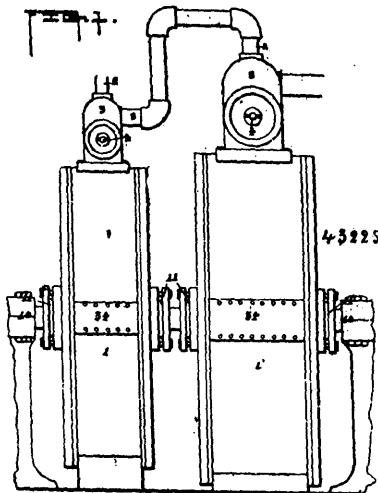
No. 43,224. Bank Note. (*Billet de banque.*)



William Wallace Wood, Elbridge, New York, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. As a new article of manufacture, the herein described bank note having at its opposite extremities characters *c* for representing the denomination arranged inversely one with the other, substantially as and for the purpose set forth. 2nd. As a new article of manufacture, the herein described note, the same having at its opposite extremities characters *D*, for representing the name of the payor and payee, the characters at one extremity being arranged inversely to the characters at the opposite extremity, substantially as and for the purpose specified. 3rd. As a new article of manufacture, the herein described bank note, the same having at the opposite extremities of each of its opposite faces characters *c* *D* representing, respectively, the denomination of the note, the name of the payor and payee, said characters at one extremity of one face being arranged inversely to the characters on the opposite extremity of said face, substantially as and for the purpose set forth.

No. 43,225. Rotary Engine. (*Machine rotative.*)



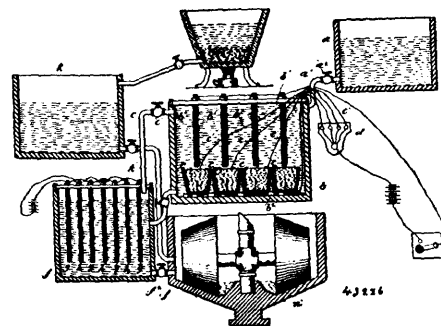
Montague James Bretherton, Fort Worth, and Robert Rowe, Aransas Pass, all in Texas, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. In a rotary engine, the cylinder provided with interiorly grooved head having removable plugs in the groove, and a

piston wheel provided with wings having removable pins, said cylinder having a removable plate in its peripheral surface, substantially as set forth. 2nd. In a rotary engine, a steam cylinder having a steam inlet and a recessed head or steam jacket, a plate covering the recess, a check valve in the plate to admit steam to said recess or steam jacket, a piston wheel with movable wings and pockets or ways for the same having steam inlets near their inner edges, there being free communication between the recesses or steam jackets in the head and said inlet in the piston wing pockets whereby the wings are balanced, substantially as set forth. 3rd. In a rotary engine, a steam cylinder having a steam inlet and a recessed head or steam jacket, a plate covering the recess, a check valve in the plate to admit steam to said recess or steam jacket, a piston wheel with movable wings and pockets or ways for the same having steam inlets near their inner edges, there being free communication between the recesses or steam jacket in the head and said inlet in the piston wing pockets whereby the wings are balanced, and springs tending to press the wings outwardly, substantially as set forth. 4th. In a rotary engine, a piston wing made in parts connected by tongue *x* and groove *z*, and provided with a spring in the central groove tending to separate the parts, and having transverse and jointed packing strips situated in grooves in the face of the two part wing and having the joints at one side of the joint between the parts of the wing to permit the extension of said strips and to prevent steam from passing between the parts, substantially as set forth. 5th. In a rotary engine, an abutment made in parts connected by a tongue and a groove, and provided with a spring in the central groove, and having transverse and jointed packing strips situated in grooves in the face of the two part abutment and having the joints at one side of the joint between the parts of the abutment to permit extension of the strips and prevent escape of steam between the parts, substantially as set forth. 6th. In a rotary engine, the combination of the cylinder, abutment and piston with the steam chest having an inlet and outlet, and having two ports communicating with the cylinder, and piston valve adapted to admit live steam to the cylinder through either port and exhaust through the other, and a steam jacket or recess in each cylinder head provided with a check valve whereby live steam can be admitted to one recess and behind the piston wings and exhausted from the other recess, both recesses communicating with the space behind the wings, substantially as set forth. 7th. In a rotary engine, the combination of the steam jackets, composed of the recess in the cylinder head covered by plates 29, the annular packing located between the piston wheel rim 14, and the annular plate of the steam jacket and the flat steel rings 26, attached to said annular plates 29, and extending over upon the wheel rim, substantially as set forth. 8th. In a rotary engine, the combination of the annular packing ring, having an inclined face located between the piston wheel rim and the annular plate of the steam jacket, also having an inclined face, and the flat steel rings attached to said annular plates and extending over upon the wheel rim, and a spring to press the packing against the plate, substantially as set forth. 9th. In a rotary engine, the combination, of piston wings provided with slots in their sides, and levers having arms extending through the walls of the piston wing pockets, and normally in contact with the outer end of the slots in the wings when the latter are in contact with the cylinder, said slots being sufficiently long to permit the wings to retire without the withdrawal therefrom of the levers, and said levers being adapted under the influence of centrifugal action to oppose the centrifugal action of the wings, and to be thrown out of engagement therewith by their inward movement and regulative stops to limit the throw of the levers, substantially as set forth.

No. 43,226. Apparatus for Treating Ores.

(*Appareil pour le traitement des minerais.*)

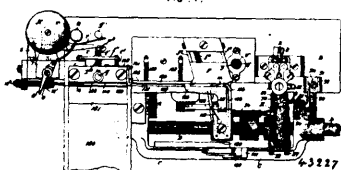


The Dominion Reduction Company, Portland, Maine, assignee of John Franklin Wiswell, Medford, Massachusetts, all in U.S.A., 14th June, 1893; 6 years.

Claim.—1st. An improved process of treating ores which consists in submerging mercury in a solution of common salt, connecting the mercury with the positive pole of a generator, and the salt solution with the other pole, so that the current will decompose the salt solution and cause the chlorine to be attracted to the mercury forming

calomel, treating the calomel with *aqua regia*, forming a soluble mercuric chloride, diluting the latter with water, treating undecomposed salt solution with an electric current to produce sodium hypochlorite, and introducing the soluble mercuric chloride and sodium hypochlorite simultaneously upon the crushed ore, as and for the purpose set forth. 2nd. An improved process of treating ores which consists in submerging mercury in a solution of common salt, connecting the mercury with the positive pole of a generator, and the salt solution with the other pole so that the current will decompose the salt solution and cause the chlorine to be attracted to the mercury forming calomel, treating the calomel with *aqua regia* forming a soluble mercuric chloride, diluting the latter with water, treating the undecomposed salt solution with an electric current to produce sodium hypochlorite, disintegrating the ores, introducing the soluble mercuric chloride and the sodium hypochlorite simultaneously as the ores are being disintegrated and adding bright iron as and for the purpose set forth. 3rd. An apparatus for treating ores to extract precious metals therefrom comprising in its construction, a tank *a* in which the chloride of sodium is dissolved, tank *b*, connected with tank *a*, and provided with a suitable strip or support from which carbon rods *b'* are suspended, raised supports *b''* cup *c* adapted to rest thereon and having wires therein leading to posts *d*, all connected with the positive pole of a generator, the carbon rods being all connected with the negative pole of said generator, vessel *i* in which the calomel is treated having suitable connection to reservoir *k* adapted to contain the stock or diluted mercurial solution and connection such as pipe *k'* to convey said solution to the crusher, and tank *f* adapted to receive the overflow of chloride of sodium from tank *b* and connections as pipe *f* therefrom to the crusher and rods *g h* connected to the respective poles of a generator, substantially as described.

No. 43,227. Type Setting Machine.
(Machine à composer.)

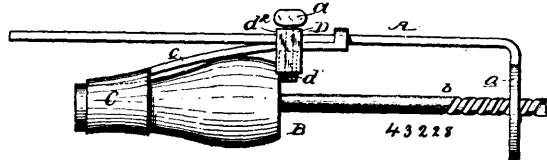


Julian Walter Chadwick, assignee of Alban Victor Ruckmich, all of New York City, New York, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. In a type setting machine, the combination, with a vertical type chute or tube, and a lifter beneath the outlet of said chute or tube, of two traps, one above the other, in the path of a type descending to said lifter, substantially as described. 2nd. In a type setting machine, the combination of a type chute and a lifter in line therewith of two traps, one vertically above the other, and device for opening one trap and simultaneously closing the other, substantially as described. 3rd. The combination of two traps in the same vertical line, an oscillating lever arranged to open one trap on its forward movement and the other on its reverse movement, and actuating devices for said levers, substantially as described. 4th. The combination, with the type chute or tube containing a trap composed of two separable jaws or plates opening from the centre outward, of a plunger or lifter arranged in line with said chute and beneath said trap, and spring actuated feelers, substantially as described. 5th. The combination, with the type chute, containing two traps, one above the other, of a lifter beneath the lower trap, and spring actuated feelers between the latter and the lifter, substantially as described. 6th. The combination, with the carriage and feed slide carrying type feeding devices, of means for reciprocating said slide and devices, such as cams connected with and moving said carrier transversely to the motion of the feed slide, said actuating devices coming into action at the end of the stroke of the feed slide, whereby the carrier remains stationary until the slide has completed its stroke, and then carries the latter away from the frame in a direction at right angles to its own proper motion, substantially as described. 7th. The combination of the transversely movable carriage, the feed slide supported in ways thereof, a cross shaft receiving motion from the main shaft, a crank on said cross shaft for actuating the feed slide, and cams and connections for reciprocating the carriage, substantially as described. 8th. The combination of the transversely movable carriage, the feed slide supported in ways thereof, the crank shaft, and an articulated adjustable rod communicating motion from said crank shaft to said feed slide, substantially as described. 9th. The combination, with the four-motion feed slide, of the type reverser carried thereby, and having a movable jaw, a stationary gage or stop for displacing said movable jaw for the purpose of permitting a type to be seized, said gage or stop being adjustable transversely and longitudinally with reference to said slide, substantially as described. 10th. The combination of the feed slide, the reversing pinchers mounted on a revoluble spindle, and having two projecting pins on the end thereof, the overhanging projection for starting the revolution of the spindle, by engaging the end of a type

held by said pinchers, a stop for engaging one of said pins and completing the reversal, of the pinchers, and a guide arm for arresting the rotation when the half revolution is completed and guiding the pinchers during the further movement of the feed slide, substantially as described. 11th. The combination of the carriage, the feed slide, the type feeding fingers carried by said slide, a guide pin carried by said fingers, and a guide groove, in which said pin works, substantially as described. 12th. The combination of the tripper mechanism for turning the type on its longitudinal axis, a channel for conducting the type towards the galley formed on one side by a plate having a rib adapted to fit one of the nicks of the type, and feed devices for punching the type through such channel, substantially as described. 13th. The combination, with the frame having a type channel beneath which said frame is cut away, feeding devices for advancing the type through said channel, a spring actuated plate forming one side of said channel, the forward motion of said plate being limited so that thin type if turned sidewise would fall out of said channel, substantially as described. 14th. The combination of the type receiving channel formed on one side by a depressible separator plate, a frame carrying said plate, a spring actuated slide in said frame adapted when released to come in contact with an eccentric pin on the main shaft, a rod carried by said slide and having a straight corner or edge, a releasing catch normally holding said rod, and a pin projecting into said channel and connected with said catch, so as to remove the same from engagement with said rod when said channel is filled, substantially as described. 15th. The combination of the type receiving channel having on one side a depressible separator plate, a pin lying in said type channel, an indicator connected with and actuated by said pin, a slide released by the same pin when the latter is displaced from the type channel, and means actuated on the release of said slide to depress the separator plate, and cut off the line of type, substantially as described.

No. 43,228. Stop for Brace Bits, &c.
(Arrêt pour mèches, etc.)

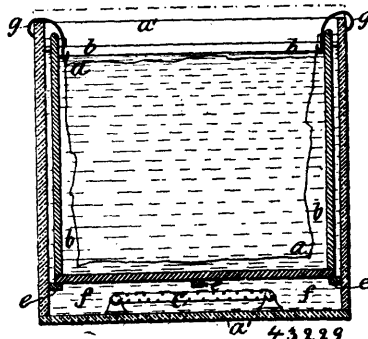


John W. Wilks and Charles Whitus, all of Chester, South Carolina, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. The combination of the annulus B, provided with a bit *b*, arm A, having the right angular perforated part *a*, and the elongated slot *a'*, slotted collar C, encircling the small end of annulus B, arm *c*, having one end secured to the collar C, and the other provided with an elongated slot *c'* and cross piece *c''*, having its outer ends turned over the arm A, and the securer D, holding the arm A, brace *c*, and annulus B, in place, all substantially as shown and described, and for the purposes set forth. 2nd. The combination of the annulus B, provided with a bit *b*, arm A, having the right angular perforated part *a*, and the elongated slot *a'*, slotted collar C, encircling the small end of annulus B, arm *c*, having one end secured to the collar C, and the other provided with an elongated slot *c'*, and cross piece *c''*, having its outer ends turned over the arm A, the securer D, consisting of the U-shaped collar *d'*, threaded perforated block *d''*, and thumb screw *d*, substantially as shown and described, and for the purposes set forth.

No. 43,229. Apparatus for making Loom Picking Bands.
(Appareil pour fabriquer les bandes de noupeur pour métiers.)

Fig. 1



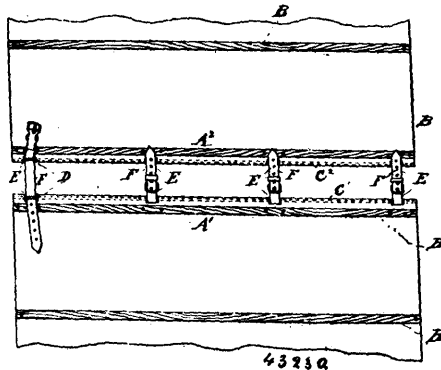
Thomas Clark, Stockport, Lancaster, England, 14th June, 1893; 6 years.

Claim.—1st. The method of currying the leather, by suspending it in tallow or other soluble fatty matter dissolved by means of heat,

substantially as and for the purpose set forth. 2nd. An apparatus for currying leather, consisting of a chamber *a*¹, containing treating and heating chambers *b* and *b*¹, substantially as and for the purpose set forth.

No. 43,230. Fastener for Grain Binder Canvas, &c.

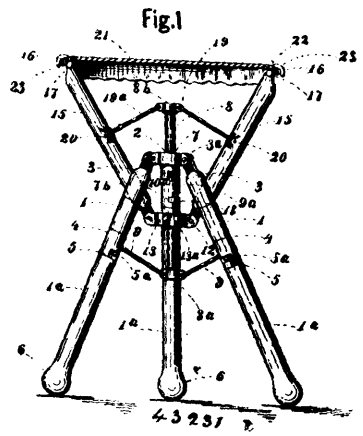
(Attache pour toile, etc., de lieuse à grain.)



Richard Timmis, Westley Salop, England, 14th June, 1893; 6 years.

Claim.—1st. In combination, with a canvas or like travelling band for use in sheaf binders, straw trussers and other like implements, a stout wire or other rod fitting in a transverse loop at each end of the said band, and straps, laces, cords, or the like engaging with the said rods at intervals and adapted to draw and maintain the two ends of the said band together, substantially as hereinbefore described. 2nd. In combination with a canvas or like travelling band for use in sheaf binders, straw trussers and other like implements, a stout wire or other rod fitting in a transverse loop at each end of the said band, the said wire or rod being formed into eyes or loops at intervals, and straps, laces, cords, or the like engaging with the eyes or loops of the said rods and adapted to draw and maintain the two ends of the said band together, substantially as hereinbefore described.

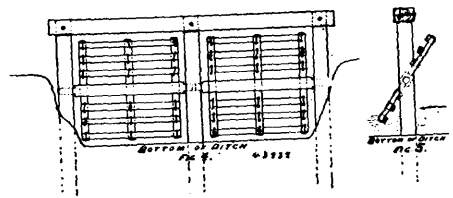
No. 43,231. Camp Stool. (Siège de camp.)



Lewis Dean Mason, Buffalo, New York, U.S.A., 14th June, 1893; 6 years.

Claim.—In a folding camp stool, a lower series of bars forming the legs of the stool, their upper ends being pivoted to a movable portion having a sleeve provided with hooks and adapted to slide up and down on a vertical central adjusting rod, in combination with the vertical central adjusting rod, an upper corresponding series of bars forming the seat supporting arms, having at their tops hooks to which the seat is secured, and their lower ends pivoted to a similar portion provided with a sleeve having fastening hooks and adapted to slide up or down on the vertical central adjusting rod, a sleeve mounted loosely on the vertical central adjusting rod, a sleeve mounted loosely on the vertical central adjusting rod, prevented from moving longitudinally by pins on said rod, hooks on said sleeve to engage with the hooks on the portions holding the supporting arms and legs, and pivoted to the top and bottom of the vertical central adjusting rod and to legs and supporting arms, substantially as described.

No. 43,232. Ditch Gate. (Barrière de fossé.)

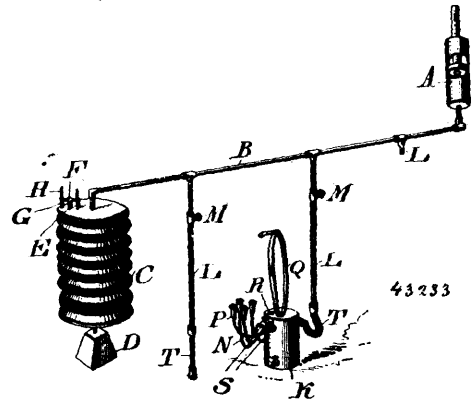


George Meloche, Sandwich West, Ontario, Canada, 14th June, 1893; 6 years.

Claim.—In a ditch gate, the uprights A, A, A, cross pieces B, in combination with the shaft D, having uprights F, F, and cross rails E, E, secured together, substantially as shown and described.

No. 43,233. Milking Machine.

(Machine pour traire les vaches.)



Joseph Hoover and Allen Wade Jay, both of Hubbard, Iowa, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. A cow milker, consisting of an air exhauster having a main pipe connected therewith, a milk receptacle connected with said main pipe, provided with teat-cups adapted to be connected with the teats of an animal to be milked, and an air reservoir connected with said main pipe, said parts being combined, substantially as described. 2nd. A cow milker, consisting of an air exhauster, a main pipe connected with said air exhauster, a milk receptacle connected with said main pipe and adapted to be connected with the teats of an animal to be milked, and a collapsible air reservoir connected with said main pipe, said parts being combined, substantially as described. 3rd. A cow milker, consisting of an air exhauster, a main pipe connected therewith, a milk receptacle connected with said pipe and having tubing with teat cups, and a collapsible air reservoir connected with said main pipe and having an air inlet valve controlled by the movement of said reservoir, said parts being combined, substantially as described. 4th. In a cow milker, a collapsible air reservoir, having a weighted lower end and provided with an opening in its upper wall, and a rising and falling valve seated on the walls of said opening and provided with a stem adapted to be engaged by said bottom, said parts being combined, substantially as described.

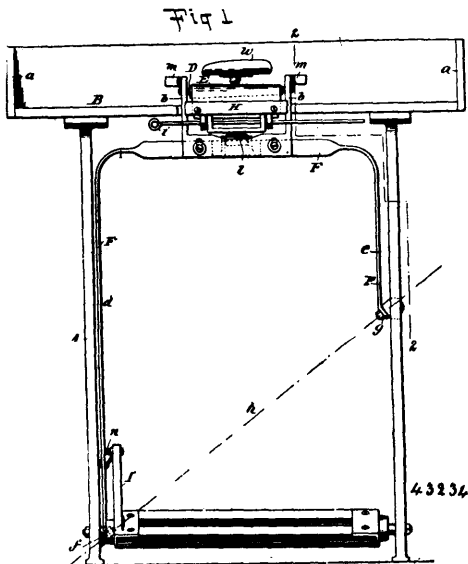
No. 43,234. Apparatus for Making Cigars.

(Appareil pour la fabrication des cigares.)

Adolph Charles Schultz and Nicholas Hermann Borgfeldt, both of Brooklyn, New York, U.S.A., 14th June, 1893; 6 years.

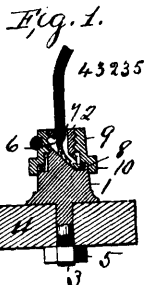
Claim.—1st. In a cigar bunching machine, the fixed plate D having curved lip *g*, and edge *h*, said edge being shaped to conform generally to the configuration of the bunch to be produced as and for the purpose herein shown and described. 2nd. The combination of the rolling board C having convex upper surface and substantially isosceles trapezoidal form, with an apron E, and with a tapering roller D, and means, substantially as described, for moving said roller, all as specified. 3rd. The combination of the isosceles trapezoidal rolling board C, having convex upper surface, with the isosceles trapezoidal apron E, roller D, and means, substantially as described, for moving said roller in the embrace of said apron, as set forth. 4th. The combination of the rolling board C, roller D, means, substantially as described, for moving said roller, apron E, and clamp H engaging one end of said apron, and with means, substantially as described, for moving said clamp backwards during a portion of the advance of the roller and holding it stationary thereafter, all as specified. 5th. In a bunching machine, the roller carrying frame F combined with a supporting frame A and inclined connecting pivots *f*, *g*, all arranged so that the swinging line *h* or

centre of motion for the vibrating roller frame F shall be inclined to the plane of the axis of the roller, as and for the purpose specified.



6th. The rolling board C having convex upper surface, combined with a tapering roller D, the roller carrying frame F, the main supporting frame A, and the connecting pivots fg between the roller carrying frame F and the supporting frame A, said connecting pivots being placed at different elevations, so that the line h of motion of the roller carrying frame shall be inclined to the surface of the rolling board, as and for the purpose specified. 7th. The combination of the rolling board C, the rolling apron E and the roller D with the roller carrying frame F having projection l, and with the pivoted clamp H engaging one end of the apron, said clamp H having stepped projection j, all arranged so that the roller frame when advanced shall cause the clamp H to be moved in the opposite direction by the contact of the projection l, with the stepped projection j of the clamp, as set forth.

No. 43,235. Connections and Terminals for Electric and other Wires. (*Raccordement et bout pour fils électriques et autres.*)

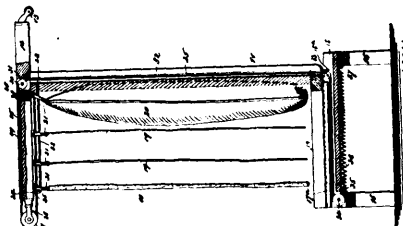


Hercules Sanche, Detroit, Michigan, U. S. A., 14th June, 1893; 6 years.

Claim.—1st. A terminal fastening for electric and other wires, consisting of a post having a threaded shank projecting from a flat contact face on said post and a collar having a non-central opening entering its periphery of one side of a diametrical line and emerging on its flat upper face, between the periphery and the central opening receiving the threaded shank, substantially as described. 2nd. A terminal fastening for electric and other wires, consisting of a post having a threaded shank projecting from a flat contact face on said post, a collar having a straight non-central opening, entering its periphery and emerging in its flat upper face, between the periphery and a non-central opening receiving the threaded shank, and a contact nut screwed on said shank, said nut and collar being each provided with a hanging flange surrounding the contact surface beneath and enclosing the peripheries of the posts on which said surfaces are formed, substantially as described. 3rd. A terminal attachment for electric and other wires, the same consisting of a post having a threaded shank projecting from a flat contact surface on said post, a series of collars each having a flange dropped from its periphery, and adapted to enclose the periphery of the adjacent collar below, and each provided with a non-central straight opening for the wire, passing through said flange and emerging on the flat upper face of the collar between the periphery and a flange surrounding a central opening which received the threaded shank, and a contact nut having a hanging flange enclosing the upper collar, substantially as described. 4th. The combination, with a terminal consisting of a post having a threaded shank, of a connector having the raw edges

of its insulating covering bound by a wire, the denuded portion of said conductor being brought upon a contact surface, coiled around the shank, and fastened by the prolonged end of the binding wire, and a contact cap, or nut, having a flange surrounding and dropping below the contact surface, substantially as described. 5th. An electric conductor, having a wire bound around the raw edge of its insulating covering and prolonged beyond the extremity of the denuded portion of the conductor, substantially as described. 6th. A permanent terminal for electric and other wires, having a central opening for the entrance of the wire, a concentric recess of larger diameter in which the denuded portion of the wire is bunched, or knotted, and a positively engaged contact plug, entering said chamber and compressing the bunched or knotted portion of the wire, substantially as described. 7th. A terminal for electric and other wires, consisting of a threaded shank projecting from a contact surface, and provided with a straight opening cut diagonally through said shank at an inclination with the axis of the shank, one end of said opening being adjacent to the other end on the opposite side of said shank lying at some distance above said contact surface, and a straight opening from the end of said shank in the line of its axis to the point of intersection with the first opening, substantially as described. 8th. A terminal for electric and other wires, consisting of a threaded shank projecting from a contact surface, and having two rectilinear openings, one in the axial plane of the shank and inclined to the axis, its lower end lying adjacent to, or near, the contact surface and the other opening lying in the axial line of said shank, from its upper end to the point of intersection with the first opening, whereby a nearly straight channel for the introduction of the wire is provided, substantially as described. 9th. A terminal for electric and other wires, consisting of a screw shank projecting from a contact surface and having two rectilinear openings, both in the axial line of said shank, one inclined to the axis and cut entirely through said shank, its lower end opening to, or near, the contact surface, and the other opening being coincident with the axial line from the extremity of said shank to the point of intersection with the other opening, in combination, with a contact nut turned upon said shank, to confine the denuded end of the wire coiled around the shank, on said contact surface, substantially as described. 10th. A terminal for electric and other wires consisting of two connecting parts, one or both being provided with a circular groove on its meeting face for containing the end of the wire, the said wire entering the grooved or grooves through a suitable aperture in the terminal, substantially as described.

No. 43,236. Folding Bed. (*Lit pliant.*)



Hugh Stevenson, New York City, New York, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. The combination with a folding bed and the bedding thereof, of a cable mechanism for separating and lowering the bedding by the rise and fall of the bed, substantially as described. 2nd. The combination with a folding bed, of the bedding held at one end to move on slide rods, and a cable mechanism for separating and lowering the bedding by the rise and fall of the bed, substantially as described. 3rd. The combination with the folding bed and its stationary base, of the bedding, and a cable connection between the bedding and the base whereby the bedding will be separated and suspended by the rise of the bed, substantially as described. 4th. The combination with the tilting bedstead mounted on a suitable base, of a cable extending vertically at one end of the bedstead and connected with the base, means for tightening and loosening the cable by the movement of the bedstead and the several pieces of bedding connected at one end to the cable, substantially as described. 5th. The combination with the bedstead and its supporting base, of slide rods secured vertically to one end of the bedstead, the bedding having its pieces held to slide on the rods, and a cable connected with the bedstead and the base and also with the bedding, the cable extending over suitable guide pulleys so as to be tightened and loosened by the rise and fall of the bedstead, substantially as described.

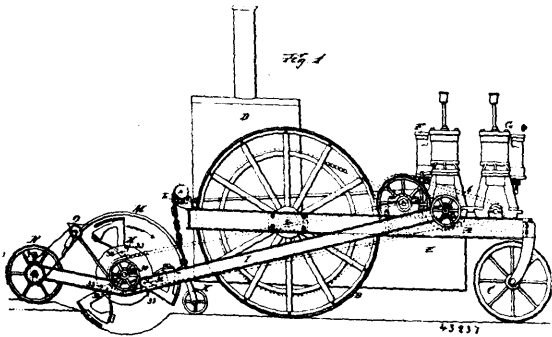
No. 43,237. Steam Cultivator.

(*Cultivateur à vapeur.*)

Roy Stone, New York City, New York, U.S.A., 14th June, 1893; 18 years.

Claim.—1st. The combination in a tillage machine of a wheeled vehicle and tillage drum arranged to be revolved in the direction of travel of the machine, substantially as described. 2nd. The combination in a tillage machine of a revolving drum carrying a suspended digger of diggers, substantially as specified. 3rd. The combination in a tillage machine of a revolving drum and suspended diggers

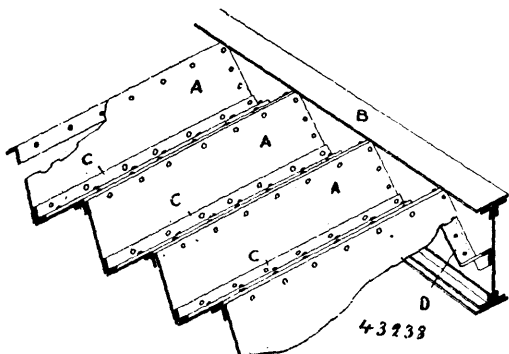
connected with the drum by spiral springs, substantially as specified. 4th. The combination in a tillage machine of a revolving drum



and suspended diggers with a cushion stop, substantially as specified. 5th. The combination in a tillage machine of a revolving drum and suspended diggers provided with a knife edge cutter and peripheral cutter foot, substantially as specified. 6th. The combination in a tillage machine of a main frame A, and a frame I hinged thereto carrying the cutter drum so as to be raised or lowered, substantially as specified. 7th. The combination in a tillage machine of two wheels and an engine, the shaft of each wheel having a friction clutch through which power is conveyed to it, and a free turning castor wheel, substantially as specified. 8th. The combination in a tillage machine of a vehicle carrying a tillage drum revolved in the direction of travel of the machine by power applied thereto, at a rate faster than the speed of the machine, substantially as specified.

No. 43,238. Bridge Floor. (Plancher de pont.)

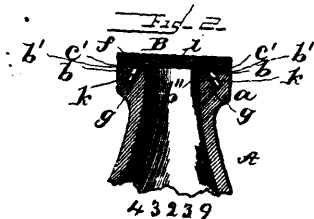
FIG. 1.



Joseph R. Worcester, Waltham, Massachusetts, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. A bridge flooring, composed of a metallic web, and having a cross section composed of a series of triangles with one side missing, each triangle connected to its neighbour at the apices of the missing side, substantially as described. 2nd. A bridge flooring, composed of a metallic web, so arranged as to form a series of alternate triangular prisms, having an open side, substantially as described. 3rd. A bridge flooring composed of plain strips of plate metal, as A, A, connected at their edges by angles, as C, C, so as to form alternate triangular prisms having an open side, substantially as described.

No. 43,239. Bottle. (Bouteille.)



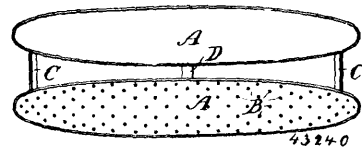
Robert S. Wiesenfeld, Baltimore, Maryland, U.S.A., 14th June, 1893; 6 years.

Claim.—1st. A packing vessel, having a groove in the end face of its head, in combination with a cap or cover, provided with a packing disc and a flexible flange or flanges on its lower

surface to engage said groove. 2nd. A packing vessel having an annular groove in the end face of its head provided with an angular outer wall, in combination with a metallic cap or cover, provided with a packing disc and a flexible flange, constructed to enter said groove and impinge against said outer wall. 3rd. A packing vessel, having an annular groove in the end face of its head, provided with inwardly inclined walls and a curved bottom, in combination with a cap or cover, having a packing disc and a flange engaging the walls of said groove. 4th. A cover for packing vessels, consisting of a packing disc, partly encased in metal and provided with a vertical flexible flange on its under side. 5th. A cover for packing vessels, consisting of a packing disc, partly encased in sheet metal, said casing being provided with a vertical flexible flange and an annular bearing surface outside of the flange. 6th. A packing vessel, having a groove in the end face of its head and an annular projecting seat on the inner side of said groove in combination, with a metallic cap or cover, having a flexible flange on its under side, and a packing disc within said flange. 7th. A packing vessel, having a groove in the end face of its head, and annular seats on both sides of said groove, the inner one of which projects beyond the plane of the outer seat, in combination, with a cap or cover, enclosing a packing disc to engage the inner seat, and provided with a vertical flexible flange, and an annular bearing surface outside the flange to engage the outer seat.

No. 43,240. Baking Pan. (Casserole.)

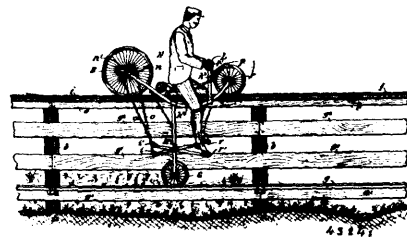
Fig. 4.



Louis Telesphore Herbert, Quebec city, Quebec, Canada, 14th June, 1893; 6 years.

Claim.—1st. A series of two or more pans of a long and narrow elliptical shape at the top, and concave in section secured together at the ends by means of metal straps and rivets, and secured centrally by a rivet passing through a short distance tube, the said pans being constructed of perforated or plain sheet metals, substantially as set forth. 2nd. A series of bake pans connected at the ends by means of a metal strap and rivets, and a short tube having a rivet pressing through securing the adjacent sides of the said pans, substantially as set forth.

No. 43,241. Elevated Railway. (Chemin de fer aérien.)



Arthur Ethelbert Hotchkiss, Mount Holley, New Jersey, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. The combination with a single supported rail, of a vehicle provided with a frame depending below and both sides of said rail, and having a saddle located above and treadles below said rail and brake mechanism connected with said vehicle, substantially as and for the purposes described. The combination with a supported track, of a vehicle having a seat or saddle arranged and adapted to carry the rider astride the track, treadles located below the track and brake mechanism connected with the vehicle, substantially as and for the purposes described. 3rd. The combination with an elevated structure provided with a single rail, of a vehicle provided with a saddle or seat arranged and adapted to carry the rider astride said structure, and treadles located below and on opposite sides thereof and adapted to be operated by the feet of the rider, substantially as and for the purposes described. 4th. The combination with an elevated supporting structure provided with a single rail, of a vehicle provided with a saddle or seat arranged and adapted to carry the rider astride said structure and with treadles located below and on opposite sides of the structure and adapted to be operated by the feet of the rider, a driving wheel adapted to run on the rail and means whereby the driving wheel is connected with the treadles, substantially as and for the purposes described. 5th. In an elevated railway system, the combination of

the frame of a bicycle or similar vehicle extending below and on opposite sides of the structure and provided with a seat arranged between the supporting wheels and adapted to carry the rider astride thereof and below the axis of the supporting wheels of the vehicle, substantially as and for the purposes described. 6th. In an elevated railway system, a vehicle provided with a frame depending below a supporting rail and having a saddle above said rail and a handle bar arranged and supported in front of said saddle and propelling mechanism connected with a driving wheel said driving wheel and propelling mechanism being located, substantially in rear of the rider, substantially as and for the purposes described. 7th. The combination, in an elevated railway system, of a track, a bicycle mounted thereon, a bar or bars connecting the axles or journals of the wheels thereof, depending bars and treadles pivotally supported by the depending bars above a lower guide wheel or wheels, substantially as and for the purposes described. 8th. In an elevated railway system, a vehicle provided with an upright arm arranged above the track rail and supporting a handle bar and the front end of a saddle and propelling means located below the plane of said supporting rail, substantially as described. 9th. In an elevated railway system, the combination, with a structure supporting a single rail, of a vehicle provided with a saddle disposed above the track supporting structure, propelling treadles arranged below the same, means connecting the treadle with a driving wheel, and a guide wheel or wheels supported by the frame of the vehicle on one or both sides of the track structure and serving to maintain the vehicle in an upright position, substantially as described. 10th. In an elevated railway system, the combination, with the elevated track, of a vehicle provided with a double frame connected with the axles of wheels supported on said track, and having a vertical arm to sustain the front end of said saddle, and means to secure the rear end of the saddle spring to said double frame, substantially as described. 11th. In an elevated railway system, the combination, with a track supporting structure, of a vehicle provided with a spring actuated saddle, a handle bar and brake mechanism arranged and supported above the track rail by the frame of the vehicle, and said frame connected with the axles of the supporting wheels and supporting treadles below said track rail, substantially as described. 12th. The combination, with an elevated track of a vehicle provided with two wheels arranged one in advance of the other, and a bar or bars connected with the axles or journals of said wheels, and provided with a spring actuated saddle located between the wheels, and above the track rail, and substantially below the axes of said wheels, substantially as described. 13th. The combination, with an elevated track, of a vehicle provided with two wheels arranged one in advance of the other and a bar or bars connected with the axles or journals of said wheels, and provided with a spring actuated saddle arranged above the track rail, and substantially below the axes of the said wheels, and a stationary hand bar connected with forward part of said vehicle, substantially as described. 14th. The combination, with an elevated track of a vehicle provided with two wheels arranged one in advance of the other and a bar or bars connected with the journals of said wheels and provided with a saddle, brake mechanism arranged above said track, and a part of the vehicle extending downward and supporting the treadles, substantially as described. 15th. The combination, with an elevated track, of a vehicle provided with wheels arranged one in advance of the other and a bar or bars connected with the axles of said wheels and carrying a spring actuated and adjustable saddle, handle bar and brake mechanism and depending arms supporting treadles and said treadles connected, with the cranks of one of the wheels of said vehicle, substantially as described. 16th. The combination, with an elevated track, of a vehicle provided with two wheels arranged one in advance of the other and a bar or bars connected with the axles of said wheels and provided with a seat adapted to carry the rider astride said bar or bars, depending arms supporting propelling treadles and one of said depending arms elongated and provided with a guide wheel, substantially as and for the purposes described. 17th. The combination, with an elevated structure provided with a single top supporting rail and one or more lower guide rails, of a vehicle provided with wheels supported and adapted to run over said rails, a seat located substantially above said top rail and below the axes of the supporting wheels and said vehicle being provided with a handle bar, brake mechanism, and propelling treadles, substantially as described. 18th. The combination, with an elevated supporting structure provided with a traction rail and guide rail or rails, of a vehicle provided with a seat adapted to carry the rider astride the elevated supporting structure, with propelling means arranged below and on opposite sides of the traction rail, and a guide wheel or wheels adapted to engage with guide rail or rails, substantially as described and for the purposes set forth. 19th. The combination, with an elevated track, supporting structure, of a two wheeled vehicle provided with a saddle adapted to carry the rider astride said structure, and propelling treadles and a handle bar, substantially as and for the purposes set forth. 20th. In combination, with an elevated track, supporting structure, of a two wheeled vehicle provided with a seat adapted to carry the rider astride said structure, propelling means, a handle bar and a depending frame embracing said structure, substantially as and for the purposes described. 21st. In combination, with an elevated supporting structure provided with traction and guide rails, of a vehicle provided with traction and guide wheels adapted to engage with said rails, a seat adapted to carry the rider astride said structure, a handle bar, a frame connected with said wheels and depend-

ing on both sides of said structure and provided with means for actuating one of said traction wheels, substantially as and for the purposes described. 22nd. The combination, with an elevated railway structure, of a vehicle provided with a vertical guide wheel journaled in the lower part of the frame of said vehicle below the propelling treadles, and substantially in a vertical line below a seat or saddle arranged between the supporting wheels, substantially as and for the purposes described. 23rd. The combination, with an elevated railway structure, of a vehicle provided with two supporting wheels adapted to run upon the track or rail of said structure, and a vertical arm supporting a handle bar, brake mechanism and the front end of a seat or saddle, substantially as described. 24th. The combination, with an elevated railway structure, of the frame of a bicycle extending below the traction rail and on opposite sides thereof and provided with a saddle adapted to carry the rider astride the structure, a handle bar and brake mechanism suitably connected with the frame of said bicycle, substantially as and for the purposes described. 25th. In an elevated railway system, the combination, with a traction rail, of a vehicle adapted to travel thereon and provided with a saddle and one or more guide wheels, substantially as described. 26th. The combination, with an elevated track, supporting structure, of the frame of a bicycle disposed below the track and on opposite sides thereof and provided with a saddle adapted to carry the rider astride the structure, substantially as and for the purposes described. 27th. The combination, with a supported rail, of a vehicle provided with a frame connected with the axles or journals of driving and pilot wheels and the axle or journal of a guide wheel or wheels located below the plane of said track and carrying a seat above the plane of the track and provided with a handle bar and brake mechanism arranged in front of the rider and adapted to engage the pilot or front supporting wheel, substantially as described. 28th. The combination with a supported rail, of a vehicle provided with a frame connected with the axles or journals of the driving and pilot wheels, and the axle or journal of a guide wheel and carrying a seat above the plane of the track rail and supporting propelling treadle levers below the plane of said track rail, and provided with a handle bar and brake mechanism arranged in front of the rider and adapted to engage the pilot or front supporting wheel, substantially as and for the purposes described. 29th. In an elevated railway system, a vehicle provided with a seat above the top supporting rail, a driving wheel adapted to run on said rail, treadles located below said rail and on opposite sides thereof, means interposed between and connected with said driving wheel and treadles to effect the actuating of said vehicle thereby, and an arm extending below the plane of the treadles and supporting a guide wheel, substantially as and for the purposes described. 30th. In an elevated railway system, a bicycle or similar vehicle provided with a seat located above the track or rail, a driving wheel adapted to run on said track, treadles located below said track or rail and on opposite sides thereof, means connected with said driving wheel and treadles to effect the actuation of the vehicle thereby, and an upright arm supporting the front end of the saddle or seat, substantially as and for the purposes set forth. 31st. In an elevated railway system, the combination with vertical supports of one or more longitudinal stringers with rail secured thereto to form a track way, and one or more intermediate stringers tying or binding said vertical supports, of a bicycle adapted to engage with said rails, and said vehicle provided with a saddle located above the top rail and below the axis of said supporting wheels and adapted to be operated by the rider straddling said vehicle, substantially as described. 32nd. The combination with an elevated track, a vehicle provided with two wheels arranged one in advance of the other and adapted to travel over said track, and a bar or bars connected with the axles or journals of said wheels, and provided with a vertical arm supporting the front end of a spring actuated saddle arranged and adjusted to carry the rider astride said elevated track, substantially as described. 33rd. An elevated railway structure provided with one or more guide rails, and a bicycle or similar vehicle provided with a saddle and one or more guide wheels, substantially as described. 34th. The combination with a supporting rail, of a vehicle provided with wheels supported and adapted to run on said rail, a saddle located above said rail and in proximity to the axes of the supporting wheels, a frame connected with the axles of the supporting wheels and provided with an upward extending arm supporting the front end of the saddle and a downward extending arm supporting a guide wheel, substantially as described. 35th. The combination, with a supported rail, of a vehicle provided with wheels, and adapted to run on said rail, a seat located above said rail and substantially below the axis of the supporting wheels, and arranged and adapted to carry the rider astride said supporting rail, and said vehicle provided with a handle bar, propelling treadles, a driving wheel connected with said treadles and a depending guide wheel, substantially as and for the purposes described. 36th. The combination, with a supporting track structure, provided with a single top supporting rail, of a vehicle having a depending frame on both sides of said track structure and provided with wheels supported and adapted to run on said supporting rail, one of said wheels being of larger diameter than the other, and connected with treadles journaled in the depending frame below the plane of the top rail, substantially as and for the purposes described. 37th. The combination, with an elevated track structure, provided with one or more guide rails, of a bicycle or similar vehicle, provided with two supporting wheels and

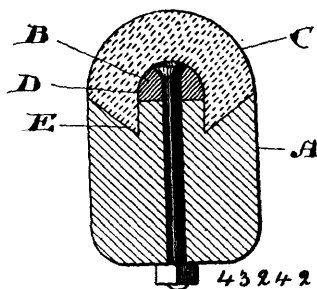
a guide wheel or wheels, one of which supporting wheels is of relatively smaller diameter than the other, and said smaller wheel arranged in front of the rider and brake mechanism adapted to be brought into engagement with the periphery of said wheel, substantially as and for the purposes described. 38th. The combination, with an elevated track structure, provided with a single top rail, of a bicycle provided with a saddle arranged above the bottom line of the supporting wheels thereof, propelling treads arranged below the bottom line of said supporting wheels and one or more depending guide wheels adapted to engage with guide rails to maintain said vehicle in an upright position in its passage over the structure, substantially as described. 39th. In an elevated railway system, the combination, of a post and rail structure, with a rail arranged on one of its stringers, a vehicle provided with wheels supported and adapted to travel over said rail, a divided frame extending downward on opposite sides of said structure, and a spring supported saddle connected with said vehicle and arranged to carry the rider astride said structure with the feet in engagement with the propelling mechanism of the vehicle, substantially as shown and described. 40th. In an elevated railway system, the combination, with a fence having a track rail, a guide rail, and one or more intermediate stringers, of a vehicle adapted to be supported and guided on said rails, a seat and a stationary handle bar, substantially as shown and described. 41st. In an elevated railway system, the combination with a fence or similar structure, having a supporting rail, a lower guide rail or rails, and one or more intermediate stringers, of a vehicle adapted to be supported and guided over said rails and provided with a seat adapted to permit of the rider straddling the frame, a stationary handle bar and brake mechanism connected with said vehicle, substantially as described. 42nd. The combination, in a railway system, of a fence, having a track rail secured to its top stringers, a guide rail secured to a lower stringer and one or more interposed stringers, a vehicle adapted to be supported and guided by said rails and provided with a handle bar, brake and propelling mechanism, substantially as described. 43rd. The combination with a post and rail structure having a rail pinned to the top stringer, a guide rail secured to the lower stringer and one or more interposed stringers, of a vehicle adapted to and capable of being guided on said rail and provided with a spring actuated seat and adapted to carry the rider astride them, a driving wheel and propelling treads connected with said driving wheel, substantially as described. 44th. The combination, with a post and rail structure having a track rail arranged on its top stringer, a guide rail arranged on its lower stringer and interposed stringers, of a vehicle guided on said track rail, and provided with a seat adapted to carry the rider astride thereof, propelling treads and a guide wheel located below said treads, substantially as and for the purposes described. 45th. The combination of a post and rail structure having a track rail arranged on its top stringer, a guide rail arranged on its lower stringer and one or more interposed stringers, of a vehicle provided with a frame extending downward on opposite sides of the fence, and supporting propelling treads and a lower guide wheel on one side of the fence in engagement with the guide rail of the lower stringer, substantially as described. 46th. The combination, with a post and rail structure having a track secured to its top stringer, a guide rail arranged on its lower stringer and with one or more interposed stringers, of a vehicle provided with a wheel supporting frame arranged astride the post or rail structure and adapted to carry the rider substantially between said supporting wheels and a guide wheel caused to engage with said guide rail, substantially as described. 47th. The combination, with a post and rail structure having a track secured thereto and guide rails arranged on opposite sides of said post and rail structure, of a vehicle having wheels supported and adapted to run upon the top rail and a lower guide wheel arranged to extend below interposed stringers of said structure and to engage with the guide rail on either side of the lower stringer of said structure, as described. 48th. The combination, with an elevated structure provided with a track rail and one or more guide rails located below said track rail, of a vehicle provided with a double frame and a saddle, handle bar, propelling treads and means for connecting said treads with a driving wheel, said vehicle being arranged and adapted to straddle said track structure and supported in a vertical position by the wheels of the vehicle engaging with the supporting and guide rails, and said vehicle and track structure arranged to carry the rider on said saddle with the hands resting on the handle bar, and feet resting upon the treads while working the propelling treads located below the plane of the supporting rail, substantially as described. 49th. The combination, with an elevated structure provided with a track rail and one or more guide rails located below said track rail, of a vehicle provided with a double frame and a saddle, propelling treads, and means for connecting said treads with a driving wheel, said vehicle being arranged and adapted to straddle said track structure and supported in a vertical position by the wheels of the vehicle engaging with the supporting and guide rails, and said vehicle and track structure arranged to carry the rider on said saddle with the feet resting upon the treads while working the propelling treads located below the plane of the supporting rail, substantially as described.

No. 43,242. Vehicle Tire. (Bandage de roue.)

Woodburn Langmuir, Toronto, Ontario, Canada, 15th June, 1893; 6 years.

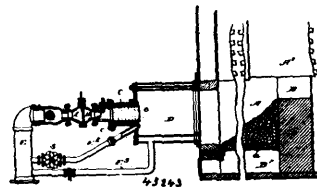
Claim.—1st. As an improved tire, a metal band bolted or other-

wise secured to the felloe an integral rubber ring made smaller than the felloe and stretched thereon so as to hug the felloe and envelop the



metal band, substantially as and for the purpose specified. 2nd. As an improved tire, a metal band bolted or otherwise secured to and substantially in the centre of the felloe, a rubber ring having a groove made in its interior circumference to fit over the metal band, the said rubber ring being stretched upon the felloe, substantially as and for the purpose specified. 3rd. As an improved tire, a metal band bolted or otherwise secured to and substantially in the centre of the felloe, a rubber ring having a groove made in its interior circumference to fit over the metal band and projections on each side of the groove to fit into recesses made in the circumference of the felloe, substantially as and for the purpose specified.

No. 43,243. Type Writer. (Clavigraphie.)



Edward Smith Higgins and Henry Charles Jenkins, both of London, England, 15th June, 1893; 6 years.

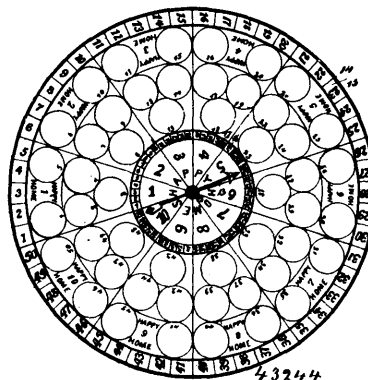
Claim.—1st. In a type writer escapement two arms or dogs such as M M¹ one pivoted on a fixed pivot and the other on a movable one both dogs being connected together by a slotted or equivalent connection, substantially as described and illustrated in the accompanying drawing. 2nd. In a type writer escapement the combination with two arms or dogs such as M M¹ one capable and the other incapable of longitudinal movement of a spring controlled slide such as M², substantially as described and illustrated in the accompanying drawing. 3rd. In a type writer escapement the combination with two arms or dogs such as M M¹ connected together by a pin and slot, one dog pivoted on a fixed pivot and the other on a pivot carried by a slide such as M² moved in one direction by a spring M³ and in the other direction along with the paper carriage by the spring which actuates it, substantially as described and illustrated in the accompanying drawing. 4th. In a type lever hinge or joint the combination with the two members to be jointed together of a segmental collar such as e¹ and jaw such as a¹ or a² the internal curve or diameter of the segmental collar e¹ corresponding with the external curve or diameter of the jaw a¹ or a², substantially as described and illustrated in the accompanying drawing. 5th. In a type lever hinge or joint the combination with the two members to be jointed together of a segmental collar such as e¹ and washer such as G¹ or G² having a rim such as g⁶ whose internal curve or diameter corresponds with the external curve or diameter of the segmental collar e¹, substantially as described, and illustrated in the accompanying drawing. 6th. In a type lever hinge or joint such as described, the combination, with the two members to be jointed together and a segmental collar jaw and washers such as e¹, a¹ or a², and G, g⁶ and G¹, g⁶, of a partly cylindrical and partly conical projection such as g⁸, substantially as described, and illustrated in the accompanying drawing. 7th. In a type lever hinge or joint such as described, the combination, with the two members to be jointed together, and a segmental collar jaw and washers such as e¹, a¹ or a² and G, g⁶ and G¹, g⁶, of a cylindrical projection formed in part with one of the washers, and a partly conical and partly cylindrical sleeve such as g⁹, g¹⁰ fitting thereon, substantially as described, and illustrated in the accompanying drawing. 8th. In a type lever joint, the combination, with one of the members to be jointed having a conical hole such as e, of another member having a central recess such as a³, and holes such as a⁴, a⁵, one cylindrical and the other stepped, substantially as described, and illustrated in the accompanying drawing. 9th. In a type lever joint, the combination, with one of the members to be jointed of a washer such as G or G¹, having a rim such as g⁶, extending partly around it, and the ends of which abut against shoulders on the member to which it is applied, substantially as described, and illustrated

in the accompanying drawing. 10th. In a type lever joint, the combination, with one member having the parts e, e^1 , and fitting between the jaws of the other member of the washers G, G^1 , one of which has parts g^0, g^{10}, g^{11} , the whole fixed together by a single screw. 11th. In a pipe lever joint, the combination, with the two members to be jointed together, of two segmental collars such as e^1 , and a conical hole such as e , on or in one of the members, and on or in the other member two perforated jaws such as a^1, a^2 , a recess a^3 between them two washers such as G, G^1 , a segmental rim such as g^0 , on each a cylindrical projection such as g , on one washer a partly cylindrical and partly conical projection such as g^0 , on the other washer and a screw, substantially as described, and illustrated in the accompanying drawing. 12th. In a type lever joint, the combination, with the two members to be jointed together, of two segmental collars such as e^1 , and a conical hole such as e , on or in one of the members, and on or in the other member two perforated jaws such as a^1, a^2 , a recess a^3 between them two washers such as G, G^1 , a segmental rim such as g^0 , on each a short cylindrical projection such as g , on one washer, a longer one such as g^0 , on the other, and a partly conical and partly cylindrical sleeve fitting on the longer projection, substantially as described, and illustrated in the accompanying drawing. 13th. In a type-writer, the combination, with a rotatable platen of a stop plate such as h^1 , loose upon its axle and a lever such as H^2, H^3 , gearing therewith, substantially as described, and illustrated in the accompanying drawing. 14th. In a type-writer, the combination, with a rotatable platen and a ratchet wheel placed upon its axle, of a stop plate such as h^1 , and lever such as H^2, H^3 , substantially as described and illustrated in the accompanying drawing. 15th. In a type-writer, the combination, with a rotatable platen, having a ratchet wheel secured to its axle, of a disc or plate carrying a pallet such as J^1 , and a plate such as h^1 , for throwing the pawl into and out of engagement with the ratchet wheel and moving it in conjunction with the ratchet wheel, substantially as described and illustrated in the accompanying drawing. 16th. Rotating the platen of a type-writing machine by means of a pallet and ratchet wheel normally disengaged from each other and caused to engage by the same lever or piece that rotates the platen. 17th. In a type-writer or platen, normally secured against rotation by a yielding pawl and rotated by a pallet arm normally disengaged from the platen, substantially as described. 18th. In a type-writer, the combination, with a rotatable platen of a ratchet wheel secured upon its axle, a stop plate such as h^1 , loose upon its axle, a stop such as h^0 , adjustable in or upon the stop plate h^1 , a disc such as J , and pallet such as J^1 , with arm j^2 , all substantially as and operated in the manner herein described and illustrated in the accompanying drawing. 19th. In a type-writer, the combination, with the paper carriage, of a lever such as H^2, H^3 , for rotating the platen for line spacing and having a cam slot such as h^0 , for liberating the escapement mechanism, substantially as described and illustrated in the accompanying drawing. 20th. In a type writer, the combination, with a rotatable platen, having a ratchet wheel secured upon its axle and pallet, such as J^1 , for engaging therewith mounted in or on a disc or plate such as J , of a stop or brake such as J^2, j^4 , substantially as and for the purpose described and illustrated in the accompanying drawing. 21st. In a type writer, the combination, with a rotatable platen, a ratchet wheel secured on its axle, stop plate such as h^1 , lever such as H^2, H^3 , and star wheel K , also secured on the axle, of a detent k , secured to the lever H^2, H^3 , substantially as and for the purpose described and illustrated in the accompanying drawing. 22nd. In a type-writer, the combination, with the platen and platen rotating or line spacing mechanism, of means for readily connecting or disconnecting these parts for the purpose of admitting of hand rotation of the platen to any fractional extent. 23rd. In a type-writer mounting, the platen rotating or line spacing mechanism on a sleeve readily releasable from the platen, substantially as described. 24th. In a type-writer, the combination, with the platen H^1 , and wheels such as j and K , of a sleeve such as h^2 , upon which the wheels are secured, and which may readily be locked on or connected to or released from the platen, substantially as and for the purpose described and illustrated in the accompanying drawing. 25th. In a type-writer, the combination, with a rotatable platen, of spring controlled arms such as h^{10}, h^{11} , roller h^{17} , and scale frame such as H^6, H^8 , substantially as described and illustrated in the accompanying drawings. 26th. In a type-writer, the combination with a rotatable platen of two rollers such as h^{17} and H^{10} carried in arms mounted on the same bar, and springs such as H^9 with screws h^{24} for regulating the pressure exercised by said roller on the platen, substantially as described and illustrated in the accompanying drawings. 27th. In a type-writer, the combination with a rotatable platen of a roller h^{17} carried in spring controlled arms such as h^{16} with a scale bar connected to the roller h^{17} by arms such as H^6, H^7 , portions of which serve to raise the roller h^{17} from the platen, substantially as described and illustrated in the accompanying drawings. 28th. In a type-writer, raising the platen presser bar or roller from one part of the platen by moving the scale bar away from the platen at another, substantially as described. 29th. In a type-writer paper guides such as L, I, L^1 in front of the paper carriage, substantially as described and illustrated in the accompanying drawings. 30th. In a type-writer, the combination with a rotatable platen of a spring controlled curved shield or guard such as H^{11} , substantially as described and illustrated in the accompanying drawings. 31st. In a type writer, a paper carriage buffer-

ing device, substantially as described. 32nd. In a type-writer a platen buffering device, substantially as described. 33rd. In a type-writer connecting the escapement rack to the paper carriage so that the two may move independently of each other in a longitudinal direction, substantially as and for the purpose described. 34th. In a type-writer, the combination with the paper carriage of an escapement rack and spring so arranged that upon the rack being arrested by the escapement, the carriage may to a small extent move onwards against the action of the spring, substantially as described and illustrated in the accompanying drawings. 35th. In a type-writer, the combination with the paper carriage and escapement rack such as I, i^3 , of means such as at one end, a headed screw or pin such as i^4 fitting in a deepened hole or recess such as i^5 , and at the other end another screw or pin i^4 , and a spring such as i^6 for preventing shocks due to the operations of the escapement in conjunction with the rack from being transmitted to the paper carriage, substantially as described and illustrated in the accompanying drawings. 36th. In a type-writer, the combination with a flat metal sticker or link such as N , of a flat and approximately circular head such as n , substantially as described and illustrated in the accompanying drawings. 37th. In a type-writer, the combination with a sticker or link such as N, n , of a cover plate such as n^1, n^2 , substantially as described and illustrated in the accompanying drawings. 38th. In a type-writer connecting a sticker or link to an arm lever or other part by forming an approximately circular recess in said part fitting an approximately circular sticker head such as n sideways into the recess, and securing cover plates to the recessed part or to the sticker to prevent the sticker head from moving out of the recess, substantially as described and illustrated in the accompanying drawings. 39th. In a type-writer connecting a sticker or link to an arm lever or other part by means of an approximately circular recess in said part and an approximately circular head on the sticker, substantially as described and illustrated in the accompanying drawings. 40th. In a type-writer connecting a type lever link with its operating lever by means of a hook and eye and preventing the disconnection of these parts by means of a spring such as c^7 , substantially as described and illustrated in the accompanying drawings. 41st. The combination and arrangement of parts constituting the complete type-writer, substantially as described and illustrated in the accompanying drawings.

No. 43,244. Game Apparatus.

(Appareil de jeu.)



Alexander W. McArthur, San Francisco, and James B. McArthur, of Winters, both of California, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. A game apparatus comprising a board, having a main circle with numbered spaces around its outer edge, an inner circle with spaces correspondingly numbered, a series of portrait spaces arranged between the inner and outer spaces and numbered to correspond with them, stations arranged at intervals among the portrait spaces, a series of segmental spaces arranged centrally upon the board and numbered to correspond with the stations, and a revoluble hand mounted in the centre of the main circle, substantially as specified. 2nd. A game apparatus, comprising a board, having concentrically arranged spaces correspondingly numbered thereon, a series of portrait spaces corresponding in number to the numbered spaces, said portrait spaces being arranged between the inner and outer numbered spaces, a series of numbered stations produced at intervals among the portrait spaces, a series of central spaces numbered to correspond with the stations, a removable and revoluble indicating hand centrally mounted upon the board, and a series of checkers numbered to correspond with the stations, substantially as specified.

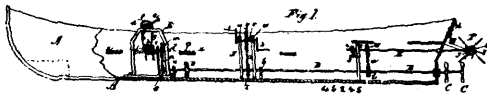
No. 43,245. Propeller for Boats.

(Propulseur pour vaisseaux.)

William Henry Tompson and George Morris, both of Hamilton, Ontario, Canada, 15th June, 1893; 6 years.

Claim.—1st. The combination, with a boat, of a frame carrying a shaft on ball bearings with a sprocket wheel keyed on the shaft

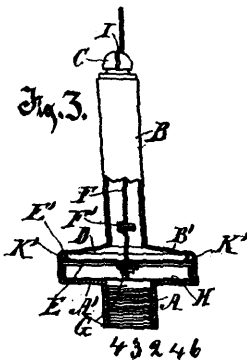
and another sprocket wheel on a shaft lower down on the frame, having the lower sprocket wheel connected with the top wheel by



an endless chain, a level gear wheel on the lower shaft and another shaft at right angles to the others, provided with a corresponding bevel gear wheel engaging with and receiving motion from the first mentioned one and a sprocket wheel on the end of the latter shaft, connected with an endless belt to a sprocket wheel on the main driving shaft, the said mechanism operated by hand crank levers to drive a screw propeller, substantially as specified. 2nd. The combination, with a boat, of a frame E, carrying the shaft c, revolving in ball bearings d, d, sprocket wheel f, on the shaft c, crank handles e, e, sprocket wheel h, on shaft i, bevel gear wheel J, on the shaft I, corresponding bevel gear wheel K, engaging therewith on the shaft l, sprocket wheel m, on shaft l, sprocket wheel o, on the inner end of the main driving shaft B, endless chain n, connecting the sprocket wheels m and o, main shaft B, revolving in ball bearings a, b, all combined, substantially as and for the purpose specified. 3rd. In a boat, the combination of main shaft B, with mechanism for driving it, and two screw propellers c, c, on the outer end of said shaft, one a short distance in alignment behind the other and having their blades revolve together in line and pitch with each other, substantially as specified. 4th. In a boat, the combination, with the main shaft B, and ball bearings a, b, of the auxiliary shaft K, bevel gear wheel J, on the end of it, shaft G, held in brackets, with ball bearings g, g, at the stern of a boat, bevel gear wheel I, on the shaft G, paddle wheels F, F, on the ends of said shaft, the shaft K being connected with and receiving motion from the main driving shaft B, substantially as specified. 5th. In a boat, the combination, with the main driving shaft and mechanism for revolving it, of the shaft K, ball bearing r, sprocket wheel M, on the said shaft, sprocket wheel L, on the main shaft B, chain belt u connecting said sprocket wheels L, M, bevel gear wheels J and I, on the respective shafts K, G, shaft G, ball bearings g, g, brackets H, H, paddle wheels F, F, substantially as described. 6th. In a boat, the combination, with the main driving shaft B, of the ball bearings a, b, and fly sheet D, substantially as specified.

No. 43,246. Cut Off for Gas Burners.

(*Détente automatique pour becs à gaz.*)

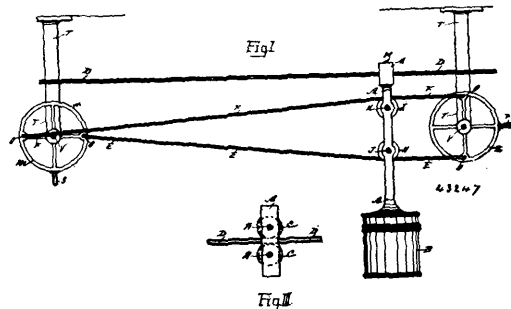


The International Self Closing Gas Burner Company, assignee of Charles H. Keeney, all of Milwaukee, Wisconsin, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. In a self closing cut off for gas burners, the combination, with a valve of a vertically acting expansible and contractible rod constructed by its expansion to effect the opening of said valve, and by its contraction the closing thereof, substantially as set forth. 2nd. In a self closing cut off for gas burners, the combination of the burner proper, a valve located therein and a vertically acting rod having rigid connections at opposite ends with the burner tip and with the valve respectively, said rod adapted by expansion to open the valve and by contraction to close the same, substantially as set forth. 3rd. In a self closing cut off for gas burners, the combination of a gas burner provided with an interior valve seat, a valve located in said burner and an expansible and contractible valve rod having connection with the valve and adapted to effect the opening and closing thereof and to allow for the excess of its contraction over that of the burner shell so as to properly seat the valve and hold the same yieldingly to its seat without undue strain, substantially as set forth. 4th. In a self closing cut off for gas burners, the combination of a burner proper provided with an interior valve seat, an expansible and contractible valve rod having rigid connections at its upper end with the burner

tip and a flexible valve secured rigidly to the lower end of the valve rod and adapted through its flexibility to allow for the excess of the contraction of the rod over that of the burner shell, substantially as set forth. 5th. In a self closing cut off for gas burners, the combination with a burner proper of a valve located therein formed or provided with a projecting guide bearing and guided in a cylindrical inner wall of the burner tube, substantially as set forth. 6th. In a self closing cut off for gas burners, the combination of a valve casing having its upper end provided with a screw threaded aperture, a valve within the casing a valve rod for operating the same, the upper end of said rod being threaded and passing through the threaded aperture of the burner to the exterior thereof whereby the position of the valve may be regulated exteriorly of the upper end of the burner, substantially as set forth. 7th. In a self closing cut off for gas burners, the combination of a valve casing, a valve therein provided with a screw threaded aperture and a valve rod having a threaded end passing through the aperture whereby the position of the valve may be regulated from the lower end of the burner, substantially as set forth. 8th. In a self closing cut off for gas burners, the combination of a valve casing, the upper end thereof provided with a screw threaded aperture, a valve within the casing also provided with a screw threaded aperture and a valve stem having its opposite ends threaded and passing through the threaded apertures of the burner and valve respectively, substantially as set forth.

No. 43,247. Package Carrier. (*Porte-paquet.*)



Thomas J. Carroll, Hamilton, Ontario, Canada, 15th June, 1893; 6 years.

Claim.—1st. The combination in a carrier A having wheels H and I pivoted therein and constructed to travel between the lines E and F, with mechanism to press said lines together against the rear face of said wheels, substantially as and for the purpose hereinbefore set forth. 2nd. A cash carrier provided with suitable wheels to travel and engage with the inner sides of lines E and F, and mechanism to press the same together in rear of said wheels in combination with the wheels C C, pivoted to the upper part of said carrier and constructed to run against, and suspend from the rigid line D, substantially as and for the purpose hereinbefore set forth. 3rd. The rigid line D, extending from station to station and provided with a carrier having suitable wheels C C, pivoted therein at its upper end thereof to engage with said line in combination with the lines E and F, extending from station to station to engage with the outer diametrical face of the wheels H and I pivoted in said carrier and mechanism to press said lines together in rear of said wheels to propel the same, substantially as and for the purpose hereinbefore set forth.

No. 43,248. Steam Turbine. (*Turbine à vapeur.*)

George John Altham, Swansea, Massachusetts, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. A motor comprising two independently revoluble wheels, one within the other, said wheels having tangential buckets, each having a receiving and a delivering end, the buckets of one wheel being offset from the buckets of the other wheel in a line parallel with the axes of the wheels whereby the receiving ends of the buckets of one wheel will register with the delivering ends of the other, as set forth. 2nd. A motor comprising two independently revoluble wheels, one within the other, the inner wheel having tangential buckets, the receiving ends of which are at one side of the outer wheel, while the outer wheel has tangential reversely extending buckets whose delivering ends are at one side of the inner wheel, the delivering ends of all the buckets in the inner wheel registering with the receiving ends of all the buckets in the outer wheel, as set forth. 3rd. In a motor, the combination of the inner wheel, having tangential buckets in its outer periphery, the hollow outer wheel receiving the inner wheel and having tangential buckets in its inner periphery offset from the buckets of the inner wheel in a line parallel with the axes of the wheels whereby they will register at their receiving ends with the delivering ends of the buckets of the inner wheel, and a pipe or tyres arranged to deliver a jet of steam or other fluid under pressure to the receiving ends of the buckets, at one side of one of said wheels, as set forth. 4th. In a motor, the combination of the inner and outer turbines, one having internal and the other external buckets U-shaped in the direction

of the axes of the wheels, and having the delivery ends of the buckets of one wheel registering with the receiving ends of the buckets of

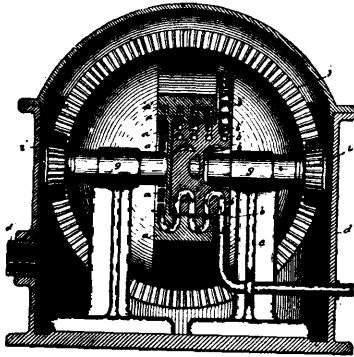
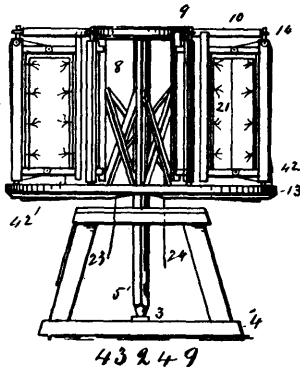


Fig. 4. 43248

the other wheel, means for supplying steam or other fluid to said buckets, the shafts supporting said wheels and mounted in fixed bearings, a power transmitting shaft, and connections between said wheel supporting shafts and the power transmitting shaft, whereby the latter is driven by the rotation of the turbines, as set forth. 5th. In a motor, the combination of the inner and outer turbines, the one having external and the other internal buckets U-shaped in the direction of the axes of the wheels and having the delivery ends of the buckets of one wheel registering with the receiving ends of the buckets of the other wheel, means for supplying steam or other fluid to said buckets, the shafts supporting said wheels and mounted in fixed bearings, bevel gears or pinions on said shafts, a large bevel gear meshing with both of said pinions, and a power transmitting shaft affixed to said larger gear, as set forth.

No. 43,219. Wind Wheel. (Roue à vent.)



43249

Eugene Bregier, Terrebonne, Minnesota, U.S.A., 15th June, 1893; 6 years.

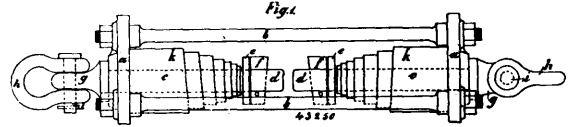
Claim.—The combination, with a support having a central guide aperture in its top of a vertical revoluble angular shaft having an apertured disc thereon contained in the said guide aperture whereby the said shaft is steadied, a frame removably mounted on the said shaft above the said disc, and consisting of an upper and lower hub through which the said shaft passes, the said hubs having radial arms, an annular ring connecting the outer ends of the lower arms, pins projecting upwardly from the said ring to serve as stops for the sail frame posts having their upper and lower ends pivoted in the outer end of the upper and lower arms respectively, and a sail frame carried by each of the said posts having an upright adapted to be stopped by the upper arm, a sail mounted in each of the said frames and two ropes attached to each of the said sails, the said ropes passing over the upper and lower arms respectively, substantially as described.

No. 43,250. Spring Coupling. (Joint à ressort.)

Otto Elster and Robert Lerche, both of Bodenbach, Bohemia, 15th June, 1893; 6 years.

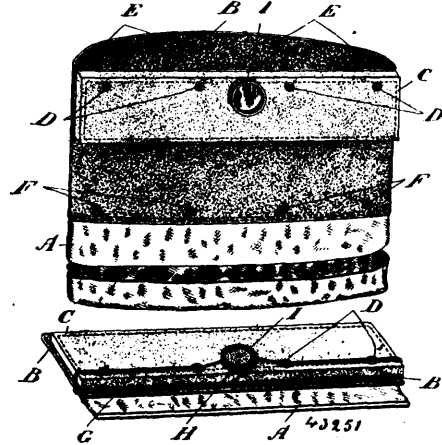
Claim.—1st. A frame connected to one part of the hawser, in combination with a rod connected to the other part and adapted to

compress or expand a spring suitably arranged on the frame, substantially as and for the purpose specified. 2nd. A frame, composed



of the end plates *a*, held together by the bolts *b*, in combination with one or more rods *C*, passing through the end pieces *a*, and volute springs located between the ends of the frame and pins on the rods *c*, substantially as and for the purpose specified.

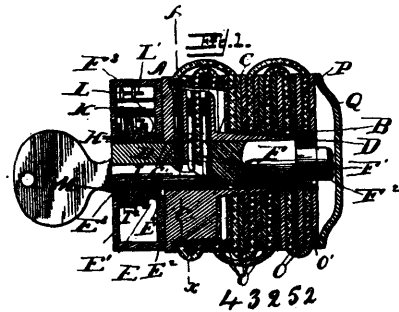
No. 43,251. Bag. (Sac.)



John Anderson Carlow, assignee Michael J. Teedy, both of Toronto, Ontario, Canada, 15th June, 1893; 6 years.

Claim.—1st. A bag of canvas or other pliable material, having on one side of its mouth a strip of stiff leather or other material, the said mouth being closed by bringing one side of the mouth against the side having the stiffening piece and folding the two together over and down against the side of the bag and securing it thus double folded by a cord laced in holes pierced through the stiffened strip and sides of the bag and sealed, substantially as and for the purpose specified. 2nd. A bag of canvas or other pliable material, having on one side of its mouth a strip of stiff leather or other material, the said mouth being closed by bringing one side of the mouth against the side having the stiffening piece and folding the two together over and down against the side of the bag, and securing it thus double folded by a cord laced in holes pierced through the stiffened strip and sides of the bag, in combination with a metal cap secured to one side of the bag and pierced to permit the passage of the cord, which is locked by sealing wax dropped into the metal cup, substantially as and for the purpose specified.

No. 43,252. Bag and Lock. (Sac et serrure.)

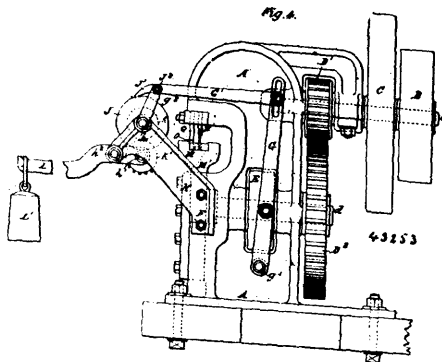


William F. Beasley, Oxford, Carolina, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. The combination with a bag having a series of eyes therein of a shaft adapted to be inserted in the said eyes, the said shaft having a cross head upon one of its ends, and carrying an enlargement upon its opposite ends, substantially as described. 2nd. The combination with a bag having a series of eyes therein of a shaft adapted to be inserted in the said eyes the said shaft having a cross head upon one of its ends and carrying an enlargement upon

the other and means for locking the barrel against rotation, as set forth. 3rd. The combination with a bag having a series of eyes therein of a fastener therefor consisting of a piece adapted to be inserted in the said eyes and having an enlargement upon its one end, a shaft partly contained within the said piece and having a cross head upon its projecting end, and means for locking the said piece and shaft together against a rotation of the latter, as set forth. 4th. The combination with a bag having a series of elongated eyes therein of a fastener therefor consisting of an angular piece adapted to be inserted in said eyes and having an enlargement upon its one end a shaft partly contained within the said piece and having a cross head upon its projecting end and pins contained in the said piece and adapted to lock the said piece and shaft together, as set forth. 5th. The combination with a bag having eyes therein of a shaft contained in said eyes and having a cross head upon its one end and carrying a face plate upon the other of a register adapted to register the rotation of the said shaft, substantially as described. 6th. The combination with a bag having a series of eyes therein one of the eyes having its opposite ends of irregular shape a shaft contained in the said eyes and carrying a face plate upon its one end and a cross head corresponding in shape to the said eye upon its opposite end and a registering mechanism adapted to be actuated by a rotation of the said cross head from a position across the said eye to one corresponding therewith, substantially as described. 7th. The combination with a bag having a series of eyes therein of a shaft contained in said eyes and carrying an enlargement upon its one end and a cross head upon its opposite end, the said shaft being capable of a limited longitudinal movement within one of the eyes of the bag, substantially as described. 8th. The combination with a housing, consisting of a face plate having a conical extension thereon, and of webs at the junction of the said parts of a shaft contained in the said face plate and extension, and carrying a cross head upon its projecting end, means for locking the said housing and shaft together, and a bag having a series of eyes therein, in which the said housing and shaft is adapted to be contained, the said eyes corresponding in size and contour to the shape and size of that section of the housing contiguous thereto, substantially as described. 9th. The combination with a housing having an enlargement upon its one end of a shaft partially contained therein and carrying upon its free end a cross head, means for locking the said shaft and housing together, a bag having a series of eyes therein corresponding in contour to the parts of the housing and cross head adjacent thereto, and a connection between the said housing and said bag, whereby the housing is permitted a limited longitudinal motion in one of the end eyes of the bag, substantially as described. 10th. The combination with a housing having an enlarged shell secured to the front end thereof, a shaft partially contained in the said shell and housing, and carrying a cross head upon its projecting rear end, means whereby the said housing and shaft may be locked together, registering mechanism contained in the said shell and adapted to record a rotation of the said shaft, and a bag having a series of eyes therein adapted to receive the said housing and corresponding in shape to that portion of the housing or cross head contiguous thereto, substantially as described. 11th. The combination with a bag having a series of eyes therein, of a cover secured to the bag over one of the end eyes of the said series, a housing adapted to be contained in the said eyes, a shaft partially contained in the said housing and having a cross head upon its rear projecting end, and means for locking the said cross head and housing together, substantially as described.

No. 43,253. Rivet. (Rivet.)



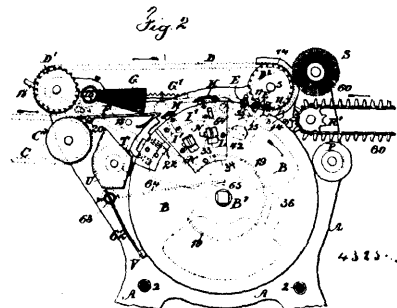
Samuel Cleland Davidson, Belfast, Ireland, 15th June, 1893; 6 years.

Claim.—1st. The mode hereinbefore described of manufacturing a bifurcated rivet or two pronged U-shaped fastener for leather or other substances with the cutting edges of the points or prongs in the line with the exterior surface of the prongs, which consists in forcing a suitable length of wire by means of a punch into and through a die which is open at both ends, whereby the wire is bent into the required shape, its end sharpened or drawn out to the

required edge by the combined action of the die and punch, and on emerging clear of the die, the said ends by reason of their springing slightly open, are caught by the die in the return movement of the punch, and the rivet thereby drawn off same, so that it may fall clear into any suitable receptacle, substantially as set forth. 2nd. In an apparatus for manufacturing bifurcated rivets or two pronged U-shaped fasteners, the combination substantially as set forth of (1) a punch having the exact form of the space that is to be left between the interior surfaces of the prongs of the rivet, (2) a reciprocating die open at both ends and corresponding exactly in shape with the cross section of the exterior surface of said prongs one of the outer sides of said die, having a cutting edge, and (3) a cutter plate adapted to act in conjunction with said cutting edge having an orifice for the passage of the wire to be formed into rivets, whereby in the forward stroke of said die a length of wire is cut off and then forced over the punch, bent and shaped into a rivet and forced out of the opposite end of the die, where by reason of its springing slightly open the ends catch against the die on its return movement and the rivet is thereby drawn off said punch, all substantially as set forth. 3rd. In an apparatus for manufacturing bifurcated rivets or two pronged U-shaped fasteners, the combination, with a reciprocating punch, and a reciprocating die open at both ends and adapted to bend and shape a length of wire into a rivet of (1) an anvil bearing a device the counterpart of which is required in the rivet head, (2) means whereby the punch is given a forward motion to press the wire against the anvil, and (3) means whereby the die is then given a sufficient forward motion to bend and shape the wire over the punch into a rivet as described, and to pass far enough along the punch for the rivet to be projected out of the opposite end of the die, when by reason of its ends springing slightly open the catch against the die on its return movement and are thereby drawn off the punch, substantially as set forth. 4th. In an apparatus for manufacturing bifurcated rivets or two pronged U-shaped fasteners, the combination, substantially as set forth of (1), a reciprocating punch (2), an anvil adapted to act in conjunction with said punch to impress a device upon the centre of a piece of wire which is to be formed into a rivet, (3) a reciprocating die open at both ends and adapted to act in conjunction with said punch, to bend and shape the said wire into a rivet and to pass sufficiently along said punch for same to project the made rivet clear out of the opposite end of the die, whereby reason of its ends springing slightly open, it catches against the die on its return movement and thereby gets drawn off said punch, (4) a cutting edge on one of the outer sides of said die and (5) a cutter plate adapted to act in conjunction with said cutting edge, whereby suitable lengths for making the rivets are cut off from a continuous length of wire, all substantially as hereinbefore described and shown. 5th. In an apparatus for manufacturing bifurcated rivets or two pronged U-shaped fasteners, a punch provided with guide legs in combination with a die having recesses or openings into which the said guide legs fit, whereby the pressing of the wire accurately into the die is ensured, substantially as set forth.

No. 43,254. Machine for Stemming Tobacco Leaves.

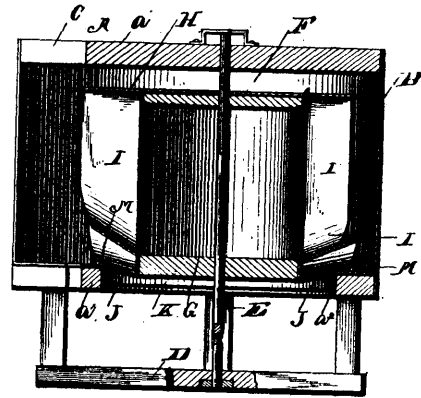
(Machine pour séparer la feuille de tabac de la tige.)



George Washington Cable, New York City, State of New York, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. The combination, in a machine for stemming tobacco leaves, of means for feeding in the leaves, means for seizing and carrying forward the stems and means for tearing off the leaf portions. 2nd. The combination, with a revolving cylinder, and means for supplying the leaf tobacco to the same, of one or more ranges of fingers projecting from the surface of such cylinder for supporting the leaves as the stems are drawn down between the fingers, a range of clamping hooks beneath the fingers and mechanism, substantially as specified, for giving to such clamping hooks a partial rotary motion to pass the ends of the hooks over the stems and for forcing the clamping hooks towards the surface of the cylinder to hold such stems, substantially as set forth. 3rd. The combination, with a feeding belt and a revolving cylinder, of conveying bars, endless chains and pulleys for such conveying bars, a platform between the feeding belt and the cylinder, and a tension brush acting in connection with the platform for applying the necessary detaining force to the tobacco leaves as they are drawn into the machine, substantially as set forth. 4th. In a tobacco stripping

machine, the cylinder B, in combination with the conveying bars, the endless chains and pulleys for the same, the pins projecting through the conveying bar and secondary bar to which the pins are attached, and means for moving the secondary bar and withdrawing the pins, the platform intervening between the feeding belt and the cylinder, a tension brush above the platform, a weight for applying proper tension to the brush and an arm and cam for raising such brush as the conveying bars pass beneath the same, substantially as set forth. 5th. In a tobacco stripping machine, the combination, with the revolving cylinder for carrying the tobacco leaves through the machine, of a range of fingers projecting above the surface of the cylinder for holding up the thin portions of the leaves, a range of clamping hooks contiguous to such fingers and shafts for the same, pinions and a rack bar for giving a partial rotary motion to such clamping hooks to turn them over the stems and springs for applying pressure by the hooks upon the stems, substantially as set forth. 6th. The combination, in a machine for stemming tobacco, of a revolving cylinder for conveying the tobacco through the machine, a range of fingers projecting from the surface of such cylinder for holding up the thin parts of the leaves and allowing the stems to pass in between the fingers, a range of clamping hooks contiguous to the fingers and mechanism for partially rotating such hooks and for moving the same to clamp the stems and a knife for separating the advancing ends of the stems in front of the clamping hooks, substantially as set forth. 7th. In a tobacco stemming machine, the combination with the cylinder for carrying the leaves through the machine, of a range of fingers projecting from the cylinder, a bar within the cylinder for supporting such fingers, springs for drawing the fingers towards the cylinder, a range of clamping hooks adjacent to the fingers, shafts for such hooks, cross bars for supporting the shafts, pinions and a rack bar for partially rotating the shafts and hooks, stationary cams at the ends of the cylinder for moving the rack bar, springs for forcing the hooks towards the surface of the cylinder and latches for holding the cross bar and clamping hooks when the latter are raised from the surface of the cylinder, substantially as set forth. 8th. The combination, with the cylinder B, of the guide fingers projecting from the surface of the cylinder, a cross bar within the cylinder to which the guide fingers are connected, springs for moving the cross bar and drawing the guide fingers towards the surface of the cylinder, holding fingers for the cross bar and a bar and cam for sustaining and giving motion to the holding fingers, substantially as set forth. 9th. The combination, with the cylinder B, guide fingers projecting from its surface, and a cross bar supporting such fingers, of clamping hooks adjacent to the fingers and mechanism, substantially as specified, for giving motion to the clamping hooks, a knife in front of the clamping hooks, knife stock and cams for giving motion to the knife and causing the same to cut the advancing ends of the stems, substantially as set forth. 10th. The combination, with the cylinder B, and feeding belt, of the platform F, pivoted to the frame of the machine, and with the moving end adjacent to the cylinder, a cam for raising such platform, a tension brush over the platform and pivoted upon the frame of the machine, an arm and cam for moving the same, conveying bars, chains and pulleys for moving the conveying bars over the platform, and in contact with the cylinder, guide fingers upon the cylinder, clamping hooks adjacent to the guide fingers and mechanism, substantially as specified, for giving motion to the same, and a knife in front of the hooks for severing the stems adjacent to the clamping hooks, substantially as set forth. 11th. The combination, in a machine for stemming tobacco leaves, of a cylinder and fingers projecting from such cylinder, and between which the stems pass, clamping hooks adjacent to the fingers and mechanism, substantially as specified, for giving motion to such hooks and causing them to hold the stems, a knife adjacent to the clamping hooks for severing the stems, and a delivery belt with wipers acting to remove the leaves from the stems, as such stems remain in contact with the cylinder, substantially as set forth. 12th. In a machine for stemming tobacco, the combination, with the cylinder for carrying the leaves through the machine, and hooks for holding the stems, of a delivery belt running adjacent to the surface of the cylinder and having ranges of wipers acting to raise and convey away the tobacco leaves, substantially as set forth. 13th. In a machine for stemming tobacco leaves, the combination, with the cylinder, for conveying the leaves through the machine and hooks thereon for holding the stems, of an endless belt and ranges of wipers running contiguous to the surface of the cylinder for delivering the leaves from the machine, and a rotary brush between which and the belt the leaves pass as delivered, substantially as set forth. 14th. The combination, with the revolving cylinder in a machine for stemming tobacco leaves, of clamping hooks upon such cylinder, for holding the stems, a delivery belt running contiguous to the surface of the cylinder for removing the leaves from the stems and discharging such leaves, and an elastic roller acting with the revolving cylinder for passing the stems away from the leaves, substantially as set forth. 15th. In a tobacco stemming machine, the combination, with the revolving cylinder, for conveying the tobacco through the machine, of guide fingers projecting from the surface of the cylinder, clamping hooks adjacent to the fingers, and mechanism, substantially as specified, for moving the hooks and holding the stems, a delivery belt running adjacent to the surface of the cylinder for removing the leaves from the stems, and a water vessel and brush for cleaning the surfaces of the cylinder, clamping hooks and guide fingers, substantially as set forth.

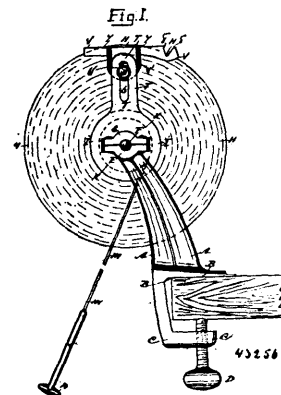
No. 43,255. Water Wheel. (Roue hydraulique.)

Charles A. Chase, Moro, Maine, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. In a water wheel, the casing having a flat closed top, a flat bottom having a circular bottom opening and a spirally disposed rim connecting said top and bottom, the shaft and the horizontal water wheel mounted upon said shaft within the casing, said wheel comprising a central core or hub, a flat top plate H projecting beyond the periphery of said core or hub, a series of water buckets arranged upon said hub tangentially to the shaft and having straight vertical portions inclined toward the casing rim from the projecting flat top plate which the upper ends meet to a point near the bottom of the hub, and at such point provided with tapered rearwardly and outwardly curved portions having narrowed projecting discharging tongues extending into said bottom opening, and laterally projecting portions M overlapping the bottom of the casing to form an auxiliary discharge back into the casing, and a lower ring band encircling said projecting tongues at their juncture with the lateral projections M, and working within the circular bottom opening of the casing, so as to separate the two bottom discharges of the buckets and also form a bearing collar for the wheel, substantially as set forth.

No. 43,256. Hand or Foot Power Grinding Machine.

(Machine à aiguiser à bras ou pi-és.)



James T. Barnard and Samuel Briggs, both of Hamilton, Ontario, Canada, and Samuel C. Rogers, Buffalo, New York, U.S.A., 15th June, 1893; 6 years.

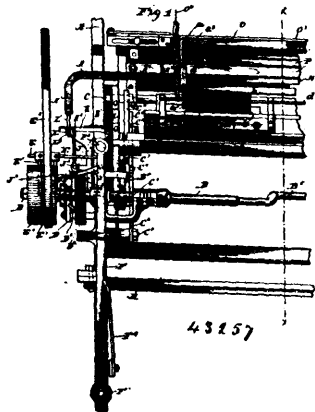
Claim.—1st. In a hand or foot power grinding machine, the framework consisting of side standards A, having bearings E projecting base B and lug C with its hand screw D, in combination with the through shaft provided with emery wheel, and clutch having loosely operating pin, and the coil spring J, substantially as described and set forth. 2nd. The combination in a hand or foot power grinding machine of the framework A, the shaft F, the emery wheel H, the clutch K provided with band M, the coil spring J, the rigid casing I having standard T, and the gauge V adjusted thereto, substantially as and for the purpose hereinbefore set forth.

No. 43,257. Knitting Machine. (Machine à tricoter.)

Charles Cooper, assignee of Charles J. Sibbald, both of Bennington, Vermont, U.S.A., 15th June, 1893; 6 years.

Claim.—1st. The combination with a knitting mechanism, of a belt shipping lever, a spring bearing against said lever, and suitable devices to hold the lever against the force of the spring, a rotatable detector rod adapted to travel to and fro in close proximity to the

needles, for the purpose specified, and a vibratory bar adapted to be operated by the detector rod when rotated, to trip the holding



devices of the said belt shipping lever, substantially as and for the purpose described. 2nd. The combination with knitting mechanism, of a belt shipping lever provided with a spring, a reciprocating carrier bar, an arm secured to said carrier bar, a detector rod loosely coupled to said arm and provided with laterally projecting arms, a vibratory bar in position to be actuated by said detector rod, a pivotal elbow lever, a latch and a pivoted lever which is adapted to engage with an arm of the said shipping lever, substantially as and for the purpose described. 3rd. The combination with the frame carrying the needles and suitable mechanism for operating said frame, of a carrier bar O, an arm secured thereto, a detector rod loosely coupled to said arm and provided with laterally projecting arms and a point which is held in position adjacent to a row of needles, a vibratory bar in position to be actuated by said detector rod, a shipping lever, and devices, substantially as shown, intermediate said vibratory bar and said shipping lever, whereby the shipping lever is released upon the movement of the bar, substantially as and for the purpose described. 4th. In a knitting machine, a needle carrying frame, a pivoted lever connected thereto and a spring bearing against the lever to move it in one direction, combined with a cam intermittently engaging said lever to move it in the opposite direction, a wheel having uniform rotation with said cam and provided with ratchet teeth on a portion only of its periphery and a pawl adapted to engage said teeth, the parts being so arranged that the pawl will engage the teeth when the cam is moving the lever against the force of the spring, substantially as and for the purpose specified. 5th. In a knitting machine, a set of vertically reciprocating needles, a set of horizontally reciprocating needles, the running mechanism, a spring actuated belt, shipping lever, and devices to hold the lever against the force of the spring, combined with a rotating detector rod and adapted to travel to and fro in front of the vertically reciprocating needles, suitable devices intermediate of the detector rod and the lever holding devices adapted to trip the latter when the former is rotated to thereby release the belt shipping lever to stop the machine, and a device to prevent the forward movement of the horizontal needles when the machine is stopped, substantially as and for the purpose described. 6th. The combination with a knitting mechanism, of a belt shipping device, a detector rod adapted to travel to and fro in close proximity to the needles for the purpose specified, and suitable mechanism between the detector rod and the belt shipping device whereby the latter may be operated by the former, substantially as and for the purpose described.

No. 43,258. Lubricator. (Graisseur.)

John Franklin Newell, Gardiner, Maine, and George Edwin Spare, New Haven, Connecticut, all in the U.S.A., 15th June, 1893; 6 years.

Claim.—1st. A composition for bearings, composed of plumbago or graphite, a fibrous substance, an oil, and white lead, or equivalent substance which will chemically unite with the oil to bind or cement together the particles of plumbago or graphite and the fibrous substance, substantially as described. 2nd. A moulded and hardened composition of matter for bearings, etc., consisting of plumbago, a fibrous substance, an oil, and an oxide, carbonate or basic carbonate of lead, substantially as described. 3rd. A composition of matter for bearings, etc., composed of plumbago or graphite, a fibrous substance, an oil, and white lead and red lead, substantially as described.

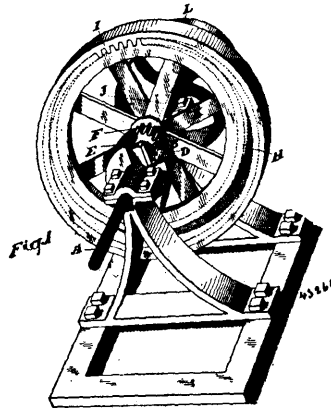
No. 43,259. Solvent for Separating Metals from Ores. (Dissolvent pour séparer les métaux des minerais.)

William A. G. Berkin, Nottingham, England, 15th June, 1893; 6 years.

Claim.—1st. In the art of separating metals from their ores, the process set forth which consists in subjecting an ore, suitably com-

minuted, to the action of a menstruum, composed of potassium cyanide, potassium ferri-cyanide, and peroxide of hydrogen, in water, agitating the said ore, and finally separating the values out of solution, substantially as described. 2nd. The fluid solvent for removing precious metals from their ores, the same consisting of potassium cyanide, potassium ferri-cyanide, and peroxide of hydrogen in water, in the proportions specified, or thereabout, substantially as described.

No. 43,260. Motor. (Moteur.)

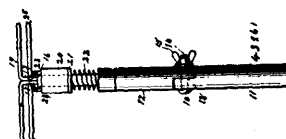


David Wells Carter and Samuel Street Fuller, both of Stratford, and James Black Perry, Toronto, all in Ontario, Canada, 15th June, 1893; 6 years.

Claim.—A shaft having a head, with two wrist pins projecting from it at substantially equal distances from the centre of the shaft, each wrist pin having a pinion journalled on it, one pinion meshing with an internal stationary gear, and with a pinion journalled on the other wrist pin which is fixed to a spur wheel meshing with an internally geared pulley independently journalled, and to which the driving power is applied, substantially as and for the purpose specified.

No. 43,261. Window Washer.

(Appareil pour laver les fenêtres.)

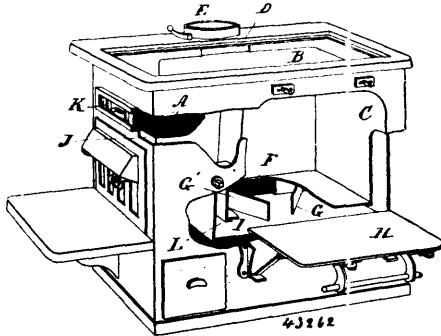


David Mendelson, New York City, New York, U.S.A., 17th June, 1893; 6 years.

Claim.—1st. A window washer, comprising an elongated handle having a shank at one end, a fixed jaw carried at the end of the shank and extending sidewise from the shank, a spring pressed slide mounted upon the shank, and a jaw carried by the slide and adapted to press against the fixed jaw, substantially as described. 2nd. A window washer, comprising an elongated handle composed of sections hinged together, a fastening device to fix the relative positions of the handle sections, a shank carried at one end of the handle, a laterally extending fixed jaw secured to the shank, a spring pressed slide mounted upon the shank, and a jaw carried by the slide and extending parallel with the first jaw, substantially as described. 3rd. A window washer, comprising an elongated handle having an outer and inner tube at one end, the tubes being arranged to telescope, a fastening device adapted to secure the tubes together, a shank carried by the movable tube, a laterally extending jaw secured to the shank, a spring pressed slide mounted upon the shank, and a jaw carried by the slide and extending parallel with the first jaw, substantially as described. 4th. A window washer, comprising a handle having a tube at one end, a spring pressed tube held to slide in and protrude from the handle tube, a shank carried by the sliding tube, a laterally extending jaw secured to the shank, a spring pressed slide mounted on the shank, and a laterally extending jaw carried by the slide and extending parallel with the first jaw, substantially as described. 5th. A window washer, comprising an elongated handle having a tube at one end, a spring pressed tube held to slide in the handle tube, a shank secured to the end of the sliding tube, a laterally extending jaw carried by the shank, a spring pressed jaw slidably secured to the shank and extending parallel with the first jaw, and a cord secured to the shank and sliding tube and adapted to extend parallel with the handle, substantially as described. 6th. The combination with the window washer, having an elongated handle and laterally extending swab holding jaws, of a laterally extending arm adjustably secured to the handle, and serving as a supplementary handle, substantially as described. 7th. The combination, with the elongated handle

having swab holding jaws at one end, of an extensible arm secured to the handle and extending at right angles to the same, and a supplemental handle carried at the free end of the extensible arm, substantially as described.

No. 43,262. Stove. (Poêle.)



Edward Gurney, assignee of John Cunningham, both of Toronto, Ontario, Canada, 17th June, 1893; 6 years.

Claim.—In a cooking stove, the combination with the smoke space formed around the oven, of an air space formed around the fire pot and communicating with the smoke space at substantially its otherwise coolest point, an opening being made for the admission of fresh air into the said air space, substantially as and for the purpose specified.

No. 43,263. Car Coupler. (Attelage de chars.)

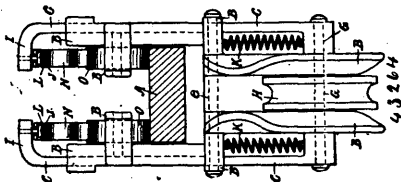


Harman Bunker and James Herbert McKeggie, all of Barrie, Ontario, Canada, 17th June, 1893; 6 years.

Claim.—1st. A drawhead A having a slot or opening made through its top at right angles to its length, a latch C pivoted at *d*, and fitted into the slot in the drawhead, a lip *g* formed in the draw head and a shoulder *f* formed on the drawhead behind the latch C, substantially as and for the purpose specified. 2nd. A link D having an arrow head *b* formed at each end, a raised portion *d* between the heads and a rubber E or other suitable material attached to its bottom, substantially as and for the purpose specified. 3rd. A drawhead A, having a slot or opening made through its top at right angles to its length, a latch C pivoted at *d* and fitted into the slot in the draw head, a lip *g* formed in the drawhead and a shoulder *f* formed on the drawhead behind the latch C, in combination with a link D having an arrowhead *b* formed at each end, a raised portion *d* between the heads and a rubber E, or other suitable material attached to its bottom, substantially as and for the purpose specified.

No. 43,264. Hay Unloader. (Appareil pour décharger le foin.)

(Appareil pour décharger le foin.)



Christian Winhold, East Zora, assignee of George M. Jones, Stratford, all in Ontario, Canada, 17th June, 1893; 6 years.

Claim.—1st. A carrier frame B, in which the slots E and grooves D are formed, the wheels O, the track A, the sliding arms C formed with the angular ends I, the carrying screws J, the spring bars L formed with the slots M, and the brakes N, in combination with the axles G, sheaves H, and means for suspending the load therefrom, substantially as shown and described and for the purpose specified. 2nd. A carrier frame B, in which the slots E and the grooves D are formed, the wheels O, the track A, the sliding arms C formed with angular ends I, the springs K interposed between the sliding arms C, and the frame B, the carrying screws J, the spring bars L formed

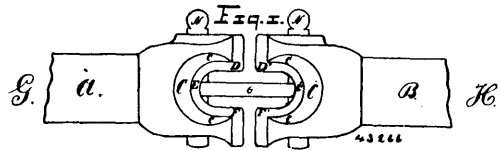
with the slots M, and the brakes N, in combination with the axles G, sheaves H, and means for suspending the load therefrom, substantially as shown and described and for the purpose specified. 3rd. In combination with the above, the pulleys R and S, rope X, hooks P and T, the lever *b*, slide *a*, pulley arm *c* in which the eye *d* is formed, and the trip rope *f*, substantially as shown and described and for the purpose specified.

No. 43,235. White Lead. (Blanc de plomb.)

The Amorphous White Lead Company, assignee of Elwyn Waller and Charles Augustus Sniffen, all of New York City, New York, U.S.A., 17th June, 1893; 6 years.

Claim.—1st. The step in the process of making white lead, which consists in treating cerrussite with neutral lead acetate under the influence of heat, for the production of basic lead acetate whereby only the lead of the native lead carbonate is extracted, leaving the silver and other constituents of the ore undissolved. 2nd. The step in the process of making white lead from a solution of basic lead acetate, which consists in mingling said solution with water holding carbonic acid in solution, whereby lead is precipitated in the form of amorphous lead hydrocarbonate. 3rd. The step in the process of making white lead which consists in the precipitation of white lead from a solution of basic lead acetate by mingling said solution with water holding carbonic acid in solution the mixture being subjected to pressure and agitation in an atmosphere of carbonic acid gas, whereby the water is made to take up more carbonic acid which is transferred to and combined with the lead. 4th. The concentration of the silver existing in carbonate ores of lead, by means of a solvent, as neutral lead acetate and heat, which dissolves out the lead, sets free the carbonic acid, and leaves the silver undissolved and concentrated. 5th. The herein described improvement in the manufacture of white lead which consists in the formation primarily of lead acetates, neutral or basic, directly from the native carbonate ores of lead.

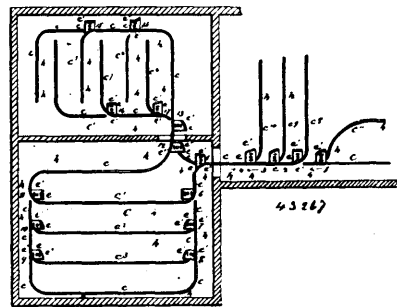
No. 43,266. Car Coupler. (Attelage de chars.)



Carter Hawkins Brendle, and Arthur Eben Lewis, both of Souris, Manitoba, Canada, 17th June, 1893; 6 years.

Claim.—1st. In a car coupling, a draw bar having a groove horizontally across its face, substantially as and for the purpose hereinbefore set forth. 2nd. In a car coupling, a draw bar having a groove across its face, and an elevation or projection around the outer edge of said groove, substantially as and for the purpose hereinbefore set forth.

No. 43,267. Tramway. (Tramway.)

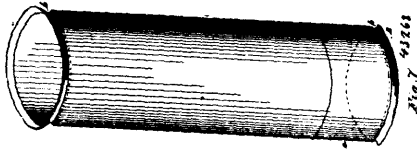


J. Duncan & Company, Boston, Massachusetts, assignee of Paul Fred Werner, Vailsberg, New Jersey, all in the U.S.A., 17th June, 1893; 6 years.

Claim.—1st. In an overhead tramway, the combination of rail sections, a connecting piece, and a pivoted switch board or turn table on said connecting piece, provided with one or more rail sections, substantially as and for the purposes set forth. 2nd. In an overhead tramway, the combination of rail sections, a connecting piece, a locking post thereon, and a pivoted switch board or turn table on said connecting piece, provided with one or more rail sections and two or more holes or openings adapted to be made to engage with the locking post, substantially as and for the purposes set forth. 3rd. In an overhead tramway, the safety device *d*, having a locking post thereon, and a switch board or turn table pivotally arranged on said safety device *d*, rail sections thereon, openings adapted to be made to engage with said locking post, and means for causing the disengagement of said stop post with said switch board or

turn table whereby the switch board or turn table may be turned substantially as and for the purposes set forth. 4th. In an overhead tramway, the safety device *d*, having a locking post thereon, and a switch board or turn table pivotally arranged on said safety device *d*, rail sections thereon, openings adapted to be made to engage with said locking post, and means for causing the disengagement of said locking post with said switch board or turn table whereby the switch board or turn table may be turned, consisting essentially of a rod *f* turning in said safety device and secured to said switch board and a handle connected with said rod for turning the same, substantially as and for the purposes set forth.

No. 43,268. Can. (Boîte métallique.)

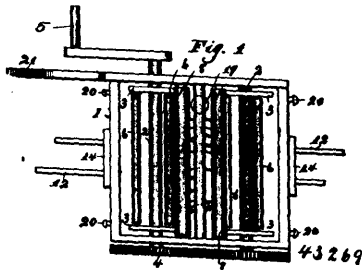


Hugh Steven Wallace, Hamilton, Ontario, Canada, 17th June, 1893; 6 years.

Claim.—1st. In a sheet metal can a malleable iron ring having an annular groove on the inside (or outside) for the top and bottom and formed to receive the sheet metal body secured thereto by solder or otherwise, substantially as and for the purpose specified. 2nd. In a sheet metal can a malleable iron ring *A* having an annular groove *b* on the outside to which the sheet metal body *c* is affixed to form a strong and durable top, substantially as specified. 3rd. In a sheet metal can the bottom malleable iron ring *A* having an annular groove *b* and a concave sheet metal bottom *a* and bottom of sheet metal body *A* secured thereto, substantially as and for the purpose specified. 4th. In a sheet metal can the combination of the malleable iron top ring *A* having an annular groove *b* and a reversed malleable iron bottom ring *A* having an annular groove *b* sheet metal bottom *a* and sheet metal body *c* secured to top and bottom rings, all constructed substantially as and for the purpose specified.

No. 43,269. Milking Machine.

(Appareil pour traire les vaches.)



Lemuel H. Dotterer Grachan, assignee of John H. Krom, Creagers-town, and William H. Biggs, Rocky Ridge, all in Maryland, U.S.A., 17th June, 1893; 6 years.

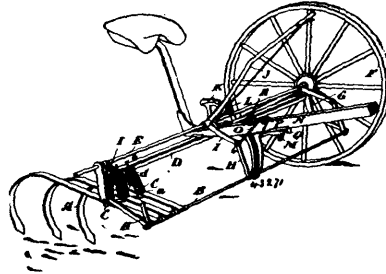
Claim.—1st. In a milking machine, the combination, with rotary heads arranged in pairs, and sets of elastic covered rollers supported in and carried by said heads, of adjustable concave pressure plates journalled at their lower edges between said set of rollers and each provided with an elastic lining, and means for adjusting said plates to and from the rollers and securing them in adjusted position, substantially as described. 2nd. In a milking machine, the combination, with a set of rollers, mounted in rotary heads, of a pressure plate pivoted or journalled adjacent to said rollers and provided with a depending forked arm or lever, a longitudinally movable bar engaged in the forked end of said lever and provided with a rack to engage a slotted guide, in which said bar is supported, and a spiral spring attached to and surrounding said bar, and having one end arranged to bear on the forked lever to adjust the pressure plate to and from the rollers, substantially as described. 3rd. In a milking machine, the combination with rotary heads arranged in pairs and sets of rollers, supported in and carried by said heads, of pressure plates journalled between said sets of rollers and provided with depending arms or levers, longitudinally movable bars engaged with said levers and provided with springs adapted to bear on the levers and adjust the pressure plates to and from the rollers and means for securing the said bars to hold the pressure plates in an adjusted position, substantially as described. 4th. In a milking machine, the combination, of a frame shaft journalled therein and provided with rigidly attached rotary heads, a set of rollers supported and carried by each pair of rotary heads, concave pressure plates journalled or pivoted in said frame between the sets of rollers, mechanism for adjusting the said plates to and from the rollers, and means for securing the pressure plates in an adjusted position, substantially as described.

No. 43,270. Method of Treating Clay for Pottery Ware. (Méthode de traiter l'argile pour les articles de poterie.)

William M. Brewer, New Brighton and Frank P. Musser, Beaver Falls, both in Pennsylvania, U.S.A., 17th June, 1893; 6 years.

Claim.—The method herein described, of treating clay, which consists in first burning the same, then reducing the burned clay or biscuit to powder, and mixing therewith, about one-third its bulk of raw or unburned clay, then adding glass, sand, flint, slaked lime, and common salt in about the proportions specified, then storing away and finally tempering to the proper consistency for use, substantially as set forth.

No. 43,271. Cultivator. (Cultivateur.)



Thomas Henry Noxon, Ingersoll, Ontario Canada, 17th June, 1893; 6 years.

Claim.—1st. In a cultivator, a fulcrum located between the pivot point and the cutting end of the tooth, and means, substantially as described, for adjusting the bar *B*, to any desired position, as set forth. 2nd. In a cultivator, a vertically adjustable bar *B*, and spring teeth pivoted thereon, in combination, with an elastically compressible fulcrum located between the pivot point and cutting end of the tooth and means substantially as described for adjusting the bar *B*, to any desired position, as set forth. 3rd. In a cultivator, a series of pivoted spring teeth of unequal lengths, in combination, with a series of pressure bars each bar located in such a position between the pivot point and cutting end of its tooth that a uniform weight shall impart a substantially uniform pressure on the cutting end of each tooth. 4th. In a cultivator, a vertically adjustable bar *B*, and spring teeth pivoted thereon, in combination with an axle on which the ground wheels are journalled, said axle being journalled on the frame, arms connecting said axle with bar *B*, and means substantially as described, for adjusting the bar *B*, to any desired position, as set forth. 5th. An arm fixed to a rock shaft, and having pivoted on it a strap connected to the bar on which the spring teeth are pivoted, in combination with a chain or cord connected at one end to the arm and at the other end to one arm of a pivoted bell crank to which the power is applied. 6th. In a cultivator having pivoted spring teeth, a tongue *N*, a bell crank to which power is applied secured thereto, a pivoted foot lever *R*, a pulley thereon, and a cord or chain passing over said pulley and connecting the bell crank with the bar on which the teeth are pivoted, whereby pressure on the lever *R*, will cause the forward draft of the horses to be utilized for applying downward pressure on the teeth, substantially as described. 7th. In a cultivator, a bar *B*, teeth pivoted thereon, a bar *D*, a wheel axle *E*, movable independent of said bar *D*, brackets *G*, secured to said bar *D*, and forming bearings for the axle and arms fixed to said axle, and supporting said bar *B*, substantially as described. 8th. A bar having on each end of it a bracket rigidly secured thereto, in which brackets the wheel axle is journalled, and arms fixed to the said axle and supporting the bar on which the teeth are pivoted, in combination with loops projecting from the bar and forming guides and supports for the said teeth, substantially as and for the purpose specified. 9th. A bar having on each end of it a bracket rigidly secured thereto, in which brackets the wheel axle is journalled, and arms fixed to the said axle and each arm connected by a pivoted link to the bar on which the teeth are pivoted, each end of the said bar being braced to the end brackets immediately opposite to it, in combination with a hand lever rigidly fastened to the journalled axle, and an arm also rigidly fastened to the axle and connected to the tooth bar by a pivoted link, substantially as and for the purpose specified. 10th. A cultivator having teeth connected thereto by a horizontal pivot, from which point their working angle is varied in combination with a draft device and intermediate mechanism between the draft device and teeth, whereby the said variation of the angle is effected, and the teeth are caused to enter the soil at varying angles to its surface all by the draft of the horses, substantially as described. 11th. A cultivator having teeth connected thereto by a horizontal pivot, from which point their working angle is varied in combination with a draft device and intermediate mechanism between the draft device and the teeth, whereby the latter are presented to the soil at varying angles to its surface, and are driven in and held there at the will of the operator, substantially as and for the purpose specified.

No. 43,272. Vehicle Gear. (*Train de voiture.*)

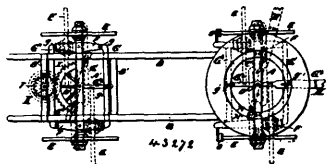


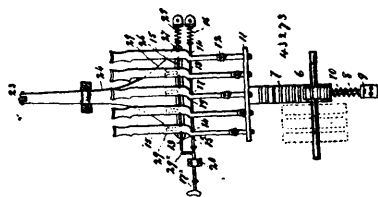
Fig. 1.

Mathew Harcourt, Detroit, Michigan, U.S.A., 17th June, 1893; 6 years.

Claim.—1st. In a vehicle gear, the combination with a pair of trucks each having wheels pivotally secured at its ends adapted to be turned parallel with the length of the trucks, and a frame secured to the truck above the top of the wheels, substantially as set forth. 2nd. In a vehicle gear, the combination with a pair of trucks, each having wheels pivotally secured at its ends and adapted to be turned parallel with the length of the trucks, said trucks also being provided with posts, and a frame upon the posts above the top of the wheels, substantially as set forth. 3rd. In a vehicle gear, the combination with a pair of truck each of which comprises an upper and lower cross bar, uprights bolted between said cross bars, a wheel journalled at the outer end of each of said trucks, and a frame secured to the trucks, and connecting them together, substantially as set forth. 4th. In a vehicle gear, the combination with a pair of trucks, each of which comprises an upper and lower cross bar, an evener secured in the ends of said bars, one end of each of the eveners in the front truck being extended and provided with a brake shoe, a wheel upon each evener, and a frame secured to the trucks for connecting them together, substantially as set forth. 5th. In a vehicle gear, the combination with a pair of trucks, the outer end of each of which is provided with wheels pivotally secured thereto and adapted to be turned parallel with the length of the trucks, a spring supported frame secured to the trucks above the top of the wheels, the under side of the front end of which frame is provided with stop blocks adapted to be forced into engagement with the wheels after said wheels have been turned parallel with said trucks, substantially as set forth. 6th. In a vehicle gear, a frame, longitudinally extended eveners F constructed with lateral arms F¹ carrying wheels E and journalled in said frame, lever connections jointly engaging said eveners towards their extremities, and a steering mechanism engaging said lever connections, substantially as described. 7th. In a vehicle gear, a frame, longitudinally extended eveners journalled intermediate their ends in said frame and carrying wheels E, lever connections G, G¹ jointly engaging said eveners, and a steering bar G² engaging said lever connections, substantially as described. 8th. In a vehicle gear, the combination with a pair of trucks each having wheels pivotally secured at its ends and adapted to be turned parallel with the length of the truck said trucks being provided with posts, springs upon the posts, and frame above the tops of the wheels and provided with a socket for each post, the sockets resting upon the top of said springs, substantially as set forth.

No. 43,273. Cash Indicator.

(*Indicateur de monnaie.*)



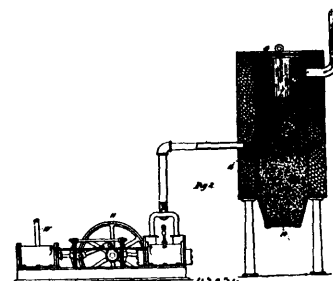
William Henry Thompson, East Stroudsburg, Pennsylvania, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. In combination, the indicating discs, the pinion and rack in connection therewith, the cross bar on the rack, and a series of keys having collars to engage the said cross bar, said collars being fixed at different distances from the cross bar, substantially as described. 2nd. In combination, the indicating mechanism, the cross bar having connection therewith, a series of key slides extending thereto and having independent movement and collars arranged on the key bars at different distances from the cross bar, substantially as described. 3rd. In combination, the indicating mechanism and a bank of keys for operating the same, each key of said bank being movable to a different degree, substantially as described. 4th. In combination, the indication mechanism, a series of keys and a lock for said keys to hold them normally against movement, said lock being arranged to be operated independently of the indicating keys, to release the same, substantially as described. 5th. In combination, the indicating mechanism, a series of keys, a lock

for holding said keys normally against action, and the push pin for operating the said lock manually, substantially as described. 6th. In combination, the indicating mechanism, a series of keys, a lock arranged to hold the keys normally against action, and to be moved independently of the indicating keys, each of said keys being adapted to give the lock a further movement for locking the unoperated keys, substantially as described. 7th. In combination, the indicating mechanism, a series of keys, having shoulders 13, a transverse locking bar, having portions adapted to engage said shoulders when the bar is moved, each of said keys operating to move the locking bar, to engage all the unoperated keys, substantially as described. 8th. In combination, the indicating mechanism, a series of keys having shoulders 13, a transverse locking bar having portions to engage the said shoulder, each key having a cam edge to engage the locking bar and move it to lock the unoperated keys, substantially as described. 9th. In combination, the indicating mechanism, a series of keys having shoulders 13, a transverse sliding locking bar, having notches, the said keys being arranged to move through the same, and each having a cam edge to engage the edge of the notch to move the bar, for locking the unoperated keys, substantially as described. 10th. In combination, the indicating mechanism, the keys having shoulders 13, 14, the locking bar adapted to engage said shoulders, means for holding the bar normally and out of engagement with the shoulder 13, each key operating to move the locking bar fully when the same is partially moved to cause said bar to engage the shoulder 13, of the unoperated keys, the said locking bar being arranged to be moved part of its stroke independently of the indicating keys, substantially as described. 11th. In combination, the indicating mechanism, the keys having two shoulders 13, 14, and the cam edges, the locking bar having notches, and the spring for holding the bar normally out of engagement with the shoulders 13, said locking bar being arranged to be partially operated independently of the indicating keys, substantially as described. 12th. In combination, the indicating mechanism, the keys thereof, the drawer, the lock thereof, and the shifting bar with means for operating the same. 13th. In combination, the indicating mechanism, the keys thereof, the drawer, the lock thereof normally out of engagement with the keys, and means for placing the lock and the keys into engagement with each other, substantially as described. 14th. In combination, the indicating mechanism, the keys thereof, the drawer and the locking lever for the same, a sliding notched bar with means for operating the same, and the projections adapted to pass through the notches of the bar, substantially as described. 15th. In combination, the indicating mechanism, the keys thereof, the drawer lock normally out of engagement with the keys, the shifting part and the push pin held normally out of line with the sliding part, and adapted to be moved into line therewith, substantially as described. 16th. In combination, the indicating mechanism, the keys, the lock for holding the keys normally against movement, the drawer, the lock thereof, normally out of engagement with the keys, the shifting part, and the push pin for operating the said shifting part and the key lock, substantially as described. 17th. In combination, the indicating mechanism, the keys, the key lock for holding the same normally against action, the drawer, the drawn lock, the shifting part and the push pin normally out of line with the said shifting part, and adapted to be turned into line therewith, substantially as described. 18th. In combination with an autographic register, a total adding mechanism and the keys thereof projecting to the top of the case, substantially as shown.

No. 43,274. Art of Reducing Metallic Ores.

(*Art de réduire les minerais métalliques.*)

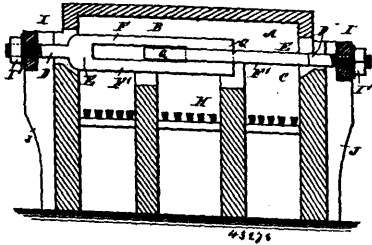


Thomas Shoenberger Blair, jr., Alleghany, Pennsylvania, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. In the art of reducing metallic oxides by a current of deoxidizing gases passed vertically through a mass of such oxides, the improvement, which consists, first, in introducing into such mass a current of reducing gas, heated to the temperature of the ore when at a red heat; second, in causing the gas to pass through the mass by pressure or suction regulated in degree in conformity to the resistance afforded by the mass of oxides; and, third, in continuing the exposure of the oxide to the heat reducing gas until the combined oxygen is eliminated, substantially as described. 2nd. In the art of reducing metallic ores, the method herein described of cooling the iron sponge after deoxidation by passing a current of cold, non-

oxidizing gas through the heated deoxidized mass and reducing it thereby to a temperature sufficiently low to prevent reabsorption of oxygen when subsequently exposed to the atmosphere, substantially as described.

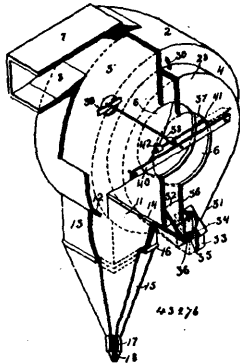
No. 43,275. Method of and Apparatus for Equalizing Links. (*Méthode et appareil pour égaliser les mailles.*)



Thomas Murphy, Sewickley, Pennsylvania, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. The herein described method of equalizing the length of the sides or members of a link, which consists in subjecting the link to the action of heat and at the same time to a gradual strain until the sides or members of the link are of equal length, substantially as set forth. 2nd. The herein described method of equalizing the length of the sides or members of a link, which consists in subjecting two connected links to the action of heat and at the same time straining the said links apart until the two sides or members of a link are of equal length, and then permitting the links to cool while under strain, substantially as set forth.

No. 43,276. Dust Collector and Catcher. (*Aspirateur de poussière.*)

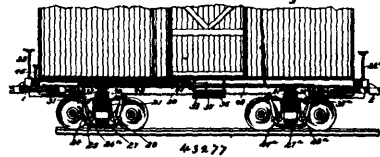


George Walter, Duluth, Minnesota, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. The combination with the drum of a tangential inlet a dust discharge slot provided in the opposite side of the drum a hopper beneath said slot, the slats 51 arranged above said slot and having bevelled lower edges, a settling chamber being formed back of said slots and the head of said drum having an air exit 6. 2nd. The combination with the drum or cylinder of a tangential inlet, a discharge slot provided in the walls of the drum having an opening 6, and the inner drum or sleeve 55 extending across the interior of the main cylinder and partially closing the opening, substantially as described. 3rd. The combination, with a drum, of a tangential inlet, a dust discharge slot being arranged in the walls of the drum, the head of the drum having an opening 6, an annular trough provided on said head, a hopper therefor and a perforated duct arranged in said trough, substantially as described. 4th. The combination, with a drum, of a tangential inlet, said drum having a dust discharge slot and dust hopper, the head of the drum having an opening 6, an interior drum 55 and an annular trough provided outside of the opening 6 and having a perforated duct of greater diameter than said part 55, substantially as described. 5th. The combination, with the drum to receive the dust laden air and having openings 6 and 11, of an annular trough 28 provided on the drum head having the opening 6, a hopper for said trough and a perforated duct provided in said trough and composed of separate coned rings suitably supported, substantially as described and for the purpose specified. 6th. The combination, in a dust collector, of a cylinder having the heads 3 and 4, with a circular opening provided in one for the discharge of the dust freed air, a tangential inlet spout to lead the dust laden air into said cylinder, a wide slot provided in the opposite wall of said cylinder, and a dust receptacle arranged opposite said slot to

receive the dust falling therefrom, substantially as described. 7th. The combination, in a dust collector, of the cylinder provided with the heads 3 and 4, one of said heads provided with a circular opening for the discharge of the dust freed air, a tangential inlet spout, a wide discharge slot arranged in the opposite side of the cylinder from said inlet spout, and a dust receptacle arranged to receive the dust falling from said slot, the overhanging edge 12, and a deflector arranged in the inlet spout, substantially as and for the purpose specified. 8th. The combination, in a dust collector, having the heads 3 and 4, the latter provided with the larger opening 6, a tangential inlet spout, a wide dust discharge spout provided in the walls of said cylinder, a dust receptacle arranged in connection therewith, and an auxiliary dust collecting annular trough provided on the wall 3, substantially as and for the purpose set forth and described. 9th. The combination, in a dust collector having the heads 3 and 4, the first provided with a small central opening 5, and the latter provided with a larger opening 6, a tangential inlet spout, a wide dust discharge spout provided in the walls of said cylinder, a dust receptacle arranged in connection therewith, and an auxiliary dust collecting annular trough provided on the wall 3, substantially as and for the purpose specified. 10th. The combination with the cylinder provided with the heads 3 and 4, the latter provided with the central opening 6, of the tangential inlet spout opening into said cylinder, the lower walls of the cylinder beneath said spout provided with the wide dust discharge slot, the dust receptacle arranged beneath the said slot, a device for disposing of the dust falling thereinto, and a dust discharge spout, a valve arranged therein and an annular dust trough arranged outside of the opening 6 and connected with said spout, substantially as described and for the purpose set forth. 11th. The combination with the cylinder having the heads 3 and 4, of the tangential inlet spout for the dust laden air, a deflector 8, arranged therein, one of said heads of said cylinder provided with a large central opening 6, an annular trough arranged about said opening on the outside of said head and a valved hopper in the lower part of said trough, substantially as described. 12th. The combination with the cylinder having the heads 3 and 4, the latter having the opening 6, of a tangential inlet spout, a wide dust discharge slot provided in the walls of said cylinder and opposite said inlet spout, a dust receptacle in connection with said slot, an annular trough or troughs arranged upon the head of the cylinder and concentric with the opening in said head, a discharge hopper for said trough and revoluble scrapers to operate in the troughs, substantially as described.

No. 43,277. Car Brake. (*Frein de char.*)



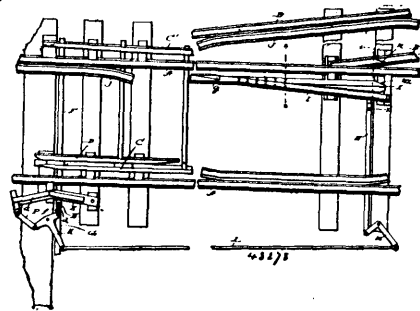
William Bellamy Guernsey, Norwick, New York, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. A hydraulic brake machine connected to the brake rigging and draw gears, and adapted to transmit draw gear pressures to the brakes, substantially as shown and described. 2nd. A fluid containing brake machine provided with a valve connected to the brake rigging and the draw gears, and adapted, through the closing of the valve, to transmit draw gear pressures to the brakes, as set forth and shown. 3rd. In a brake operated through the medium of fluid pressures, the combination of the draw gears, the brake rigging, a fluid containing brake machine connected to the draw gears and the rigging, and a disabling valve for rendering brakes inoperative, substantially as shown and described. 4th. In a brake operated through the medium of fluid pressures, the combination of the draw gears, the brake rigging, a fluid containing brake machine connected to the draw gears and the rigging, and a valve forming part of said brake machine and adapted to apply by closing, and by remaining open to not apply brakes, substantially as shown and described. 5th. In a brake operated through the medium of fluid pressures, the combination of the draw gears, the brake rigging, a fluid containing brake machine connected to the draw gears and the rigging, and an automatically determining valve lying within said machine, substantially as set forth and shown. 6th. In a brake operated through the medium of fluid pressures, the combination of the draw gears, the brake rigging, a fluid containing brake machine connected to the draw gears and the rigging, and a valve lying within and forming part of said brake machine, said valve being adapted to disable brakes upon the dissimultaneous impacts of draw gears. 7th. In a brake mechanism for cars operated through the medium of independently acting draw gears, the combination of the said draw gears having a centrally balanced unbroken fluid connection, with a brake applying machine laying within said connection adapted to apply or maintain brake shoe pressure only when the initial and pending intrusts of the two draw gears on the same car are practically simultaneous. 8th. In a hydraulic brake for cars, substantially as hereinbefore described, the combination of a cen-

trally located disabling or tripping valve which operates through the medium of a suitable fluid to prevent the application, or the continuance, of brake shoe pressure under compulsion of certain related initial movements of the two independently moving draw gears with said draw gears, as set forth. 9th. In a hydraulic brake applying machine for cars operated through the medium of longitudinally moving draw gears, the combination of a brake machine, with a centrally located tripping or disabling valve, which operates to prevent the application or continuance of brake shoe pressure whenever the intrust of the two draw gears of a car, and the consequent opposed fluid pressures, are not sufficiently simultaneous. 10th. In a system of momentum brakes, the combination of the foundation brakes, the two oppositely ended longitudinally moving draw gears or buffing apparatus, a brake machine, fluid connections between the said draw gears and machine and between said machine and the foundation brakes, a valve lying within and forming part of said machine, all the parts being so constructed and arranged as that the said brake machine will automatically apply the brakes, or fail to apply the brakes, in response to the simultaneousness, or lack of simultaneousness, of the draw gear and the consequent fluid compressions. 11th. In a car brake, the combination of the oppositely ended longitudinally moving draw gears, the foundation brakes, fluid connections between the draw gears and foundation brakes, a brake applying device lying within said connections, and a balanced valve, arranged substantially as shown and described, for disabling the brake applying device when the intrust movements of the draw gears are not sufficiently simultaneous. 12th. In a car brake, substantially as hereinbefore shown and described, the combination of the two draw gears capable of independent motion, fluid connections therefrom through a brake machine to the foundation brake rigging, and a balanced valve lying within said connections for automatically disabling the brake mechanism and releasing the brakes if such movements of the draw gears are not sufficiently simultaneous, as set forth. 13th. In a car brake, the combination of the foundation brakes, two oppositely ended longitudinally moving draw gears, fluid connections from said draw gears to the brake rigging, brake applying mechanism lying within and forming part of said connections, and a centrally located balanced valve, arranged substantially as shown and described, for temporarily disabling and disconnecting said brake applying mechanism when the intrust movements of the draw gears are not sufficiently simultaneous. 14th. In a car brake, substantially as hereinbefore shown and described, the combination of the oppositely arranged and independently acting draw gears located at the respective ends of the car, fluid connections therefrom to the foundation brake levers or rigging through a brake applying mechanism operable by the movement of the said draw gears and a tripping or disabling valve to release or prevent the operation of the brakes when the draw gear movements are dissimultaneous, all the parts being so arranged as that the brakes will remain off during the continuation of the same compression. 15th. In a brake operated through the medium of fluid pressures by the simultaneous impact of draw gears upon said fluids, the combination of a fluid containing brake machine, having a valve with a brake applying motor, substantially as shown and described. 16th. The combination of the draw gears and brake rigging of a car, a fluid connection between the draw gears with a valve controlled motor connected to the brake rigging and adapted to apply brakes, substantially in the manner described. 17th. The fluid motor 38 connected to the brake rigging and to both draw gears and adapted to apply brakes only during simultaneous impacts or intrusts of draw gears. 18th. The combination of the centrally located fluid motor 38, connections therefrom to the brake rigging upon both trucks, and fluid connections to the draw gears with said draw gears and brake apparatus, substantially as shown and described. 19th. In a car brake substantially as hereinbefore described, the combination of a brake machine, a motor or ram, with self equalizing connections between the motor and brakes upon both trucks, substantially as shown and described. 20th. In a hydraulic brake, the combination of the draw gears, a fluid containing pipe between the draw gears the brake rigging connected to the said pipe through a ram or motor, with said motor, as and for the purposes set forth. 21st. In a hydraulic brake, the combination of the brake rigging, the draw gears, a fluid containing pipe, provided with a valve extending between the draw gears, a motor attached to the brake rigging and connected to and adapted to be controlled by the aforesaid valve, whereby the closure of the valve will effect brake applications through the medium of the motor. 22nd. An independent hydraulic brake machine connected to the brake rigging and to the draw gears and provided with a brake motor and an overflow reservoir and having an automatically determining valve adapted to operate, substantially as and for the purpose set forth. 23rd. A fluid containing brake machine connected to the brake rigging and the draw gears, adapted to transmit draw gear pressures to the brake, in combination with a supply or overflow reservoir or chamber, as and for the purpose set forth. 24th. In combination with the fluid containing brake machine, substantially as hereinbefore described, a supply reservoir arranged somewhat above and connected to the said machine, as and for the purposes set forth. 25th. The independent hydraulic brake machine connected to the brake rigging and the draw gears of a car and adapted to operate the former by the compressions of the latter as described, in combination with an independent liquid supplying reservoir mounted upon the car above the machine, substantially as

and for the purpose set forth. 26th. In a brake operated through the medium of fluid pressures, the combination of the draw gears, the brake rigging, a fluid containing brake machine, provided with a valve, connected to the draw gears and the rigging, and a reservoir arranged to receive fluid pressures from the machine while the valve remains open, as and for the purposes set forth. 27th. In a brake operated through the medium of longitudinally moving draw gears and fluid pressures, the combination of a brake machine having a centrally located valve chamber, a pipe opening out from said valve chamber midway of its length, and a reservoir connected to said pipe and adapted to receive fluid pressures while the valve is open, substantially as shown and described. 28th. In a fluid containing brake machine, the combination of the automatically determining valve 41, the relief pipe 44, and the reservoir 45, arranged above the valve and provided with the perforated cap 46, as and for the purpose set forth. 29th. In a hydraulic brake, substantially as hereinbefore described, the combination of the centrally located automatically determining valve, the draw gears, pipe connections between the valve chamber and the draw gears, the pipe 40, opening centrally from the valve chamber, the motor 38, having an inwardly travelling piston, and the brake rigging attached thereto, all adapted to operate substantially as and for the purposes set forth. 30th. In a hydraulic brake, substantially as hereinbefore described, the combination of the centrally located automatically determining valve, the draw gears, pipe connections between the valve chamber and the draw gears, connections between the valve chamber and the brakes, a brake applying motor lying within said connections, and a reservoir having a pipe connection with the valve chamber, and the parts being so arranged that the said reservoir will receive fluid pressures when the valve is open and the motor cylinder when it is closed. 31st. In an automatic train brake, the combination of the longitudinally moving draw gears having draw springs, as shown, with the braking mechanism having fluid connections therewith and with the brake rigging, all the parts being so constructed and arranged that violent breakways will compel the draw springs to apply the brakes, as set forth. 32nd. In a brake operated through the medium of fluid pressures, the combination of the draw gears having draw springs, the brake rigging, a fluid containing brake machine connected to the brake rigging and through the medium of the springs to the draw bars whereby the resilience of the springs will apply brake, as shown and described. 33rd. In a brake operated through the medium of fluid pressure by the simultaneous impacts of draw gears, a permanent way or conduit extending between the draw gears, substantially as and for the purpose set forth. 34th. The combination, in a railway train, of a series of hydraulic brake machines, one upon each car of the train, connected to its draw gears and dependent upon their simultaneous intrusts, with said draw gears, as set forth. 35th. The combination, in a railway train, of a series of independent brake machines, one upon each car of the train, fluid connections between each machine and the draw gears upon the same car, with the draw gears, all the parts being so arranged that the brake machine will apply brakes only when impacts from neighbouring cars or the expansion of the opposed draw springs are sufficiently simultaneous.

No. 42,278. Railway Switch. (Aiguille de chemin de fer.)

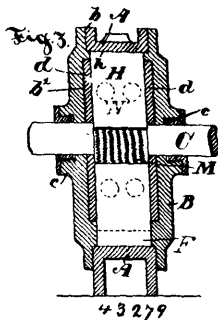


Duncan MacPherson, Montreal, Quebec, Canada, 20th June, 1893; 6 years.

Claim.—1st. In a railway switch or turnout, the combination, with the fixed and unbroken main track rails, the turnout rails, the adjustable switch rail C¹, of a greater height than the main track rails, resting upon the outside of said rails and having its forward portion bevelled or provided with an inclined plane, and the switch rail C, connected and adapted to move with the rail C¹, and resting upon the inside of the main track rails, the said rail C being of a greater height than the main track rails and having its toe end pointed and bevelled or provided with an inclined plane, of the guard rail D, fixedly connected with and arranged parallel to the rail C, the said guard rail being adapted to move with the rail C, and facilitate and insure the passage of wheels from the main track rails to the siding rails and *vice versa*, substantially as specified. 2nd. In a railway switch or turnout, the combination, with main track rails, turnout or siding rails, an adjustable switch rail C¹, and the

adjustable switch rail C, of a greater height than the main track rails and having its forward portion bevelled or provided with an inclined plane, of an adjustable guard rail arranged upon the opposite side of the main track rail with respect to the rail C, and having an inclined plane corresponding to the inclined plane of said switch rail, substantially as and for the purpose set forth. 3rd. In a railway switch or turnout, the combination, with main track rails turnout or siding rails, an adjustable switch rail C', and the adjustable switch rail C, of a greater height than the main track rails and having its forward portion bevelled or provided with an inclined plane, of an adjustable guard rail arranged upon the opposite side of the main track rail with respect to the rail C, and having an inclined plane corresponding to the inclined plane of said rail C, and also having a plane inclined oppositely to the plane of the rail C, substantially as and for the purpose set forth. 4th. In a railway switch or turnout, the combination, with main track rails, turnout or siding rails, an adjustable switch rail C', and an adjustable switch rail C, of a greater height than the main track rails and having its forward portion bevelled or provided with an inclined plane, of an adjustable guard rail of a general obtuse angle form, arranged upon the opposite side of the main track rail with respect to the rail C, and having an inclined plane corresponding to the inclined plane of said rail C, substantially as and for the purpose set forth. 5th. In a railway switch or turnout, the combination, with the main track rails, the switch rails, the rod F, having a branch b, at its outer end, and the rod G, bearing loosely in said branch b, of a plate d, mounted on the rod G, a coiled spring also mounted on the rod G, and having one of its ends connected with the rod F, a threaded bolt connected to the opposite end of the coiled spring and taking through the plate d, and a nut mounted on said bolt, substantially as specified. 6th. In a railway switch or turnout, the combination, with the main track rails, and the turnout rails B, the inner one of which has its toe end mitered, of a frog adjustable with respect to the main and turnout rails, the said frog being of a sufficient width at its free portion to cover the contiguous main and turnout rails, and having its free end mitered to engage the mitered end of the turnout rail, substantially as specified. 7th. In a railway switch, the combination, with the main track rails and the turnout rails B, one of which has its toe end shouldered and mitered, of an adjustable frog of a sufficient width to cover the contiguous main and turnout rails, the said frog being adapted to rest upon the turnout rail flush with the surface thereof, and having its end mitered to engage the mitered end of said turnout rail, substantially as specified. 8th. In a railway switch or turnout, the combination, with the main track rails, and the turnout rails B, one of which has its toe end mitered, of an adjustable frog of a sufficient width to cover the contiguous main and turnout rails, the said frog having its free end mitered to engage the mitered end of the turnout rail, and also, having the inclined plane p, and the inclined depression or cavity q, all substantially as and for the purpose set forth. 9th. In a railway switch or turnout, the combination, with the main track rails and the turnout rails, of the adjustable switch rails, an adjustable frog, an adjustable guard rail arranged upon the opposite side of the main track rail with respect to the adjacent switch rail, the connecting rod F, of the switch rails, the connecting rod N, of the frog, the double bell crank lever having one of its branches connected to the rod F, a link connecting the other branch of said lever with the adjustable guard rail, a bell crank lever M, connected to the rod N, a link connecting the double bell crank lever and the lever M, and a suitable means for actuating the rod F, substantially as specified.

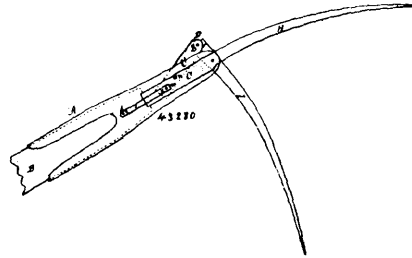
No. 43,279. Rotary Engine. (Machine rotative.)



Roméo Couillard, Warwick, Quebec, Canada, 20th June, 1893; 6 years.

Claim.—1st. In a rotary engine, the combination, with a cylindrical casing provided with steam and exhaust ports, of the disc D, secured on a shaft journalled eccentrically in the said casing, the said disc touching the casing midway between the steam and exhaust ports, and provided with a diametrical slot in which slide the two blades H, a series of spiral springs being inserted between their meeting ends, substantially as set forth. 2nd. In a rotary engine, the combination, with a disc adapted to revolve eccentrically within a suitable casing, of the slot G, the blades H, spiral springs M, and oil chambers N, substantially as set forth.

No. 43,280. Fork and Hack. (Fourche et pioche.)



William E. Bishop, Aylesford, Nova Scotia, Canada, 20th June, 1893; 6 years.

Claim.—The combination, of the socket A, shank C, and tines H and I, substantially as and for the purpose hereinbefore set forth.

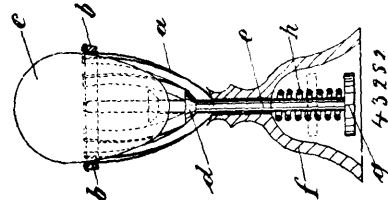
No. 43,281. Ventilator for Grain Bins. (Ventilateur pour coffres à grain.)



Frank Morton, St. Louis, Missouri, U.S.A., 20th June, 1893; 6 years.

Claim.—The combination, with a grain bin, of an inverted air receiver within the grain bin, having no means of discharge except beneath the lower edge, the said edge being substantially horizontal, so that the air will escape from all parts of the edge, an air conveyer, with a discharge mouth beneath the receiver, and a blowing device connected to the said conveyer, substantially as and for the purpose set forth. 2nd. The combination, with a grain bin, of an inverted trough within the grain bin, with a substantially horizontal edge, so as to insure an equal discharge of air beneath all parts of the edge, an air conveyer with discharging mouth centrally beneath the inverted trough, a blowing device adapted to force air into the conveyer; and suitable means to regulate the amount of air passing through the conveyer. 3rd. The combination, with a grain bin, of an air receiver within the bin, having an inclined top with no orifice for escape of air, and having a substantially horizontal lower edge, so that the air shall escape equally beneath all parts of the edge, an air conveyer discharging beneath the receiver, and a blower connected with the air conveyer, substantially as and for the purpose set forth.

No. 43,282. Egg Cup. (Coquetier.)



Ernst Wilhelm Orth, Zippelhaus 5, Hamburg, German Empire, 20th June, 1893; 6 years.

Claim.—1st. The combination, in an egg cup, of a receptacle formed of separate flexible strips and drawn together or loosened by a ring, and of an ejector consisting of a plate attached to a small rod, moving vertically in the stem of the cup under the influence of a spring, substantially as and for the purpose herein set forth with reference to the accompanying drawing. 2nd. In egg-cups, the use of an ejector consisting of a plate attached to a small rod, moving vertically in the stem of the cup under the influence of a spring, substantially as and for the purpose herein set forth with reference to the accompanying drawing.

No. 43,283. Process of Ornamenting Glass. (Procédé d'ornementation du verre.)

The Photo Litho Transfer Company, assignee of Francois Schmalz, all of New York City, New York, U.S.A., 20th June, 1893; 6 years.

Claim.—The herein described process of ornamenting vitreous wares, which consists in forming a soluble film upon a suitable back-

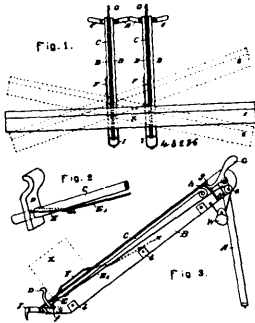
ing, forming a design upon such film in vitrifiable colours held in suspension in a suitable varnish, covering the design with a film of collodion, affixing the collodion film to the article to be ornamented, dissolving the soluble film, removing the backing, and subjecting the article to sufficient heat to burn the vitrifiable colours, substantially as described.

No. 43,284. Process of Ornamentation.
(*Procédé d'ornementation.*)

The Photo Litho Transfer Company, assignee of Francois Schmalz, all of New York City, New York, U.S.A., 20th June, 1893; 6 years.

Claim.—The herein described process of ornamentation, which consists in providing a sheet of paper or other suitable backing with a soluble coating of film, forming a design upon the article to be ornamented with a solution of gelatine and chrome alum, affixing the rubber film to the coating of gelatine and chrome alum, saturating the backing with a liquid which will dissolve the soluble film and removing the backing, substantially as described.

No. 43,285. Machine for Loading Timber.
(*Machine pour charger le bois.*)

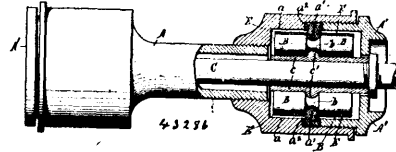


Emory Willis Gurney, Seattle, Washington, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. In a device for raising timbers, the combination with the inclined skids or trestles B, B, of the rods C attached thereto at top and bottom, dogs D surrounding the said rods, and means for drawing said dogs up on the rods, substantially as shown and described. 2nd. In a device for raising timber, the combination with the inclined skids B, B, of the rods C attached thereto at top and bottom, dogs D surrounding said rod, means for drawing said dogs up on the rods and a catch for holding the same at the bottom so placed as to be released by the weight of the stick, substantially as shown and described. 3rd. In a device for raising and loading timbers, the combination with the inclined skids B, B, of the rods C attached thereto at top and bottom, clutch dogs D surrounding said rods, a cord and weight attached to each dog to slide it upon its rod and a catch to hold it at the bottom so placed as to disengage by the weight of the stick, substantially as shown and described. 4th. In a device for raising and loading timbers, the combination with the inclined skids B, B, of rods C attached thereto at top and bottom, and clutch dogs D thereon, said dogs consisting of a flat metal bar having in the lower end a hole for the rod C, and its upper end curved forward, and means for sliding said dogs up on their rods, substantially as shown and described. 5th. In a device for raising and loading timbers, the combination, with the inclined skids B, B, and dogs for preventing backward movement of the timber thereon, of a pivoted hook bar at the top of the skids for holding the stick while it is being turned to throw it off the skids, substantially as shown and described. 6th. In a device for raising and loading timbers, the combination, with the inclined skids and dogs to prevent backward movement of the timber thereon, of a pivoted hook bar at the upper end of the skid, said hook having its outer end weighted so as to elevate the hook, and means for holding down the hook end until the timber has passed it, substantially as shown and described. 7th. In a device for raising and loading timbers, the combination, with the inclined skids consisting of two bars with a space between, of a rod lying in this space and fixed at the upper and lower ends of the skids, a dog surrounding this rod and means for drawing this dog up to its rod, substantially as shown and described. 8th. In a device for raising and loading timbers, the combination, with the inclined skids, consisting of two bars with a space between, a rod lying in this space, a dog surrounding this rod and means for moving it upon its rod, of a pivoted hook between the bars and a spring catch for holding the hook depressed until it is reached by the stick, substantially as shown and described. 9th. In a device for raising and loading timbers, the combination, with the inclined skids, consisting of two bars with a space between, of a rod lying in this space, a dog surrounding this rod, means for drawing the dog up on its rod, and a spring bar with its lower end engaging the dog when in its lowest position, and a portion projecting above the skids where the stick when placed thereon will disengage it from the dog, substantially as

shown and described. 10th. In a machine for raising and loading timbers, the combination, with the inclined skids, means for preventing backward movement of the stick thereon, of a hook or other device for preventing forward motion of the skids, substantially as shown and described. 11th. In a device for raising and loading timbers, the combination, with the inclined skids B, B, rods C, C, attached thereto at top and bottom, dogs d, surrounding said rod and means for drawing the dogs up on the rods, of means attached to and moving with the dogs for supporting the rods from the skids immediately back of the dogs, substantially as shown and described. 12th. In a device for raising and loading timbers, the combination, with the inclined skids, a rod attached thereto at top and bottom, a clutch dog engaging with said rod to prevent backward movement of the stick, of a collar upon the rod just back of the dog and attached to and moving therewith, said collar having side projections to engage with the upper surface of the skids, substantially as shown and described.

No. 43,286. Roller Bearing. (*Coussinet anti-frottant.*)



The Copeland Roller Company, New York, assignee of David Webster Copeland, Syracuse, both in New York, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. The herein described roller bearing, the same comprising an outer casing provided with an annular bearing rib, substantially as described, projecting from its inner face, and normally separated anti-friction rollers having bearing faces of greater width than the bearing face of said rib, the roller bearing faces being normally separated from the inner face of the casing and being each provided with a groove for receiving the bearing rib, all constructed and operating, substantially as described. 2nd. The herein described roller bearing, the same comprising an outer casing provided with an annular bearing rib, substantially as described, projecting from its inner face, a shaft journaled within said bearing, a sleeve encircling a portion of said shaft, and normally separated anti-friction rollers bearing against said sleeve and having bearing faces of greater width than the bearing face of said rib, the roller bearing faces being normally separated from the inner face of the casing and being each provided with a groove for receiving the bearing rib, and bands encircling the corresponding ends of said rollers, all constructed and operating, substantially as and for the purpose specified. 3rd. The herein described roller bearing, the same comprising an outer casing provided with an annular bearing rib, substantially as described, projecting from its inner face, normally separated anti-friction rollers having bearing faces of greater width than the bearing faces of said rib, the roller bearing faces being normally separated from the inner face of the casing and being each provided with a groove for receiving the bearing rib, and bands encircling the corresponding ends of said rollers, all constructed and operating, substantially as and for the purpose specified.

No. 43,287. Shaft Tug.
(*Montant d'attache des remorques.*)



Joseph Lafayette Gregory and Louis R. Rerfschneider, all of Washington, Missouri, U.S.A., 20th June, 1893; 6 years.

Claim.—An improved shaft tug, consisting of the metallic sections A, A', extending entirely around the inner edges thereof, whereby to form a groove B, a packing ring C, held in such groove and projected beyond the inner edges thereof, each of such sections having coincident laterally extending lugs a^b, a^c, a^d, connected to form guide loops a^e, and means for securing such sections together, substantially as and for the purpose described.

No. 43,288. Boutonniere. (*Boutonniere.*)

Henry W. Fishel, New York City, New York, U.S.A., 20th June, 1893; 6 years.

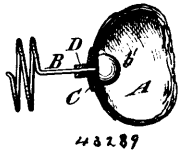
Claim.—1st. A boutonniere, comprising a button hole stud having at its outer end a perforated socket, an artificial flower held within the socket and a split pin extending through the leaves or petals of a flower and through the perforations in the socket, substantially as described. 2nd. A boutonniere, comprising a stud having a stem and base, an artificial flower and a split pin, having its prongs ex-

ending through the leaves or petals of the flower, and securing said flower to the stud, substantially as specified. 3rd. A bouton-



niere, comprising an artificial flower, a stud and a part comprising prongs for securing the flower to a portion of the stud, substantially as specified. 4th. A boutonniere, comprising an artificial flower, a stud, and a pin extending through the leaves or petals of the flower, and securing said flower to the stud, substantially as specified. 5th. A boutonniere, comprising a stud, having a base and a stem, and an artificial flower cemented to said stud, substantially as specified. 6th. A boutonniere, comprising a stud, having a base, a stem, and a socket or support, and an artificial flower, having its base conforming exteriorly to the shape of the socket or support, and cemented to said socket or support, substantially as specified.

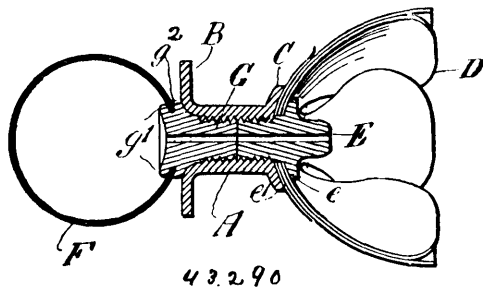
No. 43,289. Boutonniere. (Boutonniere.)



Henry W. Fishel, New York City, New York, U.S.A., 20th June, 1893; 6 years.

Claim.—1st. In a boutonniere, the combination of an artificial flower or like device, a pin engaging therewith, a socket consisting of an independent plate slipped upon the pin, said socket being held in place by a projection rearwards of it, substantially as specified. 2nd. In a boutonniere, the combination of an artificial flower or like device, a pin engaging therewith, a socket consisting of an independent plate slipped upon the pin and a projection on the pin rearwards of the socket for retaining said socket in place, substantially as specified. 3rd. In a boutonniere, the combination of an artificial flower or like device, a pin engaging therewith, and a socket made independently of the pin and secured thereto rearwards of the flower or like device, substantially as specified.

No. 43,290. Boutonniere. (Boutonniere.)



Henry Washington Fishel, New York City, New York, U.S.A., 20th June, 1893; 6 years.

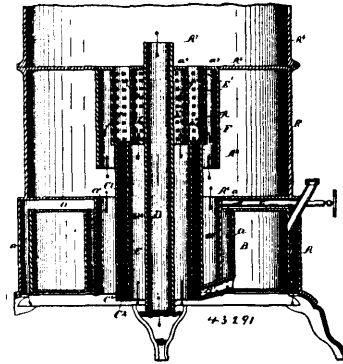
Claim.—1st. A boutonniere provided with a reservoir and a nozzle, for ejecting a liquid, substantially as specified. 2nd. A boutonniere having a hollow stem, a liquid reservoir communicating with one end of the stem, and a nozzle at the other end of the stem, substantially as specified.

No. 43,291. Oil Stove. (Poêle à l'huile.)

Edwin Mummery, Detroit, Michigan, U.S.A., 20th June, 1893; 6 years.

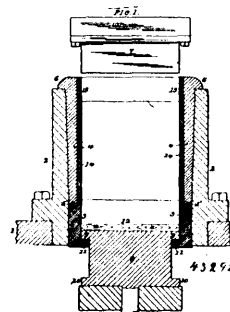
Claim.—1st. The combination of a wick chamber, and perforated air and vapour mixers extended thereabove and spaced one from another, forming an intermediate chamber open at the top thereof, substantially as described. 2nd. In a burner, the combination of a wick chamber, an interior air flue spaced from the wick chamber, and air and vapour mixers extended thereabove and spaced one from another forming an intermediate chamber open at the top thereof, substantially as described. 3rd. In a burner, the combination with a wick chamber, perforated air and vapour mixers extended thereabove and spaced one from the other, and a drum surrounding said air and vapour mixers, substantially as described. 4th. In a burner, the combination of a wick chamber, perforated air and vapour mixers extended thereabove, forming a chamber on the interior of the inner mixer, closed at its upper end and communicating with the interior passage of the wick chamber, substantially as described. 5th. In a burner, the combination of a wick chamber, perforated air and

vapour mixers extended thereabove and spaced one from the other, and forming an air chamber on the interior of the inner mixer, and a drum located exterior to the outer mixer forming an interior air



chamber therebetween, said inner and exterior air chambers closed at the top and open at the base, the space between said mixers made open at the top, substantially as described. 6th. The combination with an oil stove constructed with a hot air chamber closed at the top, of a burner provided with a wick chamber and an air and vapour mixers extended thereabove, said mixers forming an interior air chamber opening upward through the hot air chamber, substantially as described. 7th. The combination with a stove provided with a hot air chamber closed at the top, of a drum F located in said chamber, and a burner provided with a wick chamber having air vapour mixers extended thereabove within said drum, substantially as described. 8th. The combination with a stove constructed with a hot air chamber and with a drum F, of a burner provided with a wick chamber and with air and vapour mixers extended thereabove within said drum forming an intermediate air space, opening upward through said hot air chamber, and a central flue D, opening upward through said hot air chamber, substantially as described. 9th. The combination with an oil stove, of a reservoir, partition A¹, located thereabove and extending downward over the inner portion thereof, forming an air flue about the reservoir, and a burner provided with a wick chamber spaced from said portion and forming an air flue therebetween, said wick chamber provided with air and vapour mixers extended thereabove, and spaced one from the other, substantially as described. 10th. The combination with an oil stove constructed with a hot air chamber A², a partition A⁰ forming a tank chamber, and with a drum F located in the hot air chamber, of a burner provided with a wick chamber, and with air and vapour mixers extended thereabove spaced one from the other and opening through the hot air chamber, said mixer located within said drum, the space between the interior mixer and exterior to the outer mixer being closed at the upper end thereof to compel the passage of air through said mixers, substantially as described.

No. 43,292. Sectional Mould. (Moule à section.)

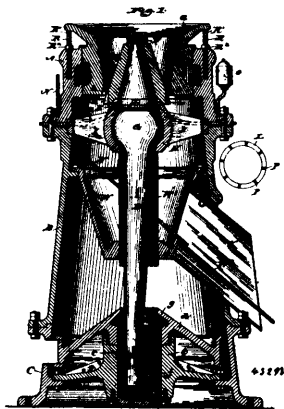


George Maxwell Graham, Chicago, Illinois, U. S. A., 20th June, 1893; 6 years.

Claim.—1st. The combination of a mould housing 2, the lower mould frame 3, and the vertical walls or sections 4 pivoted thereto and provided with flanges or rims 6 at their upper ends, as and for the purpose set forth. 2nd. The combination of the mould housing 2, the lower mould frame 3, and the vertical walls or sections 4 pivoted thereto and provided with flanges or rims 6, and removable facings or linings 14, as and for the purpose set forth. 3rd. The combination of the mould housing 2, the lower mould frame 3, and the vertical walls or sections 4 pivoted thereto and provided with flanges or rims 6, removable facings or linings 14, and wear plates 13, as and for the purpose set forth. 4th. The combination of the mould housing 2, vertical walls or sections 4, and the lower mould frame 3 connected to the sections 4 by hinges or pivots, with the lower plunger and means for confining or limiting its vertical movement independent of the mould, substantially as herein described.

5th. The combination of the mould housing 2, vertical walls or sections 4, and the lower mould frame 3 connected to the sections 4 by hinges or pivots, and provided with inturned flange 11, with the lower mould plunger 8 provided with top and bottom flanges 9 and 10, as described and for the purpose set forth.

No. 43,293. Stone Crusher. (Machine à broyer la pierre.)

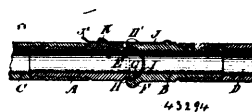


George Lowry, Tiffin, Ohio, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. In a crusher of the class described, the combination with a gyrating shaft, of a crusher head mounted thereon, and a ball fulcrum for said shaft, below and adjacent to said head, substantially as described. 2nd. In a crusher of the class described, the combination with the gyrating shaft and a mechanism for operating the same, of a crusher head secured to the upper end of the shaft, and a ball fulcrum for said shaft between the crusher head and the mechanism for gyrating the shaft, substantially as described. 3rd. In a crusher of the class described, the combination with the gyrating shaft having a spherical enlargement near the upper end thereof, and a crusher head mounted upon the upper end of said shaft, of a bearing for said spherical enlargement, composed of two or more sections, substantially as described. 4th. In a crusher of the class described, the combination with an exterior casing, composed of sections bolted together and a gyrating shaft mounted in said casing and having a spherical enlargement near the upper end thereof, of a crusher head mounted upon the upper end of said shaft, and a bearing for said spherical enlargement, composed of two or more sections supported by the casing and secured between the shell sections, substantially as described. 5th. In a crusher of the class described, the combination, with the exterior of the casing, a gyratory shaft fulcrumed within said casing near the upper end thereof, and a crusher head mounted upon the upper end of said shaft, of mechanism engaging the lower end of the shaft for gyrating the same, and a revolving crown feeder fitting loosely within the casing, opposing the crusher head, substantially as described. 6th. In a crusher of the class described, the combination, with an exterior casing, a gyrating shaft fulcrumed in said casing near the upper end thereof, and a crusher head mounted upon the upper end of said shaft, of mechanism engaging the lower end of the shaft for gyrating the same, a revolving crown feeder fitting loosely in said casing, opposing the crusher head, and means for rotating said feeder, substantially as described. 7th. In a crusher of the class described, the combination, with an exterior casing, a gyrating shaft fulcrumed in said casing near the upper end thereof, and a crusher head mounted upon the upper end of said shaft, of mechanism engaging the lower end of the shaft for gyrating the same, a revolving crown feeder fitting loosely in said casing, opposing the crusher head, cog teeth on said feeder, a worm for engaging the cogs to rotate the feeder, and mechanism for operating the worm, substantially as described. 8th. In a crusher of the class described, the combination, with a conical crusher head, and appliance for imparting a gyratory movement thereto, of the revolving crown feeder surrounding said head and adjustable supports for said feeder, whereby its height relative to the crusher head may be varied, substantially as described. 9th. In a crusher of the class described, the combination, with a conical crusher head, an appliance for imparting a gyratory movement thereto, of the revolving crown feeder surrounding said head, and adjustable supports for said feeder, whereby its height relative to the crusher head may be varied, said supports consisting of rollers loosely journaled eccentrically upon studs bearing in the frame work of the machine, substantially as described. 10th. In a crusher of the class described, the combination, with a gyrating shaft and a crusher shaft having a spherical enlargement near the upper end thereof, and a crusher head mounted on the upper end of said shaft, of a bearing for said spherical enlargement, and a ring loosely fitting said shaft between the crusher head and the spherical enlargement and working in a complimentary groove in the bearing, and oil ducts leading to said groove from the exterior of the casing, substantially as described. 11th. In a crusher of the

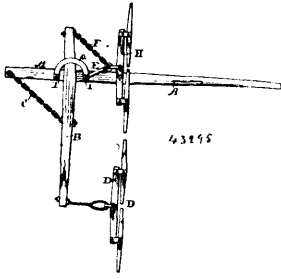
class described, the combination, with a gyrating shaft having a spherical enlargement near the upper end thereof and a crusher head mounted upon the upper end of said shaft, of a bearing for said spherical enlargement, provided with an internal annular groove above the same, a ring fitting loosely upon the shaft and working in said groove, said ring being provided upon its under face with radial grooves, arms supporting said bearing, ducts in said arms leading from the groove in the bearing to the exterior of the casing, and the oil reservoirs having open communication with said ducts, substantially as described. 13th. In a crusher of the class described, the combination, with a gyrating shaft having a spherical enlargement near the upper end thereof and a crusher head mounted upon the upper end of said shaft and provided with an annular recess in the lower face thereof, of a bearing for said spherical enlargement projecting into said recess in the crusher head and provided with an internal annular groove between the spherical enlargement and said head, and a radial grooved ring fitting loosely on the shaft and working in said groove, substantially as described. 14th. In a crusher of the class described, the combination of a crusher head and a revolving crown feeder, each corrugated as to the lower part of their surface, the number of corrugations being equal on said head and feeder, substantially as described. 15th. In a crusher of the class described, the combination, with a casing, comprising an upper, middle and lower section, and a gyrating shaft located therein, of a ball fulcrum bearing for said shaft supported between the upper and middle sections, and an eccentric sleeve, a driving pulley therefor located in the lower section of the casing for operating said shaft, substantially as described. 16th. In a crusher of the class described, the combination, with a gyrating crusher shaft, of a web plate and a sleeve working therein, the lower end of the shaft being eccentrically socketed in the said sleeve, and a pulley keyed upon said sleeve for imparting a rotary motion thereto, substantially as described. 17th. In a crusher of the class described, the combination, with a gyrating crusher shaft, of a web plate and a sleeve working therein, the lower end of the shaft being eccentrically socketed in the said sleeve, and a pulley keyed upon said sleeve for imparting a rotary motion thereto, anti-friction rollers journaled in said sleeve and bearing against the said plate, substantially as described. 18th. In a crusher of the class described, the combination, with a gyrating crusher shaft, of a web plate and a sleeve working therein, the lower end of the shaft being eccentrically socketed in the said sleeve, and a pulley keyed upon said sleeve for imparting a rotary motion thereto, anti-friction rollers journaled in said sleeve and bearing against the inner surface of the hub of said plate, substantially as described. 19th. In a crusher of the class described, the combination, with a gyrating shaft, the crusher head carried thereby and the crushing cylinder surrounding said head, of the casing in which said members are contained, a tubular sleeve of greater diameter than the surrounding shaft, an obliquely arranged diaphragm therein and a discharge chute merging at one side of said casing, substantially as described. 20th. In a crusher of the class described, the combination, with a gyrating shaft, a fulcrum therefor and a tubular sleeve depending from said bearing, surrounding and of greater diameter than said shaft, of a casing in which said members are contained, an obliquely arranged diaphragm in said casing, through which the tubular sleeve passes, a conical casting below said diaphragm, through which the tube also passes, and a discharge chute leading from said casting to the exterior of the casing, substantially as described.

No. 43,294. Coupling. (Joint.)



Isaac St. Clair Goldman, Los Angeles, California, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. A coupling comprising a female section having a semi-circular recess in its end, and provided with a lip, a male section provided with a semi-circular head fitting in the recessed end of the female section, and provided with a rigid hook engaging the lip of the said female section, and means for locking the two sections together, substantially as described. 2nd. A hose coupling comprising two members of which one is formed with a recess and is provided at the front end of the said recess with a transversely extending lip, the other member being formed with a hook adapted to engage the said lip, its head fitting into the said recess, and a washer fitted into the said recess of one of the members to be engaged by the head of the other member to form a tight joint, substantially as set forth. 3rd. A hose coupling comprising two members of which one is formed with a recess and is provided at the front end of the said recess with a transversely extending lip, the other member being formed with a hook adapted to engage the said lip, its head fitting into the said recess, a washer fitted into the said recess of one of the members to be engaged by the head of the other member to form a tight joint, and a lock for fastening the two members together, substantially as shown and described.

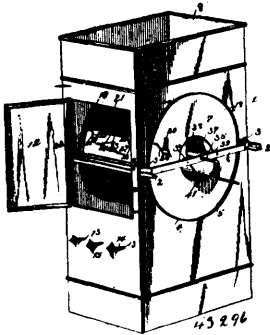
No. 43,295. Draft Equalizer. (*Régulateur du tirage.*)

William Lewis, Sank Centre, Minnesota, U.S.A., 21st June, 1893; 6 years.

Claim.—In a draft equalizer, the combination, with a tongue, of a bracket, bolts securing the said brackets to the upper surface of the tongue, a collar surrounding one of the said bolts between the bracket and the tongue and having a recess in the bottom thereof, an evener bar connected with the said tongue and passing between the said bracket and tongue, a double tree connected to each end of the said evener bar, and a link having its forward end secured to one of the double trees, and its rear end extending through the recess in the collar, and being engaged by the bolt in the tongue, the said link being shorter than the connection between the double trees and the draft bar, substantially as described.

No. 43,296. Corn Popper.

(*Appareil pour torrifier le blé-d'Inde.*)



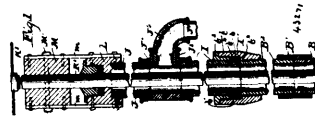
William D. Winfield, Winfield, Kansas, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. In a corn popper, the combination of a popping cylinder having an outer fine wire gauze covering, a coarser wire gauze spirally arranged within the said outer covering and having the free end bent downward over the axial centre of the cylinder, a spout or chute mounted under the said bent end of the spirally arranged gauze, and having a bottom inclining toward one side of the said cylinder, a closed frame or cabinet having a suitable burner therein, and in which the said cylinder is rotatably and removably mounted, and a shaft extending centrally through the cylinder and attached thereto to revolve the same, and movably through the said spout or chute, substantially as described. 2nd. In a corn popper, the combination of a closed frame or cabinet, a rotary cylinder removably mounted in said frame or cabinet, and having an exterior screen and an interior spirally arranged screen of coarser mesh than the said exterior screen formed with a free bent end that extends toward the central axis of the cylinder and acts as a discharge pump, a spout or chute mounted in the said cylinder in line with the central axis thereof, and formed with an inclined bottom deflecting toward one side of the said cylinder, a crank shaft extending through said spout or chute by means of which the said cylinder is rotated, and a rectangular frame 6, surrounding the cylinder in which the said shaft has bearing, and angle bars 2, secured to the sides of the frame or cabinet on which the said frame 6 is adapted to have sliding movement, substantially as described. 3rd. In a corn popping machine of the character set forth, the combination of a rotary cylinder, a spout or chute mounted centrally therein and having one end thereof projecting beyond the end of said cylinder, and a hood mounted over and secured to the front end of said spout or chute, substantially as described. 4th. In a corn popping machine of the character described, the combination of a rotary cylinder, a crank shaft extending through said cylinder for rotating the same, and a spout or chute stationarily mounted within the central portion of the cylinder, and having a double inclination in the bottom thereof with an intervening opening or throat, substantially as described. 5th. In a corn popping machine of the character set forth, the combination of a rotary cylinder with

an opening in the outer portion thereof extending longitudinally of the same, a door having clips thereon, a rod having loops therein engaging said clips and forming cranks, and having a cranked end by which said rod is operated to depress the door inward, and a catch for engaging the end crank of said rod, substantially as described. 6th. In a corn popping machine of the character set forth, the combination of a rotary popping cylinder having interior and exterior screens arranged as set forth, and a metallic strip connecting the end of the interior screen with the outer screen, substantially as described. 7th. In a corn popping machine of the character set forth, the combination of a popping cylinder having heads, an outer screen secured to said heads, and an interior spirally arranged screen connected to said heads by metallic strips having hooked ends bent over the wire of said interior screens, substantially as described. 8th. In a corn popping machine of the character set forth, the combination of a frame or cabinet, a rotary cylinder mounted therein, and a double spout or chute mounted in said cylinder, and having a portion thereof projecting from one end of said cylinder, substantially as described.

No. 43,297. Drilling Machine.

(*Machine à percer.*)

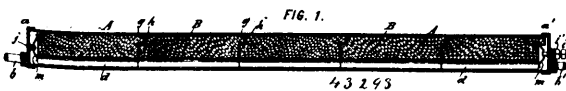


Moses Beal, Elyria, Ohio, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. The combination, with the tubular or hollow drill stem, and an irrevolvable tubular section connected with the upper end of said stem, and having a lateral water inlet, of a stuffing box at the junction of said irrevolvable section with the drill stem, substantially as set forth. 2nd. The combination, with the tubular or hollow drill stem, a tubular or cylindrical section irrevolvably connected with the upper end of the drill stem and provided with a lateral water inlet and the stem of the core holder extending upwardly through the drill stem and connected irrevolvable section, of a stuffing box attached to the upper end of said irrevolvable section around the stem of the core holder, and a stuffing box at the junction of said irrevolvable section with the drill stem, substantially as set forth. 3rd. The combination, with the hollow drill stem, a hollow section irrevolvably connected with the upper end of the drill stem, and having a lateral opening for the admission of water, and the stem of the core holder passing up through the drill stem and said irrevolvable section, of clamp boxes adapted to tightly fit or clamp against the stem of the core holder, and rigidly connected with the aforesaid irrevolvable section, substantially as set forth. 4th. The combination, with the tubular or hollow drill stem, a tubular or hollow section I, irrevolvably connected with the upper end of the drill stem, and having a lateral opening for the admission of water, core holder, stem passing up through the drill stem and said irrevolvable section, and a stuffing box around the core holder stem and said irrevolvable section, of clamp boxes M, adapted to tightly fit or clamp against the stem of the core holder, and straps m, supporting said clamp boxes and secured to the stuffing box aforesaid, substantially as shown and described. 5th. A core holder, an extractor comprising a barrel or core holder proper and a stem, the barrel being detachably secured to the stem and being provided with suitable means at or near its lower end, adapted to take hold of the lower end of the core, substantially as set forth. 6th. A core holder, the barrel whereof has a slot K⁴, extending approximately the entire length thereof, substantially as and for the purpose set forth. 7th. The combination, with the core holder, of a weight O, located within the core holder and adapted to rest on top of the core and compact the same, substantially as set forth. 8th. The combination, with the core holder, provided with a longitudinal slot in the side, of a weight O, located within the core holder and adapted to rest on the top of the core, said weight having a laterally projecting lug or member, O², and a concavity O¹ in its lower end, substantially as and for the purpose set forth. 9th. The combination with the core holder, of one or more springs attached to the side thereof and provided with one or more inwardly projecting teeth, the core holder being slotted, adjacent said spring or springs so that a lateral pressure externally upon said springs will press the same inward and cause the teeth thereof to take hold on the core, substantially as set forth. 10th. The combination with the drill barrel and core holder, the former having an internal annular flange or inwardly projecting member, a², one or more springs attached to the side of the core holder and provided with one or more inwardly projecting teeth the core holder being slotted adjacent said springs, substantially as indicated, and the springs being enlarged laterally or wedge shaped below said inwardly projecting flange or member of the drill barrel, whereby upon lifting the core holder said enlarged or wedge shaped portion of the springs will engage said inwardly projecting flange or member of the drill barrel causing the tooth or teeth of the springs to take hold on the core within the core holder, substantially as set forth. 11th. The combination with the drill barrel and core holder, of

means, substantially as indicated, for holding the core holder in proper position within the drill barrel to prevent rubbing or grinding of the core holder against the sides of the drill barrel, substantially as set forth. 12th. In a core drill, bits or cutters, the sides whereof are milled or roughened, substantially as and for the purpose set forth. 13th. The combination with the drill barrel, core holder, and bit or cutter stock detachably secured to the drill barrel, the arrangement of parts being substantially as indicated, of openings or perforations, k^1 , in the sides of the core holder, and grooves or channels N^3 , in the bit or cutter stock, substantially as and for the purpose set forth. 14th. A core extractor comprising a core holder and one or more springs secured at or near the lower end of said holder, said spring or springs being adapted to engage and take hold on the side of the core and the body of the core extractor being slotted to accommodate the location and operation of said spring or springs, substantially as set forth. 15th. The combination with the drill wheel and drill stem, of a rope, chain or cable operatively connecting the drill stem with the drill wheel, substantially as set forth. 16th. The combinations with the drill wheel and drill stem, of a collar rigid on the drill stem, and a rope, cable or chain, secured at one end to said collar, thence coiled or wound several times around the drill stem, and secured at its opposite end to the drill wheel, substantially as set forth. 17th. The combination with an upright timber or member of the derrick or supporting frame and drill stem, of a pair of bars or jaws 20 detachably secured to said upright supporting member and curved at their outer ends, as at 21, to embrace the drill stem and guide or steady the latter, substantially as set forth. 18th. The combination with an upright timber or member of the derrick or supporting frame and drill stem, of a pair of bars or jaws 20 embracing the drill stem, as at 21, and bolt and thumb nut 22 and 24 respectively, all arranged substantially as set forth. 19th. Means for facilitating and expediting the work of the drill, the same comprising an upright bar, beam, post or timber suitably supported, and having laterally projecting pins or studs arranged at suitable intervals apart up and down said upright member, a collar adjustably mounted on the drill stem and a lever resting upon said collar and adapted to engage at its inner end the under side of the aforesaid pins or studs, substantially as set forth. 20th. The combination with the drill stem and an upright bar, beam, post or timber suitably supported adjacent to the drill stem, and provided at opposite sides with laterally projecting pins or studs 27, substantially as shown, of a collar adjustably mounted on the drill stem, and a forked lever resting upon said collar, the fork of the lever straddling the drill stem and adapted to engage the under side of the aforesaid pins or studs, all substantially as and for the purpose set forth. 21st. The core extractor 31 provided near its lower end with one or more slots and springs 33 and 34 respectively, in combination with a rope, chain or cable 32 for elevating the same, substantially as set forth. 22nd. The cylindrical or tubular core extractor 31, the upper end or head whereof is perforated as at 35, in combination with a bar or rod 36 extending through said perforation and provided at each end with a jarring head 37, and rope, chain or cable suitably connected or attached to the upper jarring head, all substantially as and for the purpose set forth. 23rd. The drill barrel shown in Fig. 16 of the drawings, provided at its lower end with recesses 38, and bits of broken chips or ordinary files tightly driven into said recesses and projecting a suitable distance below the drill barrel, substantially as and for the purpose set forth. 24th. The drill barrel shown in Fig. 16 of the drawings, provided with one or more inclined slots 40, substantially as and for the purpose set forth. 25th. Small hard metallic balls, sphered cubes or blocks 41, in lieu of diamonds for cutting or drilling through hard minerals or substances, substantially as set forth. 26th. The hollow cylinder or tube 42 placed upon the drill barrel or core extractor, substantially as and for the purpose set forth.

No. 43,298. Steam Radiator. (Calorifère à vapeur.)



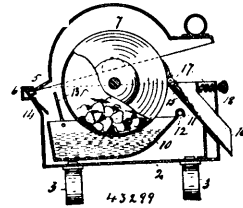
Edward Ethel Gold, New York City, New York, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. A radiator consisting of an outer conducting casing, and a steam pipe opening therein combined with an enclosed solid heat storage body of unglazed earthenware or analogous material filling said casing, the casing and storage body being relatively shaped to form steam passages between them, substantially as set forth. 2nd. A radiator consisting of an outer conducting casing, and a steam pipe opening therein combined with an enclosed solid heat storage body of unglazed earthenware or analogous material filling said casing and formed with longitudinal grooves to form steam passages between it and the casing. 3rd. A radiator consisting of an outer longitudinally extended conducting casing, and a steam pipe opening therein combined with an enclosed solid heat storage body of unglazed earthenware or analogous material partly in contact with the inner walls of the casing and partly out of contact therewith to form longitudinal steam passages between, and

divided transversely into sections fitting together end to end. 4th. A radiator consisting of an outer conducting casing, combined with an enclosed solid heat storage body partly in contact with the inner walls of the casing and partly out of contact therewith to form longitudinal steam passages between, divided into sections, and the sections formed with interfitting projections and recesses, adapted to prevent the rotative displacement of the sections. 5th. A radiator consisting of an outer conducting casing, and a steam pipe opening therein combined with an enclosed solid heat storage body in partial conductive contact with the inner walls of the casing, and the two relatively constructed to be partly out of contact to form steam spaces between them, and a tightening screw screwing into the casing for clamping the heat storage body fast in the casing to prevent rattling. 6th. A radiator consisting of an outer conducting casing, combined with a solid heat storage body in partial conductive contact with the inner walls of the casing, and the two relatively constructed to be partly out of contact to form steam spaces between them, and a spring compressed between the end of the heat storage body and the end of the casing, and adapted to hold the body firmly in place to prevent rattling, while allowing for the expansion and contraction of the casing.

No. 43,299. Ice Cream Freezer.

(Appareil de congélation pour crèmes.)



Clarence D. Pruden and Hugh A. McCormick, St. Paul, Minnesota, U.S.A., 21st June, 1893; 6 years.

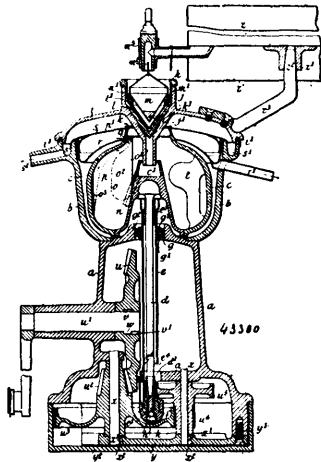
Claim.—1st. In a device of the class described, the combination, with the refrigerant cylinder, of the tray or pan arranged underneath the same, the detachable pivotal support for one end of said pan, means for raising and lowering the other end of said pan, and the spring controlled scraper bearing against the face of said cylinder, substantially as described. 2nd. In a device of the class described, the combination, with the rotary cylinder, of the scraper adapted to bear against the face of said cylinder, the chute connected to said scraper, the spring holding said scraper normally against said cylinder, and means for holding said scraper out of contact with said cylinder, substantially as described. 3rd. In a device of the class described, the combination, with the case and cylinder arranged therein, of the bearings for the shaft of said cylinder, the bifurcated projections or lugs upon said bearings and the set screws arranged in the walls of said case adapted to be secured between the forks of said lugs so as to removably secure said bearings in place, substantially as described. 4th. In a device of the class described, the combination, with the case and cylinder arranged therein, of the bearings for the shaft of said cylinder, having pivotal support at one end and means for raising and lowering the other end, and the spring controlled scraper bearing normally against the face of said cylinder, substantially as described.

No. 43,300. Centrifugal Machine for Separating Liquids. (Séparateur centrifuge de liquide.)

Robert Ashton Lister and Mikael Pedersen, Dursley, England, 21st June, 1893; 6 years.

Claim.—1st. In a centrifugal separating machine, a vertical spindle for carrying the bowl or drum made in two detachable parts or lengths, the lower end of the upper part being constructed to fit into a hole in the upper end of the lower part, thus combining the upper and lower parts firmly together, substantially as described. 3rd. In a centrifugal separating machine, having the drum carrying spindle in two parts, the lower and shorter part constituting the bearing end formed with gear teeth so that it serves as a pinion, substantially as described. 3rd. In a centrifugal separating machine, a footstep bearing for the vertical spindle, provided at its base with a seat for a roller on which a ball forming the bearing point of the said vertical spindle runs, substantially as described. 4th. In a centrifugal separating machine, the combination, with the vertical spindle, of a tube or sleeve enclosing the said spindle and carrying the footstep and main bearings therefor, the said tube or sleeve having a seat for elastic bushing or collar near its upper end, an opening for allowing the pinion end of the spindle to gear with its driving wheel and the pinion or shorter end of the spindle to be easily removed and put in its place, a lug or projection to prevent the tube or sleeve twisting, and a spherical lower end, substantially as described. 5th. In a centrifugal separating machine, the main frame constructed with a seat for the spherically shaped end of the tube or sleeve which carries the bearings for the spindle, and with a slot to receive a lug or projection upon the said tube or sleeve to

prevent the latter from twisting, substantially as described. 6th. In a centrifugal separating machine, a top cover having an inlet



funnel within which is fitted a hollow regulator having a rectangular shaped tapering opening and adapted to be turned so as to place a wider or narrower part of the said opening opposite a groove or channel in the funnel, substantially as described. 7th. In a centrifugal separating machine, having a regulator combined with the inlet funnel or opening, the combination, with the regulator, of a strainer, substantially as described. 8th. In a centrifugal separating machine, a bowl or drum having two plates or vanes placed near together to form a narrow passage through which the fluid to be separated enters the drum, substantially as described. 9th. In a centrifugal separating machine having two plates or vanes, a partition for dividing the space between the said plates or vanes into two parts, substantially as described. 10th. In a centrifugal separating machine, a tray fitting inside the bowl casing for receiving the lighter constituent of the liquid as it leaves the bowl or drum, the said tray being provided with a cover which serves to direct the heavier constituent into a groove around the said tray, substantially as described. 11th. In a centrifugal separating machine, connecting the first motion wheel to its driving shaft by forming in the said wheel an eccentric slot in its bore, from which at its deepest part runs another slot to the back of the wheel, so that the driving shaft, which is fitted with a stud, when introduced into the wheel and turned round towards the shallowest part of the eccentric slot fixes or keeps the said wheel firmly in position, substantially as described.

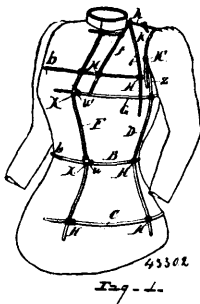
No. 43,301. Medicinal Compound.

(Composition médicinale.)

Charlotte Nellove, Toronto, Ontario, Canada, 21st June, 1893; 6 years.

Claim.—The herein described compound, consisting of guaiacum, lac sulphur, saltpetre, colchium, Peruvian bark and leaves, in substantially the proportions specified.

No. 43,302. Measuring and Drafting Devices for Garments. (Mesure pour les vêtements.)



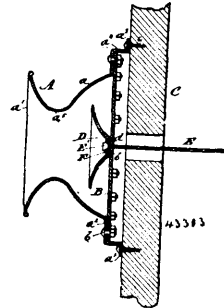
Caspar Mannebach, Detroit, Michigan, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. A device for the purpose set forth, consisting of the crossing flexible strands adjustably coupled and so arranged as to be applied to the figure of a person, with the sliding stops mounted on said strands, substantially as set forth. 2nd. A device for obtaining the dimensions of a bust or figure, consisting of a series of flexible metallic strands crossing one another at an angle and adjustably coupled at their point of crossing, the ends of some of said strands having elastic extensions provided with a hook, sub-

stantially as specified. 3rd. A device for obtaining the dimensions of a bust or figure, consisting of a form composed of a series of flexible cross strands, adjustably coupled at their points of crossing, said form adapted to enclose but one side of the figure from the centre of the back to the centre of the front, the transverse strands having elastic extensions provided with means for attachment to the apparel for retaining said form yieldingly in place upon the figure while being adjusted, substantially as specified. 4th. A device for taking the dimensions of a figure, consisting of a series of vertical and transverse strands adjustably coupled, the loops pivoted to the outer vertical strands, the intermediate vertical strand D, the transverse strands B, G, attached to said strand D, and having their outer ends supported in said loops, substantially as set forth. 5th. A device for the purpose specified, consisting of a frame composed of vertical and transverse strands crossing at an angle and adjustably coupled, the plate Z, having the inner curved edge, the strands B and D, crossing at right angles, said strands being rigidly secured at their point of crossing and fixedly attached to said plate, whereby said strands are retained in the form of a square, and the racking of the frame obviated.

No. 43,303. Acoustic Telephone.

(Téléphone acoustique.)

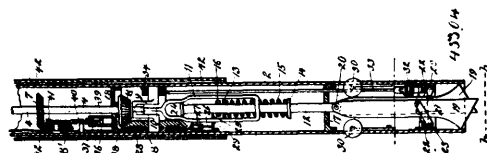


Alfred L. Simpson, New York, State of New York, U.S.A., 21st June, 1893; 6 years.

Claim.—An acoustic telephone comprising a metal case, having a bell shaped mouth, a flaring resonating body, an annular diaphragm seat, a neck extending from the seat and an attaching flange extending from the neck parallel with the said seat, a diaphragm secured near its periphery only to the seat, and a bell like resonator held to the outer face of the diaphragm by the tension of the line wire only, substantially as described. 2nd. In an acoustic telephone, the combination, of a case consisting of a body, having a forwardly flaring mouth, a diaphragm held to said case, and a bell like resonator held to the outer face of the diaphragm by the tension of the line wire, substantially as described. 3rd. An acoustic telephone, consisting of a case, having a bell like body flaring rearwardly, and forwardly flaring mouth, a diaphragm held to the rear of said body, and a bell like resonator, held to the face of the diaphragm by the tension of the line wire and flaring in the direction of the mouth, substantially as described. 4th. An acoustic telephone, consisting of a metallic case, comprising a bell like body, flaring rearwardly, and an integral forwardly flaring mouth, a diaphragm held to said body, and a bell like resonator held to the face of the diaphragm, in line with and flaring in the direction of the mouth, the said resonator being maintained in place by the tension of the line wire, and having no positive connection with the diaphragm, substantially as described. 5th. The improved acoustic telephone, having a diaphragm and a resonator held to the diaphragm by the tension of the line wire only.

No. 43,304. Deep Well Drilling Apparatus.

(Appareil pour creuser les puits.)

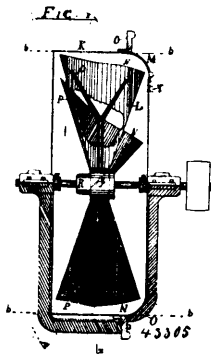


Wesley Webber, Pittsburg, Pennsylvania, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. In a deep well drilling tool, the combination of an electric motor, a drilling bit having downwardly moving divergible parts pivoted in the case, and crank connections between the motor and bit for reciprocating the bit and opening the parts, substantially as and for the purposes described. 2nd. In a deep well drilling tool, the combination of a case containing a motor, a drilling bit composed of downwardly moving divergible parts reciprocated thereby, and

toggle arms connecting the movable parts and the interior of the case, substantially as and for the purposes described. 3rd. In a deep well drilling tool, the combination of a drilling bit composed of downwardly moving divergible parts, means for reciprocating and rotating the bit, and levers adapted to be actuated by such reciprocation, to depress and open the parts of the bit, substantially as described. 4th. In a deep well drilling tool, the combination of a case containing an electric motor, a reciprocatory drilling bit operated thereby and having divergible parts, means for diverging the parts as the bit is projected, and a spring through which the reciprocatory motion is transmitted to the bit, substantially as and for the purposes described. 5th. In a deep well drilling tool, the combination of an electric motor, a drilling bit, crank connections between the motor and bit for reciprocating the latter, a ratchet and pawl connected with the motor and adapted to rotate the bit, and a case containing the several parts, substantially as and for the purposes described. 6th. In a deep well drilling tool, the combination of a case containing an electric motor, a drilling bit connected therewith and adapted to be projected thereby, and an electric signal constructed and arranged to be operated at the limit of the projection of the bit, substantially as and for the purposes described. 7th. In a deep well drilling tool, the combination of a case containing an electric motor, reciprocatory drilling bit operated thereby, a spring through which reciprocatory motion is imparted to the bit, and an electric signal constructed and arranged to be operated by the bit at the limit of its projection, substantially as and for the purposes described. 8th. In a deep well drilling tool, the combination of a case containing an electric motor, a drilling bit connected therewith and operated thereby, and projecting guide wheels connected with the case and having spring bearings, substantially as and for the purposes described. 9th. In oil well operating machinery, the combination with the derrick and crown wheel, of a cable passing thereover, said cable being provided with wires which contact with the gudgeon of the bull wheel, a brush bearing on said gudgeon, and a source of electrical energy connected with said brush, substantially as and for the purposes described. 10th. In oil well operating machinery, the combination, with the derrick and crown wheel, of a cable passing thereover, said cable being provided with separate insulated wires, one set of wires connecting at the bull wheel with a source of electrical energy, and the other set connecting with an electric signal circuit, substantially as and for the purposes described. 11th. In oil well operating machinery, the combination, with the derrick and crown wheel, of a cable passing thereover, said cable being provided with separate insulated wires, a bull wheel provided with a hollow gudgeon, and brushes bearing upon the gudgeon and connected with a source of electrical energy, one set of wires connecting with said gudgeon and the other set passing therethrough and connecting with an electric signal circuit, substantially as and for the purposes described. 12th. In a deep well drilling tool, the combination of a case containing an electric motor, a reciprocatory drilling bit operated thereby, an electric signal circuit having a circuit closer within the case, a tongue upon said circuit closer, and a projection upon the bit, arranged to engage said tongue at the limit of the projection of the bit, substantially as and for the purposes described.

No. 43,305. Disc Fan. (Eventail à disque.)



John D. McEachren, Galt, Ontario, Canada, 21st June, 1893; 6 years.

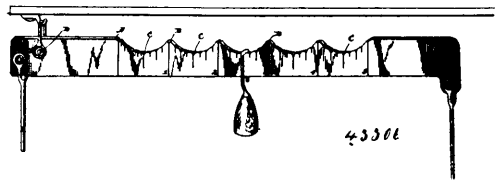
Claim.—1st. In a disc fan, the blades formed and constructed on the lines N, B, or N, G, and A, D, substantially as and for the purpose hereinbefore set forth. 2nd. In combination, with the wheel of a disc fan, a frame having the flange M, either covered or right angular, substantially as and for the purpose hereinbefore set forth.

No. 43,306. Scale Beam. (Fléau de balance.)

Moses Minrod Sevier, Vernon, Texas, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. A scale beam having a series of indicating projections upon its upper edge forming depressions between them, and a series of indicating marks in each depression, substantially as described. 2nd. A scale beam having a series of projections upon its upper edge

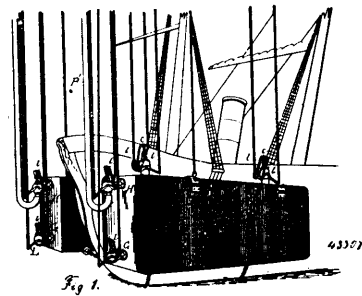
forming depressions between them, and a series of notches formed in the upper edge of each depression, substantially as described. 3rd. A scale beam having a series of projections forming scallops, and



indicating or weighing points at different elevations on the same, substantially as shown and described. 4th. A scale beam having a series of projections on its upper edge having sides which diverge downward from their upper ends, and weighing points or notches formed at intervals on the said sloping sides, substantially as shown and described. 5th. A scale beam having a series of projections on its upper edge which are formed with sides which diverge downward from their upper ends forming scallops between the projections, and notches formed at the upper ends of the projections, at their bases, and between their upper ends and bases, substantially as shown and described.

No. 43,307. Wrecking Apparatus.

(Appareil de sauvetage.)



Michael Brabaw, Detroit, Michigan, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. In a wrecking appliance, the combination of air tight pontoons, chain tubes traversing said pontoons, means for holding chains passed through said tubes, an air pipe for conducting air into said pontoons, water outlet pipe, and valves in said water and air pipes, means for holding said valves in either an open or a closed position, and means for operating the valves from the surface of the water, substantially as and for the purpose described. 2nd. In a wrecking apparatus, the combination of a pontoon rectangular in vertical cross section, diagonal tubes crossing said pontoon, lifting chains passing through said tubes, and joining the pontoons in couples, air inlet tubes leading to the surface of the water, water and air outlet tubes disposed along the top and ends of said pontoon, valves controlling said outlet, and means for operating said valves from a distance, substantially as and for the purpose described. 3rd. In combination, with a wrecking device, a spring closed valve, having a valve stem extending beyond the casing, a double bell crank lever, fulcrumed at one elbow to the casing, and linked at the other elbow to the valve stem, the elbow to which the end of the link is attached being adapted to be forced to either side of the main fulcrum, and to strain the spring in either position, whereby the valve is held in both its open and its closed positions by the strain of the spring, substantially as and for the purpose specified.

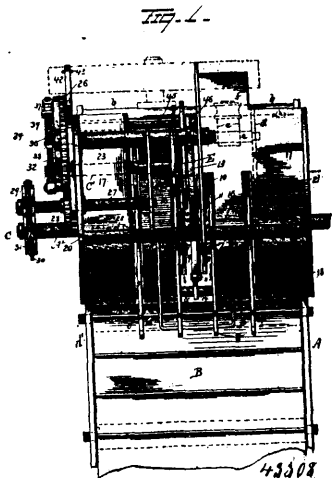
No. 43,308. Grain Binding Harvester.

(Moissonneuse-lieuse.)

Andrew Gardner, Atlantic, Iowa, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. In a rotary rake for grain binding harvesters, a series of hook shaped teeth pivotally supported at a point between the bend and one end, whereby both ends of the teeth are free, substantially as set forth. 2nd. In a rotary rake for a grain binding harvester, a tooth having a vertical portion and a hook shaped portion, said tooth being pivotally supported at a point above the juncture of the vertical and hook shaped portions and away from the end, substantially as set forth. 3rd. In a rotary rake, the combination, with loosely supported shafts of hook shaped teeth secured to these shafts at points between their ends and the angles formed between the two parts of the teeth, substantially as set forth. 4th. In a rotary rake for grain binders, the combination, with one or more hook shaped teeth pivotally supported at a point between the ends whereby both ends are free, of a plate or plates pivotally connecting these teeth approximately at the angle formed between the ends, substantially as set forth. 5th. In a rotary rake for a grain binding harvester, the combination, with teeth having a vertical and hooked

shaped portion, said teeth being pivotally supported at points above the juncture of said portions of the teeth, and an eccentric ring connected to said teeth below their pivotal support, substantially as set forth. 6th. In a rotary rake for grain binding harvesters, the



combination, with a support, of shafts loosely mounted therein and hook shaped parts secured to the shafts at points between their ends forming a tooth at each end for engaging the grain, substantially as set forth. 7th. The combination, with revoluble supports, of shafts loosely mounted in the latter, hook shaped teeth secured to the ends of the shafts at points between the ends of the hooks, and means whereby the teeth are made to point in the same direction during the entire revolution of the rake, substantially as set forth. 8th. The combination, with a support, of shafts carried thereby, rake teeth on the ends of these shafts, and annular rings loosely connected with the teeth on one end of the shafts, substantially as set forth. 9th. In a rotary rake for a grain binding harvester, the combination, with a shaft, two central supports mounted thereon, of rake teeth suspended from the peripheries of said central supports, eccentric rings pivotally connected to the teeth on the inner ends of the shafts, and means for shifting both of said rings simultaneously, substantially as set forth. 10th. In a rotary rake for a grain binding harvester, the combination, with two central supports, of a series of shafts carried by each central support, depending hook shaped teeth carried at each end of each shaft, eccentric rings pivotally connected with each inner series of teeth and means for shifting both eccentric rings simultaneously, substantially as set forth. 11th. In a rotary rake for a grain binding harvester, the combination with two central supports, of a series of shafts carried by each central support, depending hook shaped teeth carried at each end of each shaft, eccentric rings pivotally connected with each inner series of teeth, a rocker plate, and rollers carried by said rocker plate, one roller being adapted to run on the inner edge of each eccentric ring, substantially as set forth. 12th. A revolving rake comprising loosely mounted shafts provided with sets of depending hooks and sets of vertical teeth and means for maintaining these sets of hooks and teeth pointing in substantially the same directions as they are revolved from adjacent to the platform conveyer to the bundle receptacle, whereby the rake is adapted to elevating grain a greater distance than its own diameter, substantially as set forth. 13th. A revolving rake comprising loosely mounted shafts provided with sets of depending hooks and sets of vertical teeth, and means for maintaining these hooks and teeth either in their normal positions for elevating and packing grain or inclined backward for separating the incoming grain from the bundle, substantially as set forth. 14th. In a grain binding harvester, the combination with a platform conveyer and a longitudinally movable frame carrying a revolving rake, of a series of fingers carried by said longitudinally movable frame adjacent to the end of the platform conveyer and projecting under the rake, substantially as set forth. 15th. In a grain binding harvester, the combination with rear and front end bars of the harvester frame, of a shaft mounted in said rear and front end bars, elevating and binding mechanism supported on said shaft, a bracket on one of the end bars of the frame, a roller in said bracket under the shaft, a bar between the end bars of the frame, a depending bracket carried by the binder frame, and a roller carried by said bracket and adapted to run on said bar, substantially as set forth. 16th. In a grain binding harvester, the combination with a shaft, of central supports carried thereby, rake teeth pivotally connected to said central supports, eccentric rings also pivotally connected to said teeth, a rocker plate having rollers to run on the eccentric rings, a needle and a link connecting the rocker plate with the needle, substantially as set forth. 17th. In a grain binding harvester, the combination with a shaft, and central rake supports carried thereby, of rake teeth pivotally connected to said central supports, eccentric rings also pivotally connected to the teeth, a rocker plate having rollers thereon to run on the eccentric rings, a needle shaft, a needle carried by said shaft, a link connecting said needle and rocker plate, and means carried by the needle shaft for

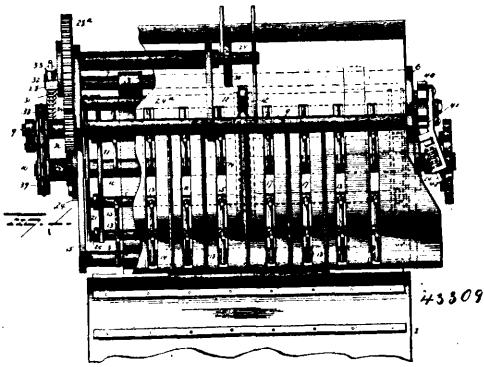
releasing the binding mechanism, substantially as set forth. 18th. In a grain binding harvester, the combination with a revolving rake comprising pivoted teeth, eccentric rings pivotally connected to said teeth, a rocker plate having rollers adapted to run on said rings, a needle bar, a link connecting the rocker and needle bar, a lever carried by the needle bar and provided with a hooked end, a notched lug or plate carried by a mutilated gear wheel, means for transmitting motion to said gear wheel, a yielding connection between the mutilated gear wheel and said lever, an arm projecting from said lever and carrying a roller, a trip shaft carrying a trip finger, and an arm carried by said trip shaft and adapted to engage said roller to release the locking mechanism when a bundle presses against the trip finger, substantially as set forth. 19th. In a tripping mechanism, the combination with an oscillatory lever having a hooked arm, the face of said hook being curved, of a lug or plate carried by a gear wheel and having a curved edge to receive the curved edge of the hook, and a yielding connection between said lug or plate and the lever at the end opposite said hook, substantially as set forth. 20th. In a locking and tripping mechanism for self binding harvesters, the combination with a rock shaft C¹, pinion 28, gear wheel 26, lever 32, mounted on rock shaft C¹, and provided with a hook 33, adapted to engage a hook 34, on gear wheel 26, and a pitman 36, provided with a spring 39, yieldingly connecting arm 32, with the mutilated gear wheel 26, of a trip shaft 45, provided on its inner end with a trip finger 46, and on its outer end with an arm 44, adapted to bear against arm 48, projecting from and attached to lever 32, and a lug or roller 40 projecting from the inner face of gear wheel 26, and adapted to operate in slot 41, of the pivotally supported cam lever 42, to raise and lower said lever, and a link connecting the free end of cam lever 42, with the free end of arm 44, substantially as set forth. 21st. The combination with a harvester frame, platform conveyer, and driving wheel, of a transversely adjustable elevator and packer frame, placed intermediate between the platform conveyer and driving wheel, comprising substantially as shown the front and rear standards *d*, *d*, provided with offsets or flanges 17, 17, and parts 20 and 21 projecting upward from the offsets 17, 17, and the cross rods or bars 15 and 22 connecting with said standards, and a sleeve 23 projecting rearwardly from the upper end of part 20, the rear end of said sleeve being supported by means of brace 24 projecting from bar 22, and means for adjustably supporting said frame, substantially as set forth. 22nd. The combination with a frame, of a sectional revolving rake, each section comprising sets of pivotally supported hook shaped teeth, supported at points between their ends forming teeth at each end, means for controlling the position of the teeth, and a rock shaft provided with a needle adapted to operate between the sections of the rake, substantially as set forth. 23rd. The combination with a platform conveyer and driving wheel, of a transversely adjustable frame placed intermediate between the platform conveyer and driving wheel, and means for supporting the frame, of a sectional revolving rake mounted in said frame adjacent to the platform conveyer, each section of the rake comprising sets of pivotally supported hook-shaped teeth supported at points between their ends forming teeth at each end, means for controlling the position of the teeth, a binder table extending from the central or highest point of the rake outward over the driving wheel, a rock shaft placed beneath said binder table adjacent to the rake, and an underlying needle mounted on said rock shaft so as to lie normally between the rake sections, substantially as set forth. 24th. The combination, with a frame placed intermediate between the platform conveyer and driving wheel, of a revolving rake comprising sets of hook-shaped teeth supported at points between their ends forming teeth at each end, and means for controlling the position of the teeth, annular bands supported between the sets of teeth and fingers attached to said frame extending outward under the rake frame adjacent to the platform conveyer, substantially as set forth. 25th. The combination, with a transversely adjustable frame placed intermediate between the platform conveyer and driving wheel, and means for supporting the frame, of a sectional revolving rake mounted in said frame adjacent to the platform conveyer, a binder table extending outward from the central or highest point of the rake over the driving wheel, a rock shaft provided with a needle adapted to operate between the sections of the rake, and laterally projecting strips or flanges curved inward and downward from laterally projecting parts of the binder table, to conform to the periphery of the rake for supporting the ends of grain which project beyond the rake teeth, substantially as set forth. 26th. The combination, with two standards extending upward and inclined outward from adjacent to the platform conveyer, and spaced apart by connecting rods, of a sectional revolving rake loosely mounted in said standards, and a rock shaft, also, loosely mounted in the standards adjacent to the rake and provided with an underlying needle adapted to lie normally between the two rake sections, said standards being provided with laterally projecting offsets at or near a level with the top of the rake and parts projecting upwardly from the outer ends of these offsets for supporting a binding mechanism, substantially as set forth.

No. 43,309. Elevating and Packing Mechanism for Harvesters. (*Élévateur et mécanisme d'emballage pour moissonneuses.*)

Andrew Gardner, Atlantic, Iowa, U.S.A., 21st June, 1893; 6 years.

Claim.—1st. In a self binding harvester, the combination with an elevator and packer frame placed intermediate between the platform

conveyer and driving wheel, of a sectional revolving rake mounted in said frame adjacent to the platform conveyer, the diameter of

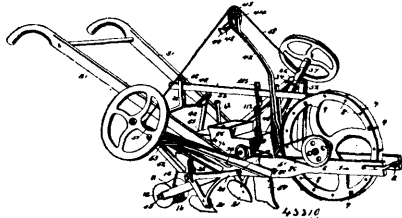


said rake being substantially equal to the vertical distance between the platform conveyer and the binder table extending approximately on a level from the central or highest point of the rake outward over the driving wheel, a rock shaft placed beneath said binder table and approximately within the angle formed by the binder table and the periphery of the rake, and an underlying needle mounted on said rock shaft so as to lie normally between the sections of the rake, said needle having substantially the same radius as the rake, substantially as set forth. 2nd. In a self binding harvester, the combination with an elevator and packer frame placed intermediate between the platform conveyer and driving wheel, of a sectional revolving rake mounted in said frame adjacent to the platform conveyer, each section of the rake comprising circular supports having a diameter substantially equal to the vertical distance between the platform conveyer and the binder table, a series of toothed shafts loosely mounted in said supports, and means connected with a rock shaft for simultaneously controlling the teeth of both sections, said rock shaft being separated from the central rake shaft by only sufficient distance to clear the rake, an underlying needle having substantially the same radius as the rake mounted on said rock shaft so as to lie normally between the sections of the rake, and a binder table extending approximately on a level from the central or highest point of the rake outward over the driving wheel, substantially as set forth. 3rd. In a self binding harvester, the combination with an elevator and packer frame placed intermediate between the platform conveyer and driving wheel, of a sectional revolving rake mounted in said frame adjacent to the platform conveyer, each section of the rake comprising circular supports, a series of shafts loosely mounted in said supports, teeth extending from each shaft at approximately right angles to each other, and means for normally maintaining said teeth in approximately horizontal and vertical positions throughout the revolution of the rake, a binder table extending outward from the central or highest point of the rake, and an adjacent rock shaft provided with a needle adapted to operate between the sections of the rake, substantially as set forth. 4th. In a self binding harvester, the combination with an elevator and packer frame placed intermediate between the platform conveyer and driving wheel, of a sectional revolving rake mounted in said frame adjacent to the platform conveyer, each section of the rake comprising circular supports, a series of toothed shafts loosely mounted in said supports, cranks on the shafts a ring pivotally connected with the several cranks and a movable plate provided with anti-friction rollers to bear against the edge of the ring to control its position, a rock shaft provided with a needle, adapted to operate between the two sections of the rake, and a binder table extending outward from the central or highest point of the rake, substantially as set forth. 5th. In a self binding harvester, the combination with a transversely adjustable elevator and packer frame placed intermediate between the platform conveyer and driving wheel, of a sectional revolving rake mounted in said frame adjacent to the platform conveyer, each section of the rake comprising circular supports, a series of shafts loosely mounted in said supports, teeth extending from each shaft at approximately right angles to each other, cranks on the shafts, a ring pivotally connected with the several cranks, and a hanger plate loosely mounted on the central rake shaft provided with anti-friction rollers to bear against the edge of the ring to control its position, an adjacent rock shaft provided with arms, links respectively connecting said crank arms and hanger plates, an underlying needle mounted on said rock shaft so as to lie normally between the two rake sections, and a slotted deck extending a short distance outward from adjacent to the platform conveyer, thence curved upward and extended outward over the rake to form a binder table, substantially as set forth. 6th. The combination with a frame, of a revolving rake composed of two sections mounted on a central shaft, each section comprising circular supports, a series of shafts loosely mounted in said supports, cranks on the shafts, a ring connecting these cranks, teeth extending from each shaft at approximately right angles to each other, and means connected with an adjacent rock shaft for either normally maintaining

said teeth of both sections in approximately horizontal and vertical positions or inclined from their normal positions throughout the revolution of the rake, substantially as set forth. 7th. In a self binding harvester, the combination with a frame, of a revolving rake composed of two sections, each section comprising circular supports, toothed shafts loosely mounted in said supports, cranks on the shafts, a ring pivotally connected to the several cranks, and a hanger plate loosely mounted on the central rake shaft provided with anti-friction rollers to bear against the edge of the ring to control its position, and a rock shaft provided with crank arms, links connecting said crank arms and hanger plates, said rock shaft being given a periodical movement by means of connection with the binding mechanism, substantially as set forth. 8th. The combination with a frame, of a revolving rake composed of two sections mounted on a central shaft, each section comprising circular supports, toothed shafts loosely mounted in said supports, cranks on these shafts, ring connecting the cranks, and means connected with crank arms on an adjacent rock shaft for simultaneously controlling the position of the teeth of both sections, one of said crank arms being provided with means for adjusting the radius of its pivotal connection with the means which control the inclination of the teeth of the corresponding section, whereby the teeth of one section may be adjusted to greater inclination than the teeth of the other, substantially as set forth. 9th. The combination with a transversely adjustable frame comprising substantially the front and rear standards 5 and 6 connected by the cross rods or bars 7, 8 and 9, of a rotary shaft 10, two sections of a revolving rake mounted on said shaft between the standards 5 and 6, a rock shaft 24^a, a needle mounted on said rock shaft so as to lie normally between the two rake sections, a shaft 29 loosely mounted in a sleeve projecting rearwardly from the upper end of front standard 5, ejectors 30 mounted on the rear end of such shaft, a gear wheel mounted on the opposite end of said shaft, and a pitman connecting said gear wheel with a crank arm on shaft 24^a, substantially as set forth. 10th. In a locking and tripping mechanism, for self binding harvesters, the combination, with the rock shaft 24^a, and the gear wheel 28^a, mounted on the shaft 29, of an arm 25, mounted on shaft 24^a, provided with a hook 27, adapted to engage a hook 28 on the mutilated gear wheel 29^a, and a pitman 31 provided with a spring 34, yielding connecting arm 25, and gear wheel 28^a, substantially as set forth. 11th. A revolving rake comprising supports, shafts therein having teeth extending from them at approximately right angles to each other, means for normally maintaining said teeth approximately in horizontal and vertical positions during the entire revolution of the rake, and the adjacent shafts of the rake located a distance apart greater than the length of the teeth, substantially as set forth. 12th. A revolving rake comprising supports, shafts therein having teeth extending from them at approximately right angles to each other, means for normally maintaining said teeth approximately in horizontal and vertical positions during the entire revolution of the rake, and the adjacent shafts of each section located a distance apart greater than the length of the teeth, substantially as set forth. 13th. A revolving rake, comprising loosely mounted shafts, and teeth on each of these shafts extending approximately at right angles to each other, and means for maintaining the teeth pointing in the same directions throughout the rotation of the rake, said teeth being yieldingly supported and adapted to be backwardly inclined by the impact of the straw against them whereby the other parts of the machine are automatically set in motion, substantially as set forth. 14th. The combination, with a rotary shaft having circular supports thereon, of tooth carrying shafts loosely mounted in said supports, cranks on the shafts, rings with which these cranks are loosely connected, anti-friction rollers operating against the inner edges of these rings, and means for changing the position of the rollers whereby the rings are shifted and the teeth are rocked, substantially as set forth. 15th. The combination, with a rotary shaft having circular supports thereon, of tooth carrying shafts loosely mounted in the supports, rings operatively connected with the shafts for rocking them simultaneously, hanger plates loosely mounted in proximity to the rings and furnished with anti-friction rollers, and means connected with the plates for rocking them whereby the position of the roller relative to the ring is changed, substantially as set forth. 16th. The combination, with a rotary shaft having supports thereon, of shafts loosely mounted in the supports, rings operatively connected with the several shafts, a rotary shaft having a pinion thereon, a shaft having a mutilated gear wheel thereon, and means operatively connected with the rings and the mutilated gear wheel for automatically locking and unlocking the mutilated gear wheel, substantially as set forth. 17th. The combination, with a revoluble rake, having teeth loosely supported therein, of plates connected with lateral projections on the shafts, on which the teeth are secured, vibratory devices having loose contact with the plates, needle mechanism, tripping mechanism connected with the needle mechanism, and means connecting the vibratory devices with the needle mechanism for imparting movement to the trip mechanism, substantially as set forth. 18th. The combination, with a revoluble rake, having loosely supported shafts carrying rake teeth, rotary plates provided each with a circular central slot connected with cranks on the tooth shafts, of vibratory devices having bearing contact with the inner edges of the plates, needle mechanism, tripping mechanism connected with the needle mechanism and mechanism connecting the vibratory devices with the needle mechanism for

imparting movement to the trip mechanism, substantially as set forth. 19th. The combination, with a frame work, of a revolving rake, comprising a shaft, circular supports near its ends and near its centre toothed shafts loosely mounted in said supports, and a rocking shaft provided with a needle which operates between the central supports of the rake, substantially as set forth. 20th. The combination, with a rotary shaft, plates thereon, toothed shafts loosely mounted in the plates, rings loosely connected with the cranks on the toothed shafts, loosely mounted hangers having rollers thereon, against which the inner edges of the rings bear, of a needle shaft having devices thereon connected with the hangers, gearing, locking mechanism, and a pitman extending from one of the devices on the needle shaft to the gearing, said pitman provided with a spring adapted yieldingly to sustain the rake teeth and throw the needle gearing into operation when the locking mechanism is disengaged, substantially as set forth. 21st. In a grain binding harvester, the combination, with a revolving rake, comprising revolving supports and rake teeth pivotally mounted thereon, eccentric rings connected with said rake teeth, rocker or hanger plates having rollers to run on said eccentric rings, a needle shaft, a lever carried by said needle shaft and having a hooked arm, a mutilated gear having a notched plate or lug with which said hooked arm engages, a pitman yieldingly connecting said lever with the mutilated gear, and gearing for transmitting motion to said mutilated gear, substantially as set forth. 22nd. The combination, with a frame work, of a revolving rake comprising a shaft, supporting plates at its ends and near its centre, toothed shafts loosely supported in the supporting plates, and a rocking shaft provided with a needle which operates between the central discs of the rakes, substantially as set forth.

No. 43,310. Planter. (Semoir.)



David J. Bowser, Cadillac, Michigan, U.S.A., 22nd June, 1893; 6 years.

Claim.—1st. In a planter, the combination, with the framework thereof, of a hopper, having an opening in its bottom, a bottomless seed discharge tube, having a perforation in its side and mounted in the opening in the hopper, and means for reciprocating the tube so that its opening is elevated above and depressed below said opening in the bottom, substantially as specified. 2nd. In a planter, the combination with a hopper, having a hole in its bottom, of an internal reciprocating bottomless tube, having a seed opening in its side, means for reciprocating said sliding tube, and means for adjusting the size of the opening, substantially as specified. 3rd. In a planter, the combination with a hopper, having a hole in its bottom, of a reciprocating tube, having a slot in its side, and mounted in the hole, means for reciprocating the tube, a gage rod supported in the tube above the slot, and means for adjusting the same, so as to project below the upper end of the slot, substantially as specified. 4th. In a planter, the combination with a hopper, having a hole in its bottom, a bottomless tube provided with a slot and its upper end with a contracted opening, and mounted for reciprocation in the hole, of means for reciprocating the tube, a gage rod fitting in the upper end of the tube and reduced to pass through the opening, and an adjusting screw passed through a perforation in the tube and bearing on the reduced portion of the rod, substantially as specified. 5th. In a planter, the combination, with a framework, the traction wheel located at the front end of the same, and provided with tappets, and the standard located in rear of the wheel, of an intermediate hopper, the bottom of which is provided with an opening, a reciprocating seed tube, having a slot in its side mounted in the opening, a vibratory lever, pivoted to the standard and at its front lying in the path of the tappets, and between the ends pivoted to the upper end of the reciprocating seed tube, substantially as specified. 6th. In a planter, the combination with the framework, the traction wheel at the front end of the same and provided with tappets, and the standard located in rear of the wheel, of a hopper, seed discharging devices removably connected with the hopper, and a notched standard located in rear of and out of alignment with the seed discharging devices, and adapted to support the lever when disconnected from said seed discharging devices, substantially as specified. 7th. In a planter, the combination with the framework, of a tool box supported on the frame, and having its lower front corner provided with a groove, a removable hopper mounted on the frame and having at its rear lower corner a rib for entering the groove, and securing devices for the hopper, substantially as specified. 8th. In a planter, the combination with the frame, and the tool box supported thereon and provided at its front lower corner with

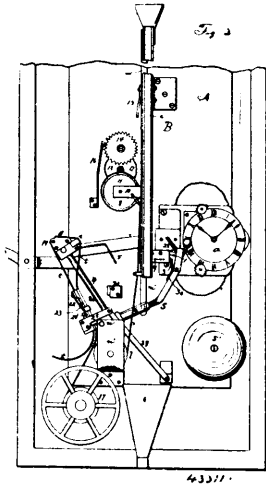
a groove, of a hopper supported upon the frame in front of the box, and provided at its lower rear corner with a rib removably fitting the groove, eyes extending from the hopper, pivoted hooks on the tool box for engaging the eyes, a staple extending from the hopper, a hasp loosely connected to the frame and slotted to receive the staple, and a hook pivoted to the hopper and adapted to engage the staple in front of the hasp, substantially as specified. 9th. In a planter, the combination with the framework comprising a rear cross bar and opposite side frame bars, of the planting mechanism carried by the framework, a pair of bars loosely hinged to the opposite side or frame bars and terminating at their rear ends in journals, a concave roller having axle trunnions taking in the journals, a bail loosely connected to the bars, a bracket secured to the cross bar of the frame and having a series of studs for removably engaging the bail, and a swivelled turn button adapted to be swung over the studs, substantially as specified. 10th. In a planter, the combination with the frame comprising opposite side bars, and the rearwardly disposed handles pivoted to the frame, of the intermediate inverted U-shaped metal frame arranged between the handles and bolted to the side bars of the frame, said metal frame having its corners provided with curved slots concentric with the pivots of the handle, and bolts passed through the slots and handles, substantially as specified. 11th. In a planter, with the oblong frame, the traction wheel in front of the same and provided with tappets, pivoted handle bars embracing the frame, an inverted U-shaped metal frame arranged between the handle bars and bolted to the frame, and provided at its upper end with opposite slotted portions concentric with the pivots of the handles, and bolts passed through the handles and slots, a central standard having a vertical guide slot, a hopper arranged in rear of the standard, feed devices in the hopper, a vibratory lever mounted in the guide slot and connected to the feed devices, and at its front end arranged in the path of the tappets, a standard rising from a rear metal frame, and pivotally connected or fulcrumed to the rear end of the vibratory lever, substantially as specified. 12th. In a planter, the combination with the framework, the traction wheel at the front end thereof, and the metal frame at the rear end, of the handles secured to the framework and to the metal frame, a recessed standard rising from the metal frame and provided with a stud, and a swivelled button, of an intermediate standard having a guide slot, a vibratory lever arranged therein in the path of the tappets and fulcrumed on the stud of the standard of the metal frame, a hopper arranged below the vibratory lever, feed devices in the hopper, a loose connection between the feed devices and the lever, substantially as specified. 13th. In a planter, the combination with the frame, of opposite standards provided with shovels and hinged to the frame, a bolt receiving opening formed in each standard, a bolt adapted to pass through the same and through suitable perforations in the frame, and L-shaped arms pivoted to the standards and provided at their free ends with bolt receiving openings, substantially as specified. 14th. In a planter, the combination with the frame having opposite staples, of triangular shovel carrying standards provided with concentric slots at their rear corners and connected with the staples, and in rear of the slots provided with bearing lugs, L-shaped slotted arms or brackets pivoted between the lugs, and bolts for passing through the slots of the standards and brackets and entering holes in the frame, substantially as specified. 15th. In a planter, the combination with the frame, and an intermediate standard having bearings, of a pulley mounted in the bearings, opposite marking frames hinged to the frame, and a rope passing over the pulley and connected to the marking frame, substantially as specified. 16th. In a planter, the combination with the frame, the intermediate standard and the loose pulley journaled therein, of the opposite marking wheel carrying frames, and means for locking either of the frames in a depressed position, substantially as specified. 17th. In a planter, the combination with the main frame, the central standard having opposite bearings, the shaft arranged in the bearings, a pulley and ratchet wheel mounted on the shaft, a headed stud below the ratchet wheel, and a slotted double ended pawl mounted on the stud of the opposite marker wheel carrying hinged frames, and a rope passed about the pulley and connected at its terminals to said frame, substantially as specified. 18th. In a planter, the combination with the framework, of a pair of hinged convergent bars arranged at the side thereof, metal straps connected with the convergent ends of the bars and provided with keepers, a set screw in one of the keepers, and a marker wheel carrying shaft arranged in the keepers, substantially as specified.

No. 43,311. Time Recorder. (Régistre horaire.)

Willard Le Grande Bundy, Binghamton, New York, U.S.A., 22nd June, 1893; 6 years.

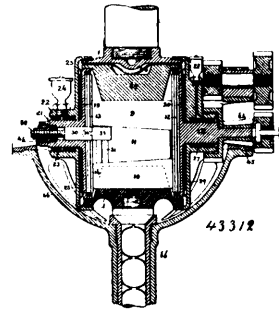
Claim.—1st. In a workman's time recorder, a check provided with a groove upon its back, in combination with a check chute, consisting of four vertical walls and provided with a rib projecting into it, and adapted to engage with the groove upon the check while in transit through the chute. 2nd. In a workman's time recorder, a check in combination with a check chute and a lever projecting into it on the side with which the check operatively engages when forced into the chute. 3rd. In a workman's time recorder, a check in combination with a check chute, a lever projecting into it, a rod connected to said lever, a rock shaft and a crank arm thereon to which said rod is connected. 4th. In a workman's time recorder, a check, in combination with a check chute, a lever projecting into it,

a rod connected to said lever, a rock shaft, a crank arm thereon to which said rod is connected and an impression platen mounted upon



an arm secured to said rock shaft. 5th. In a workman's time recorder, a check, in combination with a check chute, a lever projecting into it, a rod connected to said lever, a rock shaft, a crank arm thereon to which said rod is connected, a hammer rod secured to said crank arm, and a bell. 6th. In a workman's time recorder, a check, in combination with a check chute, a lever projecting into it, a rod connected to said lever, a rock shaft, a crank arm thereon to which said rod is connected, an impression platen mounted upon an arm secured to said rock shaft, a hammer rod secured to said crank arm, and a bell. 7th. The combination, with the impression platen, of a rock shaft, to which it is connected, and means to rotate said crank shaft, actuated by the insertion of a check into the check chute. 8th. The combination, with the impression platen and the hammer rod and bell, of a rock shaft to which they are connected and means to rotate said shaft by the insertion of a check into the check chute. 9th. In a workman's time recorder, a rock shaft, an impression platen connected thereto, a hammer rod also connected thereto, and means to rotate said shaft, and a check chute, in combination with a trip hook mounted upon said chute and adapted to engage with a pin upon said hammer rod when said rock shaft is rotated. 10th. In a workman's time recorder, a rock shaft, an impression platen connected thereto, a hammer also connected thereto, and means to rotate said shaft, and a check chute, in combination with a trip hook mounted upon said chute and provided with a hook upon one end adapted to engage with said hammer rod when said rock shaft is rotated, and having a trip arm upon the other end, projecting into the chute, and with which a check engages to disengage said hook. 11th. In a workman's time recorder, a check, a check chute, and a trip mounted thereon having one end projecting into the chute, in combination with a sliding stop mounted adjacent to said trip and projecting into said chute to retain the check upon the printing line. 12th. In a workman's time recorder, a rock shaft and means to rotate it, and an impression platen connected thereto provided with a lateral arm, in combination with a sliding stop adapted to project into the change chute, and with which said arm is adapted to engage to withdraw it from the chute. 13th. In a workman's time recorder, a rock shaft, a hammer rod connected thereto and a spring finger thereon, in combination with a sliding stop with which said finger engages when said rock shaft is rotated. 14th. In a workman's time recorder, a check chute, a check, a ribbon reel mounted upon a shaft, and a train of gearing operatively connected to said shaft, in combination with a vertically movable rod and a finger thereon, adapted to engage with the terminal gear when said rod is operated by the passage of the check through the chute. 15th. In a workman's time recorder, a rock shaft, a paper chute secured thereto, a slide upon said chute, a rocking frame mounted upon said slide, a grip upon said frame, and means to rock said frame when said shaft is rotated, in combination as set forth. 16th. In a workman's time recorder, a clock, time wheels synchronous therewith, a rock shaft and an impression platen connected thereto, and actuated thereby, in combination with a check chute, a rod connected to said rock shaft, a lever connected to said rod and projecting into the check chute, and a check operatively engaging with said lever to rotate said shaft, when inserted into said chute. 17th. In a workman's time recorder, time wheels synchronous with a clock movement, in combination and actuated by a train of gearing driven directly by a primary gear mounted upon the main post of said movement. 18th. In a workman's time recorder, a check, a check chute, and a sliding stop holding the check upon the printing line, in combination with an impression platen thrown away from the chute by the insertion of the check into the chute, and an arm upon the platen engaging said stop to release said check at the same moment that the impression blow is given by the platen.

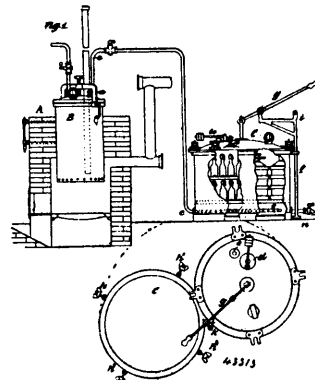
No. 43,312. Rotary Engine or Motor.
(Machine rotative ou moteur.)



Frank Henry Cathcart, Philadelphia, Pennsylvania, U.S.A., 22nd June, 1893; 6 years.

Claim.—1st. The combination of the two part piston body, threaded flanged ends on the said piston body, spacing blocks between the two parts and adapted to hold the same in proper position, threaded disks adapted to said threaded end portions, journals on said disks and piston blades carried by said piston body, substantially as specified. The combination of the two part piston body, recesses in the adjusting faces of the two sections, spacing blocks adapted to such recesses, and opposite end discs adapted to hold the parts of the piston body in position, with piston blades carried by said piston body, substantially as specified. 3rd. The combination, of the two part piston body, recesses in the adjusting faces of the two sections, spacing blocks of cross like form in cross section, having ribs adapted to such recesses and opposite end discs adapted to hold the parts of the piston body in position, with piston blades carried by said piston body, substantially as specified. 4th. The combination, of the piston body, the radially adjustable blades thereon, said blades having their inner faces inclined from each other, an adjustable wedge shaped block between said inclined faces, a longitudinally adjustable stem, and a projection on said stem engaging with a transverse groove in the wedge shaped block, substantially as specified. 5th. The combination of the piston body, the radially adjustable blades therein, the inner faces of said blades being inclined from each other, the wedge shaped adjusting block between such inclined faces, and the longitudinally adjustable stem having a dovetailed recess, a block having a dovetailed projection adapted to such recess, and a projection on said block adapted to a transverse groove in the wedge shaped block, substantially as specified. 6th. The combination of the piston body, the radially adjustable blades thereon, said blades having their inner faces inclined from each other, the wedge shaped adjusting block between such inclined faces, the adjustable stem, a threaded shank thereon, an adjusting nut engaging with said threaded shank and a gland nut, substantially as specified. 7th. The combination of the piston body, the radially adjustable blades therein, the wedge shaped adjusting block between such blades, the adjustable stem, a threaded shank thereon, the adjusting nut carried thereby and having a flange, a gland nut, a ring and packing between said ring and the adjusting nut, substantially as specified. 8th. The combination of the piston body, the radially sliding piston blades therein, said blades having their inner edges inclined from each other, the wedge shaped adjusting block between said blades and adapted to slide radially therewith, and devices for effecting the longitudinal adjustment of said block, substantially as specified.

No. 43,313. Locking Device. (Arrêt de sûreté.)

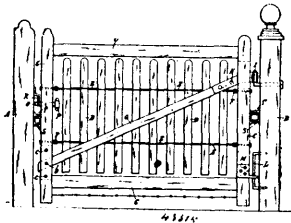


Rudolph Thiel, Lubeck, Free State of Lubeck, 22nd June, 1893; 6 years.

Claim.—1st. In sterilising boilers serving for the reception of bottles, jars or other vessels for holding sterilising liquids, the use

and combination therewith of a removable cover and a swing crane with lever for enabling the said cover to be raised and swung to one side and readily replaced again, substantially as and for the purposes hereinbefore set forth. 2nd. I claim stoppering jars, bottles or other similar vessels for holding, sterilising and preserving liquids by means of a stopper held down by movable clips with tension or compression springs to act as regulating valves which are capable of allowing the gases and steam generated in the sterilising operation, when above a certain pressure to escape, and also automatically close the vessels when such excess of internal pressure has ceased, substantially in the manner and for the purposes set forth. 3rd. In devices for closing large metallic or other vessels for holding, sterilising and preserving liquids, I claim the combination therewith and employment of regulating valves in which a spring provided with packing material constitutes the means for closing the valve or outlet, said regulating valve allowing any excess of pressure from the gases and steam generated in the vessels, in the sterilisation process, and also closing again automatically when such excess of internal pressure has ceased, substantially in the manner and for the purposes hereinbefore set forth.

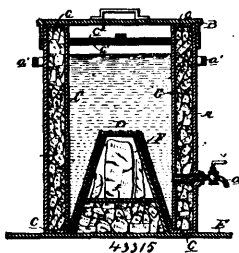
No. 43,314. Gate. (Barrière.)



Mark Ashman, West Nissouri, Ontario, Canada, 22nd June, 1893; 6 years.

Claim.—1st. An independent movable brace secured at one end to the hinge pin I, in combination with, and secured at the other end to the gate C, substantially as shown and described, and for the purpose specified. 2nd. An independent movable brace, secured to a hinge pin I, and to a gate C, in combination with the strap M, formed with the sockets N, N, and the staples L, L, substantially as shown and described and for the purpose specified. 3rd. An independent movable brace secured to a hinge pin I, and to a gate C, in combination with the flanges S and T, substantially as shown and described and for the purpose specified. 4th. An independent movable brace, secured to a hinge pin I, and to a gate C, the strap M, formed with the sockets N, N, and the staples L, L, in combination with the flanges S and T, substantially as shown and described and for the purpose specified. 5th. An independent movable brace secured to a hinge pin I, and to a gate C, in combination with a self locking latch O, formed with the weighted end P, and a keeper R, formed with a notch c, on the under side, substantially as shown and described and for the purpose specified. 6th. An independent movable brace, secured to a hinge pin I, and to a gate C, the strap M, formed with the sockets N, N, and the staples L, L, in combination with a self locking latch O, formed with a weighted end P, and a keeper R, formed with a notch c, on the under side, substantially as shown and described and for the purpose specified. 7th. An independent movable brace secured to a hinge pin I, and to a gate C, the strap M, formed with the sockets N, N, and the staples L, L, in combination with the eye bolts F, the strands E, E, and slats or pickets D, substantially as shown and described and for the purpose specified. 8th. An independent movable brace, secured to a hinge pin I, and to a gate C, the strap M, formed with the sockets N, N, and the staples L, L, in combination with the eye bolts F, the strands E, E, the slats or pickets D, the latch O, formed with a weighted end P, a keeper R, formed with a notch c, on the under side, and the flanges S, T, substantially as shown and described and for the purpose specified.

No. 43,315. Water Cooler. (Fontaine.)

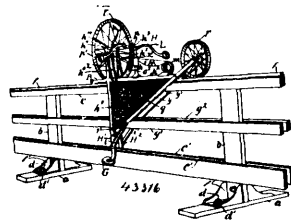


Louisa B. Saddine, Hot Springs, Arkansas, U.S.A., 22nd June, 1893; 6 years.

Claim.—1st. A water cooler, having its base portion provided with a truncated cone shaped ice holder F, open at the top, and a

removable water holder having its base of a shape corresponding to the ice holder, so that the water holder may be placed over the refrigerant to cool the water, substantially as shown and described and for the purposes set forth.

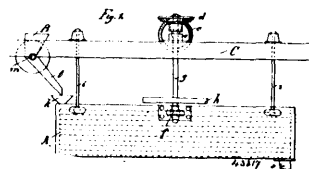
No. 43,316. Vehicle for Elevated Railways. (Voiture pour chemins de fer aérien.)



Arthur Ethelbert Hotchkiss, Mount Holly, New Jersey, U.S.A. 22nd June, 1893; 6 years.

Claim.—1st. A vehicle provided with a main frame having supporting wheels, a seat brake mechanism and depending members located on opposite sides of the main frame and connected therewith and provided with propelling means and guide rolls, the construction being such that the rider is carried by the vehicle astride the same, substantially as and for the purposes set forth. 2nd. A vehicle comprising a main frame provided with divided depending shield frames having upper extensions supporting driving and pilot wheels, guide rolls and propelling mechanism connected with the divided depending frames, a seat, and brake mechanism connected with the main frame between the driving and pilot wheels, substantially as and for the purposes set forth. 3rd. A wheeled vehicle comprising a main frame having depending devices and provided with supporting and guide wheels, a seat or saddle supported by the main frame and brake mechanism connected with said main frame, substantially as and for the purposes set forth. 4th. A wheeled vehicle adapted for an elevated course or way provided with a main frame and depending members straddling said structure and provided with guide rolls, supporting wheels journaled to vertical extensions thereof, a seat or saddle and a vertical arm provided with a handle bar and brake mechanism, substantially as and for the purposes set forth. 5th. The combination, in a vehicle of a main frame having triangular-shaped depending members, supporting wheels and guide rollers journaled respectively to said frame and the depending members thereof, a seat or saddle supported above the main frame and brake mechanism connected with a handle bar and a saddle or seat partially supported by said bar, substantially as and for the purposes set forth. 6th. The combination, in a vehicle of two grooved faced wheels journaled to a frame provided with depending members having guide wheels journaled thereto, a spring actuated saddle supported above said frame and to a vertical arm provided with a handle bar, brake mechanism and means for permitting of the actuation of said vehicle, substantially as and for the purposes set forth. 7th. The combination, with a vehicle adapted to straddle an elevated course or way and provided with two wheels and depending frames having guide rollers and pedals or treadles pivotally connected therewith, means suitably connected with said depending frames and pedals or treadles and a sprocket wheel mounted on the shaft of the forward supporting wheel, substantially as and for the purposes set forth. 8th. The combination, in a vehicle for an elevated course or way, of a frame provided with bifurcated extensions and triangular-shaped depending frames having vertical extensions, supporting wheels and guide rollers, pedals or treadles pivoted to the arms of said depending frames, sprocket wheels mounted on the journals of the forward supporting wheel and springs and chains connected with the depending frames, the sprocket wheels and the pedals or treadles, a spring actuated saddle or seat and break mechanism connected with the handle bar of the main frame and adapted to be brought into engagement with the forward supporting wheel, substantially as and for the purposes set forth.

No. 43,317. Grain Polishing and Cleaning Apparatus. (Appareil pour nettoyer le grain.)

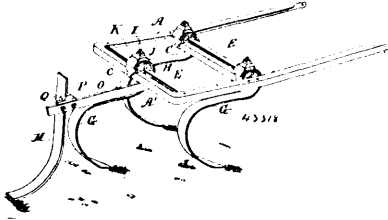


Hermann Schneider, Lissia, Prussia, 22nd June, 1893; 6 years.

Claim.—1st. The improved process of winnowing or polishing grain, substantially as herein described. 2nd. The improved apparatus for winnowing and polishing grain constructed of operating, substantially as described. 3rd. In apparatus fo

winnowing or polishing grain, the employment of a box, having one or more horizontal compartments, each divided by means of vertical transverse partitions, the opposed faces of which are inclined to one another so as to cause the grain to travel gradually through the passages formed by the partitions on a horizontal to and fro movement being imparted to the box. 4th. In apparatus for winnowing or polishing grain, the combination, with a suitably supported box, such as A, of driving mechanism comprising unequally weighted fly wheels, such as *b, h*, substantially as and for the purposes herein described.

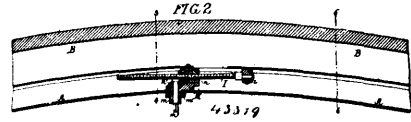
No. 43,318. Cultivator. (Cultivateur.)



The Massey Harris Company, assignee of Lyman Melvin Jones and James Wedlake, all of Toronto, Ontario, Canada, 22nd June, 1893; 6 years.

Claim.—1st. A cultivator, in which each section is composed of an integral piece of metal independently pivoted to the frame of the machine, substantially as and for the purpose specified. 2nd. A cultivator section made of metal and having metal cross bars set to form supports to carry the teeth of the cultivator and forming transverse openings to receive the fastenings for the teeth, substantially as and for the purpose specified. 3rd. A cultivator section made of metal and having metal cross bars set in pairs, the bars forming each pair being set apart to leave a transverse opening sufficiently wide to receive the fastenings used in securing the teeth and to permit their independent lateral adjustment, substantially as and for the purpose specified. 4th. A saddle forced to grip the cross bars and shaped to form a seat for the tooth, in combination with a washer butting against the bottom of the cross bars, and a bolt passing between the bars and arranged to clamp together the washer, tooth and saddle, substantially as and for the purpose specified. 5th. A saddle formed to grip the cross bars and shaped to form a seat for the tooth, in combination, with a washer having a projecting flange, to which the bar supporting the shoe is rigidly connected, and a bolt passing between the cross bars and arranged to clamp together the washer, tooth and saddle, substantially as specified. 6th. In a cultivator, a bar O, adapted to carry the shoe, in combination with a tooth fastening laterally adjustable on the cross bars of the section, substantially as and for the purpose specified. 7th. In a cultivator, a bar O, adapted to carry the shoe, in combination with a flanged washer and a tooth fastening laterally adjustable on the rear cross bars of the section, substantially as specified. 8th. In a cultivator, a bar O, adapted to carry a shoe M, in combination with a washer J, and flange N, to which the bar O, is rigidly attached, and a bolt I, passing between the cross bar E, and rear cross bar A', on section A, and arranged to clamp together the washers, the curved spring tooth, the helper saddle, substantially as specified. 9th. In a cultivator, a washer K, having a tit L, adapted to fit into an elongated slot formed in the spring tooth G, and helper H, in combination with a saddle F, and lugs *b*, formed thereon, and a bolt I, passing between the cross bars and arranged to clamp together on the cross bars, the washers, the tooth and the saddle, substantially as specified. 10th. In a cultivator, in combination with the cross bars of a section set in pairs and forming a transverse opening, a curved saddle seated on said cross bars and adjustably fastened thereto, and so shaped as to grip or hook at one end under the rear cross bar, the other end of the saddle having a lip to engage with the front cross bar so as to take the torsional strain off a curved spring tooth attached to said curved saddle, substantially as and for the purpose specified. 11th. In a cultivator, a rocking bar suitably journaled on the frame of the machine, and provided with a hand lever, arms fixed to the rocking bar and connected respectively to the section and to the pressure bar, substantially as and for the purpose specified. 12th. In a cultivator, a pressure bar fixed to a bar journaled on the frame, an arm fixed to the said last mentioned bar and having pivoted to it a slotted link, in combination with an arm fixed to the rocking bar, and connected with the slot in the said link, and of an arm likewise fixed to the rocking bar and connected to the pivoted section, substantially as and for the purpose specified. 13th. In a cultivator, a saddle adjustably attached to the cross bars of a section, in combination, with a washer having a tit formed thereon, and a curved spring tooth with an elongated slot in its seat to receive the tit, and the bolt attaching the tooth to the saddle, substantially as specified. 14th. The combination, with a cultivator, of a pivoted lever arranged to elevate and depress the teeth of the cultivator, substantially as and for the purpose specified.

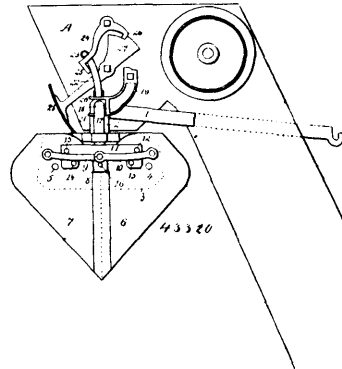
No. 43,319. Wheel Tire. (Bandage de roue.)



Frederick Schrader, Harry B. Hart, and Charles T. Harvey, all of Philadelphia, Pennsylvania, U.S.A., 22nd June, 1893; 6 years.

Claim.—1st. The combination of the felly of a wheel, a continuous U-shaped tire, the edges of which are seated in said felly, a clamping band located inside of but not filling the tire and pressing the edges of said tire down into the felly, and means for tightening said band, substantially as specified. 2nd. The combination of the U-shaped tire, the felly, an inflated tube confined by said tire, and an internal clamping device, between which and the felly the U-shaped tire is secured, substantially as set forth. 3rd. The combination of the tire, the felly, an inflated section, and a band gripping the tire and confining the inflated section of the felly to the medium of the tire, the band occupying a position between the inflated section and the felly, substantially as set forth. 4th. The combination of the felly of a wheel, a continuous U-shaped tire, the edges of which are seated in said felly, a clamping band located inside of but not filling the tire, and pressing the edges of said tire down into the felly, tightening gearing for said band, and an operating stem therefor at the back of the felly, whereby the band can be tightened without the tire, substantially as described. 5th. The combination of the felly having annular grooves therein, a U-shaped tire adapted to said grooves, and a clamping band adapted to bear upon the inner side of the tire and force it into the grooves, with mechanism for tightening said band, substantially as set forth. 6th. The combination of the annular grooved felly, a tire having edges adapted to said grooves, slots in the inner edges of the flanges of the tire, a band adapted to said slot, and mechanism for tightening said band, substantially as described. 7th. The combination of a felly, a tire adapted thereto, and a securing band for said tire, one end of said band having a nut and the other end having a screw adapted to said nut, so that on turning the nut on the screw the tire will be released from or secured to the felly, substantially as described. 8th. The combination of the felly, the tire securing band therefor, a screw on one end of said band, a bracket on its opposite end fixed to the felly, a nut carried by said bracket and adapted to the screw, gear teeth on said nut, and a spindle extending through the felly, carrying a wheel meshing with the teeth of the nut, so that on applying a wrench to said spindle the nut can be turned upon the spool, substantially as described.

No. 43,320. Grain Weigher. (Bascule à grain.)

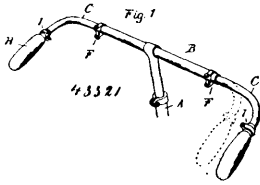


Charles J. Hartley, John R. Warren and Bradford R. Durfee, all of Decatur, Illinois, U.S.A., 22nd June, 1893; 6 years.

Claim.—1st. A bivalvular weighing receptacle, a toggle joint adapted to hold the valves closed when fully extended, and a trip for the toggle joint adapted to be actuated by the descent of the receptacle. 2nd. In weighing receptacles, the combination of the end plates sustained from the scale beam, the valves pivoted on the end plates, the toggle joint connecting the valves above the pivots thereof, the trip bar connecting with the toggle joint and the permanent stops adapted to arrest the motion of the trip bar, substantially as set forth. 3rd. In weighing receptacles, the combination of the end plates suspended from a scale beam, valves pivoted on the end plates, a toggle joint connecting the valves above the pivots thereof, a horizontal bar having pins engaging the arms of the toggle joint, a vertical bar extending upward from the horizontal bar and permanent stops adapted to arrest the motion of the vertical bar, substantially as set forth. 4th. In weighing receptacles, the combination of the end plates, the valves pivoted on the end plates and together constituting the entire receptacle, and the stop block on an end plate in position to prevent the valves from swing-

ing past their normal closing place, substantially as set forth. 5th. The combination, with the end 27, of the arm of the chute closing valve 28, of lever 24, having dog 26, and foot 25, and a trip bar adapted to release the dog by acting on the foot, substantially as set forth.

No. 43,321. Bicycle. (Bicycle.)



The Gendron Manufacturing Company, Toronto, Ontario, Canada, assignee of Peter Gendron, Toledo, Ohio, U.S.A., 22nd June, 1893; 6 years.

Claim.—1st. In a bicycle, a longitudinal adjustable handle bar, substantially as described. 2nd. In a bicycle, the combination of the steering post, a bar secured at the top thereof and adjustable end sections on said bar, substantially as described. 3rd. In a bicycle, the combination of the steering head, a bar secured at the top thereof, curved end sections adjustably connected to said bar, and grips at the ends of said curved sections, substantially as described. 4th. In a bicycle, the combination, with the steering post, of a handle bar secured thereto having its ends extending substantially rearwardly, and hand grips adjustably secured on the bends of the handle bar, substantially as described. 5th. In a bicycle, the combination, with the steering post, of a handle bar having adjustments whereby the hand grips may be adjusted to or from the rider, substantially as described. 6th. In a bicycle, the combination, with the steering post, of a handle bar consisting of a central section secured to the top of the post, of curved end sections adjustably secured to the ends of the central section, and hand grips adjustably secured to the ends of the end sections, substantially as described. 7th. In a bicycle, the combination of a handle bar, of a hand grip comprising a tubular section, a covering applied to one end, the free end of the tube split and a clamp to the split end, substantially as described. 8th. In a bicycle, a clamping ring comprising a substantially U-shaped body with inwardly extending lugs, forming an unyielding connection between the ring and the clamping lugs. 9th. In a bicycle, the combination of the steering post, a tubular head secured thereto extending on both sides, the post having its ends split, end sections slidingly engaging in the ends of the head and clamps applied thereto, substantially as described. 10th. In a bicycle, the combination of the steering post, a tubular head secured thereto extending on both sides, the head having its ends split, tubular sections slidingly engaging in the end of the head, bent to have their free ends extending substantially rearwardly, clamps on the solid ends of the head, handle grips comprising split tubes engaging the ends of the end sections, and clamps applied to the split ends of the handle grips, substantially as described.

No. 43,322. Machine for Cutting Bones.

(Machine pour couper les os.)

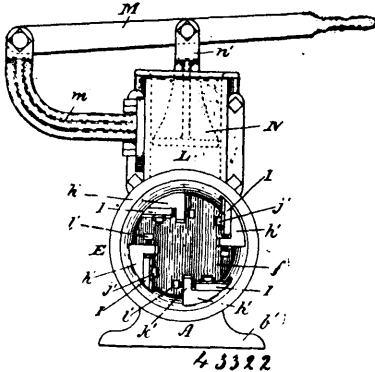
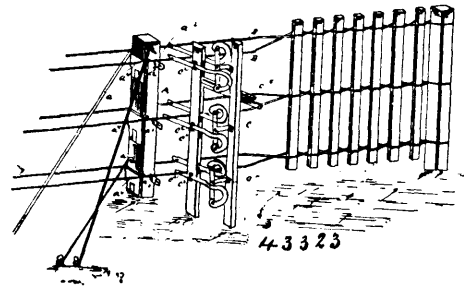


Fig. 1

James E. Wilson, Easton, Pennsylvania, U.S.A., 23rd June, 1893; 6 years.

Claim.—In a machine for cutting bones or other hard substances, a hollow rotatable cutting head journaled in an upright standard, and provided with a number of cutters held adjustably inside said head, an upright hopper secured to said standard and placed over said cutting head, a lever pivoted to an arm fixed to said hopper and pivoted also to a pressing head to operate in said hopper, all substantially as herein shown and described

No. 43,323. Fence Machine. (Machine à clôturer.)

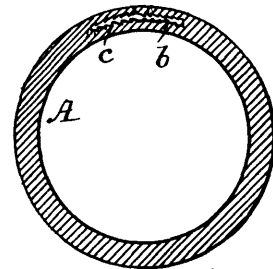


John H. Morris, Maquoketa, Iowa, U.S.A., 23rd June, 1893; 6 years.

Claim.—1st. A fence machine comprising a tension device and a wire crossing device, the latter consisting of a post, supports secured thereto, levers pivoted at their centre to the supports, wire crossing arms pivoted to the levers, and having their free ends provided with eyes, a bar pivotally connected to each of the levers, and a handle connected to the bar, substantially as described. 2nd. A fence machine comprising a tension device and a wire crossing device, the latter consisting of a post having guideways, supports secured to the posts, three armed levers pivoted centrally to the supports, wire crossing arms pivoted to two of the lever arms and working in the said guide ways, the free ends of the said arms being provided with eyes, a bar pivotally connected to each of the three lever arms, and a handle secured to the bar, substantially as described. 3rd. A fence machine comprising a tension device consisting of a post provided with revoluble studs, pins under which the wires are to be passed, and holders attached to the post and provided with notches for the reception of the wires, and a crossing device consisting of a post, reciprocating arms provided with eyes for receiving wires, levers to which the arms are attached, and a bar attached to the levers, whereby by the up and down movement of the bar a reciprocating movement is imparted to the arms, substantially as described.

No. 43,324. Leather Washer.

(Rondelle de cuir.)



Leon Moses Cabana, Buffalo, New York, U.S.A., 23rd June, 1893; 6 years.

Claim.—A washer consisting of a strip of leather bent into circular form with its ends abutting and connected by means of a barbed wire inserted into perforations in said ends and curved concentrically with the leather, the whole being compressed to embed the fibers of the leather into the barbs of the connecting wire, as set forth.

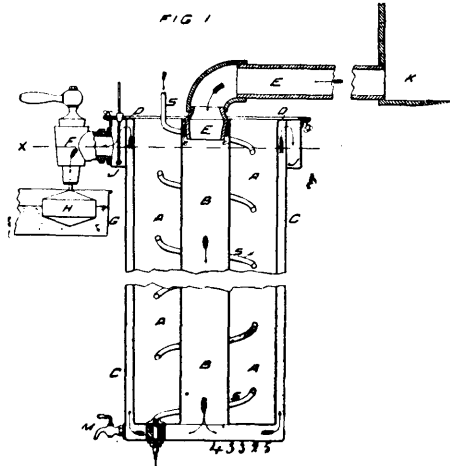
No. 43,325. Milk Heater and Cooler.

(Chaufeur et garde-lait.)

Joseph de Labroquerie Taché, St. Hyacinthe, Quebec, Canada, 23rd June, 1893; 6 years.

Claim.—1st. In a milk heater, the utilization, contrary to present practice, for heating the milk, of the space below the level of the outlet of the milk, substantially as and for the purpose hereinbefore set forth. 2nd. In milk heaters and coolers, the combination of the concentric vessels A, A and C, C, the latter as provided with the indentations a, a, and the outer compartments J, J, and faucet F, the former as provided with a tight conduit from the milk vat K, and elbow E, tightly fitted in the tube or tubes B, B, and as provided with a top plate D, extending over to the outer rim of compartment J, J, upon which it is tightly screwed, the whole so as to secure a hermetically closed connection for the passage of milk or cream from the vat K, through the apparatus to the inflow regulator

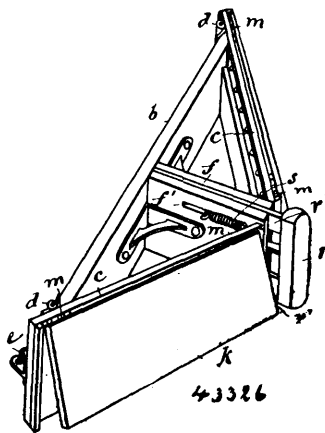
G, substantially as and for the purpose hereinbefore set forth. 3rd. In milk heaters and cooler, the combination of the outer compart-



ment J, J, and faucet F, with the indentations *a, a*, of vessel C, C, so as to secure a regular outflow of the heated or cooled fluid from all points of the apparatus, substantially as and for the purpose hereinbefore set forth.

No. 42,326. Car Fender.

(*Défense pour chars de rue.*)



Thomas Barnes, Lowell, Massachusetts, U. S. A., 23rd June, 1893; 6 years.

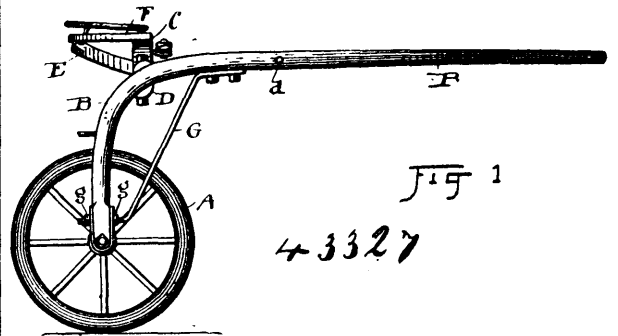
Claim.—1st. A life guard for street cars, comprising in its construction a hinged fender adapted to swing horizontally, and provided with a spring whereby it may be swung forward and laterally, a locking device whereby said fender may be confined in its retracted position against the stress of its operating spring, and an exposed trigger adapted to release said fender when struck by an object on the track, as set forth. 2nd. A life guard for street cars, comprising in its construction two fenders hinged at their outer ends to a support on the car, each adapted to swing horizontally outward from the longitudinal centre of the car platform, springs which normally exert an outward pressure on said fenders, locking devices whereby the fenders may be confined in their retracted position against the stress of the springs, and exposed triggers adapted to release said fenders, as set forth. 3rd. A life guard for street cars, comprising in its construction two fenders hinged at their outer ends to a support on the car, each adapted to swing horizontally outward from the longitudinal centre of the car platform, springs which normally exert an outward pressure on said fenders, locking devices whereby the fenders may be confined in their retracted position against the stress of the springs, exposed triggers adapted to release said fenders, and a spring supported buffer interposed between the inner ends of said fenders and movable longitudinally of the car, as set forth.

No. 43,327. Sulky. (*Désobligeante.*)

Henry H. Garrard, Cleveland, Ohio, U.S.A., 23rd June, 1893; 6 years.

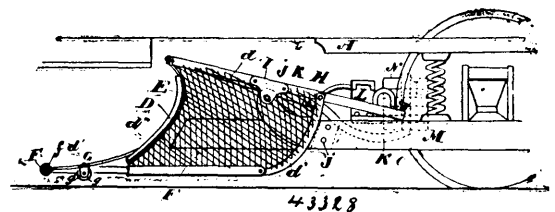
Claim.—1st. A sulky having the carrying wheels supported in the ends of the shafts, substantially as described. 2nd. In a sulky, a pair of shafts and a carrying wheel journalled in the end of each

shaft, substantially as described. 3rd. The shafts bent downward at their rear ends and bifurcated, and a wheel supported in each of



said bifurcated ends, substantially as described. 4th. In a sulky, the shafts thereof bent downward at their rear and bifurcated, and a brace for the lower end of each shaft to adjust the position thereof into alignment with the direction of travel, and wheels between said bifurcated ends, substantially as described. 5th. In a sulky, the shafts and a wheel separately supported in the end of each shaft, a truss connecting said shafts above said wheels, and strengthening braces between truss and shafts, substantially as described. 6th. The combination of the shafts and the wheels supported in the ends thereof, the truss connecting the shafts, the bow fixed to the truss and the shafts, and the seat on the truss and bow, substantially as described.

No. 43,328. Car Fender. (*Défense pour chars.*)



Arthur John Houghton, Toronto, Ontario, Canada, 23rd June, 1893; 6 years.

Claim.—1st. The combination, with the frame of the car, of a fender supported in front of the pilot frame and slightly overbalanced to the rear of its pivotal supports by the rear end as and for the purpose specified. 2nd. The combination, with the fender D, comprised of the top bar *d*, bottom bar *d*¹, and concave bars *d*¹¹, and netting following the contour and covering the said bars, of a bracket J, pivotally supporting the pins *j*, fender D, and the weight N, located on the rear end of the arm K, as and for the purpose specified. 3rd. The combination, with the fender D, comprised of the top bar *d*, bottom bar *d*¹, and concave bars *d*¹¹, and cushion F, and netting following the contour and covering the said bars, of a bracket J, pivotally supporting upon the pins *j*, the fender D, and the weight N, located on the rear end of the arm K, as and for the purpose specified. 4th. The combination, with the fender D, comprised of the top bar *d*, bottom bar *d*¹, and concave bars *d*¹¹, and netting following the contour and covering the said bars, of a bracket J, pivotally supporting upon the pins *j*, the fender D, the weight N, located on the rear end of the arm K, and the bar G, extending from side to side of the frame, and having journalled beneath it the rollers *g*, as and for the purpose specified. 5th. The combination, with the fender D, comprised of the top bars *d*, bottom bar *d*¹, and concave bars *d*¹¹, and netting following the contour and covering the said bars, of a bracket J, pivotally supporting upon the pins *j*, the fender D, and the adjusting screws M, located at the rear ends of the bar *d*, and designed to come in contact with the pilot frame C, as and for the purpose specified.

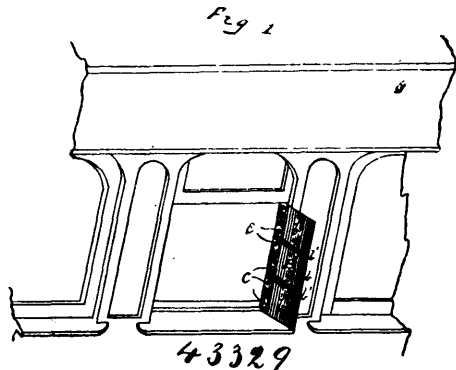
No. 43,329. Dust Guard.

(*Garde-poussière.*)

Edward Brooks Loomis, Memphis, Tennessee, U.S.A., 23rd June, 1893; 6 years.

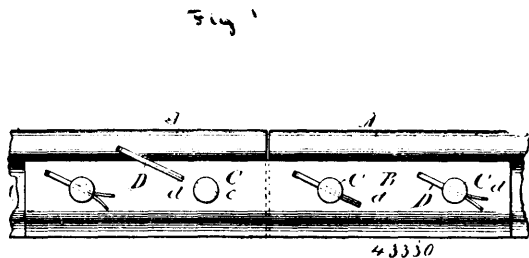
Claim.—1st. The combination, with a sectional folding stick, having buttons arranged upon each section, of a sectional folding deflector plate or wing, having a series of apertures adapted to receive the buttons, one of the sections being adapted to receive buttons upon opposite sides of the joint, substantially as shown and described. 2nd. The combination, with a sectional folding stick, of a sectional folding wing or plate, the wing folding at right angles to the direction the stick folds, whereby the stick and wing tend to

hold each other in position, substantially as shown and described. 3rd. The combination, with a sectionally folding stick having prongs



at its end, buttons upon its face, and the hook and pin at its joint, of the sectional folding deflector wing having a series of keyhole shaped apertures in each section, and the eyelets for protecting the apertures, substantially as shown and described.

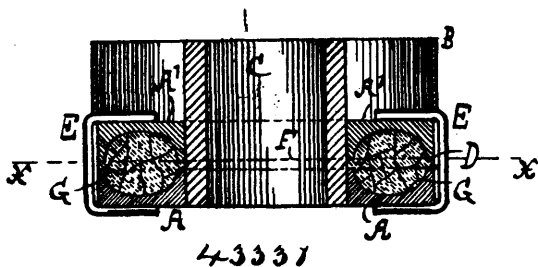
No. 43,330. Rail Joint Fastening.
(Attache pour eclisse de rail.)



Isaac Booth Futvoye, St. Johns, and John Mott, Waterloo, all in Quebec, Canada, 23rd June, 1893; 6 years.

Claim.—In a rail joint fastening, the combination with the rails and fish plates, of a number of slotted pins C, passing through said rails and plates, and the keys D, having their narrow ends d, split, substantially as set forth.

No. 43,331. Process of Treating Cork.
(Procédé pour le traitement du liège.)



John Thomas Smith, New York City, New York, U.S.A., 23rd June, 1893; 6 years.

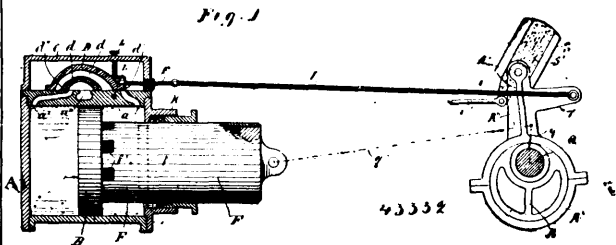
Claim.—1st. The process of treating cork, which consists in vaporizing the resinous matter contained therein by heating the cork in a mould or other suitable vessel under pressure, substantially as described. 2nd. The process of treating cork, which consists in moistening the cork, confining it in a mould or suitable vessel, and subjecting it to heat and pressure, substantially as described.

No. 43,332. Engine. (Machine à vapeur.)

Ellis J. Woolf, Minneapolis, Minnesota, U.S.A., 23rd June, 1893; 6 years.

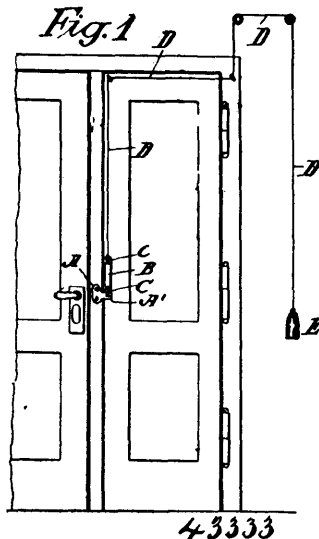
Claim.—1st. In a cylinder compound engine, a valve provided with a cavity for the passage of the steam from the high to the low pressure end of the cylinder, and having on one wall of the valve cavity a lap controlling the passage of the steam from the high to the low pressure end of the cylinder, for delaying the admission to the low pressure end, substantially as described. 2nd. In a single cylinder compound engine, a valve provided with a cavity for the

passage of the steam from the high to the low pressure end of the cylinder, and having on the inner wall of the valve cavity a lap



covering the lower pressure port for delaying admission to the low pressure end after the exhaust begins from the high pressure end into the valve cavity, substantially as described. 3rd. In a single cylinder compound engine, a piston rod recessed to constitute an extra clearance or steam space chamber at the high pressure end and provided with openings to the said chamber for the inlet and outlet of the steam, substantially as and for the purpose set forth. 4th. In a single cylinder compound engine, the combination with the cylinder having an excess of clearance on the high pressure end without increase of the piston area in the same, substantially as and for the purpose set forth, of a supplementary port from the steam chest for filling the said extra clearance or steam space chamber. 5th. In a single cylinder compound engine, the combination with a piston rod recessed to constitute an extra clearance or steam space chamber at the high pressure end and having openings to the said chamber, of a supplementary port from the steam chest for filling the said chamber, substantially as described. 6th. In a single cylinder compound engine, the combination with a piston rod recessed to provide an extra clearance or steam space chamber, of a supplementary port from the steam chest, and openings from said chamber through the wall of the piston rod located at a point on the same back of the piston head, and so as to be central with the said port when the crank is on the centre, and a packing ring seated in the bridge wall between the said port and the cylinder proper, substantially as and for the purpose set forth.

No. 43,333. Locking Device for Doors.
(Appareil de fermeture pour portes.)



Josef Cathrein, Innsbruck, Austria, 23rd June, 1893; 6 years.

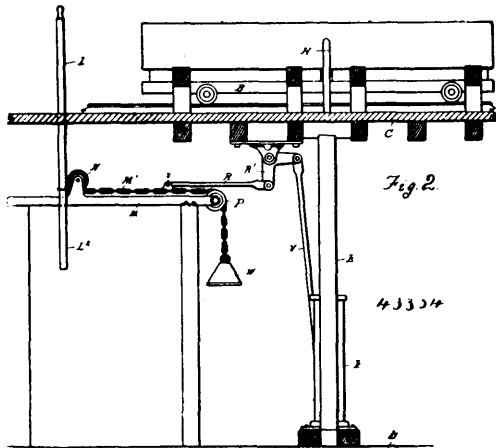
Claim.—In locking devices for doors, the combination, with a bolt keeper A, secured to the door or to the door post and provided with a lug A', overlapping the door post or door respectively, of a bolt C, connected by a cord D, with a counter weight E, the latter being so proportioned that when left to itself it permits the bolt to remain stationary in any position, but when moved it causes the bolt to move in front of the lug A', in order to lock or to unlock the door, substantially as and for the purpose described.

No. 43,334. Log Turner. (Tourné-billot.)

Herman O. Lange, Muskegon, Michigan, U.S.A., 23rd June, 1893; 6 years.

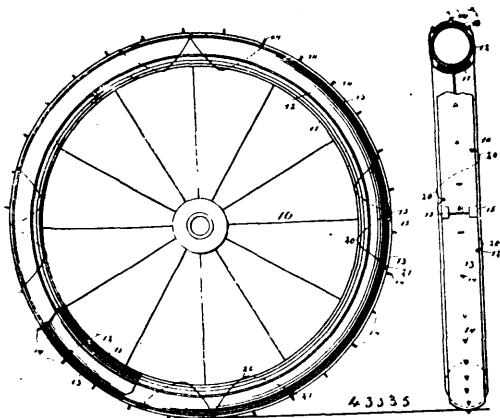
Claim.—1st. The combination of the lever L, having three pivotal points, constructed and operating, substantially as described, and means connected therewith for operating separately or synchronously the valves of two steam cylinders, as and for the purpose set

forth. 2nd. In a lever gear for operating the valves of a log turner, the combination of a lever passing through a pivotal slot and



bifurcated at its lower end, transverse bars operating as pivotal points for the lower ends of the arms, means connecting with the valve mechanism and with said levers, counterweights attached thereto, and stationary sheaves acting as abutments against which said weights are respectively adapted to draw said lever into its normal position, substantially as described. 3rd. In a lever gear for operating the valve, of a log turner, the combination of a lever bifurcated at its lower end and carrying thereon dependent links, transverse bars operating as pivotal points for each of said links, a chain connected with the valve mechanism and with said lever, a counterweight attached to said chain, and an abutment against which said weight is adapted to draw said lever into its normal position, and means for opening and closing the valves connected therewith, substantially as described. 4th. In a log turner, the combination of two upright stationary steam cylinders, a tooth bar having oppositely extended arms at its base, the end of one arm being pivoted to the piston rod of one of the steam cylinders, and the end of the other arm having an adjustable connection to the piston rod of the opposite cylinder, substantially as set forth. 5th. In a log turner, the combination of two upright stationary steam cylinders, a tooth bar having oppositely extended arms at its base, the end of one arm being pivoted to the piston rod of one of the steam cylinders, and the end of the other arm having an adjustable connection to the piston rod of the opposite cylinder, and guides controlling the reciprocating movement of the piston rods, substantially as set forth.

No. 43,335. Tire and Guard. (Bandages et gardes.)

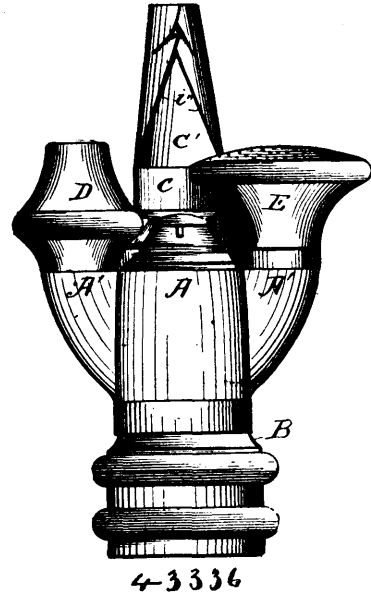


Arthur C. Gillette, Jersey City, New Jersey, U.S.A., 23rd June, 1893; 6 years.

Claim.—1st. The combination with the wheel and the pneumatic tire thereon, of the flexible tire and guard formed from a single piece of sheet metal provided with spurs upon its face, and the fastening lacing extending from the edges of the tire and guard around the felloe of the wheel, substantially as described. 2nd. As an improved article of manufacture, a detachable tire formed of a single piece of sheet metal, and provided on its face with projecting spurs at its ends with fastening devices, substantially as specified. 3rd. As an improved article of manufacture, a detachable guard and tire of

curved cross section, the tire having projecting spurs upon its face and having its ends provided with hooks, the hooks on one end being adapted to engage those on the opposite end, the whole formed from a single piece of sheet metal, substantially as specified. 4th. As an improved article of manufacture, a detachable tire and guard, formed of flexible material and provided upon its face with projecting spurs, and at its ends with fastening hooks, the fastening hooks being arranged at the outer edges of the tire, said ends being also formed respectively with a button and an apertured tongue intermediate of said hooks, substantially as specified.

No. 43,336. Nozzle. (Dec.)



John Bernard Thies, Dayton, Ohio, U.S.A., 24th June, 1893; 6 years.

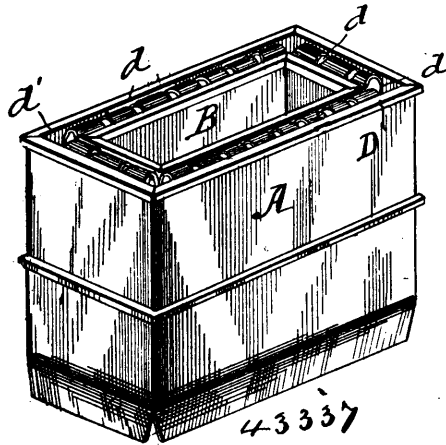
Claim.—1st. In a nozzle, the combination with the globe having a longitudinal opening, and arms projecting from the sides thereof with passage ways therethrough, of a stem adapted to fit the longitudinal opening in the globe, and be secured thereto as herein described, a longitudinal opening terminating near the upper end, and an orifice in the side of said stem, registering one with the other, the orifice in the side of said stem also registering with the passage ways in the arms of the globe, substantially as described. 2nd. The nozzle having a plurality of arms extending from the body thereof, and integral therewith, the nozzle and arms having longitudinal openings therein, in combination with the stem, affording a bearing for the nozzle to rotate upon, the stem being provided with an extension adapted to receive a washer and a screw by means of which it is secured within said nozzle, an orifice in the side, and a longitudinal passage way through the center of said stem registering with each other and with the passage ways in the arms, substantially as described. 3rd. In a nozzle, the combination with the globe having arms extending therefrom, and longitudinal openings in said globe and arms, a stem having a longitudinal orifice in the center, and an orifice in the side thereof, adapted to register with the passage ways in said arms, of the exit tips C, D, E, attachable to said arms, substantially as described. 4th. In a nozzle, the combination with the globe having arms extending therefrom, longitudinal openings in said globe and arms, a stem having a longitudinal orifice in the center, and an orifice in the side thereof, registering with the openings in said globe and arms as the globe is rotated on the stem, of the exit tips C, D and E, the latter having the thimble C', substantially as and for the purposes specified.

No. 43,337. Hot Air Pipe. (Tuyau à air chaud.)

August Miller, Burlington, Iowa, U.S.A., 24th June, 1893; 6 years.

Claim.—1st. A double walled pipe for the transmission of hot air, made in sections, each having at one end a perforated connection between the two walls, and each of said walls at the lower end being open, and also slitted or cut out at the corners, as and for the purpose set forth. 2nd. In combination, with the double walled hot air pipe made in sections, each section having bevelled edges, as described, the V-shaped and perforated strips in each section adapted to receive the said bevelled edges of the adjacent section, said bevelled acting by friction chiefly to hold the two sections

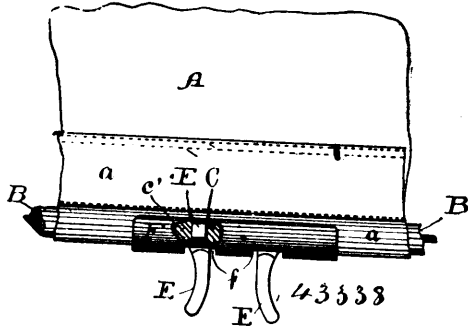
together. 3rd. A double walled hot air pipe, each section of which



has its lower ends slitted or cut out, and at its upper ends is provided between the walls with the perforated guide pieces, substantially as set forth.

No. 43,338. Spring Actuated Shade.

(*Store actionné par un ressort.*)



Edward Thomas Burrowes, Portland, Maine, U. S. A., 24th June, 1893; 6 years.

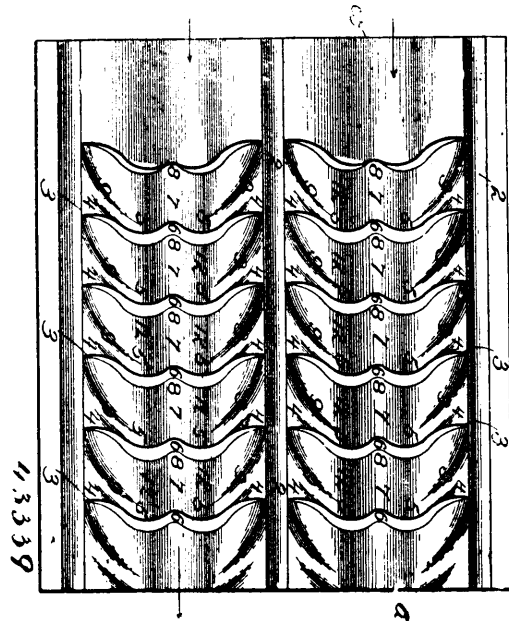
Claim—1st. In a spring actuated shade, the combination, with a tubular stick having a slot substantially midway of its length, longitudinally movable spring actuated rods in the bore of said stick, each of which is provided with a frictional holding device at its outer end and with a releasing pendant at its inner end, said pendants projecting through said slot in the stick, a cover for the stick having an opening registered with the slot in the stick, and a substantially cylindrical guard secured to the stick over the cover, the edges of said guard being of a less length than the stick and extending above the axis of the shade stick, the lower portion of said guard being provided with two slots, the outer ends of which substantially register with the outer end of the slot in the stick, and the portions of the guard between the slots being between the pendants of the rods and forming abutments therefor, substantially as set forth. 2nd. In a spring actuated shade, the combination, with a tubular stick, provided with a slot substantially midway of its length, longitudinally movable rods in the stick, each of which is provided with a frictional holding device at the outer end and at the inner end with a pendant which projects through the slot in the stick, a cover for the stick having a perforation registering with the slot therein, and a two part guard, of substantial cylindrical cross section, secured to the stick, at its upper edges, above the axis thereof, said portions of the guard overlapping one another at their lower edges and being provided with two slots, forming guideways for the pendants of the rods, the thickened portions of the guard between said slots being between said pendants and forming abutments therefor, substantially as set forth.

No. 43,339. Grain Screen. (*Tamis pour le grain.*)

The Closz and Howard Manufacturing Company, assignees of Charles Closz and Jacob Closz, all of Webster City, Iowa, U.S.A., 24th June, 1893; 6 years.

Claim—1st. A sheet metal platform screen formed with longitudinal rows of openings produced from approximately bow-shaped cuts, in transverse relation, the raised edges of the metal between each two cuts overhanging one of said openings in forwardly projecting lobes divided by an indentation or hollow, and formed with a convex surfaced ridge extending from the said indentation to the depressed edge of the next preceding cut, substantially as described.

2nd. A sheet metal platform screen formed with longitudinal rows of openings produced from approximately bow-shaped cuts in trans-



verse relation, the raised edges of the metal between each two cuts overhanging one of said openings in forwardly projecting lobes terminating in a higher intermediate receding scallop or indentation formed with a sloping convex ridge terminating in a point or lobe in the depressed edge of the next preceding cut, substantially as described. 3rd. A sheet platform screen having longitudinal rows of openings produced from approximately bow-shaped cuts in transverse relation, the forwardly standing edge of the metal between each of the two cuts being raised and having lobes forming a double transverse ridge standing toward the tail end of the screen overhanging said opening, substantially as described. 4th. A sheet metal screen having longitudinal rows of transverse openings produced from approximately bow-shaped cuts, the metal between each two cuts forming an elevated double lobed transverse ridge standing toward the tail end of the screen overhanging said openings and sloping backward to a lower point or lobe and standing inward and also sloping laterally from said forward lobes to give the greatest width of opening under said lobes, substantially as described. 5th. A sheet metal screen formed with ridges 2 dividing it into channels, intermediate longitudinal series of transverse bow-shaped cuts, the material between each two cuts being formed at its inner lower edge with a central point or lobe 8, and at its forward or outer edge with a central indentation or hollow 6 between two lobes 5, 5, and bent upwardly toward the front edge, corrugated to form a central longitudinal ridge 7 terminating in the central point or lobe 8, and formed with lateral oblique ridges 9 converging forwardly, and terminating in the two lobes, rearwardly sloping depressions 12, 12, between the central and diagonal ridges and forwardly sloping triangular depressions 4, 4, between the diagonal ridges and the longitudinal ridges 9 and 2, substantially as described.

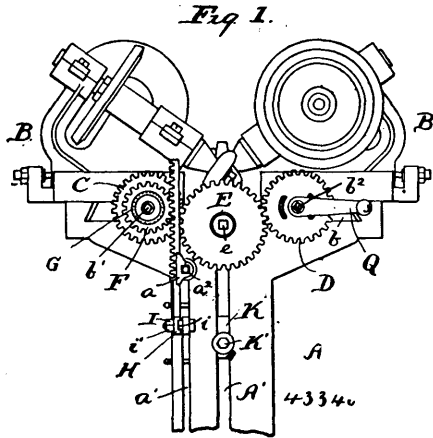
No. 43,340. Drill Milling Machine.

(*Machine pour couper les spirales dans les forets.*)

The Whitman and Barnes Manufacturing Company, assignees of Peter Hoenschel, all of Akron, Ohio, U.S.A., 24th June, 1893; 6 years.

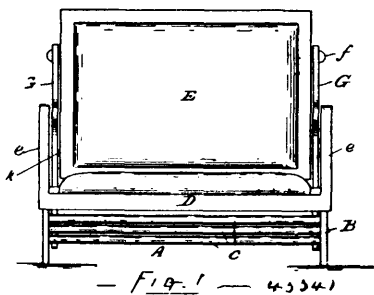
Claim—1st. In a drill milling machine, the combination with a supporting frame, cutter spindle carriers, and a work or blank holding spindle, of screws connected with the cutter spindle carriers and operatively connected with each other, a pinion loosely mounted on the shank of one of said screws, a rack adapted to operatively connect said spindle and work or blank holding spindle, and suitable mechanism for locking said pinion to the screw upon which it is mounted, substantially as set forth. 2nd. In a milling machine, the combination with a supporting frame, cutter spindle carriers, and a work or blank holding spindle, substantially as indicated, of screws connected with the cutter spindle carriers, gears mounted on the shanks of said screws and operatively connected with each other, a pinion loosely mounted on the shank of one of said screws adjacent the gear aforesaid, a rack adapted to operatively connect said pinion and work or blank holding spindle, and suitable mechanism for locking said pinion to the adjacent gear, substantially as and for the purpose set forth. 3rd. In a milling machine, the combination with a supporting frame, cutter spindle carriers, and a work or blank holding spindle, substantially as indicated, of screws connected with the cutter spindle carriers, gears mounted

on the shanks of said screws and operatively connected with each other, a pinion loosely mounted on the shank of one of said screws



adjacent the gear aforesaid, a rack adapted to operatively connect said pinion and work or blank holding spindle, and a nut mounted on the corresponding threaded portion of the shank of the respective screw forward of said pinion, and the opposing surfaces of said pinion and adjacent gear being such that upon tightening the nut aforesaid said pinion is brought into frictional contact with said gear and firmly held thereto, substantially as and for the purpose set forth. 4th. In a milling machine, the combination with a supporting frame and cutter spindle carriers, of screws connected with the cutter spindle carriers, gears mounted on the shanks of said screws and operatively connected with each other, one of said gears being loosely mounted on the respective screw, and the latter adjacent said gear being provided with a rigid disc, and suitable mechanism adapted to lock said gear to the disc, substantially as and for the purpose set forth. 5th. In a milling machine, the combination with a supporting frame and cutter spindle carriers, of screws connected with the cutter spindle carriers, gears mounted on the shanks of said screws and operatively connected with each other, one of said gears being loosely mounted on the respective screw and the latter adjacent, said gear being provided with a rigid disc, the disc being slotted, as at *n*, and the adjacent gear having bolts or securing devices, as at *O*, extending through said slots, the opposing surfaces of said gear and disc being such that upon the tightening of said bolts or securing devices, said gear is brought into frictional contact with said disc and firmly held thereto, substantially as and for the purpose set forth.

No. 43,341. Car Seat. (Banquette de chars.)

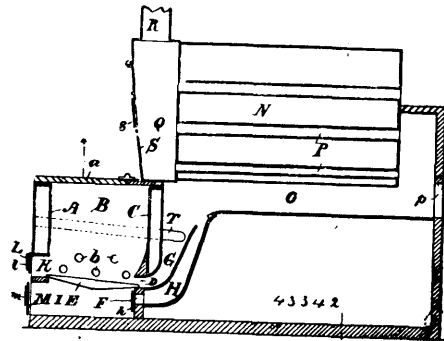


Edward Julien, Napoléon Tourangeau and Joseph Odilen Marceau, all of Montreal, Quebec, Canada, 24th June, 1893; 6 years.
Claim.—1st. In a railway car seat, a seat back supported by swinging supporting arms, pivotally supported at their lower ends in a suitable base, substantially as shown and described. 2nd. A railway car seat pivotally supported on swinging arms and provided with curved transverse slots, to receive studs projecting from the lower end corners of the seat back, substantially as shown and described. 3rd. In a car seat, the combination of a base having horizontal slots *i*, in its end brackets, the cushion frame *D* resting on said frame, the swinging supporting arms *G* connected by the bar *h*, and having the curved slots *j*, and the seat back pivoted to said swinging arms, all substantially as shown and described.

No. 43,342. Smoke Consuming Furnace. (Foyer fumivore.)

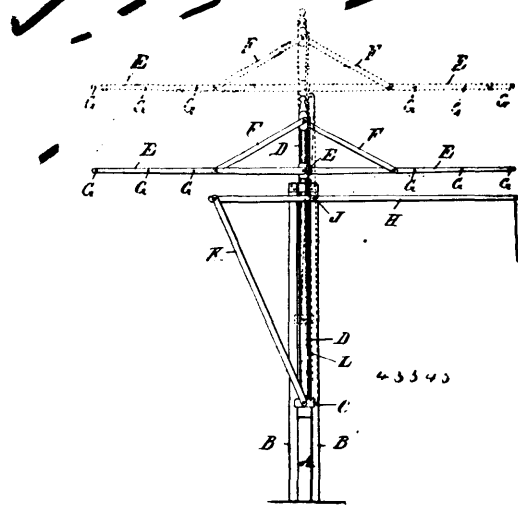
Jean Francois Chazotte, Gustave Des Trois Maisons and Antoine Roy, all of Montreal, Quebec, Canada, 24th June, 1893; 6 years.
Claim.—1st. A smoke consuming furnace of a fire box having a feed opening in its top closed by a door, a grate, apertures for admit-

ting air close to the upper surface of said grate, means for closing the said apertures, a flue leading from the said fire box, at the surface of the grate to the combustion chamber, an ash pit under the



said grate, means for regulating the air to said ash pit, a flue connecting the said ash pit to the said combustion chamber, and a damper for closing the said flue, substantially as set forth. 2nd. A smoke consuming furnace having the air admitted at the upper surface of the grate, a flue running from the fire box on a level with the upper surface of the grate, and means for regulating the supply of air to the said combustion chamber, substantially as set forth. 3rd. In a smoke consuming furnace the combination with the fire box, *A*, *B*, and *C*, having its feed door at the top, the grate *E*, apertures closed by dampers above the surface of the said grate, of the flues *G*, and *H*, the damper *h* in the said flue *H*, air tubes *T* and concave combustion chamber *O*, substantially as set forth.

No. 43,343. Clothes Dryer. (Séchoir à linge.)



William James Coulter, assignee of Albert F. Smith, all of Chesley, Ontario, Canada, 24th June, 1893; 12 years.

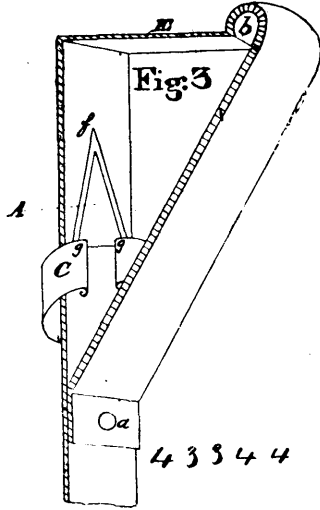
Claim.—The combination, with the post *A*, and side posts *B*, *B*¹, bolted thereto, of the intervening sliding block *C*, the spindle or rotating post *D*, supported by said block and provided with arms *E*, the lever *H*, fulcrumed to one of said side posts, and the rod *K*, pivotally connected to said lever and block, as set forth for the purpose described.

No. 43,344. Bracket. (Boulin d'échafaud.)

Samuel Raymond Scottron, Toronto, Ontario, Canada, 24th June, 1893; 12 years.

Claim.—1st. The triangular bracket *E*, figs. 1, 2 and 3, with the one side rounded or concaved to fit the leg *D*, and having a wedge shaped opening cut therein designed to receive the bent over edges of a band or ring which when passed upwardly along the sides of such opening shall bring the ends of the ring closer together, thus tightening its grip upon the leg *D*. 2nd. The triangular bracket *E*, with concaved side and wedge shaped opening, as described, together with the ring or band having the ends thereof slightly hooked so as

to engage the edges of the wedge shaped opening in such manner as



to secure the bracket at any desired point along the leg D, substantially as and for the purpose hereinbefore shown and set forth.

No. 43,345. Wrench. (Clé à écrou.)

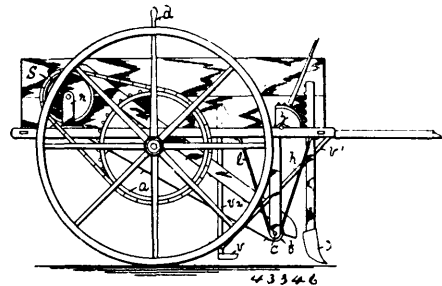
Emery B. Smith and Joseph W. Pickel, both of St. Louis, Missouri, U. S. A., 24th June, 1893; 6 years.

Claim.—1st. An improved wrench having a shank, a stationary jaw at one end of the same, a movable jaw adapted to reciprocate upon said shank, a movable jaw having an arm depending therefrom, said shank provided upon its front face with ratchet teeth, and said arm depending from said movable jaw, provided with projecting ratchet teeth upon its inner face, the engagement of said teeth adapted to lock the moving jaw 8, and the releasing of said moving jaw, substantially as set forth. 2nd. An improved wrench having a shank with fixed jaw connected thereto, a moving jaw adapted to reciprocate upon said shank, an arm depending from said moving jaw, ratchet teeth in the front face of said shank, ratchet teeth on the inner face of said depending arm, a ferrule having a spring secured in one inner side, to bear against the outer face of said depending arm, said spring normally keeping the ratchet teeth in engagement, and the compressing of said spring allowing the reversing of said moving jaw, substantially as set forth. 3rd. An improved wrench having a ferrule secured to the shank, a chamber formed by said ferrule, in front of said shank, a moving jaw, an arm depending from said moving jaw, said arm operative in said chamber, a spring secured near the lower end and upon the inner face of said ferrule opposite the

front face of said arm, said spring adapted to normally keep said arm against the shank, and said spring having its upper extremity bent outwardly at right angles with its length, to prevent the ingress of dirt into the chamber with said ferrule, substantially as set forth. 4th. An improved wrench having a ferrule secured to the shank, a moving jaw operative upon and a depending arm operative adjacent said shank, said depending arm adapted to reciprocate within a chamber formed by said ferrule, a hollow handle or casing adapted to fit over the lower end of said shank, said handle secured in position against said ferrule by a screw nut, and an interior chamber in said handle in which said depending arm is adapted to reciprocate, substantially as set forth. 5th. An improved wrench having a shank, substantially rectangular-shaped in cross section, a fixed jaw at right angles with said shank, serrated teeth in the front face of said shank, intermediate of its length, a movable jaw, an arm depending therefrom, said arm provided with a series of projecting teeth upon its inner face, adjacent its lower end said teeth upon said depending arm, adapted to engage in the series of serrations in the face of said shank, substantially as set forth. 6th. An improved wrench having a shank, substantially rectangular-shaped in cross section, a series of serrations in its front face, intermediate of its

length, a moving jaw operative upon said shank, an arm depending from said movable jaw, said arm operative adjacent the front face of said shank a series of projecting teeth upon the inner face of said depending arm, adjacent its lower end said projecting teeth adapted to engage in said serrations, substantially as set forth. 7th. An improved wrench having a shank 2, a moving jaw 6 a depending arm 9, therefrom, a ferrule 11 upon said shank 2, a transverse circular bore 22, counter bores 23 at each end thereof, said bores 22 and 23 running transversely through said shank 2, a push 24, consisting of a shank 25, adapted to operate in said bore 22, a button 26 upon one end of said shank 25, a flattened portion 27 at the opposite end of said shank, said portion 27, adapted to engage the inner face of said depending arm 9, and said arm 9, adapted to be released from its engagement with the shank 2, by pressing inwardly upon the button 26, thus compressing the spring 13, substantially as set forth. 8th. An improved wrench having a shank 2, a movable jaw 8, adapted to reciprocate upon said shank 2, a depending arm 9 therefrom, a ferrule 11 secured to said shank 2, said ferrule 11 having its side near its upper extremity thickened, a horizontal bore 34, a pushing device 28, operative therein, said device 28, consisting of a shank 30, and end portions 21 bent at right angles therewith, a button 32 upon the opposite end of said shank 30, a longitudinal cut out portion 33, in which said bent portion 31 of the shank 30 is adapted to operate, and the pushing in of the said button 32 adapted to compress the spring 13, and release the engagement of the teeth in the serrations, substantially as set forth. 9th. An improved wrench having a shank 2, a movable jaw 8, adapted to reciprocate upon said shank 2, an arm 9, depending from said jaw 8, a ferrule 11 secured to said shank 2, said ferrule having a thickened portion 29 upon its upper side, a transverse bore 35 through said portion 29, a counter bore 36, in the face of said ferrule, a wedge-shaped cut out longitudinal portion 37 in said shank 2, a shank 39 having a wedge 38 upon one end, and a button 40 upon the opposite end adapted to be operative in said wedge shaped portion 37, bore 35 and a counter bore 36, to compress the spring 13 and release the engagement of the arm 9, with the shank 2, substantially as set forth. 10th. An improved wrench having a shank 2, a fixed jaw 3 preferably formed therewith, a movable jaw 8, an arm 9 depending therefrom, a ferrule 11 secured to said shank 2, a spring 13 secured interior of said ferrule 11, and normally adapted to keep said arm 9 in contact with said shank 2, and portions of said arm 9, and movable jaw 8, roughened or milled to facilitate hand contact, substantially as set forth.

No. 43,346. Potato Planter. (Semoir à patates.)



Alvin George Gekeler, Frostburg, Maryland, U.S.A., 24th June, 1893; 6 years.

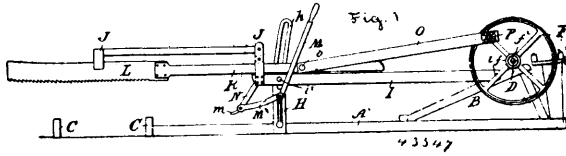
Claim.—1st. In a machine for planting potatoes, a cart, the frame, the box supported within the frame, the shovel, the seed carriers situated between the side bars of the frame and the box provided with dropping pockets, said carriers extending from about the level of the box to the level of the shovel, the V-shaped scrapers are secured to a frame, in line with and directly behind the carriers, said frame being movably affixed to front cross timber of cart frame, and is held obliquely by a center bar which passes from cross bar of frame through bottom of wagon box, substantially as set forth. 2nd. In a machine for planting potatoes, a cart, the frame, the box supported within the frame, the shovel, the seed carriers situated between the side bars of the frame and the box and provided with dropping pockets, said carriers consisting of endless belts passing obliquely down between said frame bars and box, and about wheels below and above the box and terminating near the ground behind the shovel whereby seed deposited in the pockets near the rear and top of the box is dropped directly from the pockets into the furrow, substantially as set forth.

No. 43,347. Saw Mill. (Scierie.)

Hébert Trefflé Chalifoux, St. Hyacinthe, Quebec, Canada, 24th June, 1893; 6 years.

Claim.—1st. In a combined circular and drag saw mill, the combination with the circular saw E, of a pulley F secured on the arbour of the said saw, having a recess f² formed in its hub, a pulley G having a projection g fitting into the said recess f², and a set screw g² securing the said pulley G to the said arbour, substantially as set forth. 2nd. In a combined circular and drag saw mill, the combination with a drag saw sliding in suitable guides, of the connecting

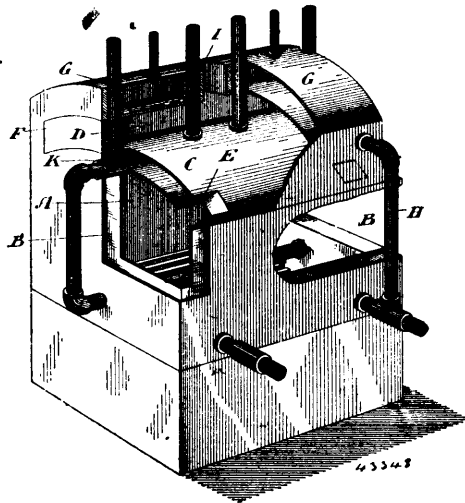
rod O pivoted to the arm of the said saw, the removable crank pin P secured to a pulley on the arbour of a circular saw, substantially



as set forth. 3rd. In a combined circular and drag saw mill, the combination with the frame A, A² of the standard H and slotted segmental arm h, the guide arm I carrying the drag saw L in suitable guides, the lever M and M², finger m and pin i², substantially as set forth.

No. 43,348. Hot Water Boiler.

(Chaudière de calorifère à eau.)



Thomas Brooks, Michael Reilly and William Rudkins, all of Peterborough, Ontario, Canada, 24th June, 1893; 6 years.

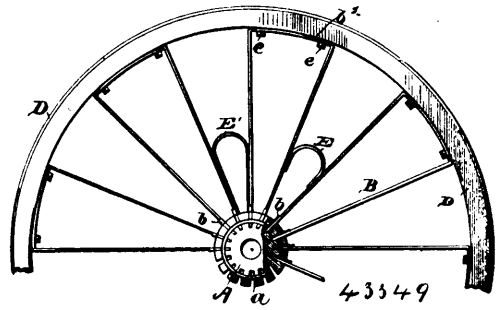
Claim.—1st. As an improved hot water boiler for heating purposes, a furnace with a shallow water space extending over it, a smoke box formed above the said water space and connected to the furnace by short flues of large diameter, and to the chimney or smoke stack by a large flue situated at a point remote from the furnace flues, substantially as and for the purpose specified. 2nd. As an improved hot water boiler for heating purposes, a furnace with a shallow water space extending over it, a smoke box formed above the said water space and connected to the furnace by short flues of large diameter to the chimney or smoke stack by a flue extending through the water space above the smoke box, which is connected to the water space around the furnace, substantially as and for the purpose specified. 3rd. As an improved hot water boiler for heating purposes, a furnace having a water space formed around it in combination with a pipe connected at one end to the water space near the grate bars of the furnace, thence through the lower portion of the furnace through a hole through the opposite side of the furnace, thence upwardly to a point level with the water space on the crown of the furnace, substantially as and for the purpose specified.

No. 43,349. Vehicle Wheel. (Roue de voiture.)

Waldo W. Valentine, Washington, Columbia, U.S.A., June 24th, 1893; 6 years.

Claim.—1st. In a wheel, a hub composed of wood or other fibrous material and provided with elongated depressions about its circumference to form spoke seats, which have their bottoms closed, and spokes having their inner ends formed to correspond with the elongated spoke seats and seated on the bottom thereof and secured therein, substantially as set forth. 2nd. In a wheel, the combination, with the hub having a series of elongated depressions about its circumference to form spoke seats, which extend lengthwise of the hub, of cross heads fitted and held in the said elongated spoke seats, and metal spokes secured to the said cross heads, substantially as described. 3rd. In a wheel, spokes connected in pairs by an arch, and having laterally extended cross heads at their inner ends, and means for securing the same to the hub, substantially in the manner set forth. 4th. In a wheel, the combination, with the rim and the hub, of spokes connected at their outer ends in pairs by an arch, the radius of the arch being shorter than the radius of the inner periphery of the rim, and adapted to tension the spokes radially

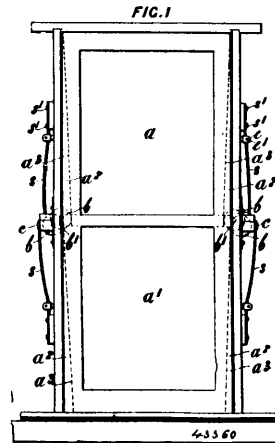
and means for securing the arch to the rim, substantially as set forth. 5th. In a wheel, the combination of a wooden or other fibrous hub, straight metal spokes having their outer ends provided with rim seats and their inner ends seated independently of each other on the



hub and secured thereto, and a wooden rim having its inner face seated on the outer ends of the spokes and secured thereto, substantially as and for the purpose described. 6th. In a wheel, the combination of a wooden or other fibrous hub, straight flat metal spokes set edgewise to the plane of the wheel and flexible in the direction of the circumference thereof and having their inner ends seated on and secured to the hub, a wooden rim having its inner face seated on the outer ends of the spokes and secured thereto, and a tension device to strain the spokes in the direction of their length, substantially as described, for the purpose specified. 7th. In a wheel, straight flat metal spokes inflexible in the direction of their larger diameter arranged in radial lines and connected in pairs at their outer ends by an arch, substantially as and for the purpose set forth. 8th. In a wheel having flat metal spokes flexible in the direction of their smaller diameter, spring braces or supports interposed between the spokes, and means for attaching same thereto, substantially as shown. 9th. In a wheel, the combination with the rim having seats d and f, of twin spokes having the arch b² fitted in the seat d, and the truss brace F between a pair of twin spokes and fitted in the seat f and held to the rim by suitable fastenings, substantially as and for the purpose described.

No. 43,350. Window Sash Hanger.

(Coulisse de croiséc.)



Alexander James, Wellington, New Zealand, 26th June, 1893; 6 years.

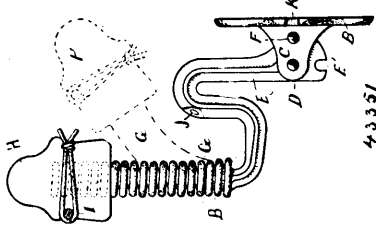
Claim.—1st. In an apparatus for hanging window sashes and the like, the inclined planes a², combined with rollers b, pressed by springs s, as and for the purpose substantially as set forth. 2nd. In an apparatus for hanging window sashes and the like, the inclined planes a², rollers b, and springs s, combined with clips c, and regulating screws c², as and for the purpose substantially as set forth. 3rd. In an apparatus for hanging window sashes and the like, the inclined planes a², rollers b, having slides c, working in sockets d, by means of springs s, as and for the purpose substantially as set forth. 4th. The apparatus for hanging window sashes and the like, substantially as described herein and illustrated.

No. 43,351. Insulator Bracket. (Support pour isoloirs.)

William N. Eichberg, Racine, Wisconsin, U.S.A., 26th June, 1893; 6 years.

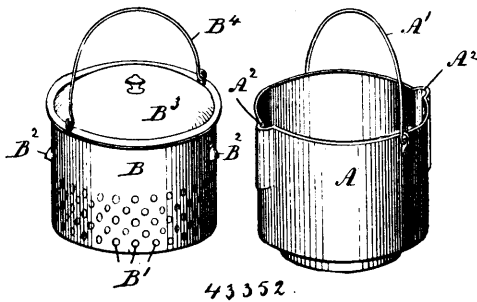
Claim.—1st. An electric insulator holder, comprising a bracket and means for attaching said bracket to some object, said bracket arm having a spring attached thereto, and an electric insulator

attached to said spring, said insulator adapted to support wire electric conductors by being connected to said bracket by means of



said spring, for the purpose stated. 2nd. An insulator holder, comprising a base B, adapted to be attached to a support, a bracket arm E, adjustably attached to said base, and a spring having one end attached to said bracket, the other end of said spring having an electric insulator attached thereto, said insulator adapted to support wire electric conductors, the several parts serving in combination, for the purpose described. 3rd. An insulator holder, comprising a stationary base, a bracket arm adjustably attached to said base, substantially as described, said bracket arm having one end of a spring attached thereto, to the other end of which spring an electric insulator is attached, arms J and J, projecting from bracket arm E, said arms J and J, disposed longitudinally substantially parallel with the electric conductor attached to said insulator, said arms serving for the purpose stated. 4th. The hereinbefore described insulator holder, having a bracket arm E, of substantially an S shape, said bracket having laterally projecting arms J and J, serving in combination with the described S shape of said bracket arm, for the purpose substantially as described.

No. 43,352. Culinary Pot. (Ustensile de cuisine.)

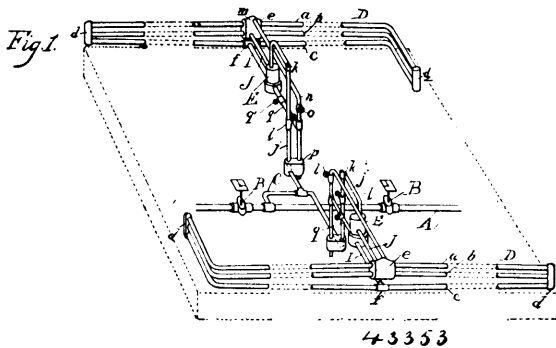


Hodevah Henry Erlam, Digby, Nova Scotia, Canada, 26th June, 1893; 6 years.

Claim.—The combination of the imperforated pot A, having box grooves or channels A¹, on the inside vertically and diametrically opposite and the inner pot B, having perforations B¹, and lugs B², coinciding with said grooves, as and for the purposes set forth.

No. 43,353. Car Heating Apparatus.

(Appareil pour chauffer les chars.)

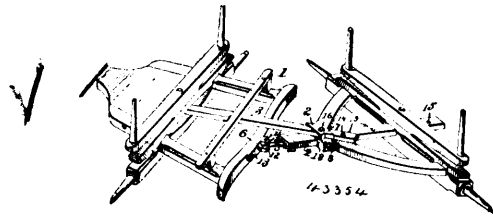


The Consolidated Car Heating Company, assignee of James Finney McElroy, all of Albany, New York, U. S. A., 26th June, 1893; 6 years.

Claim.—1st. In a car heating apparatus, the combination of a radiator having its highest and lowest points at substantially the same point in the car, an overflow pipe from the highest point, a drain pipe at the lowest point, a water chamber communicating with the radiator at two points, and a steam supply pipe discharging into the water chamber, substantially as described. 2nd. In a car heating apparatus, the combination of a radiator inclined to have

its highest and lowest points at substantially the middle, and a heater at such middle point, a steam pipe discharging in said heater, and an outgoing and return connection from said heater to the radiator, an overflow pipe from the highest point of said radiator, a drain pipe extending from the heater and a valve to control said drain pipe, substantially as described.

No. 43,354. Running Gear. (Train de voiture.)

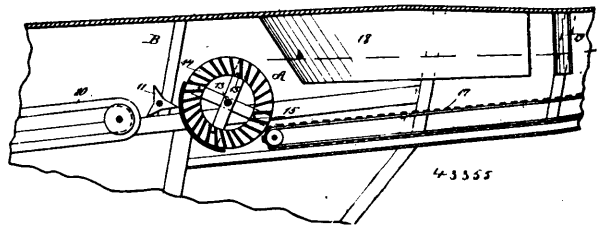


William McKee, Petersville, N. B., Canada, and David McKee, Barron, Wisconsin, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. The combination, with a running gear, of the keeper secured to the upper faces of the front ends of the rear hounds, and consisting of a casing approximately X-shaped in horizontal section, depending flanges and securing flanges arranged at the ends of the casing, the upper reach bar having its front end pivotally connected with the front axle and having its rear end arranged in said keeper, a transverse plate secured to the lower faces of the rear hounds, the lower reach bar arranged between the rear hounds, and interposed between the transverse plate and the keeper, a bolt passing through the keeper and the upper and lower reach bars, a plate 13 connected with the front hounds and provided with rearwardly extending ears, and a pin having its front end pivoted between said ears and having its rear portion arranged in the longitudinal bore of the lower reach bar, substantially as described. 2nd. The combination, with a running gear having a lower reach bar hingedly connected with the front hounds and provided with an upper reach bar, of the approximately X-shaped keeper secured to the upper faces of the rear hounds, and receiving the rear end of the upper reach bar, and provided with parallel depending flanges arranged between the front ends of the rear hounds and forming a way for the lower reach bar, substantially as described.

No. 43,355. Separator for Grain Threshers.

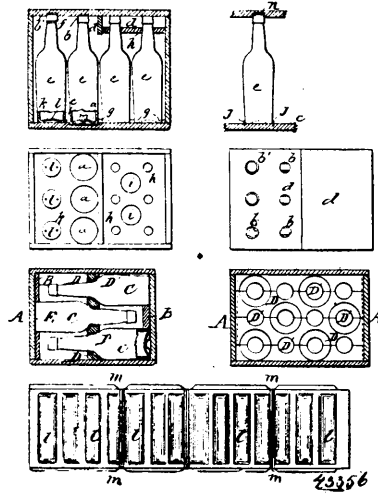
(Séparateur pour machine à battre.)



Richard Keeling, Walhalla, North Dakota, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. In a separating attachment for threshing machines, a divide board of V-shape arranged in the rear of a separating device, the divide board being attached to the deck of the attachment and extending downwardly and inwardly therefrom, as and for the purpose set forth. 2nd. In a separating attachment for threshing machines, the combination, with the carrier belt adapted to convey the screw from the threshing cylinder, of a combined blower and beater held to revolve at the rear of the carrier, and a divide board of V-shape located at the rear of the combined blower and beater, the reduced end of the divide board facing the blower, as and for the purpose set forth. 3rd. In a separating attachment for threshing machines, the combination, with a casing and a V-shaped divide board secured to the deck of the casing, of a cylinder journaled in front of the contracted end of the divide board, said cylinder consisting of heads and a series of blades carried by the heads, whereby the cylinder acts as a fan and as a beater, a picker located in front of the fan or beater, and a belt leading from the threshing cylinder of the machine to the picker, as and for the purpose set forth. 4th. In a separating attachment for threshing machines, a separating cylinder, the same comprising open heads and blades connecting the heads, the spaces between the blades being open and in communication with the interior of the cylinder, the blades being arranged also diagonally or tangentially upon the heads, as and for the purpose specified. 5th. In a separating attachment for threshing machines, the combination, with a blower, of a divide board located in the rear of the blower and essentially V-shaped, the constructed end facing the blower, and a casing surrounding the blower and divide board, a space being provided between the sides of the casing and the sides of the divide board, as and for the purpose specified.

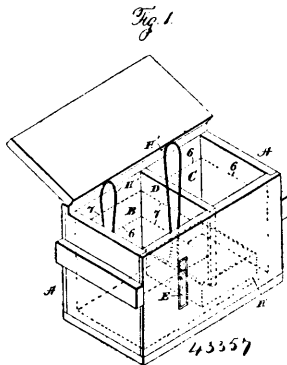
No. 43,356. Packing Case. (*Caisse d'emballage.*)



Henry James Stuart, Egremont, Cambuslang, Lanark, John Shaw Turnbull, William P. Lowrie, Robert Barr and George Scott, all in Glasgow, Scotland, 26th June, 1893; 6 years.

Claim.—1st. A packing case for bottles and the like having the sides, top and bottom recessed or hollowed out, or the sides only to receive the bodies, necks and bottoms of the bottles, or the rounds of the bodies only and having or not a removable interior diaphragm fitting over the shoulders of the bottles to maintain them at proper distances apart, substantially as described with reference to the appended drawing. 2nd. A case for packing bottles having the sides recessed or hollowed to receive the round of the bottles, and a removable built up mid partition to receive the shoulders of the bottles and hold them in place, substantially as described.

No. 43,357. Apparatus for Hardening Steel. (*Appareil pour durcir l'acier.*)



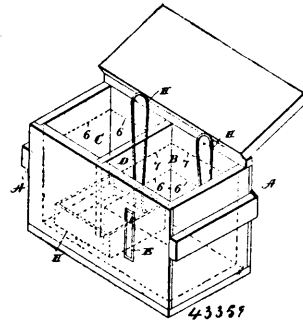
George Frederick Simonds, Vitchburg, Massachusetts, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. In an apparatus for use in hardening or tempering steel and steel articles, comprising a box having a partition that does not extend to the bottom of said box, thereby dividing the box into two compartments that communicate below said partition, a glazed opening or indicator in the front side of one of said compartments for the purpose of showing the line of demarcation between the brine and oil or other cooling media in that compartment, and means, substantially as described, for conveying the articles to be tempered from the quick cooling medium in one compartment into the slower cooling medium in the other compartment without intermediate exposure, substantially as specified. 2nd. An apparatus for use in hardening or tempering steel and steel articles, comprising a box having two compartments that communicate below a separating partition, a glazed opening or indicator in the front side of one of said compartments for the purpose of showing the line of demarcation between the brine and oil or other cooling media in that compartment, a travelling apron or conveyer common to both

of said compartments and adapted to be moved from one to the other through the communicating opening, and sprocket gearing, arranged substantially as described, for causing said apron to travel through and from the compartment containing a quick cooling medium under the partition, then up and through the compartment containing the slower cooling medium and thence downward under the box and upward to again enter and pass through the first named compartment, substantially as set forth.

No. 43,358. Process of Hardening Steel.

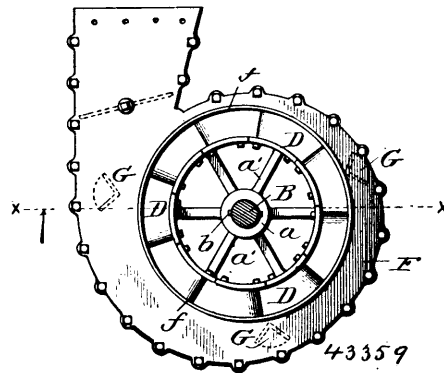
(*Procédé pour durcir l'acier.*)



George Frederick Simonds, Fitchburg, Massachusetts, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. The process of hardening steel, consisting in plunging the heated article into brine and transferring it from the brine directly into oil without intermediate exposure, substantially as set forth. 2nd. The process of hardening articles of steel, consisting in plunging said articles into a compartment filled with a quick cooling medium and transferring them while still submerged therein into an adjacent communicating compartment and into a medium of less specific gravity floating upon the medium common to both compartments and having slower cooling properties, substantially as described.

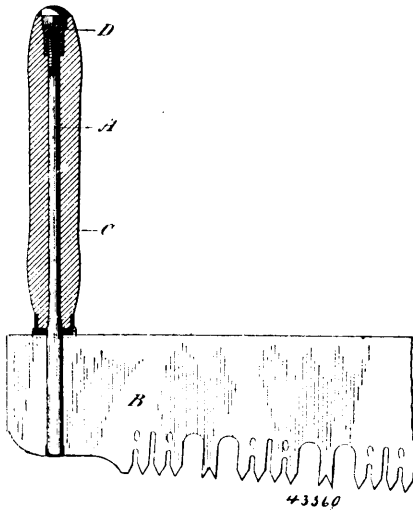
No. 43,359. Water Wheel. (*Roue d'eau.*)



Charles W. Nicholson, Assanwosick, Virginia, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. A water wheel, comprising a broad imperforate rim and diamond shaped deflectors arranged around the rim midway between the edges thereof and having spaces between the opposing ends of the said deflectors and buckets about equal in height to the height of the deflectors, provided in pairs and obliquely disposed on opposite sides of the said deflectors, the inner ends of the buckets being separated and coming opposite the spaces between the ends of the said deflectors, substantially as specified. 2nd. A water wheel, comprising a broad imperforate rim and diamond shaped deflectors, and buckets secured to the said rim, the buckets being arranged in pairs, and a bucket of each pair having integrally formed therewith a longitudinal half of the said deflector, substantially as and for the purpose described. 3rd. A water wheel, comprising a broad imperforate rim and buckets, and diamond shaped deflectors secured to the said rim, the buckets being in pairs and having a flange or foot and a longitudinal half of the deflector formed therewith, substantially as described for the purpose specified.

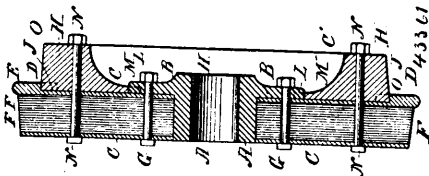
No. 43,360. Saw Handle. (Manche de scie.)



Eugene Robert Burns, Toronto, Ontario, Canada, 26th June, 1893; 6 years.

Claim.—1st. The spindle of a cross-cut saw handle, extending through the wooden portion of the handle and having a nutscrewed on to its end and butting against the outer end of the handle, substantially as and for the purpose specified.

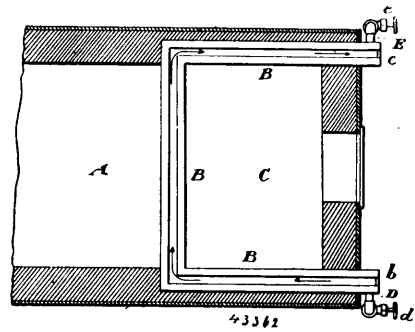
No. 43,361. Car Wheel. (Roue de char.)



Josiah Augustus Webber, Brooklyn, New York, U.S.A., 26th June, 1893; 18 years.

Claim.—1st. A car wheel comprising essentially a metallic hub, a non-metallic centre portion, side plates, one of them provided with a flange for the wheel, and an annular casting or friction plate fastened upon one of said plates, substantially as set forth. 2nd. A car wheel comprising essentially a metallic hub, a non-metallic centre portion, side plates, one of them provided with a flange for the wheel, an annular casting or friction plate and bolts passing through said annular casting, through said side plates and through the non-metallic centre portion, and means whereby the body of the wheel may be fastened to the hub, substantially as set forth. 3rd. A car wheel comprising essentially a metallic hub, a non-metallic centre portion, side plates, one of them provided with a flange for the wheel, an annular casting or friction plate, means to fasten the friction plates to the side of the wheel and interlocking parts between the wheel and the annular casting or friction plate, substantially as set forth. 4th. A car wheel comprising essentially a metallic hub, a non-metallic centre portion, side plates, one of them provided with a flange for the wheel, an annular casting or friction plate, means to fasten the friction plate to the side of the wheel and interlocking parts between the wheel and the hub and the annular casting or friction plate, substantially as set forth. 5th. A car wheel comprising essentially a metallic hub, a flange upon the hub, side plates, one of them provided with a flange, non-metallic discs extending from the hub to the tread of the wheel, an annular casting or friction plate, bolts passing through the flange of the hub, the side plates and non-metallic discs and other bolts which pass through the annular casting or friction plate, the side plates and the non-metallic discs, substantially as set forth. 6th. A car wheel comprising essentially a metallic hub, a flange upon the hub, side plates, one of them provided with a flange, non-metallic discs extending from the hub to the tread of the wheel, an annular casting or friction plate, bolts passing through the flange of the hub, the side plates and non-metallic discs and other bolts which pass through the annular casting or friction plate, the side plates and the non-metallic discs, and interlocking surfaces between the annular brake ring and the body of the wheel, substantially as set forth.

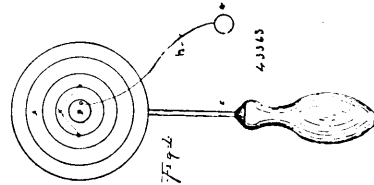
No. 43,362. Waterback for Furnaces. (Cloison d'eau pour chaudières.)



James Little, Johnstown, Pennsylvania, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. A furnace waterback which is arranged horizontally about the inside of the fire box, made open at top and having the ends 6 c extended through the front of the fire box, the said ends being provided with the cocks d c, whereby the degree of heat imparted to the water may be regulated as set forth.

No. 43,363. Toy Target. (Cible-jouet.)



John M. Edson, Towanda, Pennsylvania, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. In a toy target the combination with a handle provided with an open circular head, of a beaded hub detachably secured to said handle a target plate secured on said hub between its head and head of the handle, a rod sliding in said hub and through said plate and provided on its head with a bull's eye, a coiled spring on said rod, an elastic cord attached to the bull's eye, and a ball attached to the said cord, substantially as described. 2nd. A target composed of the combination of a handle, a hub, a target plate, a percussion chamber, said plate and chamber detachably secured to said handle, and said chamber provided with an open slitted head to receive a pellet, a firing pin sliding in said hub and provided with a coil spring to retract it from the said chamber, an elastic cord attached to said pin, and a ball secured to said cord, substantially as described. 3rd. In a target, the target plate in combination with a spring actuated rod, a sleeve through which said rod is moved and on which said plate is mounted, and a handle to carry the target having an open circular end to be placed over said sleeve, substantially as described. 4th. In a target a sleeve in combination with a firing chamber, a target plate and a handle all detachably secured to said sleeve, and a firing pin extending through said sleeve and into said chamber, substantially as described. 5th. In a target in combination with a central hub, a target plate, percussion chamber, a firing pin and a handle all supported on said hub, substantially as described. 6th. As an article of commerce the herein described toy target made up of a handle, a target plate, a firing pin and chamber, an elastic cord and a ball combined and arranged, substantially as set forth.

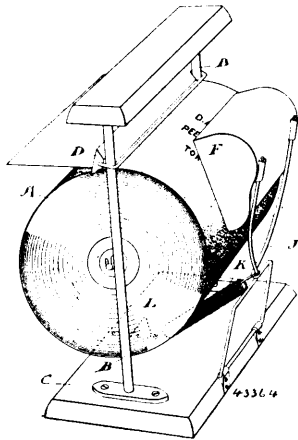
No. 43,364. Printing Device.

(Machine à imprimer.)

Frederick Cudney and Frank W. Stanton, both of Toronto, Ontario, Canada, 26th June, 1893; 6 years.

Claim.—1st. A roller having annular grooves cut in it, in combination with type arranged in the said grooves, substantially as and for the purpose specified. 2nd. A roller journalled in a case and having annular grooves cut in it to contain type which project through an opening in the case, in combination with an inking roller journalled in the said case and held in contact with the face of the type, substantially as and for the purpose specified. 3rd. A roller journalled in a case and having annular grooves cut in it to contain type which project through an opening in the case, an ink-

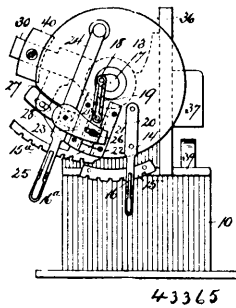
ing roller journalled in the said case and held in contact with the face of the type, in combination with a frame designed to support



the case and actuated by a spring arranged to hold the type against the face of a roll of paper, substantially as and for the purpose specified.

No. 43,365. Power Hammer. (Marteau.)

Fig. 1.



The Laird and Sweeney Manufacturing Company, assignees of James Bernard Sweeney and Robert Wallace Laird, all of Johnsbury, Vermont, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. A power hammer comprising a disc arranged vertically and made adjustable around its axis, a plate held and adapted to reciprocate in a slideway arranged on a face of said disc, a driving shaft arranged at a right angle to the disc, a helve pivoted on the latter and operating vertically, a hammer fixed on the outer end of such helve, and means for connecting the sliding plate with the helve, and also with the driving shaft, as shown and described. 2nd. In a power hammer apparatus, the combination, of a pivoted helve, a segment attached to one end of the latter and having a spring connection with it, a reciprocating hammer and guides therefor, and straps attached to, the segment and hammer at their respective ends, all operating as shown and described. 3rd. In a power hammer apparatus, the combination with the driving shaft, the hammer and its helve pivoted on the driving shaft, the disc also pivoted on the shaft and thus made adjustable around it, of the lever 24, pivoted to said disc and adapted for adjustment for the purpose stated, means for locking said lever and means for connecting it with the hammer helve, substantially as shown and described, whereby the throw of the hammer may be regulated as specified. 4th. The combination, with the main frame, having a suitable driving shaft therein, the tilting helve mounted on the shaft, and the hammer connected with and operated by the helve, of the disc mounted loosely on the shaft, the slide plate mounted on the lever and having a crank connection with the driving shaft, a lever pivoted on the disc, and a two armed crank journalled in the lever and whose journal is arranged in a slot in the disc, one arm of the crank being secured to the slide plate and the opposite arm connected with the rear end of the tilting helve, substantially as described. 5th. Hand operating mechanism for power hammers, consisting of levers 47 and 48 securely fastened to the top ends of revolving uprights, said levers being connected together by a bar or link 49, one of the levers 47 having an extension adapted to come against a flat spring 50 secured to the frame of the machine, which spring returns said levers and uprights to their normal position, catches 42 for engaging with racks 41 which hold the head in any desired position, and a lever secured to one of said uprights for operating said mechanism, substantially as shown and described.

6th. Foot power operating mechanism for power hammers consisting of a treadle pivotally secured to the base of the machine, a rod or bar connecting said treadle with a bell crank lever, the free end of said lever being adapted to engage with an arm secured on the upright 47, all substantially as and for the purpose set forth.

No. 43,366. Clothes Line. (Corde à linge.)

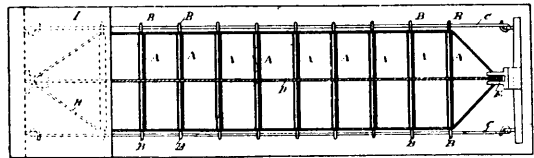


Fig. 2. 43366

Joseph Grignon, Montreal, Quebec, Canada, 26th June, 1893; 6 years.

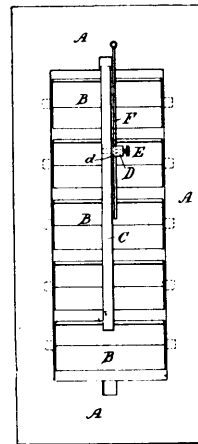
Claim.—A clothes line composed of the hangers A having staples or eyes B, the wires or rods C, ropes D and H, pulleys E and F, and covering I, substantially as described and for the purposes set forth.

No. 43,367. Lock for Blind Slats. (Arrêt pour barreaux de stores.)

(Arrêt pour barreaux de stores.)

Fig. 1

Fig. 2.

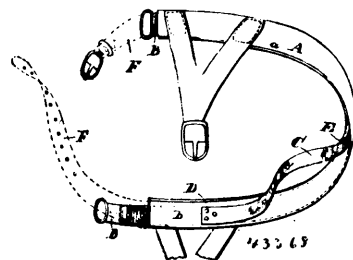


43367

Vincent Paul Edmond Martinette, Quebec City, Quebec, Canada, 26th June, 1893; 6 years.

Claim.—In a device for locking the slats of blinds, the combination, with the frame and connecting rod of a blind, of a binding post secured to the said connecting rod, a rod secured to the frame, the said rod passing through an aperture in said binding post, and a screw holding the said rod in the said aperture, substantially as set forth.

No 43,368. Bridle. (Bride.)

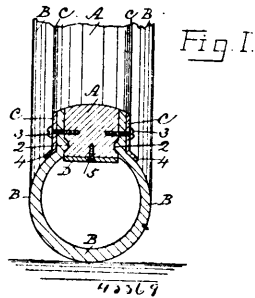


William Friedrich, Ponchatoula, Louisiana, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. In a bitless bridle, substantially as specified, the combination, with the nose band and springs fixedly connected at their rear ends to the inside of the nose band, and having their forward ends passed loosely through slots in the inner section or pieces of the nose band, of the straps B, arranged loosely within the nose band and having their forward ends connected to the forward end of the springs, substantially as and for the purpose set forth. 2nd. In a bitless bridle, substantially as specified, the combination, with the nose band, the springs fixedly connected at their rear ends to the inside of the nose band and having their forward ends

passed loosely through slots in the inner section or piece of the nose band, and the straps B, arranged loosely within the nose band and having their forward ends connected to the forward end of the springs, of the straps F, adapted to secure the nose band in position, substantially as and for the purpose set forth.

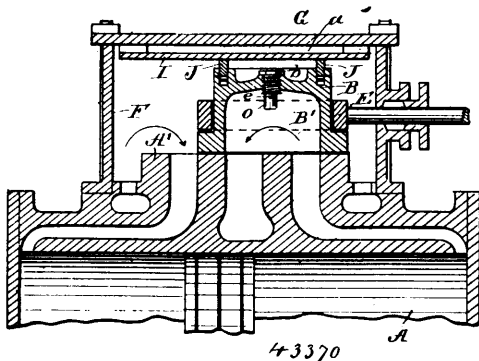
No. 43,369. Tyre for Cycle Wheels.
(*Bandage pour roues de cycles.*)



Octave Lagarie, Hamilton, Ontario, Canada, 26th June, 1893; 6 years.

Claim.—1st. In a cycle or buggy wheel, the combination of the wood rim A, having a circular groove on each side, the pneumatic rubber tire B, having convex projections on its inner sides to conform to said grooves at 2, to fit therein, the circular or segmental side plates C, having outer side flanges 4, and screws 3, and the metallic tire D, with screws 5, substantially as and for the purpose hereinbefore set forth. 2nd. In a light vehicle wheel, the combination of the rim A, having grooves, the circular or segmental side plates C, having flared side flanges 4, and the metallic band D, substantially as and for the purpose hereinbefore set forth. 3rd. In a light vehicle, the combination of the rim A, having grooves, and the metallic band or tire D, substantially as and for the purpose hereinbefore set forth.

No. 43,370. Valve. (*Soupepe.*)

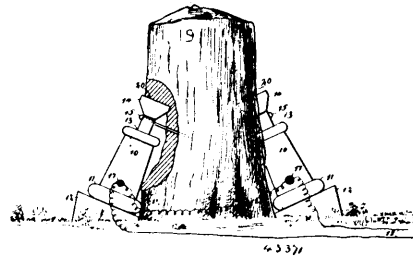


Daniel Kiley, Brooklyn, New York, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. A relief valve for balanced slide valves, comprising a cylindrical case radially perforated at its lower end and adapted to screw into the slide valve from above, a disc valve within the cylindrical case, and a hollow plug adjustable within the case and forming a seat for the disc valve, substantially as described. 2nd. A relief valve for balanced slide valve, comprising an externally and internally threaded cylindrical case, a radial projection at the top of the case having a plurality of sides, radial perforations in the case at the lower end, a disc valve within the case, and a screw plug longitudinally perforated and adapted to engage the internal thread of the valve case, substantially as described. 3rd. A relief valve for balanced slide valves having its body externally and internally threaded, a polygonal radial formation at its upper end, radial spaced holes in the lower end of the case, a disc valve adapted to slide in the case at its lower end, and having a depending projection fitting a diametrically reduced recess in said case below its radial holes, and an axially perforated screw plug fitting within the valve case and adjustable from its upper end, having its lower end located above and near the radial holes in the case, substantially as described. 4th. The combination with a slide valve having a threaded hole in its top wall, of a relief valve comprising a cylindrical case threaded externally and internally, and furnished with a hexagonal formation on its upper end, a series of radial perforations in the lower end of the case above a recess in the case, a disc valve having a depending projection loosely fitting said recess, and an axially apertured screw plug externally threaded and true on its lower end, forming a seat for the disc valve, and a squared socket

formation in the axial aperture of the plug, substantially as described.

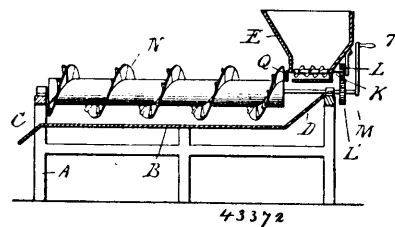
No. 43,371. Stump Extractor. (*Arrache-souche.*)



George Hayden Francis and John Thomas Edwards, Kamloops Yale, B. C., Canada, 26th June, 1893; 6 years.

Claim.—1st. The herein described method of pulling stumps and trees, which consists in confining an explosive in a suitable chamber such as a mortar, inserting a projectile such as a plunger in the chamber, connecting the plunger with the roots of the stumps or trees to be pulled, and then discharging the explosive. 2nd. The herein described method of pulling stumps and trees, which consists in confining an explosive in a suitable chamber such as a mortar, inserting a projectile such as a plunger, in the chamber above the explosive, arranging the chamber upon a firm base, with the outer end of the projectile beneath a portion of the body to be raised, and then discharging the explosive. 3rd. The herein described method of pulling stumps and trees, which consists in making recesses in the body to be pulled or lifted, confining an explosive in closed chambers such as mortars, inserting projectiles such as plungers in the mortars, arranging the mortars opposite the sides of the body to be raised, and with the outer ends of the projectiles in the recesses of the body, and then discharging the explosive. 4th. An apparatus of the kind described, comprising a mortar having a suitable discharging device such as a cap, and a plunger shaped to fit the bore of the mortar and having its outer end adapted to project from the mortar so as to contact with the body to be raised, substantially as described. 5th. The herein described apparatus, comprising a mortar, and a plunger shaped to fit the bore of the mortar, and adapted to protrude from the end of the mortar, the plunger having an enlarged head, and a transverse perforation to receive a spike, substantially as described. 6th. An apparatus for pulling stumps and trees, comprising a mortar, an inclined abutment block for the same, and a projectile or plunger shaped to fit the bore of the mortar, the plunger having a head at its outer end to abut with the body to be raised, substantially as described.

No. 43,372. Machine for Mixing Mortar.
(*Machine pour mêler le mortier.*)



John Skinner, Flint, Michigan, U.S.A., 26th June, 1893; 6 years.

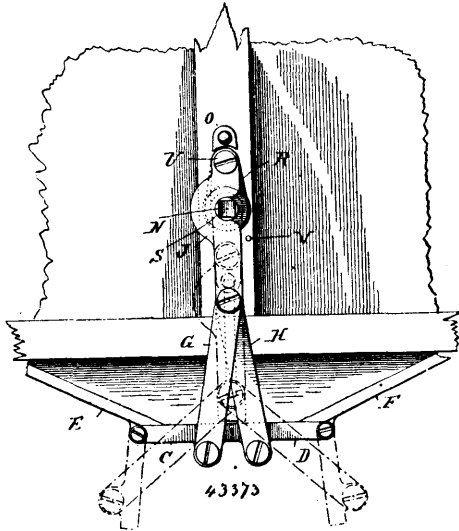
Claim.—1st. The combination with the trough B, the hoppers H, and I, the inclined apron D beneath said hoppers, the troughs O, O', the conveyers J therein, the conveyer N, shaft M, the crank handle T and the gear wheels L, L', substantially as described. 2nd. In a cement mixer, the combination with the frame A, the trough B, the conveyer N therein, the shaft M for driving said conveyer, the hoppers H and I, the troughs O, O', at the base of said hoppers, the conveyers J in said troughs, the valves Q, the shafts Q' and adjusting levers R, substantially as and for the purpose described. 3rd. In a cement mixing machine, the combination with the feed mechanism, of a conveyer consisting of the trough, the shaft, the conveyer wings consisting of the blades a having the flange b and pin c, substantially as described.

No. 43,373. Dumping Car. (*Char à bascule.*)

William McMahon, Rahway, New Jersey, U.S.A., 26th June, 1893; 6 years.

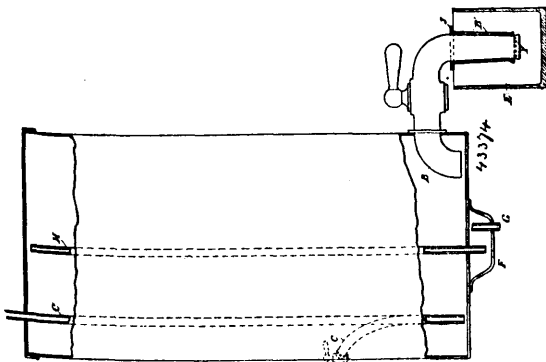
Claim.—1st. In a dumping car, the combination of the pivoted gates or bottom, a crank lever hung in the car body, a main or rock shaft to which said lever is attached, with rigid connections between said gates and crank lever, all the parts being so arranged that the

said gates, when in their closed position, will be supported directly upon the rock shaft, as set forth. 2nd. In a dumping car, the com-



bination of the pivoted gates or bottom, a crank lever pivotally hung in the car body, with pitman arm swivelled to the lever and connected to the gates, the said pitman arm having an inset shoulder which rests upon the pivot of the lever when the gates are in a closed position and which forms a support for the gates, as set forth. 3rd. In a dumping car, the combination of the pivoted gates or bottom, a crank lever pivotally hung from the body of the car, a pitman swivelled to the lever, connections from said pitman to the swinging gates, the said pitman having an inset which registers with the pivot of the lever when the gates are closed, substantially as and for the purpose set forth. 4th. In a dumping car, the combination of the horizontal gates hinged at the terminals of the fixed hopper and having their meeting and separating edges located centrally as regards the car body, eccentrics affixed to the sides of the car and connected by a shaft extending through the body of the car and arranged to support and lock the gates in their horizontal and closed position by means of rigid connecting rods, with said rods, all the parts being so arranged that upon the turning of the eccentrics the gates will be simultaneously thrust down and open, as shown and described. 5th. In a dumping car, the combination of the pivoted gates or bottom, the eccentric hung on the car body, and rigid connections between said gates and eccentric, all the parts being so arranged as that the gates will be locked in their closed position when the eccentric is on its dead center, as set forth. 6th. In a dumping car, the combination of the pivoted gates or bottom, with an eccentric, rods connecting said gates and eccentric and means for guiding the rods, and regulating their movement, substantially as set forth.

No. 43,374. Liquid Discharger.
(*Déchargeur pour liquides.*)

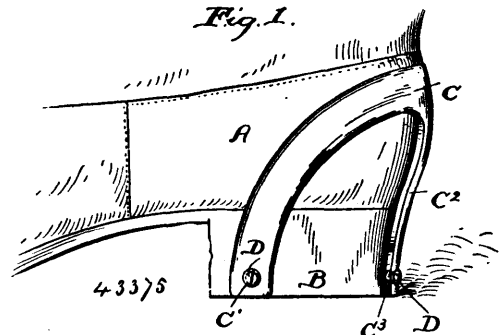


Theodore Albert Schlueler and Adolph Henry Schlueler, Oakland, California, U.S.A., 26th June, 1893, 6 years.

Claim.—1st. A means for discharging liquid from hermetically sealed containing vessels and automatically arresting the flow therefrom, consisting of an air inlet pipe extending into the vessel and opening into its lower part, a discharge pipe, the outer end of which is below the level of the bottom of the air inlet pipe, whereby the flow of liquid produces a vacuum within

the containing vessel and draws air in through the air pipe, said flow being arrested whenever the liquid in the vessel to be filled reaches a level with the lower end of the air inlet tube in the containing vessel, substantially as herein described. 2nd. A means for discharging liquid from hermetically sealed vessels and automatically arresting the flow therefrom, consisting of an air inlet pipe opening into the vessel with its open inner end at a point within the tank near the bottom, a liquid discharge pipe, the outer end of which is below the level of the inner end of the inlet pipe, whereby a vacuum is produced by the flow of liquid which draws the air through the air pipe into the tank, a receiver into which the liquid is discharged, the upper edge of which surrounding the discharge pipe is above the level of the lower end of the air pipe, whereby the flow of liquid ceases when its level in the receiver is approximately that of the bottom of the air pipe, substantially as herein described. 3rd. A means for preventing the discharge of the liquid from the outer arm of the discharge pipe, consisting of the closed bottom with perforations either with or without an exterior sleeve adapted to cover said perforations, substantially as described. 4th. A means for relieving the containing vessel from variations of internal pressure due to expansion or contraction, consisting of the liquid containing trap F, the pipe H leading therefrom to the upper interior part of the case, and the discharge pipe G, said pipes having their open ends within the trap with relation to each other, substantially as described.

No. 43,375. Plate for Boots, &c.
(*Plaques pour chausseurs, etc.*)



John Alexander Whiltier, Busto, British Columbia, 26th June, 1893; 6 years.

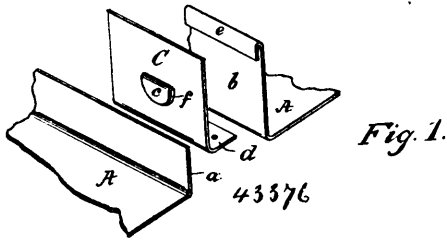
Claim.—1st. As an article of manufacture, a plate for protecting the quarter or counter and heel of a boot or shoe, the same being bent into such shape as to be capable of straddling the quarter or counter, and extend over or across the sides of the heel, substantially as and for the purpose set forth. 2nd. As an article of manufacture, a plate for protecting the quarter or counter and the heel of a boot or shoe, the same being bent into such shape as to be capable of straddling the quarter or counter, and adapted to extend across or approximately across the sides of the heel, and cover the seam at the central portion of the quarter or counter, substantially as set forth. 3rd. As an article of manufacture, a plate for protecting the quarter or counter and the heel of a boot or shoe, the same being bent into such shape as to be capable of straddling the quarter or counter, adapted to extend across or approximately across the sides of the heel, and cover the seam at the central portion of the quarter or counter, and provided with holes for the reception or passage of screws or securing devices for securing the plate to the heel of the boot or shoe, substantially as set forth. 4th. The combination, with the quarter or counter and heel of a boot or shoe, of a protecting plate straddling the counter and extending across or approximately across the sides of the heel, and suitable means for removably securing said protecting plate to the heel, substantially as set forth. 5th. The combination, with a boot or shoe, of a plate straddling the quarter or counter of the boot or shoe, extending across or approximately across the sides of the heel and having an arm or member adapted to cover the seam at the central portion of the quarter or counter above the heel, and suitable means for removably securing said plate to the heel, substantially as set forth.

No. 43,376. Sheet Metal Roofing.
(*Toiture de feuille métallique.*)

Alvin C. Kameberg, Canton, Ohio, U.S.A., 26th June, 1893; 6 years.

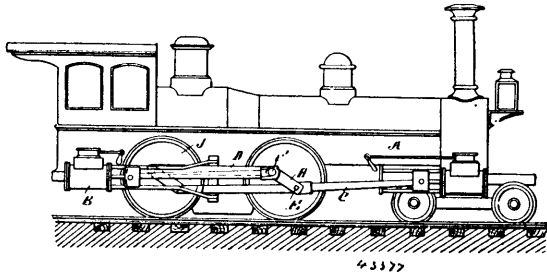
Claim.—1st. The combination of the sheets A, having flanges a and b, the latter provided with the hem c, the anchor C, having a tongue c, formed from and integral at its top portion with said anchor, the downwardly projected free end to embrace the flange a, substantially as described and for the purpose set forth. 2nd. The combination of the sheets A, having flanges a and b, the anchor C,

having a tongue formed therefrom and integral therewith at its top,



and the flange *b*, and anchor *C*, folded over the flange *a*, and the tongue *c*, indented into the flange *a*, substantially as described and for the purpose set forth.

No. 43,377. Driving Gear for Locomotive Engines.
(*Mécanisme conducteur pour machines de locomotives.*)

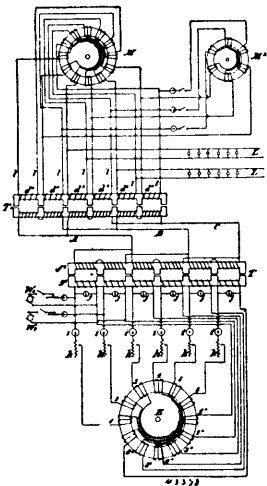


David S. Patterson, North Platte, Nebraska, U.S.A., 26th June, 1893; 6 years.

Claim.—1st. A driving gear for locomotive engines, comprising a front cylinder, a rear cylinder, the cylinders being located on opposite sides of the drive wheel, and wrist pins located on opposite sides of the centre of the drive wheel, and connected with the pitmen of the said engine cylinders, substantially as shown and described. 2nd. In a driving gear for locomotive engines, the combination, with a drive wheel having its web in a transverse aperture, of a block secured in said transverse aperture, a wrist pin formed or secured on the said block, a crank arm attached to the outer end of the wrist pin and extending diametrically of the drive wheel, a second wrist pin projecting from the free end of the said crank arm, and pitmen connected with the said wrist pins and forming parts of the engine cylinders arranged on opposite sides of the said drive wheel, substantially as shown and described. 3rd. A drive gear for locomotive engines, comprising a front cylinder, a rear cylinder, the said cylinders being located on opposite sides of the drive wheels, wrist pins located on opposite sides of the centre of each drive wheel, a crank arm for connecting the two wrist pins of one drive wheel with each other, cylinder pitmen connected with the wrist pins of one drive wheel, and parallel pitmen connecting the wrist pins of one drive wheel with the wrist pins of the other drive wheel, substantially as shown and described.

No. 43,378. Transmissions of Alternating Currents of different Phases. (*Transmission des courants alternatifs de différentes phases.*)

Michael Von Dolivo Dobrowsky, Berlin, Prussia, 26th June, 1893; 6 years.



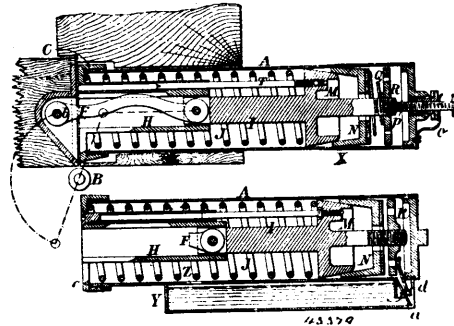
Claim.—1st. The combination, of a dynamo electric machine, having a plurality of coils or sets of coils, in which independent alternating currents of relatively differing phases are induced, a transformer provided with as many primary coils as there are induction coils or sets of coils in the dynamo, and with a smaller number of secondary coils, separate connection between the induction coils of the dynamo and the primary transformer coils, and mains connected to the secondary coils of the transformer, substantially as described. 2nd. The combination, of a dynamo electric machine, having a plurality of coils or sets of coils, in which independent alternating currents of relatively differing phases are induced, a transformer provided

with as many primary coils as there are induction coils, or sets of coils

in the dynamo, and with a smaller number of secondary coils, separate connections between the induction coils of the dynamo, and the primary transformer coils, and mains connected to the secondary coils of the transformer, the said mains forming together and with the said secondary coils concatenated circuits, substantially as specified. 3rd. The combination, of a number of electric mains, a source of electricity connected to one end of the said mains and producing therein alternating currents of relatively differing phases, a transformer having primary coils connected to the other end of the mains, and secondary coils exceeding in number that of the former, and circuits connected to the secondary coils, substantially as set forth. 4th. The combination, of a number of electric mains, a source of electricity connected to one end of the said mains and producing therein alternating currents of relatively differing phases, a transformer having primary coils connected to the other end of the mains and secondary coils exceeding in number that of the former, and circuits connected to the secondary coils, the said mains forming together, and with the primary transformer coils concatenated circuits, substantially as set forth. 5th. The combination, of a dynamo electro machine, having a plurality of coils or sets of coils in which independent alternating currents of relatively differing phases are induced, a transformer provided with as many primary coils as there are induction coils or sets of coils in the dynamo, and with a smaller number of secondary coils separate connections between the induction coils, of the dynamo and the primary transformer coils, regulating apparatuses and volt metres combined with said connection, and mains connected to the secondary coils of the transformer, substantially as described. 6th. The combination, of an electric transformer, having a plurality of primary coils and a lower number of secondary coils, another electric transformer, having a number of primary coils equal to that of the secondary coils of the first transformer and a greater number of secondary coils, two systems of circuits connected respectively to the primary coils of the first and the secondary coils of the second transformer, and electric connections between the secondary coils of the first and the primary coils of the second transformer, substantially as described.

No. 43,379. Check Spring for Doors.

(*Déclie pour ressorts de porte.*)



Samuel Sealy Allin, Bedford Park, Chiswick County, London, England, 26th June, 1893; 6 years.

Claim.—1st. In a check spring for a door, a piston consisting of two parts, the one part operating as a wedge to expend the other part when the piston moves in the one direction and allowing the other part to contract when the piston moves in the other direction, substantially as and for the purpose herein set forth. 2nd. In combination, with the spring barrel and its adjuncts, a liquid reservoir and valve arranged and operating, substantially as described with reference to figures 3 and 4. 3rd. The guide tube for the piston rod, substantially as described. 4th. The valve in the piston and screw rod for adjusting the pressure behind the piston, substantially as described. 5th. The spring valve at the bottom of the barrel, with its screw stem for adjusting relief of pressure behind the piston when the door is nearly closed, substantially as described. 6th. The attachment of the piston rod to a pin in a recess of the door so situated that when the door is in an open position the spring acts as a dead centre, substantially as and for the purpose set forth. 7th. The combination of two short barrels, the one for the piston the other for the spring, operating as a single door check, substantially as described.

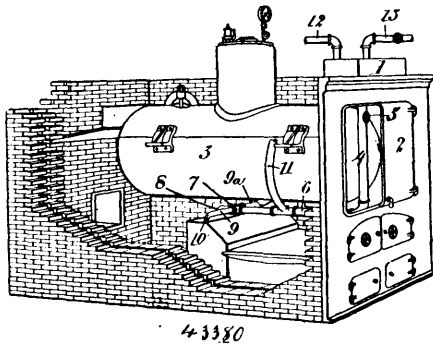
No. 43,380. Burner for Crude Oil.

(*Brûleur d'huile.*)

James Dick, Toronto, Ontario, Canada, 26th June, 1893; 6 years.

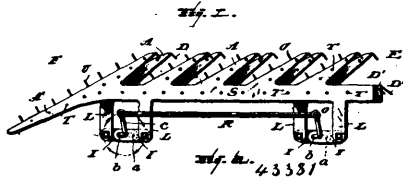
Claim.—1st. A burner for crude oil comprised of a tank, a feed pipe connected to the under side of the tank, a burner, a connection between the feed pipe and the burner, a ventilating pipe fitted to the connection and entering the smoke stack, substantially as set forth. 2nd. In a burner for crude oil, the combination of an oil tank, a feed pipe connected to the under side of the tank, a burner comprised of two branches respectively 9 and 9a, connected to the feed pipe, and having a series of perforations in their under side, a

ventilating pipe connected to the feed pipe between the branches 9 and 9a and the tank, an inlet to said tank, substantially as and for the purpose set forth. 3rd. In a burner for crude oil, the combination of an oil tank, a feed pipe connected to the under side of the



oil tank, a burner comprised of two branches respectively 9 and 9a, connected to the feed pipe and having a series of perforations in their under side, a ventilating pipe connected to the feed pipe between branches 9 and 9a and the tank, an inlet to said tank, and a ventilating pipe connected to said tank and to said smoke stack, substantially as and for the purpose set forth.

No. 43,381. Straw Carrier. (Monte-paille.)



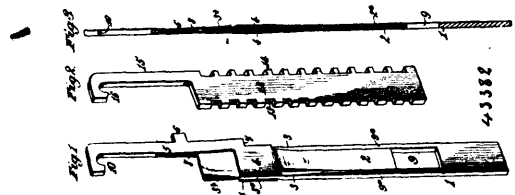
William E. White, Bottineau, North Dakota, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. In a straw carrier, the combination with the slats arranged in banks and alternating with each other, and means, substantially as described, for moving the ends of the banks simultaneously and oppositely through parallel paths, of arms rising obliquely from the slats toward their delivery ends and pins rising from said arms, all as and for the purpose set forth. 2nd. In a straw carrier, the combination with slats arranged in banks and alternating with each other, and means, substantially as described, for moving the ends of the banks simultaneously and oppositely through parallel paths, of arms rising obliquely from the slats toward their delivery ends, pins rising from said arms, and depending pins at the upper ends of the arms, all as and for the purpose set forth. 3rd. In a straw carrier, the combination with the slats set forth. 4th. In a straw carrier, the combination with the slats arranged in banks and alternating with each other, and means, substantially as described, for moving the ends of the banks simultaneously and oppositely through parallel paths, of arms rising obliquely from the slats toward their delivery ends, pins rising from said arms, and depending pins at the upper ends of the arms, also at right angles thereto, all as and for the purpose set forth. 5th. In a straw carrier, the combination with slats arranged in two banks and alternating with each other, and means, substantially as described, for moving the banks simultaneously and oppositely through parallel circular paths, of rigid arms rising obliquely from the slats toward their delivery ends, the arms remote from such ends projecting also below the slats, pins rising from said arms, and depending pins at the upper ends of the arms, all as and for the purpose set forth. 6th. In a straw carrier, the combination with slats arranged in banks and alternating with each other, and means, substantially as described, for moving the banks simultaneously and oppositely through parallel circular paths, of rigid arms rising obliquely from the slats toward their delivery ends, pins rising from said arms at approximate right angles thereto, and depending pins at the upper ends of the arms, also at right angles thereto, all as and for the purpose set forth. 7th. In a straw carrier, the combination with slats arranged in two banks and alternating with each other, and means, substantially as described, for moving the banks simultaneously and oppositely through parallel circular paths, of rigid arms rising obliquely from the slats toward their delivery ends, the arms remote

from such ends projecting also below the slats, transverse pins through said slats and arms, pins rising from said arms at approximate right angles thereto, and depending pins at the upper ends of the arms also at right angles thereto, all as and for the purpose set forth. 8th. In a straw carrier, the combination with slats arranged in banks and alternating with each other, and arms rising from the slats, of lugs depending from the slats near their ends, those on adjacent slats being arranged to have a longitudinal opening between, cranked shafts standing in these openings, bars rigidly connected to said lugs and journaled on the cranks of the shafts, and means for driving one shaft, as and for the purpose set forth. 9th. In a straw carrier, the combination with slats arranged in banks and alternating with each other, and arms rising from the slats, of lugs depending from the slats, those on adjacent slats being arranged to have a longitudinal opening between, cranked shafts standing in these openings, transverse bolts through the lugs of each bank, bars rigidly secured on the bolts between the two outer lugs, of each bank, washers thereon, between the other lugs, the bars extending toward each other and being journaled on the cranks of the shafts, and means for driving one shaft, as and for the purpose set forth. 10th. In a straw carrier, the combination with slats arranged in banks and alternating with each other, and arms rising from the slats, of lugs depending from the slats, those on adjacent slats being arranged to have a longitudinal opening between, cranked shafts standing in these openings, bars rigidly and detachably secured to certain of the lugs, extending toward each other, and being journaled on the cranks of the shafts, a casing having bearings for the latter, parallel cranks on the shafts, a pitman rod connecting these cranks, and means for driving one shaft, as and for the purpose set forth. 11th. In a straw carrier, the combination with slats arranged in banks and alternating with each other, of lugs depending from the slats, those on adjacent slats being arranged to have a longitudinal opening between, cranked shafts standing in these openings, transverse bolts through the lugs of each bank, bars splined on said bolts, extending toward and past each other, and journaled on the cranks of the shafts, and bearings for the latter, as and for the purpose set forth. 12th. In a straw carrier, the combination with slats arranged in banks and alternating with each other, and arms rising from said slats, of lugs depending from the slats near the ends of the latter, those on adjacent slats being arranged to have a longitudinal opening between, cranked shafts standing in these openings, transverse bolts through the lugs of each bank, bars splined on the bolts between the two outer lugs, of each bank, washers thereon between the other lugs, the bars extending toward each other and being journaled on the cranks of the shafts, a casing having bearings for the latter, parallel cranks on the outer ends of the shafts, a pitman rod connecting these cranks, and means for driving one shaft, as and for the purpose set forth. 13th. In a straw carrier the combination with slats arranged in banks and alternating with each other, and means, substantially as described, for moving the ends of the bank simultaneously and oppositely through parallel paths, of arm rising obliquely from the slats toward their delivery ends, and transverse pins through said slats and arms, all as and for the purpose hereinbefore set forth.

No. 43,382. Space Bar for Line Casting Machines.

(Barre d'espace pour machines à couler les lignes.)

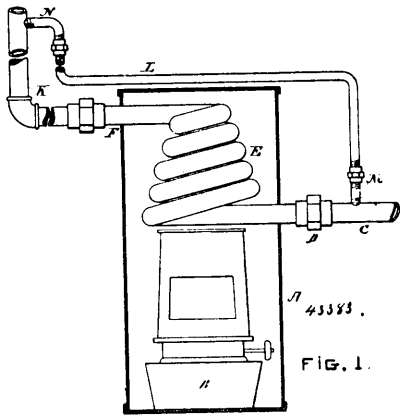


William Stephen Scudder, Brooklyn, New York, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. A spacer, consisting of laterally expansible members or cheek pieces, and an adjustable expander section having longitudinal, marginal, expanding ribs located between the said members or cheek pieces and constructed to separate the latter in approximately parallel planes, substantially as described. 2nd. A spacer, consisting of an elastic, laterally expansible section comprising approximately parallel members or cheek pieces, and an expander provided with projecting, longitudinal ribs having a series of expanding portions which operate to separate the members or cheek pieces in approximately parallel planes, substantially as described. 3rd. A spacer, consisting of an expanding section, and laterally expansible members or cheek pieces united at their upper and lower end portions and between which united upper and lower end portions the expanding parts of the expander are located, substantially as described. 4th. A spacer, consisting of a longitudinally slotted expander section having marginal ribs, and a section composed of elastic members or cheek pieces, and a shank portion with longitudinal parallel edges located between and bearing against the longitudinal parallel edges of the slot in the expander section, substantially as described. 5th. A spacer, consisting of an expander section having a longitudinal slot, parallel side bars and expanding

portions above the longitudinal slot, and elastic members or cheek pieces having a shank portion provided with longitudinal outer edges bearing against inner edges of the parallel side bars and connected through the longitudinal slot of the expander section at a point below the expanding portions thereof, substantially as described. 6th. A spacer, consisting of laterally expandible members or cheek pieces, and an expander section provided with longitudinal, marginal expanding ribs projecting from the body of the expander section and interposed between the laterally expandible members or cheek pieces, substantially as described. 7th. A spacer, consisting of a longitudinally slotted expander section having marginal ribs formed as stepped portions between which the body of said section is reduced in thickness, and a pair of connected, laterally expandible members or cheek pieces against which the marginal ribs operate to more or less expand said members or cheek pieces, substantially as described. 8th. A spacer, consisting of laterally expandible members or cheek pieces connected together at their upper and lower end portions and provided at the upper end portion with means whereby they are rendered susceptible of mechanical manipulation in assembling and distributing and an expander section having its expanding portions located between the laterally expandible members or cheek pieces, substantially as described.

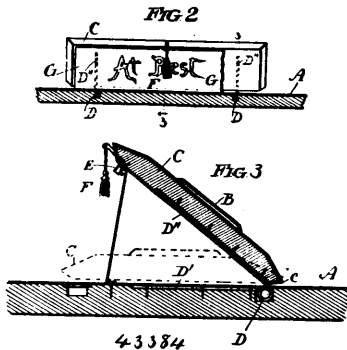
No. 43,383. Device for Preventing Water Pipes from Freezing. (*Appareil pour empêcher les tuyaux de geler.*)



Jacob Krumschied, Boston, Massachusetts, U.S.A., 27th June, 1893; 6 years.

Claim.—In a water supply system of a building, the combination, of the regular cold water supply pipes, with a heat generator B, having a heating coil E, directly connected with the regular service, and a loop pipe L, so arranged that it shall embrace within its points of junction with the regular cold water supply pipes, the said heat generator, and such portions of the regular cold water supply pipe, that would otherwise become so cold as to freeze the contained water, substantially as and for the purpose set forth.

No. 43,384. Coffin. (*Cercueil.*)

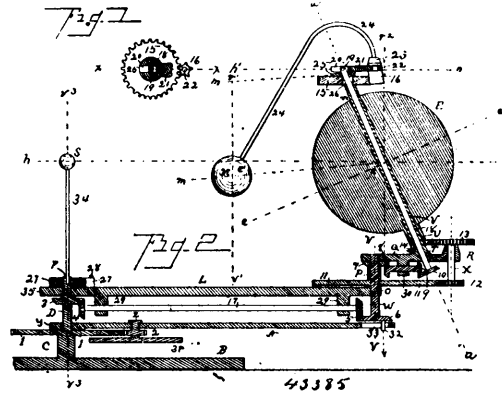


William J. Leonhardt, Chicago, Illinois, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. The combination, with the coffin, and a name plate, of a movable support, to which the said name plate is secured, said support being in turn secured to the lid, and means for holding said support either in an inclined position or flat against the lid of the coffin, substantially as set forth. 2nd. The combination, with the coffin, and the name plate therefor, of a movable support to which said name plate is secured, a hinge connecting one edge of the support to the coffin lid, and means for holding said support in an in-

clined position, or permitting it to be folded down against the lid of the coffin, substantially as set forth. 3rd. The combination, with a coffin and a name plate, of a support to which said plate is secured, a hinge connecting one edge of the support to the lid of the coffin, a spring for holding said support in inclined position, and a catch for holding it against the lid of the coffin, substantially as set forth. 4th. The combination, with a coffin, and the name plate therefor, of a movable panel to which said name plate is secured, a hinge connecting one edge of the panel to the lid of the coffin, and means for holding said panel in an inclined position or permitting it to be folded down flat against the lid of the coffin, substantially as set forth. 5th. The combination, with the coffin and a name plate, of the panel C, to which said plate is secured, the springs, having coils D, and arms D¹ and D¹¹, secured to the lid of the coffin and panel, respectively, the strip of fabric G, secured at its edges to the lid of the coffin and panel, respectively, and the catch E, for holding the panel against the lid of the coffin, substantially as set forth.

No. 43,385. Tellurian. (*Tellurien.*)



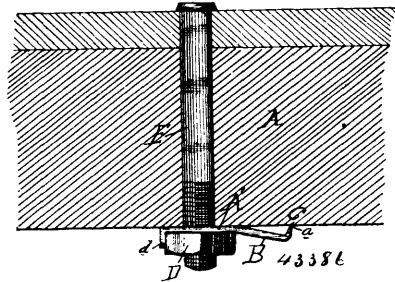
Samuel M. Reavis, Frankfort, Indiana, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing, an integral boss at the extremity of the lever, having a vertical axis, a vertical shaft turning in the lever boss and having an integral horizontally projecting arm at its upper end, with its boss resting and supported on the end of the frame lever boss, whereby it supports the connected shaft, a bevel wheel on the end of the vertical shaft below the boss, a stationary bevel on the frame lever support, and concentric with its axis, and a horizontal shaft having a bevel wheel on each end and supported by the frame lever, one bevel on the horizontal shaft engaging the stationary bevel on the stationary support and the other bevel engaging and driving the bevel on the vertical shaft at the end of the frame lever, and the rotation of the frame lever about its pivot, causing the described gearing to operate, substantially as set forth. 2nd. In a tellurian, the combination, of a stationary support, a frame lever pivoted to turn horizontally about its bearing, an integral boss at the extremity of the lever, having a vertical axis, a vertical shaft turning in the lever boss and having an integral horizontally projecting arm at its upper end, a stationary toothed wheel secured directly to the frame lever boss, a vertical shaft turning in the boss at the end of the projecting arm, a pinion on the lower end of the latter shaft, engaging the stationary wheel on the frame lever, a wheel on the upper end of the same shaft, a pinion engaging the latter toothed wheel and connected to, and arranged to rotate the earth sphere, a horizontal shaft supported and carried by the frame lever, having a toothed wheel at each end, and a stationary toothed wheel connected concentrically to the frame lever support, and engaging and driving the said mechanism intervening between it and the earth sphere, substantially as set forth. 3rd. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing, a boss at the extremity of the lever, a vertical shaft turning in the lever boss, an arm secured to the top of the said shaft and projecting horizontally and having a boss at its outer end, a second vertical shaft held and turning in the end boss of the projecting arm, a toothed wheel on each end of the second shaft a stationary toothed wheel secured concentric with and to the frame lever boss and engaging the lower wheel on the second vertical shaft, a support for the earth sphere, connected to the projecting arm of the first vertical shaft, a toothed wheel connected to the earth sphere and engaging the upper toothed wheel on the second vertical shaft, a horizontal shaft carried by the frame lever and having a toothed wheel at each end, and a stationary toothed wheel connected concentrically to the frame lever support and engaging and driving the said mechanism intervening between it and the earth support, substantially as set forth. 4th. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing and

having a boss at its extremity, a vertical shaft turning in the boss and having connected thereto the earth sphere support and also a toothed wheel connected concentrically to the frame lever support, a horizontal shaft carried by the frame lever and having one toothed wheel at one end engaging the stationary toothed wheel and a toothed wheel at the other end engaging the toothed wheel on the vertical shaft, and a motor device connected to and arranged to automatically operate the frame lever and connected apparatus, substantially as set forth. 5th. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing and having a boss at its extremity, a vertical shaft turning in the boss and having connected thereto the earth sphere support, and also a toothed wheel, a stationary toothed wheel connected concentrically to the frame lever support, a horizontal shaft carried by the frame lever and having one toothed wheel at one end engaging the stationary toothed wheel, and a toothed wheel at the other end engaging the toothed wheel on the vertical shaft, and a spring connected to the frame lever support and to the frame lever and arranged to automatically operate the frame lever and connected apparatus, substantially as set forth. 6th. In a tellurian, the combination of a stationary support a frame lever pivoted to turn horizontally about its bearing and having a boss at its extremity, a vertical shaft turning in the boss and having connected thereto the earth sphere support, and also, a toothed wheel, a stationary toothed wheel connected concentrically to the frame lever support, a horizontal shaft carried by the frame lever and having one toothed wheel at one end engaging the stationary toothed wheel, and a toothed wheel at the other end engaging the toothed wheel on the vertical shaft, a motor device connected to and arranged to automatically operate the frame lever and connected apparatus, and a speed regulating device constructed to operate as a dead weight, connected to the frame lever, and adapted to control the motion of the lever, substantially as set forth. 7th. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing and having a boss at its extremity, a vertical shaft turning in the boss and having connected thereto the earth sphere support, and also a toothed wheel, a stationary toothed wheel connected concentrically to the frame lever support, a horizontal shaft carried by the frame lever, and having a toothed wheel at one end engaging the stationary toothed wheel, and a toothed wheel at the other end engaging the toothed wheel on the vertical shaft, a motor device connected to and arranged to automatically operate the frame lever and connected apparatus, and a speed regulating device consisting of a lever pivoted to the frame lever support, in a pin on the toothed wheel of the vertical shaft at the end of the frame lever, working in a slot in the extremity of the second pivoted lever, a stationary toothed wheel secured concentrically to the frame lever support, and a pinion carried by the second lever and engaging the stationary wheel and having connected thereto a balance wheel, substantially as set forth. 8th. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing and having a boss at its extremity, a vertical shaft turning in the boss and having connected thereto the earth sphere support, and also a toothed wheel, a stationary toothed wheel connected concentrically to the frame lever support, a horizontal shaft carried by the frame lever, and having a toothed wheel at one end engaging the stationary toothed wheel, and a toothed wheel at the other end engaging the toothed wheel on the vertical shaft, a motor device connected to and arranged to automatically operate the frame lever and connected apparatus, and a speed regulating device consisting of a lever pivoted to the frame lever support, in a pin on the toothed wheel of the vertical shaft at the end of the frame lever, working in a slot in the extremity of the second pivoted lever, a stationary toothed wheel secured concentrically to the frame lever support, and a pinion carried by the second lever and engaging the stationary wheel and having connected thereto a balance wheel, substantially as set forth. 9th. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing and having a boss at its extremity, a vertical shaft turning in the boss and having connected thereto the earth sphere support, and also a toothed wheel, a stationary toothed wheel connected concentrically to the frame lever support, a horizontal shaft carried by the frame lever and having a toothed wheel at one end engaging the stationary toothed wheel and a toothed wheel at the other end engaging the toothed wheel on the vertical shaft, a stationary toothed wheel at the top of the boss on the end of the frame lever, a horizontal shaft carried by the earth sphere support and having a toothed wheel at each end, an upright shaft supported by and having bearings in the earth sphere support, and extending through the center of the earth sphere, and having a toothed wheel at its upper end, and means supported above the earth sphere by the latter's support, capable of supporting and moving the moon, and the stationary toothed wheel on the frame lever boss, driving the horizontal shaft, the upright shaft, and the moon moving apparatus by means of their toothed wheels when the earth sphere support is rotated, substantially as set forth. 10th. In a tellurian, the combination of a stationary support, a frame lever pivoted to turn horizontally about its bearing and having a boss at its extremity, a vertical shaft turning in the boss and having connected thereto the earth sphere support, and also a toothed wheel, a stationary toothed wheel connected concentrically to the frame lever support, a horizontal shaft carried by the frame lever and having a toothed wheel at one end engaging the stationary toothed wheel and a toothed wheel at the other end engaging the toothed wheel on the vertical shaft, a stationary toothed wheel at the top of the boss on the end of the frame lever, a horizontal shaft carried by the earth sphere support and having a toothed wheel at each end, an upright shaft supported by and having bearings in the earth sphere support, and extending through the center of the earth sphere, a stationary toothed wheel secured to the top of the earth sphere support, a lever pivoted to the upper end of the said upright shaft, and a pinion at the extremity of the said lever for supporting and moving the moon, and the stationary toothed wheel on the frame lever boss, driving the horizontal shaft, the upright shaft, and the moon moving apparatus by means of their toothed wheels when the earth sphere support is rotated, substantially as set forth. 10th. In a tellurian, the combination of an earth sphere supporting and moving apparatus, an earth sphere supported and moved thereby, an upright moon apparatus moving shaft extend-

ing through the earth sphere, a stationary toothed wheel supported above the earth sphere, a lever pivoted to the upper end of the upright shaft, a pinion at the extremity of the said lever for supporting and moving the moon, and means constructed in connection with said pivoted lever for causing an inclination of the moon's orbit during the revolution of the moon about the earth sphere, substantially as set forth.

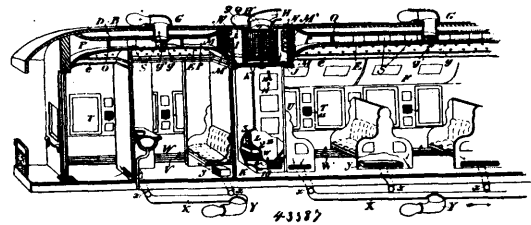
No. 43,386. Nut Lock. (Arrête-écrou.)



Benjamin Porter, Fullerton, North Dakota, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. As an improved article of manufacture a washer for a nut lock comprising a plate with a lip at one of its edges to engage the side of a nut, and an arm projecting from the opposite edge bent up back beyond the working face of the washer, and its free end sharpened to a point and bent so as to be adapted to be driven in the object through which the bolt passes, substantially as herein described. 2nd. As an improved article of manufacture a washer for a nut lock comprising a plate with a lip at one of its edges to engage the side of a nut, and an arm projecting from the opposite edge bent up back beyond the working face of the washer, and its free end bent so as to form a spring, substantially as and for the purpose herein described.

No. 43,387. Method of Ventilating Cars. (Méthode de ventiler les chars.)



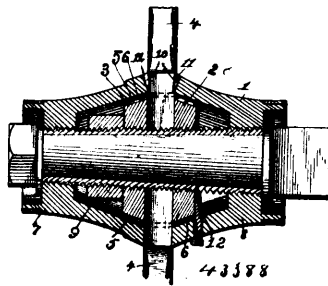
Samuel George Curry, Toronto, Ontario, Canada, 27th June, 1893; 6 years.

Claim.—1st. In a railroad passenger car, the combination, with the double walls or shells and roofs, forming an air space or jacket, of means whereby the air is drawn from the air space, as and for the purpose specified. 2nd. In a railroad passenger car, the combination, with the double walls or shells and roofs forming an air space or jacket, of means whereby the air is drawn from the air space, and means for connecting the air space with the interior of the car and exhausting the impure air from the bottom of the interior of the car, as and for the purpose specified. 3rd. In a railroad passenger car, the combination, with the double walls or shells and roofs, of the cowls for letting the air out of the space between the double roofs and walls and casings situated beneath the seats, and branch ducts leading from such casings to the exhaust duct, provided with suitable cowls, as and for the purpose specified. 4th. The combination, with the inlet cowls and air chamber situated at the top of the car connected therewith, of passage-ways leading downwardly from the air chamber to the bottom of the heating chamber, which communicates at the top with the air space between the roofs so that the heated air will pass down the space between the side walls of the car and through openings and coils at the bottom into the interior of the car from which it will ascend, and means whereby the impure air is drawn off from the bottom of the car, as and for the purpose specified. 5th. The combination, with the cowls H, and air chamber I, and the fine wire netting casing i, of the passage ways Z, heating chamber L, communicating with the air space between the roofs B and D, and side walls A and C, the openings V, made in the bottom of the side walls C, coils W, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 6th. The combination, with the inlet cowls H, and air chamber I, provided with a fine wire netting casing and water pan, of the passage ways Z, heating chamber L, communicating with the air space between the roofs B

and D, and side walls A and C, the openings V, made in the bottom of the side walls C, coils W, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 7th. The combination, with the inlet cowls H, air chamber I, passage ways Z, connected at the bottom by the opening z, to the heating chamber, of the wire screens *w*, situated at the bottom of the heating chamber, the heating coils 3, the top of the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, made in the bottom of the side walls C, coils W, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 8th. The combination, with the inlet cowls H, air chamber I, passage ways Z, connected at the bottom by the opening z, to the heating chamber, of the baffle plates 2, coated with adhesive, sticky substances, the heating coils 3, the top of the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, made in the bottom of the side walls C, coils W, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 9th. The combination, with the inlet cowls H, air chamber I, passage ways Z, connected at the bottom by the opening z, to the heating chamber, of the heating coils 3, wire casings 4, having the mineral wool particles situated in them, the top of the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, made in the bottom of the side walls C, coils W, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 10th. The combination, with the inlet cowls H, and air chamber I, provided with fine wire netting casings, of the passageways Z, heating chamber L, provided with the heating coils 3, and moisture pans 6, having the recesses 7, filled with water and openings 8, for the passage of the heated air, the top of the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, made in the bottom of the side walls C, coils W, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 11th. The combination, with the inlet cowls H, air chamber I, provided with fine wire netting casings *i*, water pan J, passage ways Z, leading to the bottom of the heating chamber, wire netting *w*, baffle plates 2, heating cowls 3, wire casings, with mineral wool particles located in the same, and moisture pan constructed as specified, the top of the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, made in the bottom of the side walls C, coils W, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 12th. The combination, with the inlet cowl H, air chamber I, passage ways Z, and heating chamber L, all constructed and arranged as specified, the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, located at the bottom of the side walls C, and coils W, of the perforated ceiling E, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 13th. The combination, with the inlet cowls H, air chamber I, passage ways Z, and heating chamber L, all constructed and arranged as specified, the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, located at the bottom of the side walls C, and coils W, of the perforated ceiling E, passage ways P, and openings *r*, leading to the upper berth F, and ways *p*, leading to the lower berth and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 14th. The combination, with the inlet cowls H, air chamber I, passage ways Z, and heating chamber L, all constructed and arranged as specified, the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the outlet cowls O, located above the heating chamber, the openings V, located at the bottom of the side walls C, and coils W, of the perforated ceiling E, passage ways P, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 15th. The combination, with a railroad passenger car divided into three divisions and having two inlet cowls H, and two air chambers I, connected therewith, of the passage ways Z, heating chamber L, provided with the flap 10, hinged to the diaphragm 11, the air chambers and heating chambers being constructed and arranged as specified, and the heating chamber communicating with the air space between the roofs B and D, and side walls A and C, the openings V, located at the bottom of the side walls C, and cowls W, the perforated ceiling E, passage ways P, and means whereby the impure air is exhausted from the bottom of the car, as and for the purpose specified. 16th. The combination with the roofs B and D, side walls A and C forming a continuous air space around the top and sides of the car, and perforated ceilings E, of the outlet cowls G, provided with a damper *g*, as and for the purpose specified. 17th. The combination with the roofs B and D, side walls A and C, forming a continuous air space around the top and sides of the car, and perforated ceiling E, of the inlet cowls H, air chamber I, openings M leading into the passage ways P, situated between the roof D, and perforated ceiling E, dampers

13 designed to close the passage ways Z, and means whereby the impure air is drawn off through the bottom of the car, as and for the purpose specified. 19th. The combination with the roofs B and D, side walls A and C, forming a continuous air space around the top and sides of the car and perforated ceiling E, of the inlet cowls H, air chamber I, wire netting casings *i*, openings M leading into the passage ways P, situated between the roof D and perforated ceiling E, and means whereby the impure air is drawn off from the bottom of the car, as and for the purpose specified. 20th. The combination with the roofs B and D, side walls A and C forming a continuous air space around the top and sides of the car and perforated ceiling E, of the inlet cowls H, air chamber I provided with a wire netting casing and water pan, openings M leading into the passage ways P, situated between the roofs D and perforated ceiling E, and means whereby the impure air is drawn off from the bottom of the car, as and for the purpose specified. 21st. The combination with the roofs B and D, side walls A and C forming a continuous air space around the top and sides of the car and perforated ceiling E, of the inlet cowls H, provided with a damper H¹, the air chamber I, provided with openings M, leading into the passage ways P, situated between the roof D and perforated ceiling E, and means whereby the impure air is drawn off from the bottom of the car, as and for the purpose specified. 22nd. The combination with the roofs B and D, side walls A and C, forming a continuous air space around the top and sides of the car and perforated ceiling E, of the inlet cowls H, openings provided with a slot damper N, and the fine double wire netting screens enclosing the mineral wool particles situated at the inner side of the opening M, and the passage ways M situated between the roof D and perforated ceiling E, and means whereby the impure air is drawn off from the bottom of the car, as and for the purpose specified. 23rd. The combination with the roofs B and D, side walls A and C, forming a continuous air space around the top and sides of the car, and perforated ceiling E, of the inlet cowls H, air chamber I, openings M, leading into the passageways P, situated between the roof D, and perforated ceiling E, and the cowls G, provided with dampers, as and for the purpose specified. 24th. The combination with the roofs B and D, side walls A and C, forming a continuous air space around the top and sides of the car, and perforated ceiling E, of the passageways S, leading from the ceiling E, to the outer space, provided with dampers, and the cowls Q, as and for the purpose specified. 25th. The combination with the roofs B and D, side walls A and C, forming a continuous air space around the top and sides of the car, and perforated ceiling E, of the passageways S, leading from the ceiling E, to the outer air space, and provided with dampers, the passageways *c*, leading from the upper berth to the air spaces between the roofs and the cowls Q, as and for the purpose specified. 26th. The combination with the roofs B and D, side walls A and C, forming a continuous space around the top and sides of the car, and perforated ceiling E, of the openings T, provided with a flap damper U, located in the air space between the walls A and C, between the windows of the car, as and for the purpose specified. 27th. The combination with the roofs B and D, side walls A and C, forming a continuous air space around the top and sides of the car, of the heating chamber L, arranged as specified, the openings V, at the bottom of the side walls C, coils W, and dampers 15, arranged to close the passageways Z, at the bottom, and allow of the circulation of the air of the car through the opening z, and heating chamber, as and for the purpose specified. 28th. The combination with the walls or shells and roofs forming an air space or jacket, and the openings at the bottom of the inner shell, of an air space or opening extending up between the backs of the seats as and for the purpose specified.

No. 43,388. Vehicle Hub. (Moyeu de roue.)



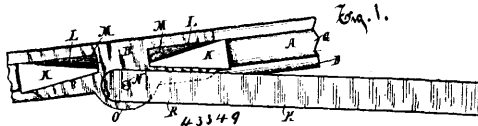
Paul F. Rachal, Fort Jessup, Louisiana, U.S.A., 27th June, 1893: 6 years.

Claim.—1st. In a hub, the combination of an exteriorly threaded axle, a pair of spoke securing rings interiorly threaded and arranged on the axle box, spokes arranged between the rings, a nut arranged on the axle box and located adjacent to one of the rings, and the end caps screwed on the axle box and having concavities at their inner ends receiving the nut and the securing rings, substantially as described. 2nd. In a hub, the combination of an axle, a pair of spoke securing rings provided on their peripheries with annular series of transverse grooves, spokes located between

the rings and provided with laterally extending pins arranged in said grooves, and the end caps fitting over the rings and securing the pins in the grooves, substantially as described. 3rd. In a hub, the combination of an exteriorly threaded axle box, a pair of spoke securing rings interiorly threaded and arranged on the axle box, spokes arranged between the rings, the end caps interiorly threaded and screwed on the axle box, and provided at their inner ends with concavities to receive the securing rings and having at their inner edges slots, and wedges arranged in the slots and engaging the spokes to prevent the end caps unscrewing, substantially as described. 4th. In a hub, the combination of an exteriorly threaded axle box, a pair of spoke securing rings arranged on the axle box, spokes arranged between the rings, the end caps having concavities in their inner ends adapted to form an oil chamber, and a pin mounted in one of the end caps and the axle box, and provided in its lower portion with a groove and its upper portion with a recess, and located contiguous to one of the rings, substantially as and for the purpose described.

No. 43,389. Car Replacer.

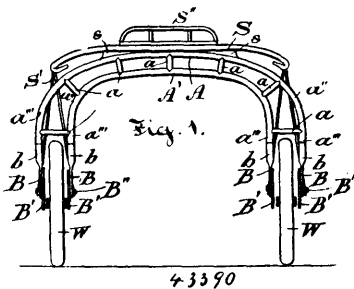
(Appareil à remettre les chars sur la voie.)



Henry G. Hanson, Trevor, Wisconsin, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. In a car replacer, the combination with a clamp formed to rest on the top of the rail, to embrace both sides of the tread and at one side to rest on the base of the rail, and an inclined fender track rigid on the clamp, the outer end of which fender track is arranged to rest on and register with the rail, the fender track extending from said end obliquely over the rail, of an inclined bridge resting and pivoted at one end on the clamp so as to register with the inner or higher end of the fender track, being thereby adapted to deliver the wheel of a moving car to the fender track to be carried thereby across and down on to the rail, as set forth. 2nd. In a car replacer, a clamp or cap consisting of a top part adapted to rest on the rail and depending sides passing over and embracing the edges of the tread of the rail substantially throughout the entire length of the top part, an inclined oblique fender track rigid on the clamp, adapted to carry a car wheel over and across the rail on which it is placed, which fender track at its outer end registers with the rail and extends longitudinally beyond the top part of the clamp at a height above the top part at the end thereof sufficient to carry the flange of the wheel travelling thereon over the top of the clamp, and an inclined bridge resting and pivoted at one end on the clamp in such manner as to register with the inner or higher end of the fender track, substantially as described. 3rd. A car replacer, comprising a clamp having depending sides arranged to embrace a railway rail, reversely arranged oblique fender tracks, raised on top of the clamp, and a bridge pivoted at one end on the cap in such manner as to register with one or the other of the fender tracks and capable of being swung either to right or left to receive and carry the wheel of a car moved in either direction, to the registering fender track, substantially as described.

No. 43,390. Cart. (Essieu de voiture.)

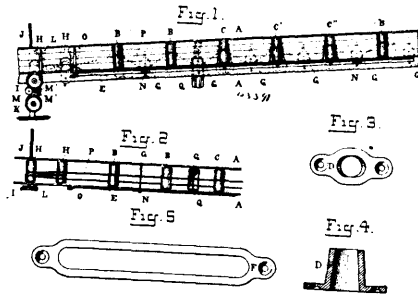


William John Hamill, St. Catharines, Ontario, Canada, 27th June, 1893; 6 years.

Claim.—1st. In a sulky cart, the combination of a composite axle consisting of two arched pieces A and A', connected by cross ties all in one plane, extensibly adjustable ends B and B', held together by a bolt or set screw and each pair carrying a bearing, a shaft S, bent upwardly near the axle and secured to the top thereof, braces S', connecting axle shaft and a seat S'', secured to the top of said axle, substantially as set forth. 2nd. In an axle for vehicles, the combination of two bent or arched pieces A and A', in the same vertical plane and terminating in vertical ends and connecting

pieces or cross ties a, connecting said arched pieces, substantially as set forth. 3rd. In an axle for vehicles, the combination of two bent or arched pieces A and A', in the same vertical plane and terminating in vertical ends, cross ties a, connecting said bent pieces, extension bars B, at the ends of said bent pieces each having a serrated face and a slotted serrated bar B', held on said bar B, by a bolt or set screw and carrying a bearing for the wheel, substantially as set forth.

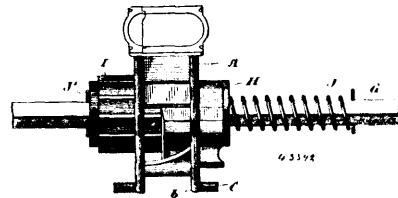
No. 43,391. Lumber Carrier. (Transport à bois.)



Harry Hawkins, John Wix and John Black Hamon, all of Birmingham, Alabama, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. In a lumber carrier, consisting of a series of carrier rollers, pivoted in side frames and having V-grooves formed in the rollers for rope, a series of idler sheaves provided with V-grooves, secured on shafts journaled in the side frames, two driving rollers journaled in the side frames, having a series of V-rope grooves, a friction wheel secured on the end of the shaft of one driving roller shaft, a like friction wheel secured on a driving shaft, driven by any suitable power, hand lever pivoted on one of the side frames having journaled near its lower end two intermediate friction wheels, an arm projecting at a right angle near the lower end of the lever, having journaled near its end a connecting friction wheel, an endless driving rope with two or more turns in the V-grooves of the driving rollers, one side of the rope passing under the series of idler sheaves, and over the series of rollers journaled in the side frames, all combined as shown and for the purpose described. 2nd. In a lumber carrier, a series of carrier rolls journaled in side frames, a series of idler sheaves secured on shafts journaled in the side frames, one or more sets of angle rollers, consisting of two or more rolls to the set, one end of the said rolls journaled in one of the side frames, the opposite end of the rolls journaled in a shifting rod, having a hand lever pivoted at its end, the movement of the lever shifting the rod in both directions, throwing the ends of the angle rolls to the right or the left, and means to drive the carrier and angle rolls, substantially as described. 3rd. In a lumber carrier, a series of carrier rolls journaled in side frames, one or more sets of angle rolls, one end of the said rolls journaled in metal bearings secured in one of the side frames, the said bearings formed oval on the inside to allow the rolls to angle, the opposite ends of the angle rolls journaled in like bearings secured in a shifting rod, placed on the outside of the frame, an oblong metal bearing placed in the side frame, on the inside of the shifting rod, for the roll shaft to slide in, an endless rope placed in grooves formed in the rolls and idler sheaves, one or more weight boxes attached to idler sheaves suspended on the rope, and means of driving the rope, substantially as described.

No. 43,392. Seeding Machine. (Semoir.)

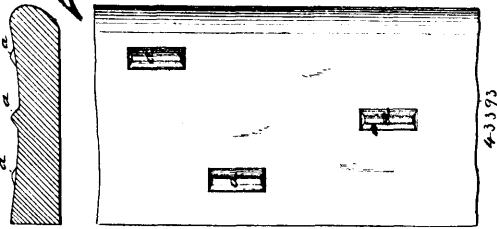


The Massey Harris Company, assignees of Lyman M. Jones and James Wedlake, all of Toronto, Ontario, Canada, 27th June, 1893; 6 years.

Claim.—1st. In a seeding machine, a grain tube pivoted to the grain feed casing, in combination with a spring connected at one end to the tube and at its outer end to the feed casing or seed box, substantially as and for the purpose specified. 2nd. In a seeding machine, a grain tube pivoted to the grain feed casing, in combination with a spring connecting the grain tube with the feed casing or seed box, a back lip formed on the hopper shaped head of the grain tube, and a flange formed on the bottom of the feed casing, substantially as and for the purpose specified. 3rd. In a seeding machine, the combination with a feed shaft, of a spring placed on the feed shaft between the cut off and a stop on the feed shaft, sub-

stantially as and for the purpose specified. 4th. In a seeding machine, a feed shaft longitudinally adjustable, in combination with a feed cylinder and cut off stops or pins fixed on the feed shaft, and a spring to actuate the cut off, substantially as and for the purpose specified.

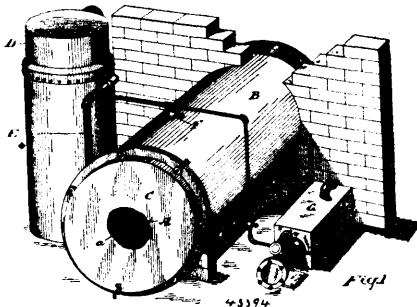
No. 43,393. Tire for Wheels. (Bandage de roue.)



Jabez Jones, Charles Vernon and Edward Holden, Smethwick, Stafford, England, 27th June, 1893; 6 years.

Claim.—Arranging on the inner face of the rolled bars of iron or steel from which the tires of wheels having wooden felloes are made, a series of knife edged or nearly knife edged ribs or a series of conical or hemispherical or other shaped projections or ribs, or a series of correspondingly shaped depressions for fixing the tire to the wooden felloes of the wheel without nails, bolts or fastenings, the said ribs or projections or depressions being variously grouped or arranged on or in the inner face of the tire bars, and the said tire bars having the sectional figures, or substantially the sectional figures, hereinbefore described and shown.

No. 43,394. Disinfecting Apparatus. (Appareil à désinfecter.)



Barnard McEvoy, Toronto, Ontario, Canada, 27th June, 1893; 6 years.

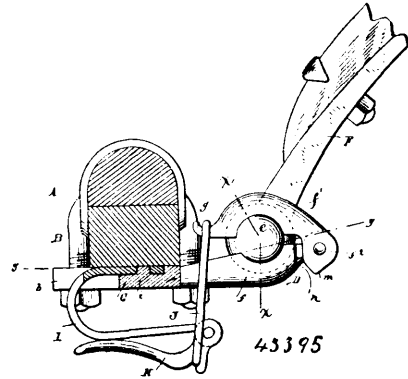
Claim.—A disinfecting apparatus, comprising an inner cylinder, an outer cylinder surrounding the same with an annular jacket, chamber between, which opens at the ends of the cylinders, the steam pipes leading to the annular chamber, and the inner cylinder, the exhaust pipe leading from the inner cylinder, and the removable double heads for the ends of the cylinders, having inner and outer walls, the said heads being adapted to extend across both the inner cylinder and the jacket chamber, and having openings in their inner walls, whereby when the heads are fixed in place their interior spaces are thrown into communication with the jacket of the cylinders, substantially as described.

No. 43,395. Thill Coupling. (Armon de limonière.)

Christopher Columbus Bradley, Syracuse, New York, U.S.A., 27th June, 1893; 6 years.

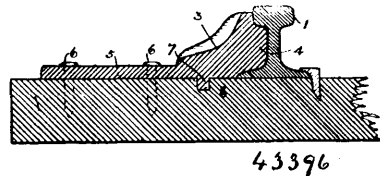
Claim.—1st. In a thill coupling, the combination with the wrist, of a knuckle having its face rising from its ends towards its middle, of a draught eye having a movable section, a tension spring, a clamping lever pivoted to said spring, and a loop connecting the movable section of the draught eye with said clamping lever, substantially as set forth. 2nd. The combination, with the thill iron provided with a wrist or knuckle, having its face rising from its ends towards its middle, of a clip provided with a rigid eye section, and a movable eye section hinged to the front end of the rigid section, both sections embracing said wrist and provided with corresponding bearing surfaces, a tension spring secured with one end to said clip, a clamping lever pivoted to the opposite end of said spring, and a loop connecting the movable eye section with said clamping lever, substantially as set forth. 3rd. The combination, with the thill iron, provided with a wrist or knuckle having a convex spherical surface, of a clip provided with a forwardly projecting rigid eye section, a movable eye section hinged with its front end to the front end of the rigid eye section, both eye sections embracing said wrist and provided with corresponding concave spherical bearing surfaces, a tension spring secured with one end to said clip, a

clamping lever pivoted to the opposite end of said spring, and a loop detachably connecting the rear end of said movable eye section,



with the clamping lever, substantially as set forth. 4th. The combination, with the wrist, having a recess in its bearing surface, of an absorbent plug arranged in said recess, and a draught eye embracing said wrist, substantially as set forth.

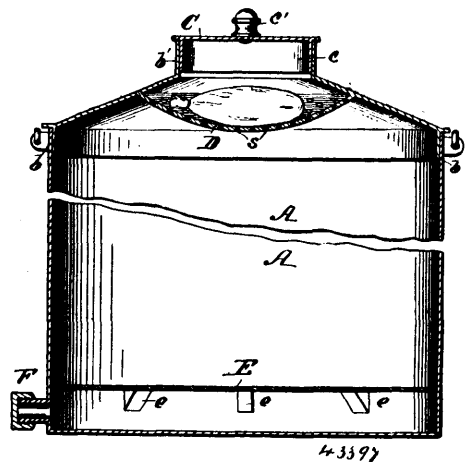
No. 43,396. Rail Brace. (Epaule de rail.)



George H. Mason, Rochester, New York, U.S.A., 27th June 1893; 6 years.

Claim.—1st. A rail brace having a head adapted to engage the side of the railroad rail, a plate or base adapted to be secured to a tie, and a laterally extending rib on the under side of the base removed from the end thereof, adapted to engage a corresponding slot in the top of the tie, whereby the tie will be prevented from chipping beyond the slot, substantially as described. 2nd. A rail brace consisting of a head engaging the side of a railroad rail beneath the head and fitting the upper side of the bottom flange thereof, a plate or base adapted to be secured to a tie, and a laterally extending rib on the under side of the base removed from the end thereof, adapted to engage a corresponding slot in the top of the tie, whereby the tie will be prevented from chipping beyond the slot, and the rail held securely in position, substantially as described.

No. 43,397. Garbage Receptacle. (Réceptacle pour tripailles.)

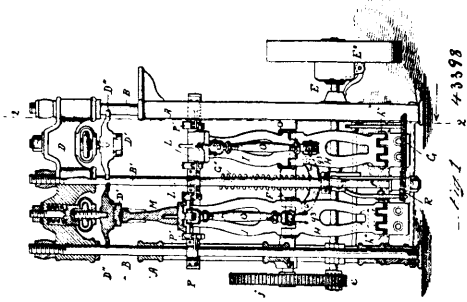


Charles James L. MacLeod, Chicago, Illinois, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. In a garbage receptacle, a chamber separated from the body of the receptacle by a diaphragm permitting the passage

of air and provided with an external movable cap, said chamber being adapted to receive disinfecting material. 2nd. In a garbage receptacle, the combination with a detachable top adapted to cover the receptacle and formed with a suitable opening, of a perforated diaphragm placed beneath the opening and supported by the top and a movable cover closing the opening, the space between the cover and the diaphragm being a chamber adapted to contain disinfectant material. 3rd. The combination with the can A, of the top B, fitting in the can and formed with a central opening, the cover C, adapted to close said opening, and the perforated diaphragm D, supported beneath the opening, the space between the cover and the diaphragm being a chamber adapted to contain disinfecting material, substantially as shown and described.

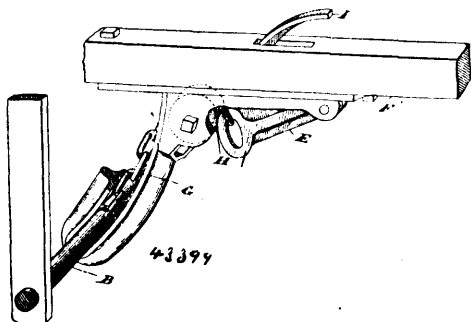
No. 43,398. Boot and Shoe Levelling Machine.
(*Machine pour dresser les chaussures.*)



Maurice V. Bresnahan and John J. Heys, both of Lynn, Massachusetts, U.S.A., 27th June, 1893; 6 years.

Claim.—1st. In a machine for automatically levelling the soles of boots and shoes, the combination of a sole former, a last block mounted upon the upper end of a pair of pivoted toggle levers and mechanism substantially as described, for moving said last block vertically to and from the sole former and forward and back positively in a curved path, as and for the purpose set forth. 2nd. In a machine for automatically levelling the soles of boots and shoes, the combination of a sole former, a last block mounted upon the upper end of a pair of pivoted toggle levers, a crank shaft having a link connected to the toggle lever joint, and stationary segmental or curved arm for positively guiding the last block to and from the operator, substantially as and for the purpose set forth. 3rd. In a machine for automatically levelling the soles of boots and shoes, the combination of a sole former, a last block mounted upon the upper end of a pair of pivoted toggle levers having rearwardly projecting lugs and a link at the toggle joint connected to a crank shaft and stationary segmental or curved arm for positively guiding the last block to and from the operator, substantially as and for the purpose set forth. 4th. In a machine for automatically levelling the soles of boots and shoes, the combination of a sole former, a last block mounted upon the upper end of a pair of pivoted toggle levers, a crank and link for actuating said toggle levers, and a starting treadle having a locking projection and a pivoted locking lever adapted to hold the said treadle depressed until the toggle lever in reaching its vertical position comes in contact with said locking lever and releases the treadle automatically, as and for the purpose set forth. 5th. In a machine for automatically levelling the soles of boots and shoes, a last block mounted upon a pair of toggle levers and actuated by a crank and connection and a pivoted locking lever combined with a main starting treadle adapted when depressed to be held by said locking lever, and an auxiliary treadle adapted to trip the said locking lever to release the main treadle at the will of the operator, substantially as and for the purpose set forth.

No. 43,399. Cultivator. (*Cultivateur.*)



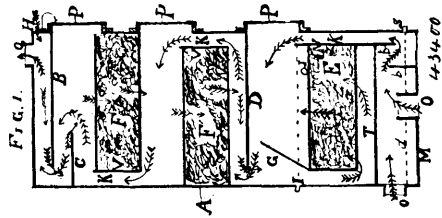
Thomas Henry Noxon, Ingersoll, Ontario, Canada, 27th June, 1893; 6 years.

Claim.—1st. The pivoted lever E, connected to the rod B, by the chain G, carried over the pulley H, substantially as and for the

purpose specified. 2nd. The lever E, provided with a curved horn I, and connected to the rod B, by the chain G, carried over the pulley H, substantially as and for the purpose specified.

No. 43,400. Feed Water Heater.

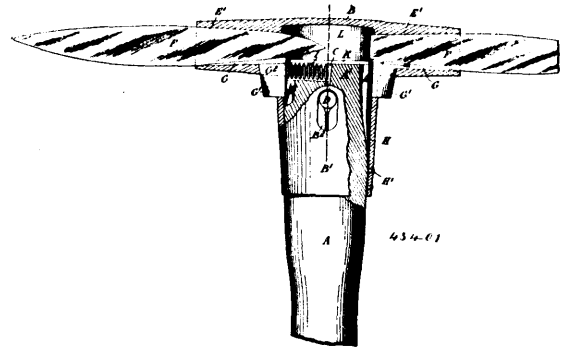
(*Réchauffeur de l'eau d'alimentation.*)



John D. McEachren, Galt, Ontario, Canada, 28th June, 1893; 6 years.

Claim.—1st. In a feed water heater, the combination of diaphragms b, b, water space D, and outlet S, substantially as and for the purpose herebefore set forth. 2nd. In a feed water heater, the combination of the diaphragm V, forming opening K, and diaphragm G, with the head T, substantially as and for the purpose herebefore set forth. 3rd. In combination with diaphragm V and G, the filtering beds E and F, substantially as and for the purpose herebefore set forth. 4th. In combination with filtering bed F and doors P, the diaphragm D, substantially as and for the purpose herebefore set forth. 5th. In combination with diaphragm V, and filtering beds F, the diaphragms B and C, or any number of them, substantially as and for the purpose herein before set forth.

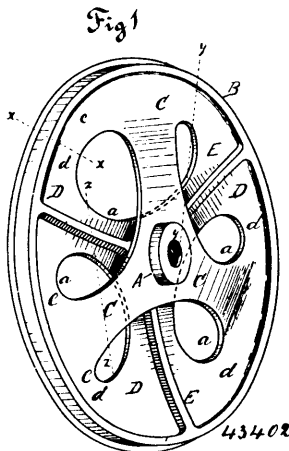
No. 43,401. Picks and similar tools. (*Pic et autres outils semblables.*)



William Kirkley, Birkinshaw, Quarndon, Derby, England, 28th June, 1893; 6 years.

Claim.—1st. In a pick or similar tool, a socket having one of its bearing surfaces capable of being removed or released to admit of the removal of the tool point, substantially as described. 2nd. In a pick or similar tool the combination with a tapered tool, socket such as E, having its larger end outwards and a tapered tool or point such as F, having its smaller end inwards of a wedge such as G, having its thicker part inwards and so arranged that it can be forced inwards towards the centre of the head from the outside for the purpose of releasing the tool or point, substantially as described and illustrated in the accompanying drawing. 3rd. In a pick or similar tool the employment of a tool retaining wedge having its thicker part towards the inside of the head and capable of being released from the outside. 4th. In a pick or similar tool the combination with a wedge such as described, of a spring intended to keep it in its normal position, substantially as described and illustrated in the accompanying drawing. 5th. In a pick or similar tool the combination with a wedge, such as described, of a plate spring such as H, secured both to the wedge and to the head or shaft socket, substantially as described and illustrated in the accompanying drawing. 6th. In a pick or similar tool the combination with a handle socket or eye such as B¹, closed at its larger end of a shaft or handle placed therein through the open smaller end and subsequently expanded therein by means of a cross wedge or equivalent entered through an opening such as B¹ in the socket, substantially as described, and illustrated in the accompanying drawing. 7th. In a pick or similar tool the employment of a double ended point or tool, substantially as described and illustrated in the accompanying drawing.

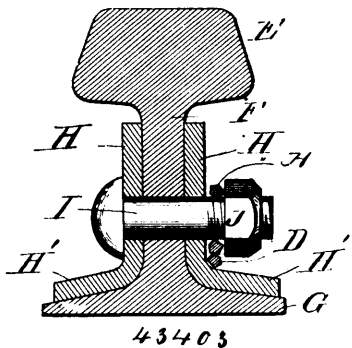
No. 43,402. Car Wheel. (Roue de chars.)



Frans H. R. Wanner, Stockholm, Sweden, 28th June, 1893; 6 years.

Claim.—1st. The combination, in a wheel, of the hub A, rim B, and spoke webs C and D, alternately merging into one another in hypercycloidal curves *a*, between the hub and the rim, substantially as set forth. 2nd. As an improved article of manufacture, a metallic wheel having the hub and rim connected by a central part or body composing the alternating spoke webs C and D and their connecting oblique rim webs *c* and *d*, constructed and arranged, substantially as and for the purpose shown and set forth.

No. 43,403. Nut Lock. (Arrête-écrou.)



Alfred Hurst Read, St. Louis, Missouri, U.S.A., 28th June, 1893; 6 years.

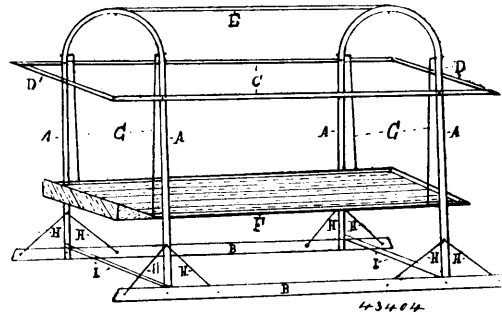
Claim.—1st. The herein described nut lock, consisting in an opening with its ends sprung in opposite directions from the plane of the ring, one of said ends being formed with a lug or projection on its outer circumferential face, substantially as and for the purposes specified. 2nd. The herein described nut lock, consisting of an opening with its ends sprung in opposite directions from the plane of the ring, one of said ends being bent or doubled back on itself exteriorly to the ring and substantially concentrically thereto, substantially as and for the purposes specified. 3rd. The herein described nut lock, consisting in an opening ring formed from material polygonal in cross section, and with its ends sprung in opposite directions from the plane of the ring, one of said ends being formed with a lug or projection on its outer circumferential surface, substantially as and for the purpose specified. 4th. The herein described nut lock, consisting in an opening ring formed from material polygonal in cross section and with its ends sprung in opposite directions from the plane of the ring, one of said ends being bent or doubled back on itself exteriorly to the ring and substantially concentrically thereto, substantially as and for the purposes specified. 5th. The herein described nut lock, consisting in an opening ring formed from twisted material polygonal in cross section and with its ends sprung in opposite direction from the plane of the ring, one of said ends being bent or doubled back on itself exteriorly to the ring, and substantially concentrically thereto, substantially as and for the purposes specified.

No. 43,404. Hammock. (Hamac.)

William Francis Phillips, Sarnia, Ontario, Canada, 28th June, 1893; 6 years.

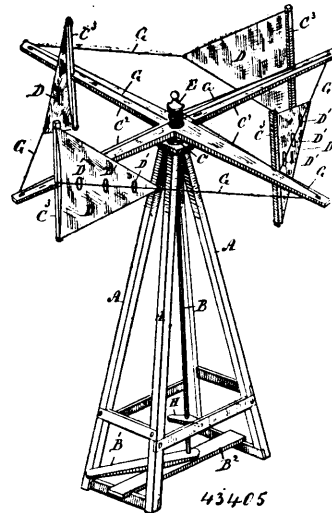
Claim.—A portable hammock constructed substantially as herein shown and described, consisting of the posts *a*, the sills *b*, the plates

c and *d*, the ridge pole *e*, the bed piece *f*, the rods *g*, and the braces



h, and cross braces *i*, *i*, all constructed and arranged to operate substantially as set forth.

No. 43,405. Wind Mill. (Moulin à vent.)



Albert Bradford, Isaac A. Cowie and Albert E. Little, all of Morden, Manitoba, Canada, 28th June, 1893; 6 years.

Claim.—The combination, with a derrick, having a cavity A², at top, of the driving shaft B, having a cross pin B³, or pawl removable from said cavity by slightly lifting said shaft by hand, the wheel arms C², having at their intersection a plate C¹, provided with radial ratchets C², and adapted to engage said cross pin or pawl when the shaft is lifted, said wheel arms having vertical yards C³, carrying sails D, a spool E, fixed to the top of said shaft, and ropes G, secured at the middle to the clew of the sails, the ends of said ropes or clew lines winding around said spool in a reverse direction, whereby the wheel revolves independently on the shaft and spool to furl the sails, and the wheel and spool rotate simultaneously to furl the sails when the shaft is lifted endwise, as set forth.

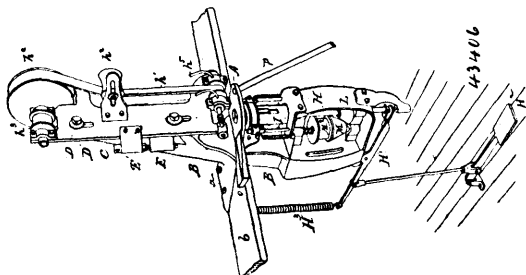
No. 43,406. Machine for Forming Pearl Buttons.

(Machine à former les boutons de perle.)

The Standard Pearl Button Company, assignees of George Carlyle, all of Detroit, Michigan, U.S.A., 28th June, 1893; 6 years.

Claim.—1st. In a pearl button forming machine, the combination, with a rotating grinding wheel, of a chuck arranged with its face in a horizontal plane, and a table, plate or guide over or along which the blanks are moved into the chuck opening whereby the blanks can be delivered to and removed from the chuck horizontally, substantially as set forth. 2nd. In a pearl button forming machine, the combination, with a rotating grinding wheel, of a horizontally arranged chuck, having its chucking face flush, or nearly so, with a table plate or guide over or along which the blanks are moved into the chuck opening, of means for raising such chuck above the surface of the table plate or guide to bring the blank in contact with the grinding wheel, substantially as set forth. 3rd. In a pearl button forming machine, the combination, with a rotating grinding wheel, of a horizontally arranged chuck movable toward and away from the grinding wheel, a table, plate or guide over or along which the blocks are moved into the chuck opening, and means for opening and closing the chuck operated by the movement of the chuck, substantially as set forth. 4th. In a pearl button forming machine, the combination with a rotating grinding wheel, of a chuck mounted upon

a vertical spindle and having a horizontal chucking face, said spindle being longitudinally movable to move the chuck



toward and away from the grinding wheel, a table, plate or guide over or along which the blanks are moved into the chuck opening, and means for throwing the chuck spindle into connection with the power as the chuck is moved toward the grinding wheel, substantially as set forth. 5th. In a pearl button forming machine, the combination, with a rotating grinding wheel, of a chuck movable toward and away from said grinding wheel, means for closing the chuck upon the blank operated by its forward movement, and means for connecting the chuck with the source of power to rotate the same as the chuck is moved forward, substantially as set forth. 6th. In a pearl button forming machine, the combination, with a rotating grinding wheel, of a vertical chuck spindle, carrying a horizontal chuck, a horizontal table or plate, with whose surface the chuck is flush, or nearly so, means for moving the chuck vertically above the table or plate and toward the grinding wheel, means for opening and closing the chuck operated by its movement, and a power connection with the chuck spindle brought into operation by the forward movement of the chuck, substantially as set forth. 7th. In a pearl button forming machine, the combination, with the rotating grinding wheel, of a chuck, movable toward and away from said wheel, arms pivoted in the chuck head carrying the clamping plates, and a collar encircling said arms and forcing them inwardly as the chuck is moved forward, substantially as set forth. 8th. In a pearl button forming machine, the combination, with the moving chuck, of the pivoted arms carrying the ducking plates, the encircling collar, and the springs connecting said collar with the frame, substantially as set forth. 9th. In a pearl button forming machine, the combination with the chuck, movable toward and away from the grinding wheel, of a stationary rod passing through the chuck, and loosening the blanks from the chuck as it moves backward, substantially as set forth. 10th. In a pearl button forming machine, the combination, with the rotating grinding wheel, of the automatic chuck mounted upon a movable spindle, and the cone friction wheels connecting the chuck spindle with the power, as the chuck is moved forward, substantially as set forth.

No. 43,407. Pearl Button. (Bouton de perle.)

Henry W. Crouse, New York City, New York, assignee of George Carlyle, Detroit, Michigan, all in the U.S.A., 28th June, 1893; 6 years.

Claim.—1st. The method of manufacturing pearl buttons, consisting in subjecting the mother of pearl to a softening agent prior to forming the buttons, substantially as set forth. 2nd. The method of manufacturing pearl buttons, consisting in first cutting the blanks from the shell, so as to expose the edges of the laminae, then subjecting such blanks to a softening agent, and then cutting or grinding the blanks to form buttons, substantially as set forth. 3rd. The method of manufacturing pearl buttons, consisting in soaking the mother of pearl in a solution of lye and in turpentine, prior to forming the buttons, substantially as set forth. 4th. The method of manufacturing pearl buttons, consisting in first cutting the blanks from the shell, so as to expose the edges of the laminae, and then soaking such blanks in a solution of lye and in turpentine, and then cutting or grinding the blanks to form buttons, substantially as set forth.

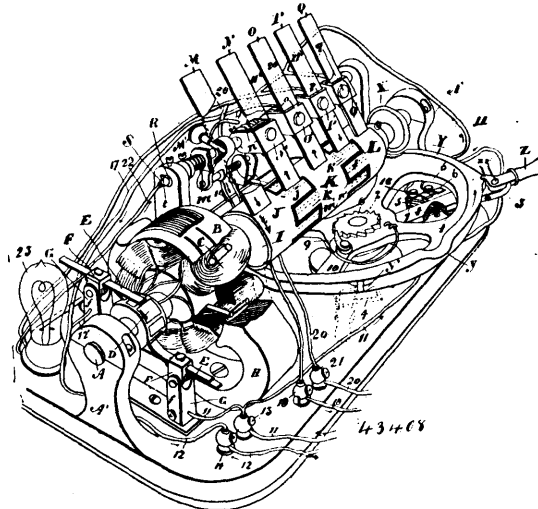
No. 43,408. Transmitter for Electric Currents.

(*Transmetteur de courant électrique.*)

William Joseph Still and Randolph MacDonald, all of Toronto, Ontario, Canada, 28th June, 1893; 6 years.

Claim.—1st. A transmitter comprised of a cylinder and motor for driving such cylinder, such motor being arranged to run on an alternating current in unison with the alternations, and the cylinder being so constructed as to transmute the alternating current into a constant current, as and for the purpose specified. 2nd. The combination with a motor adapted to be run by an alternating current, of a transmuting cylinder formed of three rings insulated from each other, and from the central spindle on which is located the motor, and cylinder and having rectangular, tooth-shaped lateral projections, alternately arranged and designed to fit into the spaces between the lateral projections of the adjacent ring, and means whereby the alternating current is conveyed to the rings and transmuted to a constant current to be conveyed away from the rings, as and for the purpose specified. 3rd. The combination with the motor having the armature and commutator located on the spindle

A, and driven through the alternating current wires as specified, of the transmuting cylinder comprised of the three rings J, K



and L, insulated from the spindle A, by the insulating cylinder I, and having rectangular tooth-shaped lateral projections, the projections *j*, extending into the spaces between the projections *k*, of the ring K, and the projections *l*, of the ring L, extending between the projections *k*¹, of the ring K, and the projections *l* of the ring L, extending between the projections *j*, of the ring J, and the projections *k*¹, of the ring K, extending between the projections *l*, of the ring L, so as to form rectangular fret-shaped insulating spaces *m* and *n*, between the ring K, and the rings J and L respectively, of the brushes M, N, O, P, Q, and means whereby the alternating current entering the brushes is transmuted by the cylinder comprised of the rings J, K and L, as described and conveyed from the brushes as constant current, as and for the purpose specified. 4th. The combination, with the motor having the armature and commutator located on the spindle A, and driven through the alternating current wires as specified, of the transmuting cylinder comprised of the three rings J, K and L, insulated from the spindle A, by the insulating cylinder I, and having rectangular tooth-shaped lateral projections, the projections *j*, extending into the spaces between the projections *k*, of the ring K, and the projections *l*, of the ring L, extending between the projections *k*¹, of the ring K, and the projections *l*, of the ring K, extending between the projections *j*, of the ring J, and the projections *k*¹, of the ring K, extending between the projections *l*, of the ring L, so as to form rectangular fret-shaped insulating spaces *m* and *n*, between the ring K, and the rings J and L respectively, of the brushes M, N, O, P, Q, and the alternating current wires 11 and 12, the wire 11, being connected to the brushes M and Q, so that when the current passes over the wires 11, in the direction indicated and the brushes N and P, are on the projections *j* and *k*¹, the current will pass through the wire 11, brush M, ring J, projection *j*, brush N, over the wires 18, and 20, in the direction indicated, back to the brush P, through the projections *k*¹, ring K, brush O, wire 17 to the wire 12, but when the current is passing over the wire 12, in the direction indicated and the brushes N and P, are on the projections *k* and *l*, of the rings K and L respectively, the current will pass over the wire 12, in the direction indicated wire 17, through the brush O, ring K, brush N, through the wires 18 and 20, in the same direction as before back to the brush P, through the projection *l*, ring L, brush Q, out on the wire 11¹, and wire 11, in the opposite direction, as and for the purpose specified. 5th. The combination, with the alternating current wires 11 and 12, designed to convey the current through the brushes M, N, O, P, Q, and cylinder and wires 18 and 20 as specified, and means whereby the current is short circuited as the brush N, passes from one lateral projection to the succeeding one as the transmuting cylinder is caused to revolve, as and for the purpose specified. 6th. The combination, with the alternating current wires 11 and 12, designed to convey the current through the brushes M, N, O, P, Q, and cylinder and wires 18 and 20 as specified, of the short circuiting brush T, arranged to come in contact with the succeeding projection as the brush N, leaves the preceding projection of the same ring, the brush T, being connected by a short circuiting wire to a substance of low resistance and finally passing out through the brushes into one of the alternating current wires, as and for the purpose specified. 7th. The combination, with the alternating current wires 11 and 12, designed to convey the current through the brushes M, N, O, P, Q, and cylinder and wires 18 and 20 as specified, of the short circuiting brush T, arranged to come in contact with the succeeding projection as the brush N, leaves the preceding projection of the same ring, the brush T, being connected through the holder U, sleeve V, adjusting screw W, rod S,

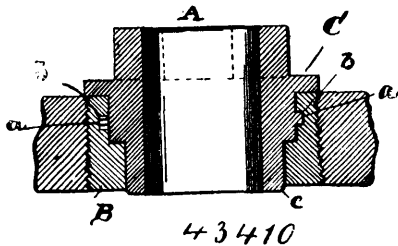
wire 22, lamp 23, brush P, projection k^1 , ring K, brush O, wire 17 and wire 12, and alternately in the opposite direction through the wire 12, wire 17, brush O, brush T, holder U, sleeve V, adjusting screw W, rod S, wire 22, lamp 23, brush P, projection I, ring L, brush Q, wire 11², and wire 11, as and for the purpose specified. 8th. The combination with the transmuting cylinder comprised of the rings J, K and L, having the lateral projections j , k and k^1 and l , and the brushes M, N, O, P, Q, arranged as to the alternating current wires, and constant current wires as specified and the alternating current motor, of the pinion X, and means whereby this pinion is partially rotated to start the transmuting cylinder, and at the same time throw into circuit the alternating current wires to the brushes, as and for the purpose specified. 9th. The combination with the transmuting cylinder comprised of the rings J, K and L, having the lateral projections j , k and k^1 and l , and the brushes M, N, O, P, Q, arranged as to the alternating current wires, and constant current wires as specified and the alternating current motor, of the pinion X and starting wheel Y, having the notches y cut in the face of the periphery of the lever Z, and designed to partially rotate the starting wheel Y, and cause the pinion X to revolve, as and for the purpose specified. 10th. The combination with the transmuting cylinder comprised of the rings J, K and L, having the lateral projections j , k and k^1 and l , and the brushes M, N, O, P, Q, arranged as to the alternating current wires and constant current wires as specified, and the alternating current motor, of the pinion X and the starting wheel Y, having the notches y cut in the face of the periphery of the lever Z, and designed to partially rotate the starting wheel Y, and cause the pinion X to revolve and at the same time bring the knife 4 beneath the spring fingers 5 and 6, of the switch 7, so as to complete the circuit through the wire 11, as and for the purpose specified. 11th. The combination with the transmuting cylinder comprised of the ring J, K, and L, having the lateral projections j , k and k^1 and l , and the brushes M, N, O, P, Q, arranged as to the alternating current wires and constant current wires as specified, and the alternating current motor, of the pinion X and starting wheel Y, having the notches y cut in the face of the periphery of the lever Z, which is provided with a pivoted handle H designed to fit in between the jaws h^1 , and partially rotates the wheel and the spring dog 9, designed to come in contact with the ratchet wheel B, secured to the stud 2, as and for the purpose specified.

No. 43,400. Beer. (Bière.)

Jacob Uhlmann, Fuerth, assignee of Dr. Heinrich Conrad Schneider, Worms, both in Germany, 28th June, 1893; 6 years.

Claim.—1st. A process for improving beer by means of saccharified colouring malt, characterized by the addition of an extract of such malt, which is rich in maltodextrin or isomaltose to the finished beer, or to the beer wort produced in the usual manner, only in the hopping vat, and thereby removing such extract from the converting action of the diastase. 2nd. A process for making the malt extract rich in maltodextrin (isomaltose), specified in claim 1, consisting in mashing the saccharified colouring malt employed, at a temperature of about 10 degrees below the usual mashing temperature, which is the one most favourable to the formation of maltodextrin (isomaltose) and concentrating the wort thus produced to the requisite consistency.

No. 43,410. Means for Protecting the Bungways of Barrels. (Moyen de protéger les boudons de tonneau.)



Mark Anthony, Berkeley, California, and William C. Savage, New York City, New York, all in the U.S.A., 28th June, 1893; 6 years.

Claim.—In a device for protecting the bungways of barrels, casks or the like, the combination, with the bung B, having an inclined way b , formed on its inner surface, of the spout A, having lugs a , adapted to slide in the said grooves b , the annular flange C, and wrench seat D, substantially as set forth.

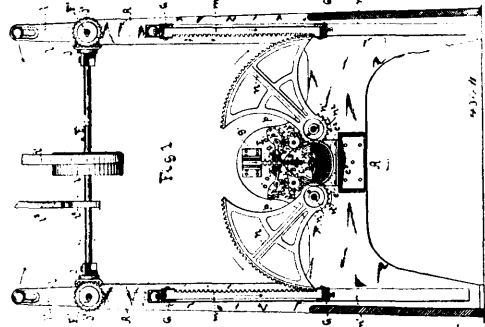
No. 43,411. Piano Hammer Covering Machine.

(Machine pour couvrir les marteaux de pianos.)

Martin Koeniges, Dolgeville, New York, U.S.A., 28th June, 1893; 6 years.

Claim.—1st. In a machine of the character specified, a removable felt die and moulding clamp, and means for locking the felt die when

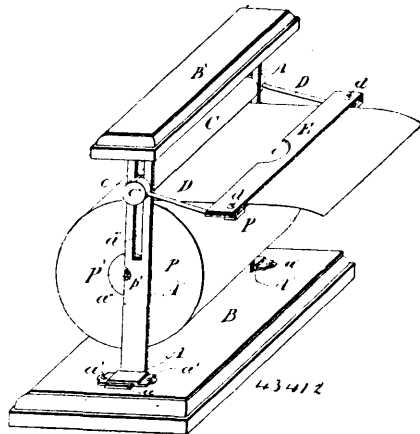
closed, substantially as described. 2nd. In a machine of the character specified, a removable felt die and moulding clamp, and a



device on the clamp for locking the felt die, substantially as described. 3rd. The removable felt die herein described, having two hinged sections, and a moulding clamp provided with a locking device arranged to engage the sections of the felt die when closed, substantially as described. 4th. The removable felt die herein described, having a stationary central part, two sections hinged thereto, and arms projecting from said sections; combined with the moulding clamp provided with locking devices arranged to engage with and automatically lock the sections of the felt die when closed, substantially as described. 5th. In a machine of the character specified, a removable felt die and means for locking the same while under pressure, substantially as described. 6th. In a machine of the character specified, a reciprocating clamp head, a moulding clamp adapted to be inserted into the same, a removable felt die, means for closing the same upon the felt, and a locking device for locking the die while under pressure, substantially as described. 7th. In a machine of the character specified, a felt die provided with hinged sections and severing devices secured to said sections, substantially as described. 8th. In a machine of the character specified, a felt die provided with hinged sections, severing devices secured to said sections and means for moving said severing devices longitudinally, substantially as described. 9th. In a machine of the character specified, the combination, with the moulding clamp and the felt die, provided with movable sections, of reciprocating racks and intermediate gear connections between said racks and the moulding clamp and felt die for operating the same, substantially as and for the purposes set forth.

No. 43,412. Paper Roll Holder and Cutter.

(Appareil à tenir et à couper les rouleaux de papier.)

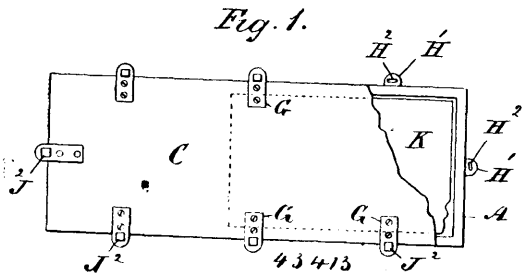


John Adams Armstrong and Charles Arthur McNaughton, both of Ottawa, Ontario, Canada, 29th June, 1893; 6 years.

Claim.—1st. In a paper roll holder and cutter, the combination of a pair of flat bar standards A notched at the rear to form bearings for the roller axle and slotted from the top to near said bearings and having bent feet, recessed foot plates A^1 and slotted plates A^1 through which said standards pass at foot and top, the base B and top rail B^1 to which said plates are secured, the presser C slotted near each end from front and back to form central parallel bearings to slide in the slots of the standards, forward projecting arms D secured to the projecting ends of the presser, and a pair of flat plate knives E secured to the ends of said arms parallel and close to each other, but allowing space between their opposite flat sides to pass a sheet of paper, substantially as set forth. 2nd. In a paper roll holder and cutter, the combination of flat bar standards A notched at the rear edge to provide bearings for the paper roll axle and having a slot extending from the top down near said bearings, a presser

C provided with slots forming a shouldered flat neck adapted to slide in the slot of said standards and having its ends projecting beyond said standards, a forward projecting arm D rigidly secured to each end of said presser and a pair of flat plate knives E secured to the ends of said arms close to each other but leaving space for a sheet of paper to pass between them, substantially as set forth. 3rd. In a paper roll holder and cutter, the combination of a presser adapted to slide vertically in a pair of standards parallel to itself and provided at each end with an arm, a pair of flat plate knives placed flat against each other but having room between them for a sheet of paper and having their rear edges notched out at or near the centre, substantially as set forth.

No. 43,413. Burial Case. (Cercueil.)

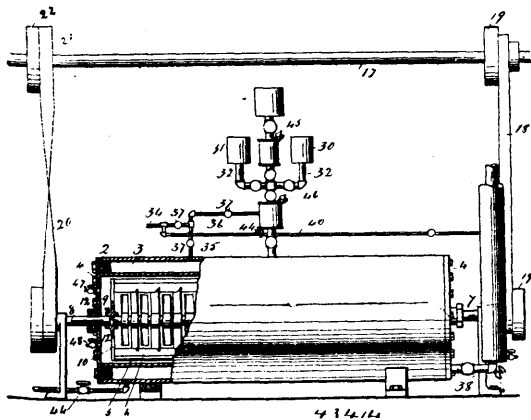


David E. Southwick and George W. Rowell, Ogdensburg, New York, U.S.A., 29th June, 1893; 6 years.

Claim.—1st. The combination of the wooden case A, having a metallic lining B, a lid C, having a metallic lining D, provided with a rim E, the packing F, intervening the lid and the case and secured to the lid, and the lid fastenings, consisting of the slotted lugs G, H, and a key shaped bolt J, as set forth. 2nd. A burial case cover fastening consisting of the lugs G, H, each having a coinciding slot and the latter provided with a car or inclined projection H', and a key shaped bolt J, having a bit J', engaging said inclined projection, and when turned drawing the lugs toward one another, as set forth.

No. 43,414. Apparatus for Making Soap.

(Appareil pour la fabrication du savon.)

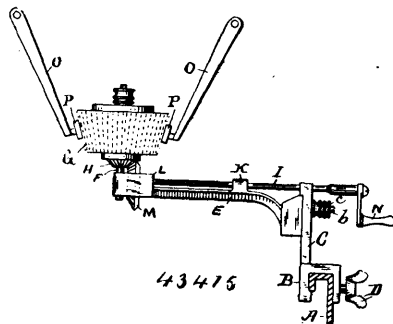


Milton Josiah Palmer, Toledo, Ohio, U.S.A., 29th June, 1893; 6 years.

Claim.—1st. The process of manufacturing soap, which consists in saponifying the material in a vacuum chamber, ejecting the material by pressure therein, and afterwards treating the chemically united compounds with an electric current. 2nd. The process of making soap, which consists in intimately commingling the fatty matter and alkali, and then subjecting the material to the action of an electrical current. 3rd. In an apparatus for making soap, a vacuum chamber, a revoluble reel therein, comprising a plurality of floats, cross bars extending from one float to the other float, an agitator having blades alternately with the cross bars, and revolving in an opposite direction to the reel. 4th. In an apparatus for making soap, a vacuum chamber, a two part shaft extending through the same, a reel revolubly mounted upon one portion of the shaft and journaled to revolve independently of the other, transverse bars upon the reel, blades upon the shaft alternating with the bars, and mechanism for revolving the reel and agitator in opposite directions, a receptacle for fatty matter, a receptacle for alkali and connections with the receptacles and vacuum chamber. 5th. In an apparatus for making soap, a vacuum chamber, a concentric steam chamber, a jacketed chamber in connection with the vacuum chamber, a receptacle for alkaline solution in connection with the jacketed chamber, a supplemental chamber connected with the jacketed chamber, an open receptacle connected with the supplemental chamber, pipes

leading from the steam supply, and connected with the concentric steam chamber and jacketed receptacle, cocks in the two latter chambers for allowing the escape of steam without destroying the vacuum of the vacuum chamber, and valves for cutting off or admitting material from either closed chamber to the vacuum chamber. 6th. In an apparatus for making soap, a vacuum chamber, means for admitting fatty matter and alkali thereto, an agitating machine within the chamber, a vat for the reception of saponaceous matter, a jacketed pipe leading from the chamber to the vat, and connections from a steam supply to the jacket of the pipe.

No. 43,415. Device for Cleaning the Type of Type-writing Machines. (Appareil pour nettoyer les caractères des clavigraphes.)

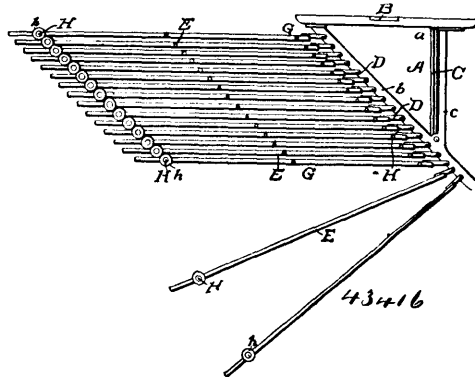


Thomas Headly Stackhouse, Philadelphia, Pennsylvania, U.S.A., 29th June, 1893; 6 years.

Claim.—1st. The combination, with a type-writing machine, of a guide carried by the frame of the machine, an arm carried by this guide and adapted to be raised or lowered on this guide, a set screw or thumb nut for clamping the said arm and guide, a vertical shaft upon the inside end of said arm, a conical brush and a gear wheel carried by said vertical shaft, a shaft carried by said arm, a gear wheel carried by said shaft and gearing into gear wheel on said vertical shaft, and a crank for revolving said second shaft, all substantially as and for the purposes set forth. 2nd. The combination, with a type-writing machine, of a conical brush, a vertical shaft upon which said brush is mounted, a horizontal shaft, gear wheels upon said shafts meshing with each other, an operating crank upon said horizontal shaft, a horizontal arm carrying said shafts and their connected parts, and means, substantially as described, for carrying this horizontal arm and for adjusting it and the horizontal shaft and their connected parts vertically, substantially as and for the purposes set forth.

No. 43,416. Display Rack.

(Chevalet d'étalage.)

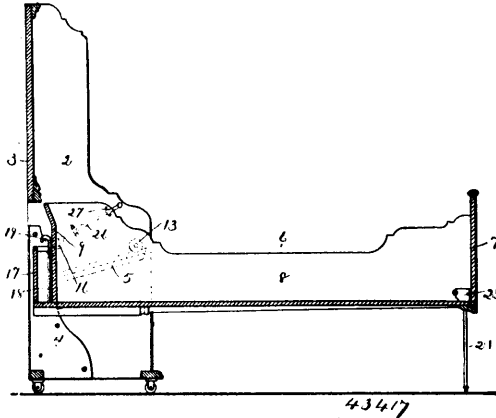


John H. Best, Galva, Illinois, U.S.A., 29th June, 1893; 6 years.

Claim.—1st. As an article of manufacture, a display rack, consisting of two parallel brackets, adapted to be attached to a suitable support, a series of straight arms pivotally connected to one of said brackets, and a series of braces attached at one end to said arms and having their other ends pivotally connected to one of the brackets, substantially as described. 2nd. As an article of manufacture, a display rack, consisting of two parallel brackets, a series of parallel arms pivotally connected to one of said brackets, a series of rollers mounted on the display arms and projecting beyond the sides thereof, and braces attached at one end to said arms and having their other ends pivotally connected to one of the brackets, substantially as described. 3rd. In a display rack, the combination of two parallel fixed brackets, a series of display arms, having their inner ends bifurcated, plates k, fitted in the bifurcations in the display arms, and each provided with two parallel rearwardly extend-

ing arms M, which extend on opposite sides of and are pivotally connected to one of the fixed brackets, and a series of brace rods attached to the display arms, and pivotally connected to the other bracket, substantially as described.

No. 43,417. Folding Bed. (Lit pliant.)

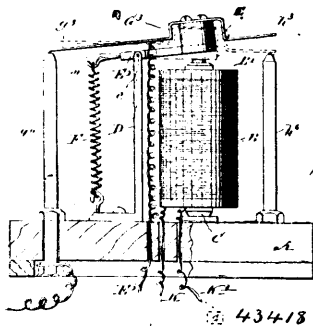


Robert Piper, Toledo, Ohio, and David D. Whitesell, Alma, Michigan, all in the U.S.A., 29th June, 1893; 6 years.

Claim.—1st. In a folding bed, a head or upright portion, provided with a substantially vertically curved track, in combination with the bed having a traveller and supporting wheels abutting against and running on the traveller and supporting tracks respectively. 2nd. In a folding bed, a head or upright portion, provided with a substantially vertical traveller track, and a supporting track inclined downwardly towards the rear, a bed having a traveller and supporting wheels abutting against and running on the traveller and supporting tracks respectively, in combination with pockets for weights on the head of the bed, said weights having a fastening device to secure them in the pockets. 3rd. In a folding bed, a head or upright portion provided with travelling and supporting tracks, a bed having traveller and supporting wheels, and a locking mechanism for one of the supporting wheels comprising a sliding rod formed with a curved catch upon the inner end adapted to frictionally engage with the wheel when the rod is lowered, or to be withdrawn by the vertical movement of the rod. 4th. In a folding bed, a head or upright portion, a bed supported thereon at the head portion, legs at the foot portion held in extended adjustment by a gravity latch or lock, adapted to swing to bear upon the end of the leg when the bed is extended, or out of the way when folded.

No. 43,418. Electric Switch.

(Commutateur électrique.)



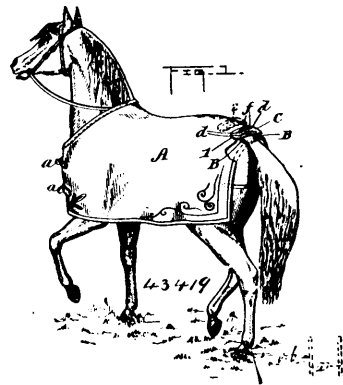
The Automatic Telephone and Electric Company of Canada, Montreal, Quebec, Canada, 29th June, 1893; 6 years.

Claim.—1st. In a system of electrical communication, apparatus to secure on a given number of main lines a greater number of direct connections between a greater number of communicating points than the number of said main lines. 2nd. In a system of electrical communication, a switch device and connections adapted to secure on a given number of main lines a greater number of direct connections between a greater number of communicating points, than the number of said main lines. 3rd. In a system of electrical communication, an independently operated electro-magnetic switch device and connections adapted by the transmission of an electric current through the same to secure on a given number of main lines a greater number of direct connections between a greater number of communicating points than the number of said main lines. 4th. In an electric switch device, the combination of one or more electro-

magnets suitably mounted on an insulated base, an armature support, an armature fulcrumed or pivoted to such support, insulated conducting strips, carried by said armature, and having their ends extended to form finger projecting on either side of said fulcruming or pivoting point, insulated contacts corresponding in number to said finger projections means for normally holding said armature away from said magnets, and holding the fingers, projecting from one side in connection with their contacts, and the said magnets being adapted upon energisation to attract said armature, and bring the opposite fingers into connection with their contacts and wire connections or terminals respectively from said conducting strips contacts and magnet, as set forth. 5th. An electro-magnetically operated switch device consisting of one or more electro-magnets, a pivoted armature, carrying two or more insulated conducting strips each of which has a double finger projection, and from opposite sides of said armature terminals for connecting permanently to each of said strips, a main line, and insulated contacts in number and arrangement corresponding to the opposite rows of the finger projections of said strips, and with which such projections are caused alternately to connect by the movement of said armature, as set forth.

No. 43,419. Horse Blanket Fastener.

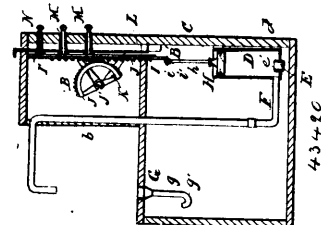
(Attache pour couvertures de cheval.)



Ugene Henry Danforth and Edgar A. Jordan, both of Colebrook, New Hampshire, U.S.A., 29th June, 1893; 6 years.

Claim.—1st. A horse blanket provided with an adjustable crupper strap having fastening means, substantially as described. 2nd. In a horse blanket holder, a detachable crupper strap and a fastening device, comprising a keeper plate provided with staple keepers, and staples passing through said plate and adapted to secure said crupper strap adjustably to a horse blanket, substantially as and for the purpose described. 3rd. The combination of the plate with elevated open sided keeper lugs, the flexible or pliable staples passed through the holes and adapted to be bent or sprung under the keeper lugs, and a strap passed under the bowed portions of the staples beneath the plate, substantially as described. 4th. The keeper plate having elevated open sided lugs stamped upon it so as to stand above its upper side and with holes through it near each end, in combination with U-shaped flexible or pliable penetrating staples fastened to the plate by bending and springing them under the lugs, substantially as described.

No. 43,420. Pump. (Pompe.)

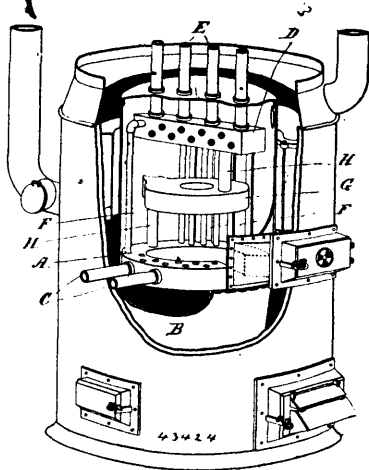


John G. Becker, Fort Wayne, Indiana, U.S.A., 29th June, 1893; 6 years.

Claim.—1st. In a self measuring pump, the combination, with a tank, a cylinder having valved inlet, and a discharge pipe, of a piston, a rack bar connected to the piston rod, a segment engaging with the rack bar, a fixed stop bar having a plurality of openings, a tube fitting in each opening and having a threaded end, a stop slidably passed through each tube to be projected into the path of the rack bar, and nuts on the threaded ends of the tubes on each side of the top bar, substantially as described.

the sides and the tie bars or beams connecting said sides, the plates secured upon the steps and extending to overlap the next lower step, the mercury cups arranged below the lower ends of said plates, the gates supported adjustably above said cups and in the rear of the extended step plates, the holders or vessels supported on the tie bars M and the tubes connected with said vessels and arranged to discharge into the mercury cups, all substantially as set forth. 19th. The combination in an amalgamator of a main frame or box, devices for adjusting the angle of said frame or box mercury cups supported on said frame or box, devices by which to adjust the angle of such cups irrespective of the adjustment of the frame, conducting devices for directing the material to the mercury cups and the gates supported adjustably above said cups, substantially as set forth.

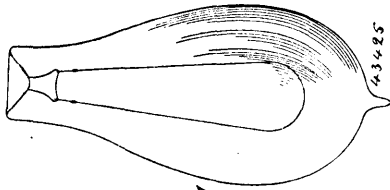
No. 43,424. Heating Furnace. (Calorifere.)



Joseph Brensley Sheridan, Toronto, Ontario, Canada, 29th June, 1893; 6 years.

Claim.—As an auxiliary heater to a hot air furnace, a hollow ring located in the combustion chamber, in combination with a chamber or chambers arranged in the combustion chamber and detachably connected together and to the pipes leading to the radiator, substantially as and for the purpose specified.

No. 43,425. Electric Lamp. (Lampe électrique.)



John Waring, Manchester, Connecticut, U. S. A., 29th June, 1893; 6 years.

Claim.—1st. The combination of a carbon to be raised to incandescence by electrical excitement, an enveloping gas composed wholly or largely of an element or elements of high atomic weight, to wit, as high as that of bromine, a sealed chamber enclosing both the carbon and surrounding gas, and electrical conductors passing through the walls of said chamber and connecting with the carbon, for the purpose specified. 2nd. The combination of a carbon to be raised to incandescence by electrical excitement, an enveloping gas consisting wholly or largely of bromine, or of iodine, or of both, a sealed chamber enclosing both the carbon and surrounding gas, and electrical conductors passing through the walls of said chamber and connecting with the carbon, for the purpose specified.

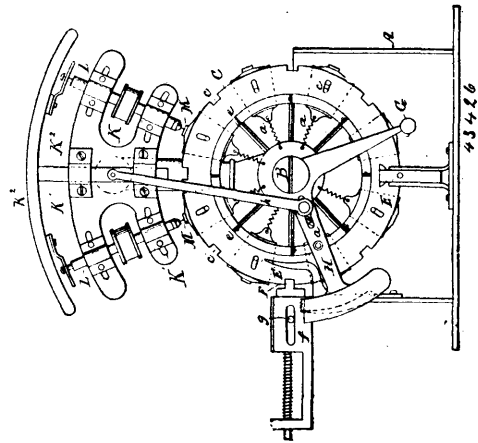
No. 43,426. Button Drilling Machine.

(Machine à percer les boutons.)

Henry W. Crouse, New York City, assignee of George Carlyle, Detroit, Michigan, all in the U.S.A., 29th June, 1893; 6 years.

Claim.—1st. In a button drilling machine, the combination, with the rotating chuck carrying wheel having a series of chucks mounted radially in its rim, of two or more rotating drills adapted to be brought simultaneously into operation upon two or more blanks carried by the said chucks, substantially as set forth. 2nd. In a button drilling machine, the combination with a rotating wheel having a series of chucks mounted radially in its rim, of an arm rotating such wheel by a pawl and ratchet connection, and a sliding drill frame carrying two or more rotating drill spindles and reciprocated by a connection with such operating arm, substantially as set

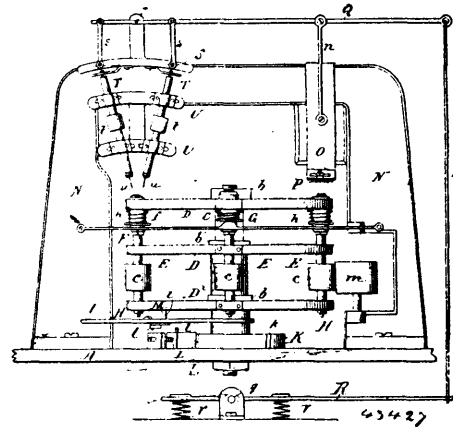
forth. 3rd. In a button drilling machine, the combination with the rotating wheel carrying a series of chucks mounted radially in it



rim, of a locking dog for holding such wheel, a sliding drill frame carrying two or more rotating drills, an operating arm rotating such wheel by a pawl and ratchet movement, a connection between such arm and the sliding drill frame for working such drill frame, and a tongue carried by such arm for retracting the locking dog, substantially as set forth. 4th. In a button drilling machine, the combination with the rotating wheel having a series of spring closed chucks mounted radially in its rim, of stationary cams for opening such chucks by the rotation of the wheel to release the drilled buttons and to receive new blanks, substantially as set forth. 5th. In a button drilling machine, the combination with the sliding chuck jaws, of the stationary wedges for opening such chuck jaws, substantially as set forth.

No. 43,427. Machine for Making Buttons.

(Machine pour la fabrication des boutons.)

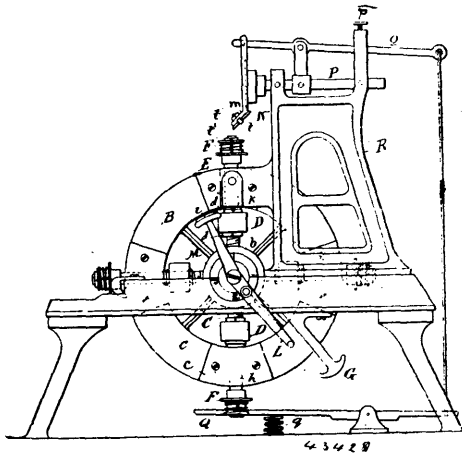


Henry W. Crouse, New York City, New York, assignee of George Carlyle, Detroit, Michigan, all in the U.S.A., 29th June, 1893; 6 years.

Claim.—1st. In a button making machine, the combination with a series of rotatable blank holding chucks advanced progressively beneath tools, of one or more rotating drills acting upon the blanks in succession, a non-rotating forming tool also acting upon the blanks successively, and means for rotating the chucks when beneath the forming tool, substantially as set forth. 2nd. In a button making machine, the combination with a series of blank holding chucks advanced progressively beneath the tools of sliding, forming and drilling tools operating upon the blanks successively, means for rotating the chuck which for the time being is beneath the forming tool, substantially as set forth. 3rd. In a button making machine, the combination with a rotating chuck carrier, of a series of chuck spindles carried thereby, each provided with a friction wheel, a fixed rotating friction wheel with which the friction wheel of each spindle engages when the chuck of that spindle is beneath the forming tool, an advancing non-rotating forming tool acting upon the blanks successively, and one or more advancing rotating drills also acting on the blanks successively, substantially as set forth. 4th. In a button making machine, the combination with a rotating chuck carrier, of a series of chuck spindles mounted thereon, means for rotating each chuck spindle when beneath the forming tool, a sliding and non-rotating forming tool, and two sliding

rotating drill spindles connected with a rocking arm, and advanced alternately by the rocking of said arm, substantially as set forth. 5th. In a button making machine, the combination with a rotating chuck carrier, of a series of chuck spindles mounted thereon, means for rotating the chuck spindles when beneath the forming tool, a sliding non-rotating forming tool, two sliding rotating drill spindles advanced alternately by a rocking arm, and a lever with which the sliding forming tool and the drill rocking arm are connected, so that both the forming tool and the drills are brought into action by the same lever movement, substantially as set forth. 6th. In a button making machine, the combination with the rotating chuck carrier, of a series of chuck spindles mounted thereon, forming and drilling tools acting upon the blanks carried by the chucks, an oscillating handle rotating the rotating chuck carrier, a cam for opening the chucks, a discharging rod for each chuck operated by the movement of the oscillating handle, and a locking dog for locking the carrier at each position of rest, which dog is retracted by the movement of said oscillating lever, substantially as set forth.

No. 43,428. Button Forming Machine.
(Machine pour former les boutons.)

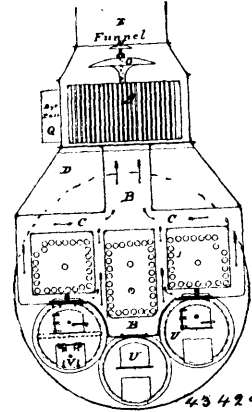


Henry W. Crouse, New York City, New York, assignee of George Carlyle, Detroit, Michigan, all in the U.S.A., 29th June, 1893; 6 years.

Claim.—1st. In a button forming machine, a cutting tool, consisting of a plate provided with ribs on one side extending throughout its length forming a cutting edge of the desired configuration, which can be re-sharpened without altering the configuration by simply grinding away the plate, substantially as set forth. 2nd. In a button forming machine, a cutting tool having two or more sets of ribs upon one face, forming separate cutting edges of the desired configuration, which can be re-sharpened without altering the configuration by simply grinding away the end of the plate, substantially as set forth. 3rd. In a button forming machine, the cutting tool composed of the plate N, provided with two or more sets of cutting ribs and intermediate clearing channels extending throughout the length of the plate on one side and adapted to form independent cutting edges by the grinding of the end of the plate, substantially as set forth. 4th. In a button forming machine, the combination, with a non-rotatable cutting tool, of a chuck carrier carrying two or more rotatable chucks and presenting the chucks successively to such cutting tool, substantially as set forth. 5th. In a button forming machine, the combination, with a non-rotatable cutting tool, of a chuck carrier carrying two or more rotatable chucks and presenting the chucks successively to such cutting tool, and means for rotating such chucks only when under the cutting tool, substantially as set forth. 6th. In a button forming machine, the combination, with a reciprocating cutting tool, of two or more rotatable chuck spindles mounted radially in a wheel, by the turning of which wheel the chucks carried by said spindles are brought successively under the cutting tool, substantially as set forth. 7th. In a button forming machine, the combination, with a reciprocating cutting tool, of a wheel, two or more chuck spindles mounted radially upon such wheel, whereby the chucks will be brought successively under the cutting tool, and means for rotating such spindles only when the chucks are under the cutting tool, substantially as set forth. 8th. In a button forming machine, the combination, with a reciprocating cutting tool, of a wheel, two or more chuck spindles mounted radially upon such wheel, whereby the chucks will be brought successively under the cutting tool, a wheel on each of said chuck spindles, and a rotating wheel which is brought into connection with the wheels on the chuck spindles as each chuck is moved under the cutting tool, substantially as set forth. 9th. In a button forming machine, the combination, with a reciprocating cutting tool, of a wheel, two or more chuck spindles mounted radially upon such wheel, whereby the chucks will be brought successively under the cutting tool, a yielding friction wheel on each chuck

spindle, and a rotating wheel with which the friction wheel of such chuck spindle is brought in contact when the chuck is under the cutting tool, substantially as set forth. 10th. In a button forming machine, the combination, with a rotating carrying wheel, of chuck spindles mounted radially thereon, a locking dog for such wheel, and a swinging arm moving such wheel through a pawl and ratchet and having a tongue which withdraws the locking dog, substantially as set forth. 11th. In a button forming machine, the combination, with a carrying wheel, of chuck spindles mounted radially thereon and carrying spring closed chucks, and stationary cams opening such chucks at points for discharging the buttons and for receiving new blanks, substantially as set forth.

No. 43,429. Steam Boiler. (Chaudière à vapeur.)



James Patterson and George W. Jones, both of Halifax, Nova Scotia, 20th June, 1893; 6 years.

Claim.—1st. In a forced draught apparatus for steam boilers, the removable heater A in combination with the air pipe from blower, and the pipe B conveying air to furnace, as herein described and for the purpose set forth. 2nd. In a forced draught apparatus for steam boilers, the bye pass passage passing around outside of funnel and forming a connection between pipe, from blower and pipe B to furnace and fitted with adjustable valves, as herein described and for the purpose set forth. 3rd. In a forced draught apparatus for steam boilers, the projecting furnace front having air passages and regulating valves communicating with furnace and ash pit, as herein described and for the purpose specified. 4th. In a forced draught apparatus for steam boilers, the cowl placed above heater and having a metallic pipe passing through it and making a connection into funnel, as herein described and for the purpose specified. 5th. In a forced draught apparatus for steam boilers, the convection arch of refractory material at rear end of furnace and extending into combustion chamber, as herein described and for the purpose specified. 8th. In a forced draught apparatus for steam boilers, the tube ferrule of refractory material in combination with the convection arch, as herein described and for the purpose set forth. 7th. In a forced draught apparatus, the combination of the removable heater and the bye pass passage, and the furnace front with its controlling valves, and the cowl and the pipe, as herein described and for the purpose specified. 8th. In a forced draught apparatus, the combination of the furnace front with its controlling valves, and the convection arch and tube ferrules, as herein described and for the purpose set forth.

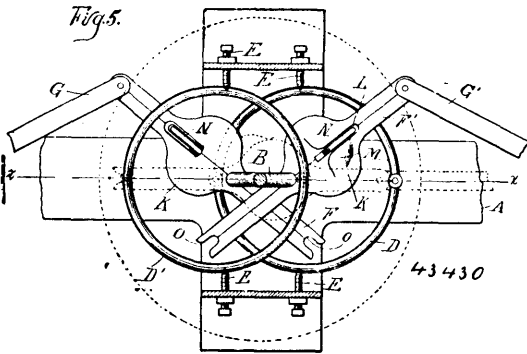
No. 43,430. Device for Converting Motion.
(Appareil pour changer le mouvement.)

Francis Jackson, Raisonville, Franklin Atkinson and Willis Baldwin, both of Munroe, all of Michigan, U.S.A., 30th June, 1893; 6 years.

Claim.—1st. In a device for converting a reciprocating into a rotary motion, the combination of a crank, a lever pivoted thereon, means for oscillating the lever and fulcrums on opposite sides of the crank alternately projected into the path of the lever, actuated by the lever, substantially as described. 2nd. In a device for converting a reciprocating into a rotary motion, the combination of a shaft, a double crank thereon, a lever pivoted on each crank, means for oscillating the lever, frames pivoted beside the cranks carrying fulcrum pins on opposite sides of the cranks, and means for alternately moving the fulcrums on opposite sides of the crank into the path of the levers, substantially as described. 3rd. In a device of the kind described, the combination of a double crank, levers pivoted on said cranks, levers for oscillating the crank levers and fulcrums alternately projected into the path of the crank levers on opposite sides of the cranks, substantially as described. 4th. In a device of the kind described, the combination of a double crank, multiplying levers pivoted on said cranks, levers for oscillating the crank levers, and fulcrums alternately projected into the path of the crank levers on opposite sides of the cranks, substantially as described. 5th. In a device of the kind described, the combination of a double crank

shaft, levers pivoted on the cranks, levers for oscillating the crank levers extending from opposite sides of the crank shaft, frames car-

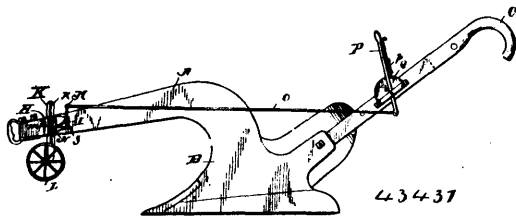
between said sheet and plate P¹, and the side plates F, F attached



rying fulcrums for each lever, means for oscillating said frames to project the fulcrums on opposite sides of the crank alternately into the path of the levers, the fulcrums on both frames on each side of the cranks being arranged to be moved simultaneously into and out of their operative position, substantially as described. 6th. In a device of the kind described, the combination of a double crank, levers pivoted on said cranks, levers for oscillating the crank levers, frames carrying fulcrums adapted to be projected into the path of the crank levers alternately on opposite sides of the cranks, said frames being actuated from the crank levers, substantially as described. 7th. In a foot power, the combination of the cranks, the levers pivoted in the crank, the fulcrums project into the path of the lever on opposite sides of the crank, the bell crank levers for oscillating the crank levers, the connecting rods H, H¹, and the treadle lever I, suspended from the connecting rods and its pivot pin slidingly engages with its fulcrum block, substantially as described.

No. 43,431. Gage Running Attachment.

(Attache pour ajusteur mobile.)



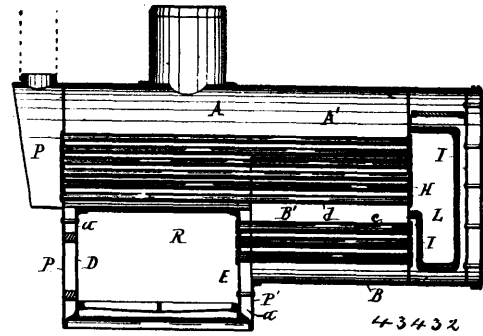
Delzon G. Hobby, Fred J. Ferris, both of Albion, and Frank D. Hamlin, Madina, all of New York, U.S.A., 30th June, 1893; 6 years.

Claim.—In an attachment for plows, the combination with the plow beams having a side notch or recess at one end, of an attachment plate having at one side an off standing securing rib P, adapted to snugly fit in the side notch or recess in the beam opposite inturned grooved guide tongues, and an integral end extension I, having a pivot pin or stud bolt, a single bolt passing through the attachment plate and said beam to hold the former in position, a vertically adjustable wheel standard adapted to slide on the attachment plate between the grooved guide tongues thereof, said wheel standard carrying a gage wheel or runner at its lower end, and provided with an intermediate outwardly projecting pin, a braced bell crank lever pivoted at its angle on said pivot pin or bolt and having a slot in one arm adapted to loosely engage the pin of the wheel standard, and controlling devices connected to the other arm of the braced bell crank, substantially as set forth.

No. 43,432. Steam Boiler. (Chaudière à vapeur.)

Robert Joy and Thomas Kingsford, both of Oswego, New York, U.S.A., 30th June, 1893; 6 years.

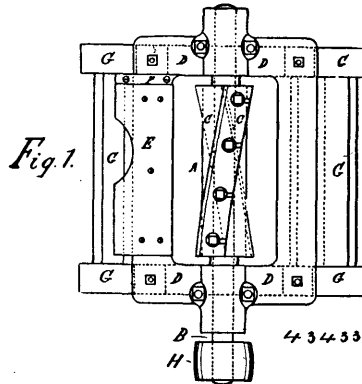
Claim.—In a return flue boiler of the class described, the combination with the cylindrical shell A, formed with the semi-cylindrical rearward top extension A¹, the inverted semi cylindrical bottom plate B formed with the vertical extensions B¹ riveted to the bottom edges of the extension A¹, and the plates P, P¹ attached to said parts as shown, of the side plates C, C, attached directly tangentially to the sides of the cylindrical shell A, and the fire box shell formed of the front plate D attached to the cylindrical shell A, with the water space a between it and the plate P, the flue sheet E also attached to the aforesaid cylindrical shell with the water space



to said cylindrical shell with the water space between said plates and outer plates C, C, all combined substantially as described and shown.

No. 43,433. Machine for Jointing Shingles.

(Machine à dresser le bardeau.)

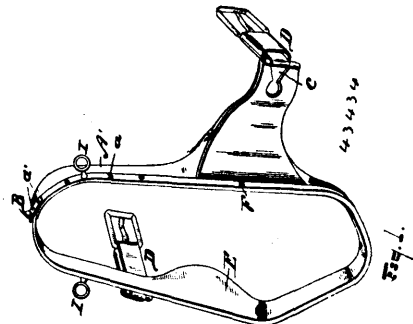


Gardner Clish, Duncan McDonald and Silas Tupper, assignees of Robert Smallwood, all of Truro, Nova Scotia, Canada, 30th June, 1893; 6 years.

Claim.—The combination of the rotary cutters C, C, with the cutter head A, the journal B, the pulley H, the plate E, and the squaring iron F, substantially as and for the purpose hereinbefore set forth.

No. 43,434. Horse Collar and Hames.

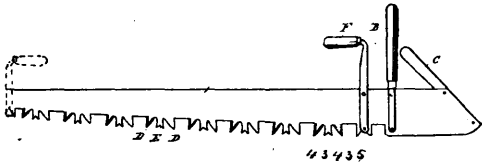
(Collier de cheval.)



Joseph Morrison and Benjamin S. Van Tuyl, both of Petrolia, Ontario, Canada, 30th June, 1893; 6 years.

Claim.—1st. A hame for a collar extending nearly all round the same and provided with a section pivotally connected at one side of the hame and fastened to the opposite side thereof, substantially as described. 2nd. The combination, with the hame A, having section A¹, pivoted to one side near the top thereof, of the collar or padding E, secured to said hame and opening at the top, substantially as described. 3rd. The combination, with the iron A, of the draw irons C, permanently attached to or forming part thereof, shaped to fit the horse's shoulders and padded to prevent chafing, substantially as described. 4th. The combination, with the iron A, of the draw irons C, permanently attached to or formed therewith, shaped to fit the horse's shoulders and provided with tugs D, substantially as described.

No. 43,435. Saw. (Scie.)

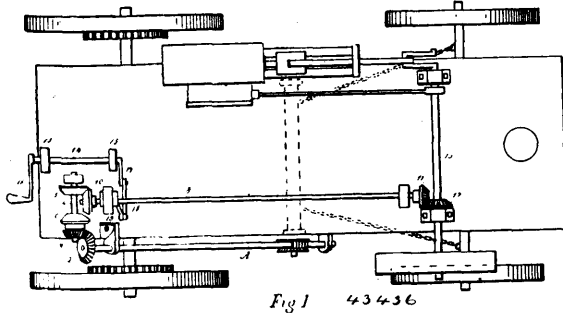


Joseph V. Hotchkiss, Jay, and Henry Eehlenbeck, Pleasant, both of Indiana, U.S.A., 30th June, 1893; 6 years.

Claim.—1st. A cross cut saw, provided with a series of teeth arranged in groups, each group composed of two cutting teeth formed and dressed as herein described, in combination with an intermediate double pointed raking tooth, substantially as and for the purpose herein set forth.

No. 43,436. Steering Device for Road Engines.

(Machine à vapeur pour les routes.)

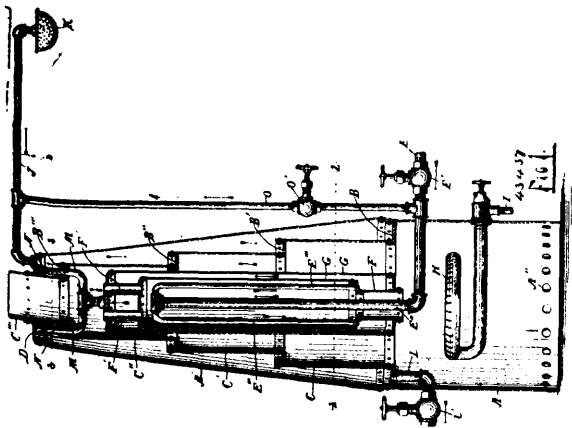


Robert Fullerton, Martin and William Matthews & Co., Gardner, all of Tennessee, U.S.A., 30th June, 1893; 6 years.

Claim.—In a road engine, the combination, with three friction discs connected by a longitudinal rod and spur wheels with the main shaft of the engine, of an eccentric arranged on the inside of the back end of the said longitudinal rod and operated by a handle arm connected therewith by an end pivoted link, substantially as shown and described.

No. 43,437. Water Heater and Shower Bath.

(Calorifere à eau et bain d'orange.)

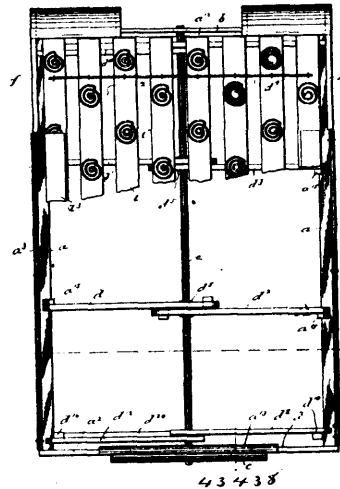


John Pellow, Grand Rapids, Michigan, and Robert Pellow, Chicago, Illinois, both in the U.S.A., 30th June, 1893; 6 years.

Claim.—1st. In a water heater, the combination with the tubular section of different diameters, cups at the ends of said sections, and the casing surrounding said sections and cups, of the pipes extending upwardly through the lower of said sections and having their upper ends located adjacent to the exterior of the upper of said sections and formed with lateral openings, substantially as shown and described. 2nd. In a water heater, a series of diminishing tubular sections connected by annular cups, and a truncated conical casing connected to one of said cups at its base, and to one of said tubular sections at its opposite end, and vertical pipes within said sections and cups connected to a water supply at one end, and passing through the upper cup at the opposite end, and having a series of openings in the side adjacent to one of said tubular sections, substantially as described. 3rd. In a water heater, a cylindrical casing, having burners or other heating devices, within the same, a

tubular conical extension attached to said base, a series of upwardly diminishing tubular sections connected by upwardly open annular cups within said conical extension to the upper tubular section a pipe in said casing above said heaters, and extending upward within said tubular sections and cups, said coils passing through the upper cup and having lateral openings in the side adjacent to the upper tubular section, and a discharge pipe attached to the lower annular cup, substantially as described. 4th. The combination, in a combined water heater and shower bath of a casing, tubular sections of different diameters located in said casing, cups at the ends of said sections, the burners, pipes extending upward within said tubular sections and having their upper ends located adjacent to the exterior surface of the uppermost section and formed with lateral openings, a permanently open pipe J, extending from the upper end of said casing and provided at its outer end with a sprinkler, a valved pipe G extending from the lower end of said coils, and a valved pipe L connecting said pipes J and E, substantially as described. 5th. A combined water heater and shower bath, consisting of a series of upwardly diminishing tubular sections, annular cups connecting the adjacent ends of the same, a truncated conical outer shell connected to the outer rim of the lower cup at its base and to the upper tubular section at its smaller end, burners in said casing conical vertical pipes within said sections and cups, said pipes extending through the uppermost cup and having series of openings in their sides adjacent to the uppermost tubular section, a permanently open pipe J, extending from the upper end of said casing and provided at its outer end with a sprinkler, a valved pipe L, extending from the upper cup, a valved pipe E, connected with the lower ends of said pipes, and a valved pipe O, connecting said pipes J and E, substantially as described. 6th. In a water heater, the combination of an outer and an inner cylinder, having a water space between, a pipe in the axis of said cylinder, a head on said pipe, return pipes connecting said head and the space between said cylinders, and flues extending through said cylinders, substantially as described. 7th. In a water heater, the combination of an inner cylinder, an outer cylinder of greater diameter and length than said inner cylinder, heads in said cylinders, flues connecting said heads, a pipe in the axis of said cylinders, a head on said pipe, return pipes connecting said head with the lower head of the inner cylinder, substantially as described. 8th. In a water heater, in combination, with an outer truncated cone, and an inner flue, consisting of cylindrical sections of diminishing diameters, connected by upwardly open annular cups, a vertical pipe in the axis of the same, a head on the said pipes, return pipes connecting said head and the space between, concentric cylinders surrounding said pipes and having a water space between them, flues passing through said cylinders, a pipe opening into the axis of the outer cylinder head and connecting the same with the space between said cone and shell, substantially as described.

No. 43,438. Lounge. (Caiseuse.)



The Boston Couch Bed Company, assignee of William S. Bowie, all of Boston, Massachusetts, U.S.A., 30th June, 1893; 6 years.

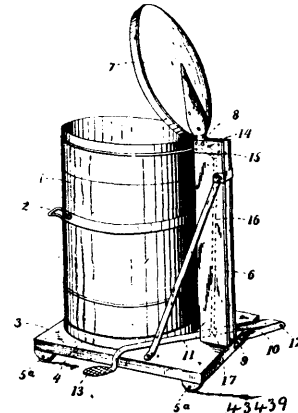
Claim.—1st. In a lounge or couch bed, two transversely movable slat supporting sections, and slats carrying springs thereon, the side slats being rigidly secured to their supports, and the intermediate slats being free to move on their supports, and connected with the side slats, combined with a single longitudinal operating shaft c, and intermediate connections between said shaft and said transversely movable sections whereby the latter are extended and retracted by the operation of the former, substantially as described. 2nd. In a lounge or couch bed, two longitudinal side rails and two transverse slat supporting frames connected to each side rail, and movable transversely therewith, several longitudinal slats carrying springs mounted on said transverse supporting frames, the side slats

being rigidly secured to their supports, and the intermediate slats being free to move on their supports, and connected with the side slats, combined with the longitudinal operating shafts *e*, and intermediate connections between said transversely movable parts and said shaft, whereby the bed may be extended and retracted by turning said shafts, substantially as described. 3rd. In a lounge or couch bed, two longitudinal side rails and two transverse slat supporting frames connected to each side rail, and movable transversely therewith, and pieces *a*², also connected to said side rails, and several longitudinal slats carrying springs mounted on said transverse supporting frames, separable transversely, combined with the longitudinal operating shaft *e*, and intermediate connections between said transversely movable parts and said shaft, whereby the width of the bed may be varied by turning said shaft, and a single width head board, and foot board formed to present guides for said end pieces *a*², substantially as described. 4th. In a lounge or couch bed, two longitudinal side rails and two transverse slat supporting frames, connected to each side rail, and movable therewith, several slats carrying springs supported on said frame, combined with the longitudinal operating shaft *e*, and cords or chains connecting said shaft with transversely movable parts, whereby the latter are extended or retracted by said shaft, substantially as described. 5th. In a lounge or couch bed, two longitudinal side rails, and two transverse slat supporting frames connected to each side rail, having slots or openings *d*⁴, slats carrying springs placed on said slotted frames, combined with a single longitudinal operating shaft *e*, placed in said slots or openings *d*⁴, and intermediate connections between said shaft and the transversely movable parts, whereby the bed is extended or retracted by the operation of said shaft, substantially as described. 6th. In a lounge or couch bed, two transversely movable sections, slats carrying springs placed thereon, the side slats being rigidly secured to their supports, and the intermediate slats being free to move on their supports, the slats *e*³, placed on top of the springs on said rigidly secured side slats combined with a full width mattress placed on said springs, and pockets to receive the side edges of said mattress when the bed is closed up and used as a lounge, substantially as described. 7th. In a lounge or couch bed, two transversely movable sections, slats carrying springs thereon, and side slats being rigidly secured to their supports, and the intermediate slats being free to move on their supports, and connected with the rigidly secured side slats, combined with a full width mattress placed on said springs and pockets at the sides of the transversely movable sections to receive the side edges of said mattress when the bed is retracted and used as a lounge, substantially as described. 8th. In a lounge or couch bed, two transversely movable slat supporting sections, and slats carrying springs thereon, the side slats being rigidly secured to their supports, and the intermediate slats being free to move on their supports and connected with the rigidly secured side slats, and means for extending and retracting said sections transversely to widen or narrow the bed, combined with a full width mattress placed on said springs and pockets to receive the side edges of said mattress when the bed is retracted and used as a lounge, substantially as described. 9th. In a lounge or couch bed, two transversely movable slat supporting sections, and means for extending and retracting them, combined with a series of slat carrying springs supported on said sections, the outside slats being rigidly secured to the sections, and the intermediate slats being free to move independently on their supports, and connected with each other and with the rigidly secured side slats, whereby they will be separated as the slat supporting sections are extended, substantially as described. 10th. In a transversely extensible lounge or couch bed, side rails *a*, *a*¹, slat supports connected therewith, and slats carrying springs mounted on said slat supports, combined with the head board and foot board, the longitudinal shaft *e*, having its bearings in said head board and foot board, pinions *d*^b, *d*^c, thereon, and racks secured to the transversely movable parts of the bed which are engaged by said pinions, substantially as described. 11th. In a transversely extensible lounge or couch bed, side rails, and transversely arranged slat supporting frames connected thereto, and a series of longitudinally arranged slats carrying springs placed thereon, the slide slats of which are rigidly secured to and movable with their supports while the intermediate ones are independently movable, and flexible connections between said slats by means of which the intermediate slats are separated as the side slats are moved from each other, combined with the longitudinal shaft *e*, pinions *d*^b, secured thereto, and racks engaged by said pinions secured to the slat supporting frame, substantially as described. 12th. In a transversely extensible lounge or couch bed, side rails and end pieces connected thereto, slat supporting frames and slats thereon, and means for moving said self-supporting frames to vary the width of the bed, combined with the bars *a*³, secured to the upper edges of said side rails to thereby present pockets or recesses to receive the side edges of the mattress when the bed is closed up, and used as a lounge, substantially as described. 13th. In a transversely extensible bed, side rails and pieces connected thereto, a head board and foot board which serve as guides for said end pieces, slat supporting frames and slats thereon, and means for moving said slat supporting frames toward and from each other, combined with a head rest composed of two separate parts, of which the side pieces *f*, form a co-operative part, substantially as described. 14th. In a transversely extensible lounge or couch bed, side rails *a*, *a*¹ and transverse slat supporting frames connected thereto, and means for moving them toward and from each other, a series of

longitudinally arranged slats *i*, carrying springs located on said frames, the side slats being connected to their supports, and the intermediate slats being free to move on their supports, and connected together and to the side slats, combined with a head board and foot board, the latter having a head *a*¹³, beneath which the ends of said free and independently movable slats are placed, substantially as described. 15th. In a transversely extensible lounge or couch bed, inclined side rails and transverse slat supporting frames projecting above said side rails, and cut away at their ends adjacent to the said side rails opposite said cut away portions to form in connection therewith pockets or recesses, slats carrying springs placed on said transverse slat supporting frames, and a mattress placed on said springs, the side edges of which enter said pockets or recesses when the bed is closed up, substantially as described.

No. 43,439. Garbage Receptacle.

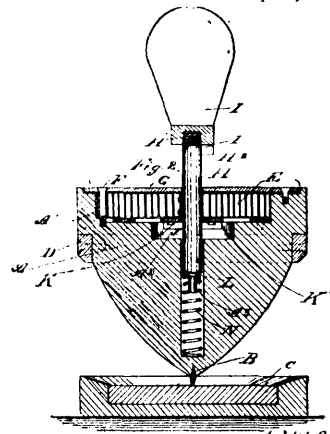
(Réceptier pour tripailles.)



Joseph Charles Roth and Samuel Elind Hopkins, both of Buffalo, New York, U.S.A., 30th June, 1893; 6 years.

Claim.—1st. In a garbage receptacle, the combination, with a platform, of a vertical standard secured thereto, a treadle, pivotally secured to the platform, a cover pivotally secured to the top of the standard, a rod for connecting the treadle and the cover, and a receptacle loosely placed upon the platform, substantially as set forth. 2nd. In a garbage receptacle, the combination, with a platform, of a hollow standard secured to the rear portion thereof, a treadle pivotally secured within the upper portion of the standard, a rod within the standard for connecting the treadle and the cover and a receptacle loosely placed upon the platform, substantially as set forth. 3rd. In a garbage receptacle, the combination, with a platform, of a vertical standard and a bracket secured to the platform, a treadle pivotally secured to the bracket and projecting diagonally across the top of the platform, a cover pivotally secured to the upper end of the standard, a rod for connecting the treadle and the cover, and a receptacle loosely placed upon the platform, substantially as set forth. 4th. In a garbage receptacle, the combination, with a platform provided with an upwardly projecting ring, of a vertical standard at the rear of the platform, a treadle, pivotally secured to the platform, a cover pivotally secured to the upper portion of the standard, a rod for connecting the cover and the treadle, and a receptacle loosely placed within the ring upon the platform, substantially as set forth.

No. 43,440. Spinning Top. (Toupie.)

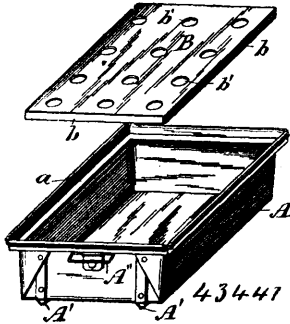


Nathaniel McLaren, Brudenell, Prince Edward Island, 30th June, 1893; 6 years.

Claim.—1st. In a spinning top, the combination with the recessed body A, a spindle which is vertically movable, a coiled spring

attached to the said body and spindle, a wheel or disk fixed in the body and having ratchet teeth on its under side and a cross pin fixed in the spindle and arranged below said wheel or disk, whereby it is disengaged from the ratchet when the spindle is pressed downward, as specified. 2nd. A spinning top comprising a body, a spring coiled in the said body and secured at its outer end to the said body near its periphery, a spindle mounted to turn centrally in the said body and connected with the inner end of the said spring, a ratchet wheel fixed in the said body, a pin extending from the said spindle and adapted to glide over the teeth of the ratchet when the shaft is turned in one direction, and adapted to lock against the back of the teeth, and a second spring held in the said body and pressing on the said spindle to hold the pin thereon in contact with the ratchet, substantially as shown and described.

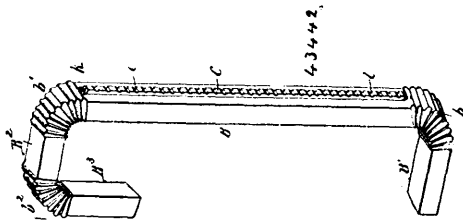
No. 43,441. Roasting and Baking Pan.
(*Poêle à frire et tourtière.*)



Hugh Minnis, Leamington, Ontario, Canada, 30th June, 1893; 6 years.

Claim.—In a roasting and baking pan, the combination with the pan body A, of the hollow bars A¹ at the bottom and rebated rim a, the false bottom B having downward projecting flange b and perforations b¹, and the cover C fitting with its bottom rim in the rebate a, the large perforations c¹ in the ends, and the pivoted plates C¹ adapted to cover said perforations, substantially as set forth.

No. 43,442. Metal Tube. (*Tube en métal.*)



The Dominion Tubular Lamp Company, Syracuse, New York U.S.A., assignee of Bernard Theodore Stibor, Montreal, Quebec, Canada, 30th June, 1893; 6 years.

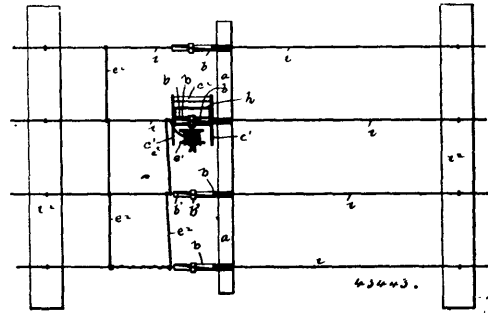
Claim.—1st. A sheet metal tube having a longitudinal seam which is corrugated or indented, whereby one member of the seam is prevented from moving longitudinally upon the other, substantially as set forth. 2nd. A sheet metal tube having its main portion seamed and its end portion provided with a lap joint whose edge is supported upon the side wall of the tube, substantially as set forth. 3rd. A sheet metal tube having its main portion provided with a seam which is corrugated or indented, and its end portion with a lap joint whose edge is supported upon the side wall of the tube, substantially as set forth.

No. 43,443. Wire Fence Machine.
(*Machine à clôture de fil de fer.*)

Herman Carter, Derby, Ohio, U.S.A., 30th June, 1893; 6 years.

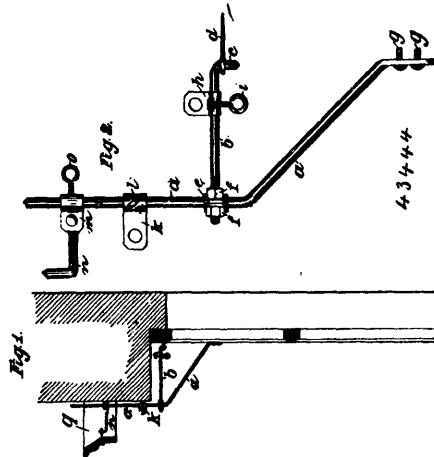
Claim.—1st. In a wire fence machine the combination with the standard a and its arms b having tubular projecting portions, of a supply wire carrying bobbin frame adapted to be detachably supported on one of said arms b, substantially as and for the purpose specified. 3rd. In a mechanism for weaving cross wires in a fence, a movable bobbin frame consisting of the recessed side pieces c¹, a transverse piece connecting said side pieces at the inner ends of said recesses, spring latches h normally closing, as described, said recesses and a spool e¹ journaled within said frame and an outlet 3 in one of the pieces c¹, substantially as and for the purpose specified. 4th. In a wire fence machine of the class specified, the combination with a standard a and arms b projecting therefrom, of a bobbin frame

having recessed side pieces c¹, as described, a concave seat piece connecting said side pieces, said frame recesses and seat piece



adapted to receive one of said arms b and a wire spool journaled within said bobbin frame, substantially as and for the purpose specified.

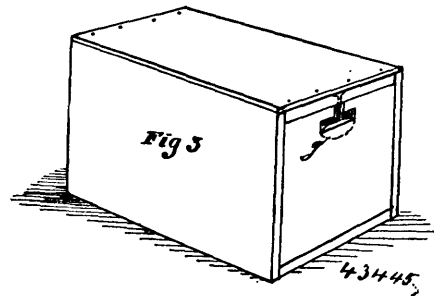
No. 43,444. Curtain Rod. (*Bâton de rideau.*)



Franz Otto and Carl Otto, both of Zerbst, Germany, 30th June, 1893; 6 years.

Claim.—An adjustable support for curtain rods or blind rollers constructed of suitably bent rods a, a, carried by means of screws g, g, clamping plates e, and horizontal rods b, said rods a, a, being furnished with clamps which are movable thereon and which are formed as eyes or rings or hooks according to the requirements of each case, for the purpose of receiving therein or thereon window blinds and curtains or door or portiere curtains, arranged, combined and acting substantially in the manner and for the purposes hereinbefore described and illustrated in the drawings hereunto annexed.

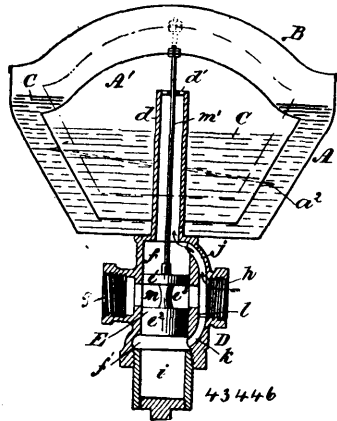
No. 43,445. Box Fastener. (*Fermeture de boîte.*)



Samuel Stephenson and Gilford Flewwelling, both of Hampton, New Brunswick, Canada, 30th June, 1893; 6 years.

Claim.—The making of the end of the box in two parts, as shown in the drawing, and the combination of the vertical slot b, and the horizontal slot a, with the bent wire fastening d, forming a complete locking or fastening device for biscuit or other boxes, substantially as and for the purpose hereinbefore set forth.

No. 43,446. Gas Regulator. (Régulateur à gaz.)



The Union National Gas Saving Company, assignee of Jay Charles Richardson, all of New York City, New York, U.S.A., 30th June, 1893; 6 years.

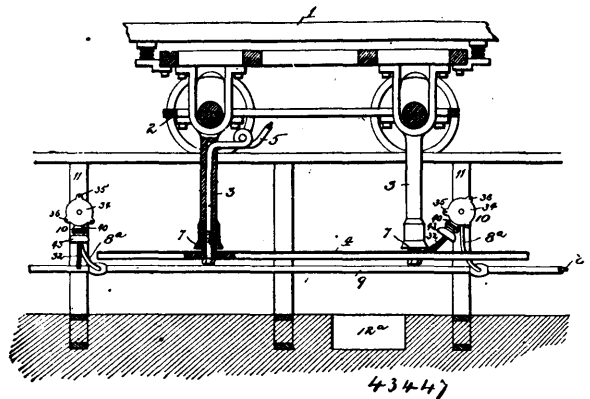
Claim.—1st. The combination in a gas saving regulator, and with a regulator body and float, of a throughway valve, and a relief port communicating from the outlet side of the valve with said float, substantially as described. 2nd. The combination in a gas regulator, with a regulator body and float, of a chamber through the float sustaining liquid, opening beneath said float, a throughway valve and a relief port communicating with said chamber around said valve, substantially as and for the purpose described. 3rd. In a gas regulator, a valve having a ported plug, and a relief passage from the burner side of the valve, substantially as and for the purpose described. 4th. In a gas regulator, a valve having a plug with a straightway port, a relief port in the valve body leading from the burner side of the valve to above the plug, and a condensation drip also from the burner side of the valve to a drip outlet, substantially as described. 5th. In a gas regulator, and in combination with the body of the regulator, and a float therein, a straightway valve having a plug with a through and through port, and said plug being operatively connected with the float, substantially as described. 6th. In a gas regulator, the combination with a regulator body and float, of a balanced disc valve and a relief port communicating from the outlet side of the valve with said float, substantially as described. 7th. In gas regulators, a valve composed of two equal discs, with a gas passage between, substantially as described. 8th. In gas regulators, the combination with the regulating valve of a float having a peripheral flange thereon, substantially as described. 9th. In gas regulators, the combination with the regulating valve of a float having a peripheral helical blade thereon adapted to give the said float and valve a rotary motion, substantially as and for the purpose described.

No. 43,447. Electric Railway. (Chemin de fer électrique.)

The Columbian Underground Electric Traction Company, assignees of James S. Sheldon, all of St. Louis, Missouri, U.S.A., 30th June, 1893; 6 years.

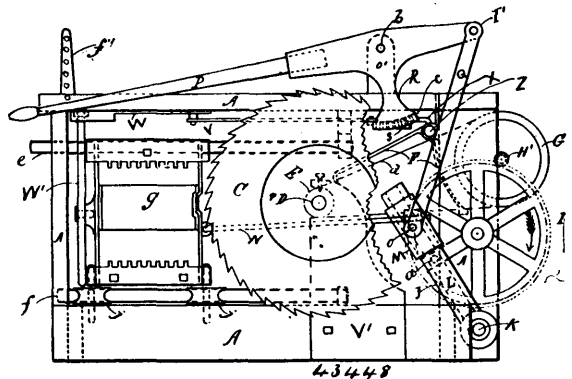
Claim.—1st. In an electric railway, a series of yieldingly secured, rotating stationary switches located in the conduit and having electrical connection with a main hermetically sealed working conductor, and devices on the motor car adapted to conduct the current from said switches to the motor, substantially as set forth. 2nd. An underground electric railway, consisting of a motor car, supports secured to the truck frame of said car, a contact plate secured to said supports and adapted to travel in the subway, a series of swinging or pendulum like switches located in the subway, and in electrical connection with an insulated main supply conductor, said switches adapted to be engaged only at their free ends and operated by said contact plate, whereby electrical connection is made between said main supply conductor and the motor, substantially as set forth. 3rd. In an underground electric railway, a main supply conductor, and a pivoted switch provided with an exposed flexible contact, and consisting of a hermetically sealed box, with contacts located therein, so devised that when said switch is actuated said exposed contact is thrown into electrical connection with the main supply conductor, substantially as set forth. In an underground electric railway, a main supply conductor, a pivoted switch provided with an exposed contact, and consisting of a hermetically sealed box with contacts therein, so located that when said switch is in its normal position said exposed

contact is out of circuit with the main supply conductor, but said exposed contact is brought into electrical connection with the main supply conductor, when said switch is actuated, substantially as



set forth. 5th. In an underground electric railway, a main supply conductor, a contact plate carried by a motor car, a pivoted switch provided with an exposed flexible contact, and consisting of a hermetically sealed box, with contacts therein so located that when said switch is in its normal position, the exposed flexible contact is out of circuit with the main conductor, but said flexible contact is brought into electrical connection, when said switch is actuated by said contact plates, substantially as set forth.

No. 43,448. Shingle Machine. (Machine à bardeau.)



Gardner Clish, Duncan McDonald and Silas Tupper, assignees of Robert Smallwood, all of Truro, Nova Scotia, Canada, 30th June, 1893; 6 years.

Claim.—1st. In a shingle machine, the combination of the connecting rod Q, the slide M, the lever J and the connecting rod N, with the carriage g, g, g, and the pivot T¹, substantially as and for the purpose hereinbefore set forth. 2nd. In a shingle machine, the combination of the rack stud f¹, the bracket o, and the lever P, with the connecting rod Q, substantially as and for the purpose hereinbefore set forth. 3rd. In a shingle machine, the combination of the rack stud f¹, the bracket o¹, the lever P, the lever arm R, the bell cranks s, the bell crank arm y, the connecting rod X, and the slide Z, with the double bell shifter F, substantially as and for the purpose hereinbefore set forth. 4th. In a shingle machine, the combination of the rack stud f¹, the bracket o¹, the lever P, the lever arm R, the bell crank s, the bell crank arm u, the connecting rod N, and the setting iron W, with the setting lever W¹, substantially as and for the purpose hereinbefore set forth. 5th. In a shingle machine, the combination of the lever N¹, the connecting rod m, the arm l, the rail e, and the spline or feather i, with the carriage g, g, g, substantially as and for the purpose hereinbefore set forth. 6th. In a shingle machine, the combination of the lever Z¹, the connecting rod X¹, the shipping slide n, the lever t, and the pawl h, with the carriage g, g, g, and the clutch v, substantially as and for the purpose hereinbefore set forth. 7th. In a shingle machine, the combination of the guide rail f, the antifriction rollers j, j, the studs k, k, and the hinges H, with the sides of the carriage g, g, substantially as and for the purpose hereinbefore set forth.

CERTIFICATES OF THE PAYMENT OF FEES FOR FURTHER TERMS HAVE BEEN ATTACHED TO THE FOLLOWING PATENTS.

3001. ABEL KLEINSTIVER and B. S. VANTUYL, 2nd five years of No. 29,354, from the 14th day of June, 1893. Improvements in Grain Separators, 5th June, 1893.
3002. J. D. PERRY, 2nd five years of No. 29,284, from the 6th day of June, 1893. Improvements in Potato Diggers, 5th June, 1893.
3003. W. H. THOMAS, 2nd five years of No. 29,447, from the 4th day of July, 1893. Improvements on Flue Cleaners, 5th June, 1893.
3004. JOSIAH AUSTIN, 2nd five years of No. 29,298, from the 8th day of June, 1893. Improvements in Feeders for Steam Boilers, 7th June, 1893.
3005. THE ROYAL ELECTRIC COMPANY (assignees), 3rd five years of No. 16,911, from the 14th day of June, 1893. Improvements on System of Electric Distribution, 7th June, 1893.
3006. THE ROYAL ELECTRIC COMPANY (assignees), 3rd five years of No. 16,954, from the 16th day of June, 1893. Improvements on Electric Lamps, 7th June, 1893.
3007. THE ROYAL ELECTRIC COMPANY (assignees), 3rd five years of No. 17,075, from the 22nd day of June, 1893. Improvements on Electric Arc Lamps, 7th June, 1893.
3008. EDWARD SMITH and FREDERICK SMITH, 2nd five years of No. 31,600, from the 17th day of June, 1893. Improved means for producing Sparkling effect, Ornamental and other for advertising and general display purposes, 7th June, 1893.
3009. MATTHEW GANNETT, 2nd five years of No. 29,293, from the 7th day of June, 1893. Improvements in Automatic Audible Signals adapted to maritime and fire alarm purposes, 7th June 1893.
3010. WILLIAM PAYNE, 2nd five years of No. 29,572, from the 27th day of July, 1893. Equalizing adjustable pliable truss, 9th June, 1893.
3011. WILLIAM PAYNE, 2nd five years of No. 29,573, from the 27th day of July, 1893. Double equalizing adjustable pliable truss, 9th June, 1893.
3012. JAMES SANGSTER, 2nd five years of No. 29,321, from the 11th day of June, 1893. Improvements in Stove Grates, 9th June, 1893.
3013. J. G. BATTELLE, 2nd five years of No. 29,506, from the 19th day of July, 1893. Improvements in Joints for Sheet Metal, 10th June, 1893.
3014. PAQUET and GODBOUT, 3rd five years of No. 17,114, from the 2nd day of July, 1893. Composition of matter to be used for Plastering Walls of Houses, 10th June, 1893.
3015. W. T. WELLS, 2nd five years of No. 29,359, from the 19th day of June, 1893. Improvements in producing Rustless Casting on Iron and Steel Surfaces, 10th June, 1893.
3016. WARNOCK & CO. (assignees), 2nd five years of 29,350, from the 14th day of June, 1893. Improvement in Fifth Wheels, 10th June, 1893.
3017. H. A. FRENCH, 2nd five years of No. 29,370, from the 19th day of June, 1893. Improvements in Pumps, 13th June, 1893.
3018. ABEL KLEINSTIVER and B. S. VAN TUYL, 2nd five years of No. 29,466, from the 7th day of July, 1893. Improvements in Mechanism for Driving Machinery, 13th June, 1893.
3019. EDWARD HOW, 3rd five years of No. 17,013, from the 18th day of June, 1893. Improvements in Double Trees, 13th June, 1893.
3020. THE GRIP PRINTING AND PUBLISHING COMPANY (assignees), 3rd five years of No. 16,930, from the 16th day of June, 1893. Improvements on Memorandum Books, 13th June, 1893.
3021. L. L. BURDON, 2nd five years of No. 29,348, from the 14th day of June, 1893. Improvements in manufacture of Compound Ingots, 13th June, 1893.
3022. WILLIAM ANGUS, 2nd five years of No. 29,368, from the 19th day of June, 1893. Improvements in the application of pure wood cellulose or wood fibre, half stuff, as ordinarily carried out in the manufacture of Feltings, Sheathing and Roofing in the construction of buildings, 16th June, 1893.
3023. F. E. BEARDSLEY and W. R. SULLIVAN, 2nd and 3rd five years of No. 32,672, from the 2nd day of November, 1894. Improvements in Axle Cutters, 16th June, 1893.
3024. JASPER BATES, 3rd five years of No. 17,039, from the 21st day of June, 1893. Improvements on Manual Powers, 16th June, 1893.
3025. M. H. GILBERT, 3rd five years of No. 17,003, from the 18th day of June, 1893. Improvements on Stock Cars, 16th June, 1893.
3026. H. F. COOMBES, 3rd five years of No. 16,964, from the 16th day of June, 1893. Improvement in Butter Tubs, 16th June, 1893.
3027. ROBERT B. BROWN, 3rd five years of No. 17,008, from the 18th day of June, 1893. Improvements on Hay Elevators and Carriers, 17th June, 1893.
3028. THE EDISON ELECTRIC LIGHT COMPANY (assignees), 3rd five years of No. 17,076, from the 22nd day of June, 1893. Improvements in systems of Electrical Distribution, 22nd June, 1893.
3029. THE EDISON ELECTRIC LIGHT COMPANY (assignees), 3rd five years of No. 17,077, from the 22nd day of June, 1893. Improvements on Electrical Generators and Motors, 22nd June, 1893.
3030. B. J. WHEELLOCK and J. W. WHEELLOCK, 2nd five years of No. 29,412, from the 27th day of June, 1893. Improvements in the Process of Treating Porous Cups for use in Electric and Galvanic Batteries, 27th June, 1893.
3031. THE SEWALL SAFETY CAR HEATING COMPANY (assignees), 2nd five years of No. 29,414, from the 3rd day of July, 1893. Improvements in Car Heating Apparatus, 27th June, 1893.
3032. ROBERT TORRANCE, 2nd five years of No. 29,442, from the 4th day of July, 1893. Improvements in Side Spring Buggy and Carriage Gears, 27th June, 1893.
3033. THE ROYAL ELECTRIC COMPANY (assignees), 3rd five years of No. 17,397, from the 26th day of July, 1893. Improvements on Electric Arc Lamps, 27th June, 1893.
3034. THE ROYAL ELECTRIC COMPANY (assignees), 3rd five years of No. 17,398, from the 26th day of July, 1893. Improvements in Electric Arc Lamp Cut Outs, 27th June, 1893.
3035. JAMES H. SEWALL, 2nd five years of No. 29,485, from the 11th day of July, 1893. Improvements in Car Heating Apparatus, 27th June, 1893.
3036. THE E. B. EDDY COMPANY (assignees), 2nd five years of No. 29,579, from the 28th day of July, 1893. Improvements on Holders for Rolls of Toilet or Wrapping Paper, 30th June, 1893.
3037. JOHN CARNRICK, 2nd five years of No. 29,459, from the 6th day of July, 1893. Improvements in Soluble Food for Infants and Invalids, 30th June, 1893.

TRADE MARKS

Registered during the month of June, 1893, at the Department of Agriculture—
Copyright and Trade Mark Branch.

4660. JOHN STARR, SON & CO., of Halifax, N. S. Electric Lamps, 1st June, 1893.
4661. THE DR. ESELJAY MEDICINE CO., of London, Ont. Liver Lozenges, 2nd June, 1893.
4662. THE TORONTO RADIATOR CO., LD., of Toronto, Ont. Radiators, 6th June, 1893.
4663. THE COSMO BUTTERMILK SOAP CO., of Chicago, Ill., U.S.A. Toilet Soaps, 7th June, 1893.
4664. THE EDISON & SWAN UNITED ELECTRIC LIGHT CO., LD., of 100 Victoria Street, Westminster, London, England. General Trade Mark, 7th June, 1893.
4665. JOHN JAMES McLAUGHLIN, of Toronto, Ont. Non-Intoxicating Beverages, 8th June, 1893.
4666. WILLIAM CLARK, of Montreal, Que. Food Preparations, 12th June, 1893.
4667. CHARLES BOECKH & SONS, of Toronto, Ont. Butter Moulds, 15th June, 1893.
4668. ROBERT RAMSAY SLAVEN, of Orillia, Simcoe Co., Ont. Pills, 16th June, 1893.
4669. } S. DAVIS & SONS, of Montreal, Que. Cigars, Cigarettes and Tobaccos, 19th
4670. } June, 1893.
4671. }
4672. E. W. VILLENEUVE, of Montreal, Que. Cigars, 20th June, 1893.
4673. ERNEST FELLAY & JOHN LAVINE, of Montreal, Que. Cigars, 21st June, 1893.
4674. } MARIE GABRIELLE FRANCOZ, veuve POULAT, 22 rue de Crequi,
4675. } Grenoble, France, faisant affaires sous la raison de commerce de
FRANCOZ FILS. Gants, 22 juin 1893.
4676. GEORGE ALEXANDER McCANN, of Toronto, Ont. Proprietary Medicines, 27th June, 1893.
4677. } LOUIS OVIDE GROTHÉ, of Montreal, Que. Cigars, Cigarettes and Tobaccos,
4678. } 28th June, 1893.
4679. THE ROYAL CORSET CO., of Sherbrooke, Que. Corsets, 29th June, 1893.
4680. CAROLINE S. ELY, of Champlain, Clinton Co., N.Y., U.S.A. Powdered Washing Compound, 29th June, 1893.

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Copyright and Trade Mark Branch.

- 6948 CAMPAIGN ECHOES. The Autobiography of Mrs. Letitia Youmans. Wm. Briggs (Book Steward of the Methodist Book and Publishing House) Toronto, Ont., 1st June, 1893.
- 6949 THE CANADIAN ALBUM, Men of Canada; or Success by Example. Volume II. Edited by Rev. Wm. Cochrane, D.D. Thomas S. Linscott, Brantford, Ont., 5th June, 1893.
- 6950 THE CANADIAN CONTRACTOR'S HAND BOOK. Second Edition. Published by Chas. H. Mortimer, Toronto, Ont., 5th June, 1893.
- 6951 THE MARSHLANDS (book of poems). By J. F. Herbin, Wolfville, N.S., 5th June, 1893.
- 6952 ANSWERED. Song. Words by Mrs. Edgar Jarvis. Music by Francesco D'Auria. A. & S. Nordheimer, Toronto, Ont., 6th June, 1893.
6953. TABLEAU ARTISTIQUE, fait à la plume par Monsieur Joseph Octave Gosselin, de Québec, représentant L'HONORABLE JOSEPH ADOLPHE CHAPLEAU, Lieutenant Gouverneur de la Province de Québec, &c.; Henri Alphonse Turgeon, Québec, Qué., 6 juin 1893.
- 6954 PORTRAIT AU CRAYON DE L'HONORABLE WILFRID LAURIER. Charles Trancrede Desjardins, Sorel, Que., 7 juin 1893.
- 6955 A PERFECT CHECK ON AGENTS FOR MONEYS PAID TO THEM (receipt form). Wm. Jones, Toronto, Ont., 7th June, 1893.
- 6956 AN INVESTMENT PLAN whereby a Shareholder in a Building Society or Loan Association may, by paying 12½ cents per week until maturity of his share, obtain \$100, the par value thereof in about 84 months; also showing how a Loan may be repaid for the net sum advanced. Wm. Jones, Toronto, Ont., 7th June, 1893.
- 6957 OLD HICKORY MILITARY SCHOTTISCHE, by Percy Seymour; The Anglo-Canadian Music Publishers Association, Ltd., London, England, 9th June, 1893.
- 6958 OCEAN SPRAYS WALTZ, by F. Boscovitz. The Anglo-Canadian Music Publishers' Association, Ltd., London, England, 9th June, 1893.
- 6959 EVENING SERVICE IN KEY OF D. (Magnificat and Nunc Dimittis). By George Young Timms, Toronto, Ont., 9th June, 1893.
- 6960 LE PAROISSIEN NOTÉ. Quatrième Edition. J. F. A. Langlais, Québec, Qué., 9 juin 1893.
- 6961 THE PROTECTIVE TRANSFER AND RECORD CHECK SYSTEM FOR STREET RAILWAYS, (book). Emil C. Beckh, Toronto, Ont., 10th June, 1893.
- 6962 RECREATION IN RHETORIC (game). Rev. Robert J. Stilwell, Rosemont, Ont., 12th June, 1893.
6963. CANADIAN MELODIES AND POEMS, by George E. Merkle, North Williamsburg, Ont., 13th June, 1893.
6964. SCARF DANCE (Pas des Echarpes). Air de Ballet. Par C. Chaminade. The Anglo-Canadian Music Publishers' Association, (Ltd.), London, England, 16th June, 1893.
6965. MAP OF THE NEW WESTMINSTER DISTRICT, BRITISH COLUMBIA (Sheet No. 1), 1893. John Albert Kirk, New Westminster, B.C., 16th June, 1893.
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