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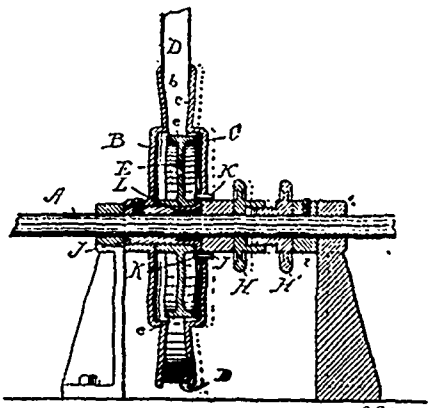
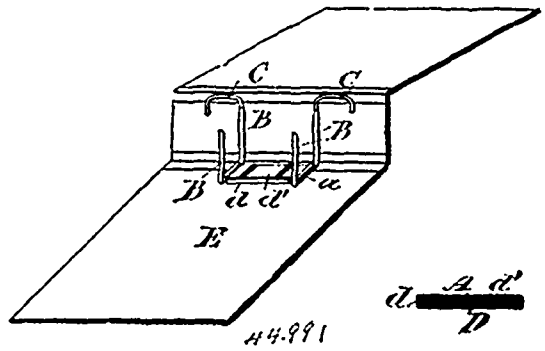
No. 44,990. Pulley. (*Poulie.*)



Edward F. Gordon, Concord, New Hampshire, U.S.A., 2nd January, 1894; 6 years.

Claim.—1st. A variable speed pulley formed of two laterally separable discs having oblique and sharply inclined bearing surfaces adapted to receive at various depths between them the transmitting belt, in combination with suitable means for varying the distance of one of said discs from the other so as, at the will of the operator, to vary positively and at a defined distances, the working radius of said pulley, substantially as described. 2nd. A driving pulley formed of two laterally separable rotating parts with driving faces sharply inclined toward each other, in combination with hand wheels loose on the driving shaft and having threaded hubs, whereby the distance between said parts of the pulley and their grip on the belt, may be varied, substantially as and for the purpose set forth. 3rd. A driving pulley formed in two laterally separable rotary parts having oblique and sharply inclined driving surfaces, and an enclosed spring tending to separate them, in combination with a loose pulley enclosed between said rotary parts and having a belt supporting periphery within, and at the foot of said inclined surfaces, and with means mounted on the shaft, independent of the pulley, adapted to press its parts toward each other, substantially as and for the purpose set forth. 4th. A two part driving pulley with inclined driving surfaces, and an enclosed loose pulley with its periphery adjacent to such surfaces, in combination with an internal sleeve rotating with the shaft, formed with a flange controlling the loose pulley and having projections entering recesses in the laterally movable part of the driving pulley, substantially as and for the purpose set forth. 5th. The driving pulley described having laterally separable parts B. C., with inclined driving surface *b*, *c*, and the enclosed loose pulley E, with its periphery c beneath such inclined surfaces, in combination with the internal sleeve J, around which said loose pulley revolves the spring L, within said sleeve acting to press the part C, of the pulley away from the part B, and with the threaded parts H H', adapted to press said parts toward each other, substantially as and for the purpose set forth.

No. 44,991. File for Documents. (*Serre-papiers.*)

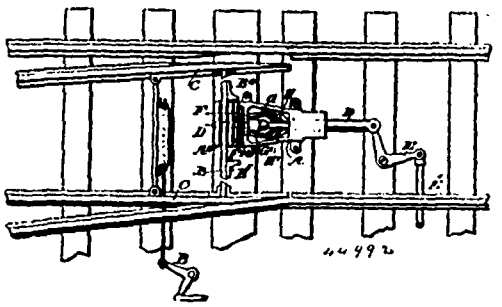


The Eclipse Office Furniture Company, assignee of William O. Gottwalls, all of Ottawa, Ontario, Canada, 2nd January, 1894; 6 years.

Claim.—1st. In a letter and bill file, the combination of a metallic base A having its ends turned up to form a bearing for the posts, the posts B bent to form two uprights on a cross shank secured in said bearings and having its ends made tubular, the arches C each having one end provided with an annular groove and inserted in a rear post and secured therein by having the edge of the tube upset to enter the annular groove, and the front posts having their ends beveled, a clasp D having a rim *d*, doubled over cover d^1, and ends d^{11}, adapted for insertion in slits, and a backing E holding said clasp, substantially as set forth. 2nd. In a letter and bill file, the combination of a metallic base having its ends turned up to form bearings *a*, two pairs of posts or standards B formed of a pair of tubes or wires each bent to form two posts on a cross shank *b* secured in said bearings and having the tubular ends b^1, and b^{11}, and two arches C each having one end grooved annularly and inserted in a tubular end of a post and the metal of the latter closed in upon said groove, and the end b^{11}, beveled on the inside to receive the other end of the arch, substantially as set forth. 3rd. In a letter or bill file, the combination of two posts *B* connected by a cross shank, a tubular end b^1, and a tubular end b^{11}, beveled off from the inside to form a notch, an arch C having one end grooved and inserted in the bearing b^1, and the metal of the edge thereof closed in upon said grooved and the other end adapted to fit said notch, substantially as set forth. 4th. In a clasp to hold the base of a letter and bill file, the combination of a piece of sheet metal D corresponding to the base of the file it is to hold, a turned up edge to form a rim or flange *d*, a turned over

portion d^1, and ends d^{11}, forming extensions of the base and adapted to be inserted in a wood or mill board backing, substantially as set forth.

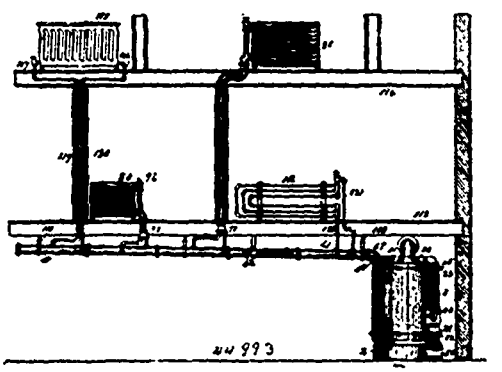
No. 44,992. Switch Lock. (*Serrure pour aiguilles.*)



Samuel E. Burlet, Red Bank, and Benjamin B. Mathews, Bound Brook, both in New Jersey, U.S.A., 4th January, 1894; 6 years.

Claim.—1st. A switch lock comprising a plunger or bolt under the control of the operator and adapted to engage the switch bar to lock the same in place, plates adapted to be engaged by the said bolt, and a mechanism controlled by the said bolt for shifting the said plates, substantially as shown and described. 2nd. A switch lock comprising a plunger or bolt under the control of the operator and adapted to engage the switch bar to lock the same in position, plates mounted to slide and adapted to be engaged by lugs on the switch bar, the said plates being provided with apertures adapted to register with the said plunger to be engaged by the same, and spring pressed levers for shifting the said plates and adapted to be locked or unlocked by the said plunger, substantially as shown and described. 3rd. A switch lock comprising a switch bar provided with lugs, a plunger or bolt under the control of the operator and adapted to engage the said switch bar or lock the same in position, sliding plates adapted to be moved inward by the said lugs on the switch bar, spring pressed levers connected with the said plates, and a second set of levers adapted to lock the said first named set of levers and controlled by a projection on the said plunger, substantially as shown and described. 4th. A switch lock comprising a casing, a plunger fitted to slide therein and under control of the operator, plates fitted to slide in opposite directions in the said casing and having apertures adapted to be engaged by the said plunger, spring pressed levers engaging the said plates to move the latter outward, a second set of spring pressed levers arranged within the said casing, and a projection on the said plunger and adapted to engage the second set of levers to unlock the first set of levers, substantially as shown and described. 5th. A switch lock comprising a casing, a plunger fitted to slide therein and under the control of the operator, plates fitted to slide in opposite directions in the said casing and having apertures adapted to be engaged by the said plunger, spring pressed levers engaging the said plates to move the latter outward, a second set of spring pressed levers arranged within the said casing, a projection on the said plunger and adapted to engage the second set of levers to unlock the first set of levers, and a switch bar passing through the said casing and adapted to be engaged by the said plunger, the said switch bar being provided with adjustable lugs arranged on opposite sides of the casing to engage the said plates, substantially as shown and described.

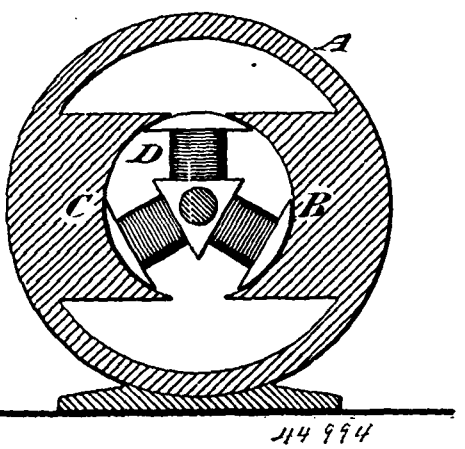
No. 44,993. Heater. (*Calorifère.*)



Curt J. Balthasar and John W. Fryer, both of St. Louis, Missouri, U.S.A., 4th January, 1894; 6 years.

Claim.—1st. The combination, with a boiler having thereon discharge and return connections, of an elbow 57, having two separate passages and attached to said boiler with one of said passages in communication with the discharge connection of said boiler, and the other one of said passages in communication with the return connection of said boiler, a steam or hot water main divided into separate upper and lower passages and fixed in an inclined position, with its upper passage in communication with one of said passages of said elbow, and with its lower passage in communication with the other one of said passages of said elbow, the ends of said upper and lower passages of said main being closed at a point remote from said boiler, and a series of separate small pipes connected to the upper and lower spaces of said main. 2nd. As a new article of manufacture, a short section of a main for conducting steam or hot water under pressure, the same comprising an integral body of cast iron having its interior divided by an integral central longitudinal partition 62, and a series of separate pipe connections located upon the outer periphery of said body at irregular distances apart both longitudinally and circumferentially, and communicating with the interior of the same on each side of said partition. 3rd. In a steam or hot water heating system, the improved main, comprising a series of separate cast iron sections, each having end flanges and horizontal abutting partitions, gaskets 63 placed between the abutting portions of said sections so as to form a tight joint, means for clamping together the adjacent flanges of said sections, said gaskets having a horizontal centre strip 65, which fits between the adjacent ends of said partitions of the connected sections, an elbow having flanges at its ends, a partition which divides the interior of said elbow into two separate passages, a gasket 63 provided with a horizontal centre strip 65, and fitted between the adjacent end of one of said sections and said elbow, in combination with a boiler having discharge and return connections to which the passages of said elbow are connected, and means whereby said main is fixed in an inclined position to gravitate water toward said boiler, substantially as herein specified.

No. 44,994. Electric Motor. (*Moteur électrique.*)

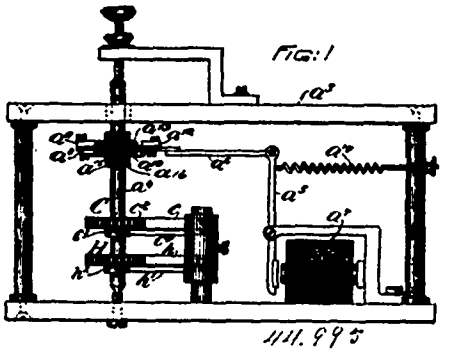


William H. Longsdorf, New York, State of New York, assignee of Gardner Hewett, Jersey City, New Jersey, both in the U.S.A., 4th January, 1894; 6 years.

Claim.—1st. An electric motor having for its enclosing case or envelope a closed magnetic shell, provided with concave internal projections forming poles, and an armature supported and rotating in the field between said poles, substantially as described. 2nd. An electric motor having for its enclosing case or envelope a closed cylindrical magnetic shell, provided with concave internal longitudinal projections forming poles, and an armature concentric with said cylindrical shell, and supported and rotating in the field between said poles, substantially as described. 3rd. In an electric motor, a permanent hollow cylindrical field magnet having internal longitudinal projections forming poles, and an armature supported to rotate in the cylindrical field between the concave faces of said poles, substantially as described. 4th. In an electric motor, a permanent hollow cylindrical field magnet having internal longitudinal projections forming poles, bearings carried by said magnet at its ends, and armature having its shaft journalled in said bearings and rotating in the cylindrical field between the concave faces of said poles, substantially as described. 5th. In an electric motor, a permanent hollow cylindrical field magnet having internal longitudinal projections forming poles, metallic heads closing the ends of said cylinder, and an armature having its shaft journalled in said heads, substantially as described. 6th. The combination in an electric motor, of the cylindrical field magnet A, having the internal poles B, with concave faces to produce a cylindrical space between them, the armature D in said cylindrical space, and the metallic detachable heads D and E on said magnet A, and supporting the bearing for the shaft of said armature, substantially as described.

No. 44,995. System of Electrical Transmission.

(*Système de transmission électrique.*)



The Fowden Printing Telegraph Company, Trenton, New Jersey, assignee of Job A. Davis and Robert A. Fowden, both of Philadelphia, Pennsylvania, U.S.A., 4th January, 1894; 6 years.

Claim.—1st. In a system of electrical transmission, a step-by-step electric motor, comprising a longitudinally movable bar responding to electrical impulses in line, and provided with pawl and ratchet connections for imparting a step-by-step motion to a revoluble member, and with detent or pallet and escapement connections for equalizing said step-by-step motion, substantially as and for the purposes set forth. 2nd. In a system of electrical transmission, a step-by-step electric motor, comprising a bar having a to and fro longitudinal movement, and provided with pawls for imparting a step-by-step motion to a revoluble member and with detents or pallets for equalizing and limiting said step-by-step motion, substantially as and for the purposes set forth. 3rd. In a system of electric transmission, a step-by-step electric motor, comprising a bar connected with the armature of an electro-magnet, and provided with pawl and ratchet connections for imparting a step-by-step motion to a revoluble member, and with detent or pallet and escapement connections for equalizing said step-by-step motion, substantially as and for the purposes set forth. 4th. In a system of electrical transmission, a step by-step electric motor, comprising a bar connected with the spring controlled armature lever of an electro-magnet, and provided with pawl and ratchet connections for driving a revoluble member, and with detent or pallet and escapement connections for limiting the movement of the revoluble member, substantially as and for the purposes set forth. 5th. In a system of electrical transmission, a step-by-step electric motor, comprising a revoluble member, an electro-magnet having a controlled armature lever, a bar connected with said armature lever by a link and pawl, and ratchet and detent or pallet and escapement connections interposed between said bar and revoluble member, substantially as and for the purposes set forth. 6th. In a system of electrical transmission, a step-by-step electric motor, a shaft provided with ratchet and escape-wheels, and a bar slotted for the accommodation of said shaft, and provided at the sides of said slot with pawls engaging said ratchet-wheel, and at the ends of said slot with detents or pallets for engaging said escape-wheel, substantially as and for the purposes set forth. 7th. In a system of electrical transmission, a step-by-step electric motor, comprising a shaft provided with ratchet and escape-wheels, a bar slotted for the accommodation of said shaft, and provided at the sides of said slot with spring controlled pivotal pawls engaging said ratchet-wheel and at the ends of said slot with fixed detents or pallets for engaging said escape-wheel, and an electro-magnet for operating said bar, substantially as and for the purposes set forth. 8th. In a system of electrical transmission, a step-by-step electric motor, a revoluble shaft provided with ratchet and escape-wheels, a bar slotted for the accommodation of said shaft, and provided at the sides of said slot with pawls engaging said ratchet-wheel and at the ends of said slot with detents or pallets for engaging said escape-wheels, and guides for said bar, substantially as and for the purposes set forth. 9th. In a system of electrical transmission, a step-by-step electric motor, comprising a bar responding to electrical impulses in line, and provided with pawl and ratchet connections for imparting motion to a revoluble member, and with pallets and escapement connections for equalizing the steps of the motions of the revoluble member, and guides for said bar, substantially as and for the purposes set forth. 10th. In a system of electrical transmission, a step-by-step electric motor, comprising a bar connected with the armature of an electro-magnet, and provided with pawl and ratchet connections for imparting a step-by-step motion to a revoluble member, and with pallet and escapement connections for equalizing the steps of motion of said member, and a circuit breaker and closer mounted on said revoluble member and adapted to make and break the circuit through the coils of said electro-magnet, substantially as and for the purposes set forth. 11th. In a system of electrical transmission, a step-by-step electric motor, comprising a revoluble member, a bar connected with the armature of an electro-magnet and provided with pawl and ratchet and pallet and escapement connections for actuating said revoluble member, a circuit breaker and closer mounted on said revoluble member and adapted to break the circuit through the coils of said magnet after its armature is pulled up, and a spring for shifting said bar to bring the circuit breaker and closer into position for making the circuit through the coils of said magnet, substantially as and for the purposes set forth. 12th. In a system of electrical transmission, a step-by-step electric-motor, comprising a revoluble member, an electro-magnet having a spring controlled armature lever, a bar connected with said armature lever by a link, pawl and ratchet and pallet and escapement connections interposed between said bar and revoluble member, and a circuit breaker and closer mounted upon said revoluble member and adapted to control the circuit of said magnet, substantially as and for the purposes set forth. 13th. In a system of electrical transmission, a step-by-step electric motor, comprising a revoluble member provided with ratchet and escapement-wheels, a motor bar slotted for the accommodation of said shaft and provided at the sides of said slot with pawls engaging said ratchet-wheel and at the ends of said slot with pallets engaging said escapement-wheel, an electro-magnet for operating said bar and a circuit breaker and closer mounted on said revoluble member and adapted to control the circuit of said electro-magnet, substantially as and for the purposes set forth. 14th. In a system of electrical transmission, a step-by-step electric motor, comprising a bar responding to electrical impulses in line and provided with pawl and ratchet connections for imparting a step-by-step motion to a revoluble member and with pallet and escapement connections for equalizing said step-by-step motion, and electrical and mechanical devices operated by the revoluble member and adapted to control the impulses in the line, substantially as and for the purposes set forth. 15th. In a system of electrical transmission, a series of step-by-step electric motors provided respectively with a vibratory bar responding to electrical impulses in line and having pawl and ratchet connections for imparting a step-by-step movement to a revoluble member and having pallet and escapement connections for limiting the step-by-step motion to the revoluble member, and mechanical and electrical devices for positively actuating one of said revoluble members and for causing the same to synchroneously operate the other motors, substantially as and for the purposes set forth. 16th. In a system of electrical transmission, two stations provided respectively with electro-magnets adapted to operate bars having pawl and ratchet, and pallet, and escapement connections for intermittently rotating a shaft, a relay magnet, local circuits controlled by a key and adapted to be closed through the stops of said relay and through the contacts of a local circuit breaker and closer mounted on said shaft, and a line circuit adapted to be closed by manuel keys at each station through the coils of said relays, and through the contacts of a line circuit breaker and closer on said shaft, the construction and arrangement being such that the shaft at the transmitting station is rotated by the depression of the key, and consequently closing the local circuit through its circuit breaker and closer, and the shaft at the receiving station is rotated by the closing of its local circuit by the relay, substantially as and for the purposes set forth. 17th. In a system of electrical transmission, a step-by-step electric motor, comprising a shaft, an electro-magnet, a bar, pawl and ratchet, and pallet, and escapement connections between said bar, and a spring controlled armature lever of said magnet, in combination with a local battery circuit adapted to be closed by a manuel key through a local circuit breaker and closer, and a circuit breaker and closer adapted to transmit electrical impulses to line, substantially as and for the purposes set forth. 18th. In a system of electrical transmission, a motor comprising a shaft, an electro-magnet, a bar, pawl and ratchet, and pallet, and escapement connections between said bar and the spring controlled armature lever of said magnet, in combination with a local battery circuit adapted to be closed through said magnet, and a relay controlling said local battery circuit and responding to impulses in a line battery circuit, substantially as and for the purposes set forth. 19th. In a system of electrical transmission, a transmitting station provided with an electro-magnet, a shaft, a bar, pawl and ratchet, and pallet, and escapement connections between said bar, and the spring controlled armature lever of said magnet, a local battery circuit adapted to be closed by a manuel key through a local circuit breaker and closer, a circuit breaker and closer adapted to transmit electrical impulses through a line battery circuit, and a receiving station provided with a shaft, an electro-magnet, a bar, pawl and ratchet, and pallet, and escapement connections between said bar, and the spring controlled armature lever of said magnet, a local battery circuit adapted to be closed through said magnet, and a relay controlling said local battery circuit and responding to impulses in the line battery circuit, substantially as and for the purposes set forth. 20th. In a system of electrical transmission, a step-by-step electric motor, comprising a revoluble member provided with ratchet and escape-wheels, and a device or bar responding to electrical impulses and provided with pawls operating respectively by a thrust and a pull to rotate said ratchet-wheel and with detents, pallets, stop-dogs or anchors for limiting and adjusting the movements of the escape-wheel, substantially as and for the purposes set forth. 21st. In a system of electrical transmission, a step-by-step electric motor, comprising a bar responding to electrical impulses in line and provided with pawls operating respectively by a thrust and a pull to drive a revoluble member, substantially as and for the purposes set forth. 22nd. In a system of

electrical transmission, a step-by-step electric motor, comprising a revoluble member provided with a ratchet and escape-wheels, a bar provided with pawls operating respectively by thrust and a pull to rotate said ratchet-wheel, and with detents, pallets, stop-dogs or anchors for limiting and adjusting the movements of the escape-wheel, and an armature lever connected with said bar and responding to electrical impulses through the coils of its magnet, substantially as and for the purposes set forth. 23rd. In a system of electrical transmission, a step by step electric motor, comprising a revoluble member provided with a ratchet and escape-wheels, a bar provided with pawls operating respectively by a thrust and a pull to rotate said ratchet-wheel and with pallets, stop-dogs or anchors for limiting and adjusting the movements of the escape-wheel, an armature-lever connected with said bar, and responding to the electrical impulses through the coils of its magnet, and a retracting spring for said lever, substantially as and for the purpose set forth. 24th. In a system of electrical transmission, a step-by-step electric motor, having a revoluble member provided with ratchet and escape-wheels, means provided with a slot for the accommodation of said revoluble member, pawls pivotally attached to said means by a stud or screw, and operating respectively by a thrust and pull to rotate said ratchet-wheel and detents, pallets and stop-dogs for limiting and adjusting the movements of the escape-wheel, substantially as and for the purpose set forth. 25th. In a system of electrical transmission, a step-by-step electric motor, comprising a revoluble member provided with ratchet and escape-wheels, means responding to electrical impulses in line and provided with spring controlled pawls operating respectively by a thrust and pull to rotate said ratchet-wheel and with the detents, stop-dogs, pallets or anchors for limiting and adjusting the movements of the escape-wheel, substantially as and for the purposes set forth. 26th. In a system of electrical transmission, a step-by-step electric motor, a revoluble member provided with ratchet-and escape-wheels, slotted means for the accommodation of said revoluble member, and provided with pawls operating respectively by a thrust and a pull to rotate said ratchet-wheel, and with pallets, stop-dogs or anchors for limiting and adjusting the movements of the escape-wheels, substantially as and for the purposes set forth. 27th. In a system of electrical transmission, a step-by-step electric motor, a revoluble member provided with ratchet and escape-wheels, a slotted bar for the accommodation of said revoluble member, and provided with pawls operating respectively by a thrust and a pull to rotate said ratchet-wheel and pallets, stop dogs or anchors for limiting and adjusting the movements of the escape-wheels, and collars for guiding said bar, substantially as and for the purposes set forth. 28th. The combination in a system of electrical transmission, of a series of instruments having a revoluble member provided with ratchet and escape-wheels, means substantially as described, responding to electrical impulses in line and provided with pawls, whereof one operates by a thrust and the other by a pull to rotate said ratchet-wheels and pallets, detents or anchors for limiting and adjusting the movements of the escape-wheel, and a line circuit controlled by electrical and mechanical devices, substantially as described, actuated by a principal instrument, and adapted to synchronously operate all in the primary instruments therewith, substantially as and for the purposes set forth. 29th. The combination in a system of electrical transmission, of a series of instruments having a revoluble member provided with ratchet and escape-wheels, a bar responding to electrical impulses in line and provided with pawls, whereof one operates by a pull and the other by a thrust to rotate said ratchet-wheel, detents, pallets or anchors for limiting and adjusting the movement of the escape-wheel, and a line circuit controlled by a circuit breaker and closer actuated by a principal instrument, and adapted to synchronously operate all the other instruments in circuit therewith, substantially as and for the purposes set forth. 30th. In a system of electrical transmission, a step-by-step electric motor, comprising a revoluble member provided with ratchet and escape-wheels, and a slotted device or bar for accommodating said revoluble member responding to electrical impulses and provided with pawls, whereof one is provided with a hook-shaped extremity and operates by a pull, and whereof the other operates by a push or thrust to rotate said ratchet-wheel, and detents, pallets, stop-dogs or anchors mounted on said device or bar, and adapted to limit and adjust the movements of the escapement-wheel, substantially as and for the purposes set forth. 31st. In a system of electrical transmission, a step-by-step electric motor, having a revoluble member provided with ratchet and escape-wheels, a bar provided with a slot for the accommodation of said revoluble member, and with pivotal pawls, whereof one is provided with a hook-shaped extremity and rotates said ratchet-wheel by a pull and whereof the other rotates said ratchet-wheel by a push or thrust, and detents, pallets or stop-dogs carried by said bar and adapted to limit and adjust the movements of the escape-wheel, substantially as and for the purposes set forth. 32nd. The combination, in a system of electrical transmission, of a series of instruments having a revoluble member provided with ratchet and escape-wheels, a slotted device for the accommodation of said revoluble member and responding to electrical impulses in line and provided with pawls, whereof one operates by a thrust and the other is provided with a hook-shaped extremity and operates by a pull to rotate said ratchet-wheel, pallets, detents or anchors, for limiting and adjusting the movements of the escape-wheel, a line circuit, electrical and mechanical devices actuated by a principal instrument and adapted to synchronously operates all the primary instruments therewith, substantially as and for the purposes set forth. 33rd. The combination, in a system of electrical transmission, of a series of instruments having a revoluble member provided with ratchet and escape-wheels, a slotted bar for the accommodation of said revoluble member responding to electrical impulses in line and provided with pawls, whereof one is provided with a hook-shaped extremity adapted to operate by a pull, and whereof the other is adapted to operate by a thrust to rotate said ratchet-wheel, detents, pallets or anchors for limiting and adjusting the movement of the escape-wheel, and a line circuit controlled by a circuit breaker and closer actuated by a principal instrument and adapted to synchronously operate all the other instruments looped or connected in circuit therewith, substantially as and for the purposes set forth.

No. 44,996. Refrigerator for Ice Cream.

(*Congélateur de crème.*)

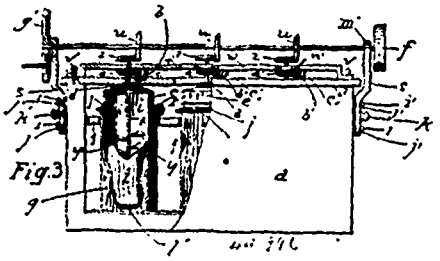


Fig. 3

Frank W. Merrill, Deering, Maine, U.S.A., 4th January, 1894; 6 years.

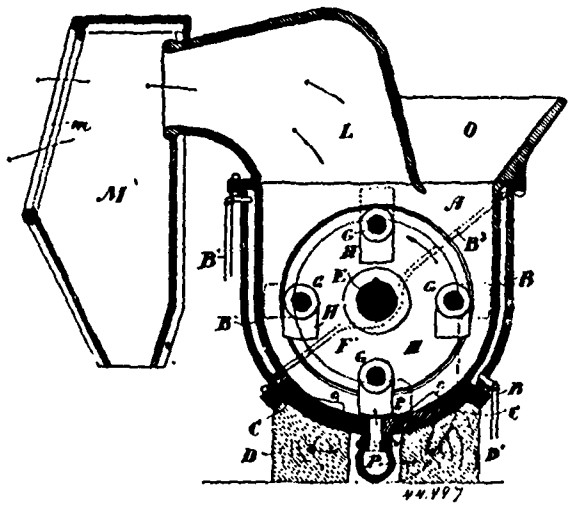
Claim.—1st. The combination with an ice chest, of a frame adapted to fit closely against the walls of said chest, perforated shields adapted to be held in a fixed position relative to said walls by said frame, cans for cream resting in said shields, a cover to said chest having openings therein into which the upper ends of said cans project and covers for said openings, substantially as and for the purposes set forth. 2nd. In an ice cream cooler, the combination, with an ice chest, of a draw-off pipe leading from the bottom thereof, and a strainer over the inner of said pipe and at some distance therefrom, the top of said strainer being extended to a considerable distance above the bottom of the chest, and having its walls perforated or made of strainer cloth, substantially as and for the purposes set forth. 3rd. In an ice cream cooler and freezer, a chest having a cover thereto, a loose frame set therein, the sides of said frame resting against the interior walls of said chest, perforated shields adapted to be held in a fixed position by the shield frame, cans stepped in the bottoms of said shields, a shaft journalled in brackets attached to said chest, a bar also attached to said chest, spindles passing through said bar and extending down into said cans, stirrers attached thereto, and a system of gears arranged and adapted to impart a rotary motion to said cans, and to said spindles by means of the revolution of said shaft, substantially as and for the purposes set forth.

No. 44,997. Pulverizer. (*Broyeur.*)

Thomas Parker, John Douglas Wright, Francis Farquharson Stuart, and Alexander Maxwell Colquhown, all of Toronto, Ontario, Canada, 4th January, 1894; 6 years.

Claim.—1st. A pulverizer consisting of a chamber to receive the material, a shaft journalled in the ends of the chamber and provided with discs and rods extending between the end discs secured in them near the periphery, and parallel to the shaft, and a series of beaters loosely journalled upon the rod, as and for the purpose specified. 2nd. The combination with the chamber, shaft journalled therein, discs on the shaft and rods extending between the end discs and beaters loosely journalled on such rods as specified, of the projections, c, c^1, formed in the bottom of the pulverizing chamber as and for the purpose specified. 3rd. The combination, with the chamber, shaft journalled therein, discs on the shaft and rods extending between the end discs and beaters loosely journalled on such rods as specified, of a fan preferably secured on the outer end of the shaft and fan casing having a duct leading from it beneath the pulverizing chamber, such duct having a series of vertical passageways extending up into the chamber, as and for the purpose specified. 4th. The combination with the chamber, shaft journalled therein, discs on the shaft and rods extending between the end discs and beaters loosely journalled on such rods as specified, of the hollow walls B, designed to receive live steam, as and for the purpose specified. 5th. The combination with the chamber, shaft journalled therein, discs on the shaft and rods extending between the end discs and beaters loosely journalled on such rods as specified, of the fan J, provided with the casing I, and duct P, leading from the casing to beneath the bottom of the pulverizing chamber, and provided with

vertical passageways *p*, leading into the pulverizing chamber, the duct L, secured at the top of the pulverizing chamber and leading

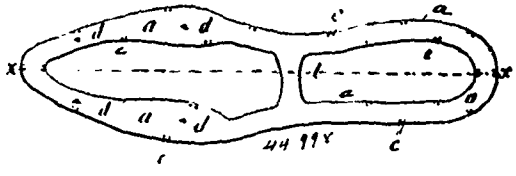


into the hopper M, which is provided with an opening covered by the bolting cloth *n*, as and for the purpose specified.

No. 44,998. Stretcher for Insoles.

(*Appareil à étendre pour fausses-semelles.*)

Fig 2



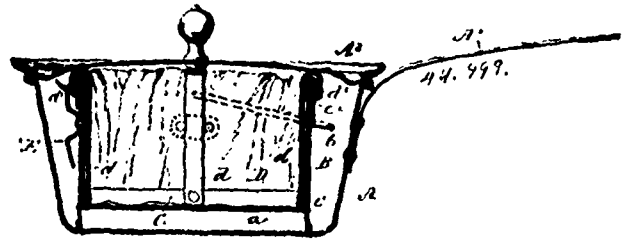
Johann F. A. Miethling, Louis Simon and Otto Bombon, all of Berlin, German Empire, 4th January, 1894; 6 years.

Claim.—1st. An improved device for keeping insoles stretched or extended for preventing same from twisting, wrinkling or moving in the shoe, consisting of a frame *a*, *corresponding to the shape* of the foot and made of elastic material, the insole being secured to same by stitching, adhesion or other suitable manner, substantially as described and shown in the drawings. 2nd. An improved device for keeping insoles stretched, consisting of a frame *a*, to be inserted and secured in a pocket-like insole made of two layers of fabric and provided with side or middle slits for inserting the frame, without requiring to be permanently secured to the insole, substantially as described and shown. 3rd. An improved device for keeping insoles stretched consisting of a frame *a*, connected to the insole so as to be easily removable, by stitching a border of fabric or other suitable material all around the under edge of the insole, into which border said frame is inserted, substantially as described and shown. 4th. An improved device for keeping insoles stretched, consisting of a frame *a*, in the shape of a sole, and provided underneath with points or pins, which enter the inner sole and prevent same from moving in the shoe, substantially as described and shown. 5th. An insole for shoes or boots, which is prevented from twisting, wrinkling or moving by being suitably secured to a stretcher frame *a*, substantially as described and shown. 6th. The use of stretcher frame *a*, without insole, for protecting the foot from nails, which may have penetrated to the inside of the shoe, substantially as described and shown in the drawing.

No. 44,999. Cooking Utensil. (*Ustensile de cuisine.*)

George Habberton Nicholls, and Meyer M. Levy, both of Galveston, Texas, U.S.A., 4th January, 1894; 6 years.

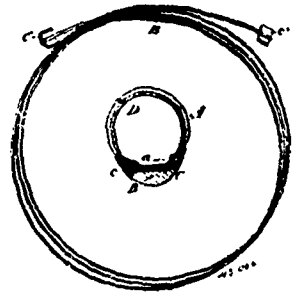
Claim.—1st. The combination with a water receptacle, of a foraminated vessel, a skeleton frame adapted to hook upon the top edge of the vessel, and a fibrous envelope intervening the frame and vessel, substantially as described. 2nd. The combination with a water receptacle, having a handle and a cover, of a foraminated cylindrical vessel the bottom of which is located above lower edge of the side wall, a bail handle for the vessel, a skeleton frame having hooks that engage the top edge of the vessel, an intervening fibrous



envelope, and a hanger hook on the outer side of the foraminated vessel, substantially as described.

No. 45,000. Tire for Vehicle Wheels.

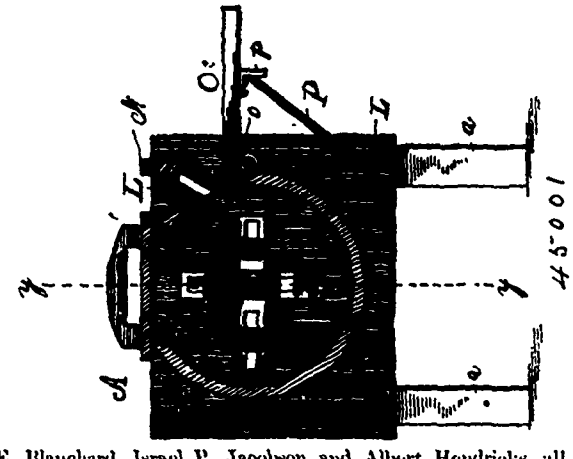
(*Bandage pour roues de voiture.*)



Robert Scott Anderson and John Thomas Beatty, both of Toronto, Ontario, Canada, 4th January, 1894; 6 years.

Claim.—1st. In a pneumatic tire for bicycles and wheels, the combination with the tire, tube and rim, of a wire coil consisting of a plurality of convolutions secured in each edge of the tire, and held securely in place upon the rim by the pressure of the tube when inflated, but allowable of extension upon the air pressure being removed from the tube, as and for the purpose specified. 2nd. In a pneumatic tire for bicycles and wheels, the combination with the tire, tube and rim, of a wire coil consisting of a plurality of convolutions secured in each edge of the tire, and held normally in place upon the rim by the pressure of the tube when inflated, but allowable of extension upon the air pressure being removed from the tube and having the ends extending out in opposite directions through a hole c, outside of the edge of the tire, as and for the purpose specified. 3rd. In a pneumatic tire for bicycles and wheels, the combination with the tire, tube and rim, of a wire coil consisting of a plurality of convolutions secured in each edge of the tire and held normally in place upon the rim by the pressure of the tube when inflated, but allowable of extension upon the air pressure being removed from the tube, and having the ends extending out in opposite directions through a hole c, outside of the edge of the tire and tabs c^1, secured on the terminals of such ends, as and for the purpose specified.

No. 45,001. Washing Machine. (*Machine à blanchir.*)



E. Blanchard, Israel P. Jacobson, and Albert Hendricks, all of Logan, Utah, U.S.A., 15th January, 1894; 6 years.

Claim.—1st. In a washing machine, the combination of a suitable receptacle, a horizontal shaft journalled therein, and a drum carried

by said shaft and provided with a series of reciprocating rubbing bars each having a number of laterally projecting studs or pins, substantially as described. 2nd. In a washing machine, the combination of a receptacle, a shaft journalled therein and provided at one end with a crank, the heads or spiders secured on said shaft, and a series of rubbing bars carried by said arm and each having a number of laterally projecting studs or pins, the studs on adjacent bars being arranged alternately with relation to each other, substantially as described.

No. 45,002. Tobacco Pipe. (*Pipe à tabac.*)

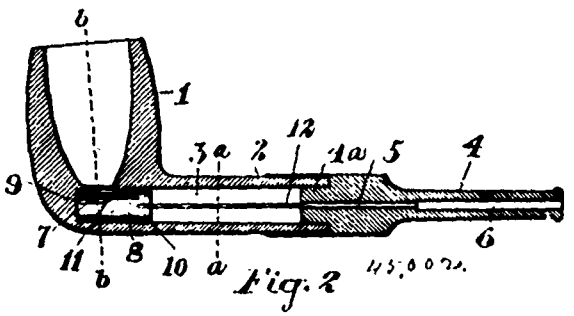
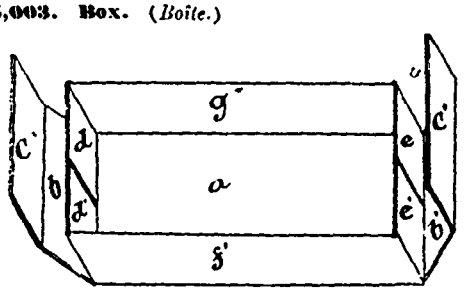


Fig. 2

George G. Kerr, and John L. Kerr, both of Toronto, Ontario, Canada, 4th January, 1894; 6 years.

Claim.—1st. In a tobacco pipe, the combination of the bowl, a stem formed integrally with the bowl, a direct passageway of substantially three-eighths of an inch in diameter formed through the said stem into the bowl, and a mouthpiece connected to the end of the stem, and a passageway through the mouthpiece connecting with the passageway through the stem, substantially as described. 2nd. In a tobacco pipe, the combination of the bowl having its inner walls converging toward the lower end, a stem formed integrally with the bowl, and arranged substantially at right angles to the vertical axis of the bowl, a direct passageway of approximately three-eighths of an inch in diameter formed through the said stem into the bowl, the said passageway of a uniform diameter form the end of the stem into the bowl, arranged to prevent the accumulation of nicotine therein, and the condensation of the smoke from the tobacco in the bowl, a mouthpiece connected to the end of the said stem, a shoulder to said mouthpiece butting against the end of said stem, a projection, said mouthpiece extending into the passageway through said stem, a passageway through said mouthpiece in connection with the enlarged passageway through the stem, substantially as and for the purpose specified. 3rd. In a tobacco pipe, the combination of the bowl, a stem formed integrally with the bowl, and arranged substantially at right angles to the vertical axis of the bowl, a direct passageway of approximately three-eighths of an inch in diameter fromed through the said stem into the bowl, grate bars at the lower end of the bowl to arrest the passage of the tobacco from the bowl into the passageway through the stem, substantially as described. 4th. In a tobacco pipe, the combination of the bowl, a stem formed integrally with the bowl having a direct passageway of approximately three-eighths of an inch in diameter formed therethrough and entering the lower end of the bowl, a sleeve or tube within the passageway at that end of the stem adjoining the bowl, an opening through the sleeve or tube into the lower end of the bowl, and grate bars secured across said opening, substantially as described.

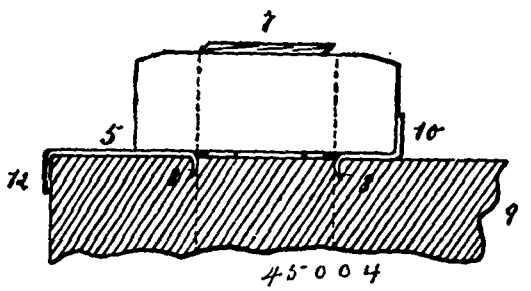
No. 45,003. Box. (*Boîte.*)



Joseph Taylor Craw, Jersey City, New Jersey, and Nicholas W. Schenck, Brooklyn, New York, all in the U.S.A., 5th January, 1894; 6 years.

Claim.—1st. A knock down box and cover, each having side and end flaps adapted to turn down inside the box and cover and extending to the bottom of the same, and a clamping piece adapted to clamp said side and end flaps, substantially as described. 2nd. A box and cover, each having turn in side and end flaps extending to the bottom thereof, and a separate clamp piece engaging said flaps, substantially as described. 3rd. A telescoping box and cover, each having turn in side and end flaps and an inside clamp piece of the same finish as said side and end flaps and adapted to clamp the same, substantially as described. 4th. In knock down boxes and covers, and in combination with side and end flaps which will turn in and down to the bottoms of said boxes and covers, separate bottoms for locking said flaps, substantially as described. 5th. In blanks for knock down box covers the combination with side flaps and turn in side flaps of holes situated to be bi-sected by the scores between the said side flaps and turn in side flaps and so that when the last named flaps are turned in the halves of said holes will register and form thumb notches in the sides of the cover, substantially as described. 6th. A telescoping box and cover having side flaps, turn in side flaps shorter than said side flaps, end flaps, inside end flaps narrower than said end flaps, turn in end flaps wider than said end flaps, and an inside clamp piece adapted to clamp said turn in side and end flaps, substantially as described. 7th. A knock down box having turn in side and end flaps extending to the bottom of box and showing within the same finish as the exterior of the box, and also having a separate bottom adapted to be inserted within the box and clamp said turn in flaps and showing the same finish as the exterior of the box, substantially as described. 8th. A knock down box cover having turn in side and end flaps extending to the bottom of the cover and showing the same finish within as the exterior of the cover, and also having a double bottom adapted to be inserted in the cover and clamp said turn in flaps and showing within the same finish as the exterior of the cover, substantially as described.

No. 45,004. Nut Lock. (*Arrête-écrou.*)

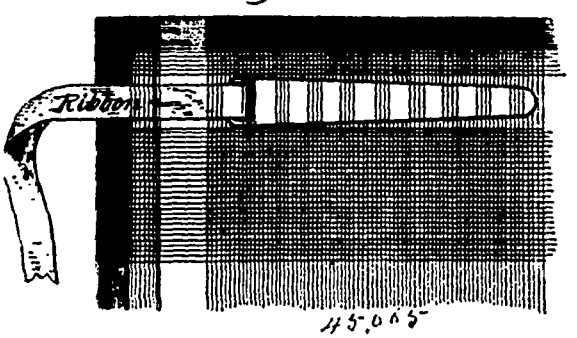


Thomas D. Jones, Algernon S. Osgoode, and John Early, all of Chicago, Illinois, U.S.A., 5th January, 1894; 6 years.

Claim.—1st. In a nut lock, a plate of sheet metal perforated to receive a bolt, and having at each of two edges a pair of oppositely pointing hook shaped spurs to engage a penetrable base, and further having a portion to be bent against the side of a nut placed upon the plate to lock the same, substantially as described. 2nd. In a nut lock, a plate of sheet metal adapted to receive a bolt and to hold a nut placed thereon and provided at two of its edges with oppositely pointing hook shaped spurs, substantially as described.

No. 45,005. Ribbon Needle. (*Aiguille à ruban.*)

Fig. 3

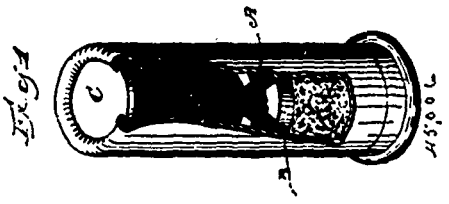


Gustavus G. Weigand, Des Moines, Iowa, U.S.A., 5th January, 1894; 6 years.

Claim.—As a new article of manufacture, a ribbon needle consisting of a flat plate, that is wider at one end than the other, and has straight smooth edges, and two parallel slots extending transversely to the longitudinal axis of the needle, its wide end adapted to admit a ribbon in the manner set forth for the purposes stated.

No. 45,006. Wad for Shot Guns.

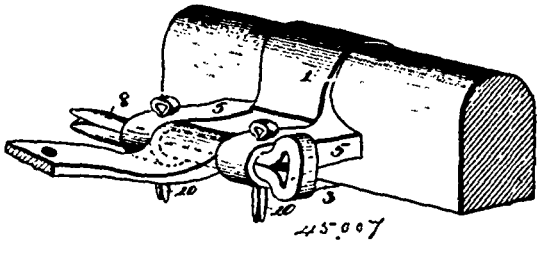
(*Bourre pour fusils.*)



Andrew E. Vesn, and Allen F. Ferris, both of Brainard, Minnesota, U.S.A., 5th January, 1894; 6 years.

Claim.—1st. A hollow shot wad or ring, of considerable thickness, made of soft or compressible material, such as felt, with the walls of the shot cavity approximately parallel with the outer wall of the wad, whereby a soft compressible cushion is formed between the shot and the wall of the barrel which permits contraction in passing through the barrel, and at the same time confines the shot in compact form within the compressible walls of the wad and centrally in the line of fire, substantially as and for the purposes set forth. 2nd. The combination of a hollow shot wad open at both ends, made of compressible material, such as felt, of considerable thickness, affording a compressible cushion between the shot and the wall of the barrel permitting contraction in passing through the barrel, and at the same time confining the shot in compact form within the compressible wall of the wad and centrally in the line of fire, and a disc-shaped wad adapted to close one end of said shot wad and separate the shot from the powder, substantially as and for the purposes set forth. 3rd. The combination in a cartridge, with a disc-shaped wad placed between the powder and shot, of a hollow cylindrical shot wad placed upon said disc-shaped wad, which serves as a bottom therefor, and confining a portion of the shot next to the powder, said hollow wad having yielding sides forming a compressible cushion between the shot and the wall of the barrel, permitting contraction in passing through the barrel, and at the same time confining the shot in compact form within the compressible walls of the wad and centrally in the line of fire, substantially as and for the purposes set forth.

No. 45,007. Thill Coupler. (*Armon de limonière.*)



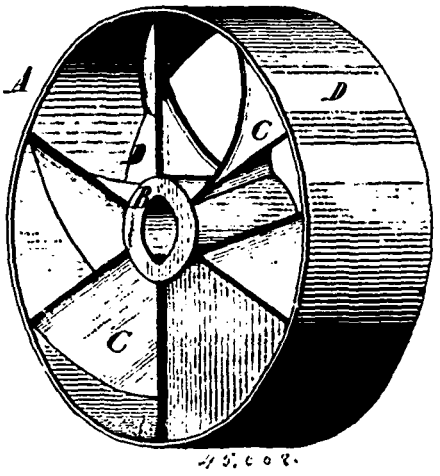
Ansel W. Fisher, Charlotte, Maine, U.S.A., 5th January, 1894; 18 years.

Claim.—1st. In a thill coupling, the combination of a clip having arms projecting forwardly therefrom that are spaced apart and have transverse openings therethrough with vertical openings communicating with said transverse openings, an enlarged spring pin having recesses in the back thereof aligning with the vertical openings in the said arms, and removably fitted in the said transverse openings of the said arms, and vertical pins removably seated in said vertical openings and engaging said recesses of the larger pin, substantially as described. 2nd. In a thill coupling, the combination of arms having transverse openings extending therethrough, a split spring pin mounted in said transverse openings and arranged to be readily removed, and a vertical retaining pin of smaller form engaging the rear part of the aforesaid pin, substantially as described.

No. 45,008. Propeller Wheel. (*Hélice de propulsion.*)

Nicolas Wagener, Baltimore, Maryland, U.S.A., 8th January, 1894; 6 years.

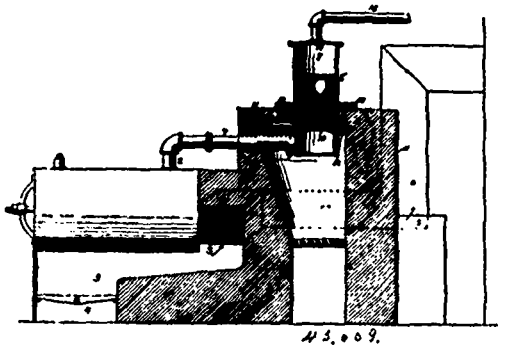
Claim.—A propeller wheel forming a true screw, having the opposite exposed edges of its blades extending from the hub in straight radial lines, and the faces of the adjacent blades equally distant from each other on parallel lines, a hub of equal width from end to end of the blades, and a continuous rim or band entirely



inclosing the peripheries of the blades and extending from one edge thereof to the other, substantially as described.

No. 45,009. Method of Desulphurizing Oils.

(*Méthode de désulfuration de l'huile.*)



Otto Paul Amend, New York, and Josiah Henry Macy, Harrison, both in the State of New York, U.S.A., 8th January, 1894; 6 years.

Claim.—1st. The process of desulphurizing oil which consists in vaporizing the oil containing the sulphur and heating the oil vapour to a degree of heat at or above the boiling point of sulphur, in exposing the oil vapour so heated to the action of one or more chemical re-agents that will combine with sulphur or sulphur compounds and then condensing the oil vapour. 2nd. The herein described process of desulphurizing oil which consists in vaporizing the oil containing sulphur or sulphur compounds and heating the vaporized oil to a degree of heat at or above the boiling point of sulphur and then exposing the vaporized oil so heated to the action of one or more alkalies and then condensing the oil. 3rd. The process of desulphurizing oil which consists in vaporizing the oil containing sulphur and heating the oil vapour to a degree of heat at or above the boiling point of sulphur, in exposing the oil vapour so heated to the action of an oxidizing agent capable of combining with sulphur or sulphur compounds and then condensing the oil vapour. 4th. The process of desulphurizing oil which consists in vaporizing the oil containing sulphur or sulphur compounds and heating the vaporized oil to a degree of heat at or above the boiling point of sulphur and exposing the vaporized oil so heated to the action of a hydrated (caustic) alkali and then condensing the oil vapour. 5th. The process of desulphurizing oil which consists in vaporizing the oil containing the sulphur and heating the oil vapour to a degree of heat at or above the boiling point of sulphur, in exposing the oil vapour so heated to the action of an oxidizing agent and a caustic agent and then condensing the oil vapour.

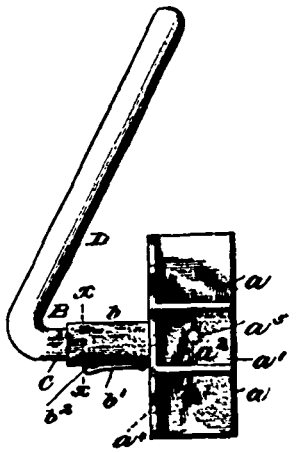
No. 45,010. Wrench. (*Clé à écrou.*)

Morgan Williams, Aspen, Colorado, U.S.A., 8th January, 1894; 6 years.

Claim.—1st. A wrench having its operating shaft extended at an angle from the head plate, and provided with a handle portion diagonal relative to the axis of rotation of said shaft, substantially as set forth. 2nd. A wrench having a head plate provided with

one or more jaws or nut receiving compartments, and the operating shaft connected to said head plate, and having its handle portion

Fig. 1



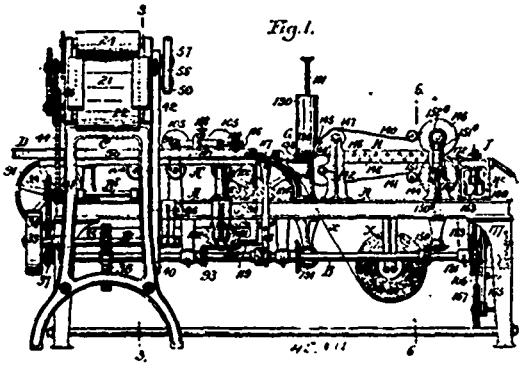
45,011.

diagonal relative to the axis of rotation of said shaft, substantially as set forth. 3rd. The herein described improved nut wrench, comprising the head plate having a series of jaws or nut receiving compartments, the shaft extended at right angles from said head plate, and means for removably connecting said head plate to said shaft, substantially as set forth. 4th. The herein described improved wrench, comprising the head plate, having a series of jaws or nut receiving compartments, the shaft extended at right angles from said head plate, and having an outer handle end diagonal to the axis of rotation of said shaft, and means for removably connecting said head plate to said shaft, substantially as set forth. 5th. The herein described improved wrench, comprising the head plate having a series of jaws or nut receiving compartments of different size, and a socket, the shaft fitted in said socket and having an outer handle end diagonal to the axis of rotation of said shaft, and the spring plate for holding said shaft in said socket, substantially as set forth. 6th. The herein described improved wrench, comprising the head plate having a series of jaws or nut receiving compartments of different size, a square socket extending therefrom having a hole or opening, the spring plate attached to said socket and having a shoulder projecting into said hole or opening, and the operating shaft having a squared portion provided with a groove or recess and held in said socket by said shouldered end of said spring plate, substantially as set forth. 7th. The herein described improved wrench, comprising the head plate having a series of holes or openings therein, the angular plates projecting from said head plate, the inner plates connecting said angular plates, also having a series of holes or openings the socket and shaft rigidly held in said socket, and having its outer handle end diagonal to the axis of rotation of said shaft, substantially as set forth.

No. 45,011. Machine for Making Cigarettes.

(*Machine à faire les cigarettes.*)

Fig. 1.



Albert Leroy Munson, New York, State of New York, U.S.A., 8th January, 1894; 6 years.

Claim.—1st. The combination of the tobacco feeding apron, the picker roll having movable picker pins, means for withdrawing the pins within the periphery of said roll, and another picker roll coacting with the first-named roll, substantially as described. 2nd. The combination of the tobacco feeding apron, the pair of picker rolls, and the grooved upper roll adapted to lay the tobacco on to said picker rolls, substantially as described. 3rd. The combination of the tobacco feeding apron, the pair of picker rolls, having movable picker pins, and means for withdrawing pins within the periphery of the rolls, substantially as described. 4th. The combination in a tobacco picker roll, of cross rods mounted therein, having pins projecting to the exterior of the roll, and means for moving the cross rods to withdraw the pins within the periphery of the roll, substantially as described. 5th. The combination in a tobacco picker roll, having a perforated periphery, of a number of cross rods mounted in said roll, having pins projecting through said perforated periphery, and a cam for withdrawing the pins within said periphery, substantially as described. 6th. The combination in a tobacco picker, roller having a perforated periphery, of a number of cross rods mounted in said roll, having pins projecting through said perforated periphery, a cam for withdrawing the pins within said periphery, and another cam for projecting the pins, substantially as described. 7th. The combination of the filler former, the cigarette former, the bridge plate bringing the space between said formers, an intermediate upper belt, and intermediate side belts for forwarding the filler on to the wrapper strip, substantially as described. 8th. The combination of the cigarette former, the intermediate belt extending on to the former and inclined with respect to the direction of movement of the tobacco filler to exert a gradually increased pressure thereon to feed it positively onward, substantially as described. 9th. The combination of the cigarette former, the bridge plate overlapping the entrance to said former and the intermediate filler forwarding belt extending on to the former beyond the end of the plate to feed the wrapper strip and filler onward in unison, substantially as described. 10th. The herein described pair of endless cigarette belts, each having the semi-circular recess mounted to provide a continuous recess for the cigarette, the opposite side bearing surfaces and the central rib. 11th. The combination with the cigarette former of the paste fountain, the intermediate grooved paste roll, and the paste roll receiving paste from the groove of said intermediate roll, substantially as described. 12th. The combination with the cigarette former, of the paste fountain, the follower in said fountain, the intermediate grooved paste roll, and the paster roll receiving paste from the groove of the intermediate roll, substantially as described. 13th. The combination with the cigarette former, of the paste fountain having an opening near its lower end, the intermediate grooved projecting into said opening, and a paster roll receiving paste from the groove of the intermediate roll, substantially as described. 14th. The combination of the continuously moving filler forming belts, the cigarette former, the continuously moving intermediate forwarding belts, and the continuously moving elastic cigarette grasping and carrying belts, having permanent and coacting and cigarette recesses, substantially as described. 15th. The combination with the cigarette forming devices, of a horizontally oscillating and laterally moving cutter-head, having a cutter for severing the cigarette into lengths. 16th. The combination with the cigarette forming devices, of a laterally vibrated frame, an oscillating cutter head mounted in said frame, and a cutter carried by the head. 17th. The combination with the cigarette forming devices, of a laterally vibrated frame, a cutter-head loosely mounted in said frame and carrying a cutter, and a crank and connections for oscillating the cutter-head. 18th. The combination with the cigarette forming devices, of a laterally vibrated frame, a cutter-head loosely mounted in said frame, and carrying a cutter, a shaft having a universal joint connection connected to said head, and a crank for oscillating the shaft. 19th. The combination with the cigarette forming devices, of a revolving and laterally moving cutter for the cigarette, a cam for restraining its lateral movement, and a spring for imparting said lateral movement at the instant of severance, substantially as described. 20th. The combination with the cigarette forming devices, of a revolving and laterally moving cutter for the cigarette, a cam for restraining its lateral movement against the force of a spring, a movable finger for sustaining the cigarette while being severed, and a cam for operating the finger, substantially as described. 21st. The combination with the cigarette forming devices, of a revolving support, a laterally moving carriage carried on said support, and revolved therewith, and a rotary cigarette cutter mounted in said carriage, substantially as described.

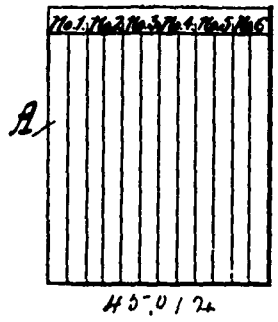
No. 45,012. Cash Register and Account Check.

(*Régistre de monnaie et de compte.*)

John Tyler Hicks, Boston, Massachusetts, U.S.A., 8th January, 1894; 6 years.

Claim.—1st. The herein described improved means for securing hotel or restaurant proprietors or others, from losses by the peculations of waiters, cashiers or other employees, which consists of a sheet, provided with separate spaces, having suitable headings, substantially as described, said headings being designatory of the several waiters to whom the several spaces on the sheet are individually appropriated, in conjunction with separate slips, each so marked as to indicate the waiter using it, whereby the selling price of all the articles sold may be entered in duplicate, once upon the slip of the waiter making the sale, and once upon his allotted space upon the main sheet, substantially as and for the purpose specified. 2nd. The herein described improvement in the art of securing hotel or restaurant proprietors and others, from losses by the peculations of waiters, cashiers or other employees, which

consists in providing separate slips for the waiters, each so marked as to indicate the waiter using it, and in entering upon the slip



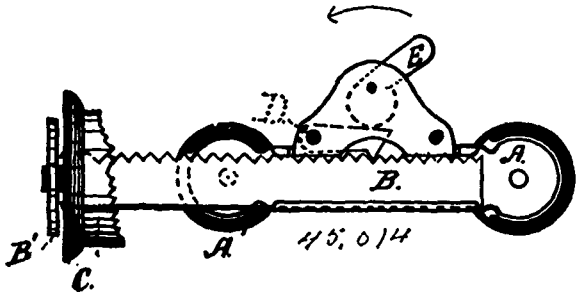
belonging to each waiter, the amount of each sale that he makes, and also in providing a main sheet having separate spaces for the different waiters, and suitably marked to correspond with the number of the waiters and with their slips and in entering upon said main sheet all the amounts marked upon the waiters slips so that there may thus be a duplication of the entries, substantially in the manner and for the purpose specified.

No. 45,013. Method of Correcting Drawings.
(*Méthode de corriger les dessins.*)

Anson K. Cross, Boston, Massachusetts, U.S.A., 8th January, 1894; 6 years.

Claim.—1st. In the art of teaching free hand drawing the improvement which consists in making a drawing upon a transparent slate, then holding the slate between the object and the eye in a position substantially perpendicular to the line of vision and moving said slat back and forth until, to the eye, the drawing will, as nearly as practicable, cover the object, whereby the inaccuracies of the drawing may be discovered, substantially as set forth. 2nd. In the art of teaching free hand drawing the improvement which consists in placing an opaque sheet or object behind a transparent slate making a drawing upon said transparent slate then holding the slate separated from the opaque sheet between the object to be separated and the eye in a position substantially perpendicular to the line of vision, and moving said slate back and forth until, to the eye, the drawing will, as nearly as practicable, cover the object, whereby the inaccuracies of the drawing may be discovered, substantially as set forth.

No. 45,014. Bracket for Shade Rollers.
(*Console pour rouleaux de rideau.*)



George Cook, Newark, New Jersey U.S A., 8th January, 1894; 6 years.

Claim.—1st. A shade roller bracket comprising the base plate, having longitudinal ribs thereon, the bracket proper having a serrated strip portion adapted to slide in the said base plate, a gravity pawl engaging with the said serrated strip portion, and a lever cam engaging with the said pawl, all substantially as described and for the purpose set forth. 2nd. A shade roller bracket comprising the base plate having longitudinal ribs thereon, the bracket proper having a serrated strip portion adapted to slide in the said base plate, the said bracket proper being narrower at its neck or bend than the body of the said strip portion, a gravity pawl engaging with the said strip portion, and a lever cam engaging with the said pawl, all substantially as described and for the purpose set forth. 3rd. A shade roller bracket comprising the base-plate A, having longitudinal ribs thereon, the bracket proper B, B', adapted to slide in the said base plate, and the spring pawl F, all substantially as described and for the purpose set forth. 4th. An adjustable shade roller bracket, comprising the combination with a shade roller, of a base plate, a sliding bracket proper thereon, having a serrated edge on its strip portion, and a pawl and suitable locking mechanism to retain the said pawl in position, all substantially as described and for the purpose set forth. 5th. A shade roller bracket comprising a base plate with longitudinal guiding ribs thereon, one of the said ribs being provided with an opening therein at or near its centre, a continuous metallic piece bent at right angles, one end of which forms the roller pivot bearing, the remaining portion forming a toothed strip adapted to slide in the said base plate, and a spring pawl secured to the said base plate engaging with the said toothed strip, substantially as described and for the purpose set forth. 6th. A shade roller bracket comprising a base plate with longitudinal guiding ribs thereon, one of the said ribs being provided with an opening therein at or near its centre, a continuous metallic piece bent at right angles, one end of which forms the roller pivot bearing, the remaining portion form a toothed strip adapted to slide in the said base plate, the bend or neck of the said metallic piece being narrower than the strip portion thereof, and a spring pawl secured to the base plate engaging with the said toothed strip portion, substantially as described and for the purpose set forth.

No. 45,015. Horse-shoe. (*Fer à cheval.*)

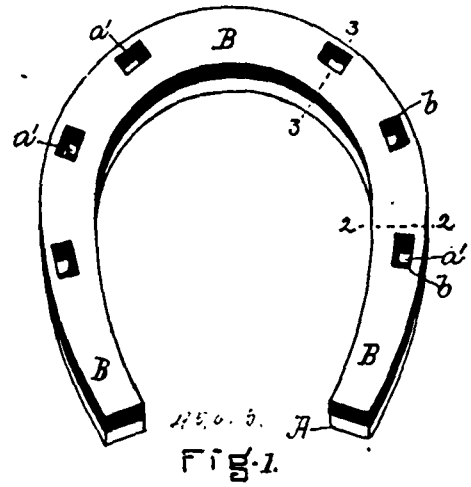


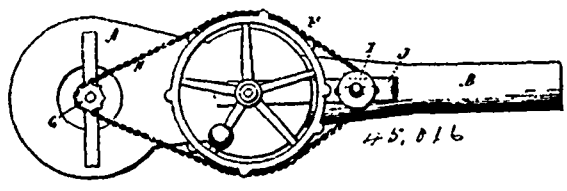
Fig. 1.

Myron Levi Chamberlain, Boston, Massachusetts, U.S.A., January 8th, 1894; 6 years.

Claim.—A compound horse-shoe, consisting of a metal portion, provided with a copperized surface, and a wearing portion composed of India-rubber, or its compounds attached to the metal portion by a union of the rubber and the copperized surface, substantially as described.

No. 45,016. Device for Destroying Insects.
(*Appareil pour détruire les insectes.*)

Fig 1



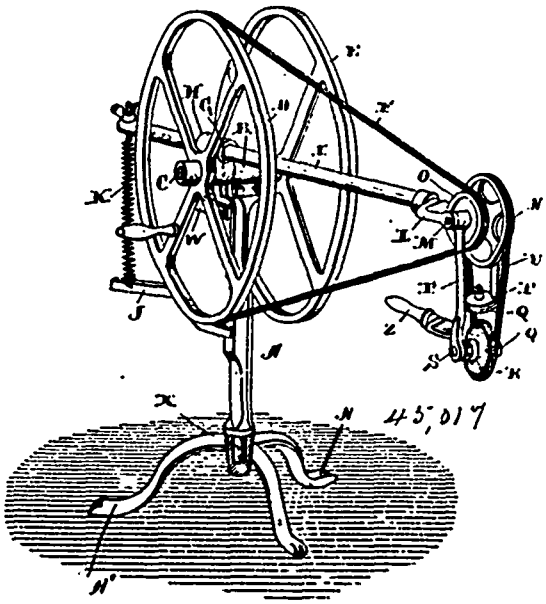
Dennis O. Tuttle, North Haven, and Lucien Sanderson, New Haven, both of Connecticut, U.S.A., 8th January, 1894; 6 years.

Claim.—1st. In an insect exterminator, the combination with a casing forming a chute, of a current creating device located in the said casing at the rear end thereof, a rotable powder receiver mounted in the casing in the path of the current created by the said device and constructed with a small discharge opening formed in its periphery and adapted to receive a supply of insect powder, and means for rotating the said powder receiver, substantially as described. 2nd. In an insect exterminator, the combination with a casing forming a chute, a current creating device located in the said casing at the rear end thereof, a rotable powder receiver mounted

in the casing in the path of the current created by the said device, and constructed with a small discharge opening located in its periphery and adapted to have a supply of insect powder introduced into it, and means for rotating the said powder receiver, substantially as set forth. 3rd. In an insect exterminator, the combination with a casing forming a chute, and constructed in its upper face with an opening closed by a cap or cover, a current creating device located in the said casing at the rear end thereof, a rotable powder-receiver mounted in the casing in the path of the current created by the said device, and consisting of a hollow cylinder having a small discharge opening formed in its periphery, and also having a supply opening arranged to align with the said opening formed in the casing, and means for operating the said current creating device and the powder receiver, substantially as described.

No. 45,017. Sharpener for Calks.

(*Appareil pour affiler les crampons.*)

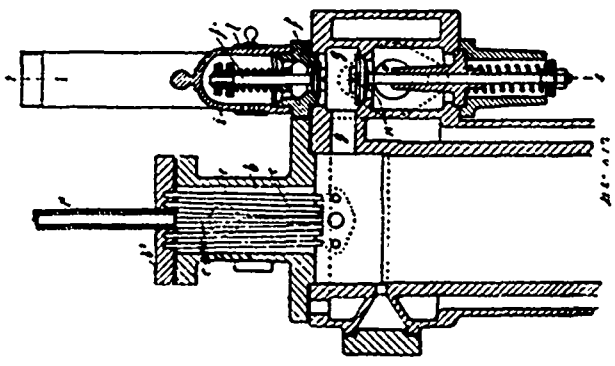


Frank F. Gokey, Winooski, Vermont, U.S.A., 8th January, 1894; 6 years.

Claim.—1st. An improved calk sharpener, comprising a support, a shaft journalled in its upper end, a sleeve loose on the shaft, a tubular extension on said sleeve extending at right angles to the sleeve cavity, a bar confined in said tubular extension, and a grinding mechanism carried thereby, substantially as shown and described. 2nd. An improved calk sharpner, comprising a support, a shaft journalled therein, a sleeve loose upon the shaft, a tubular extension on said sleeve and at right angles thereto, a bar adjustable longitudinally in said extension, and a grinding mechanism carried by said bar, substantially as shown and described,

No. 45,018. Hydrocarbon Engine.

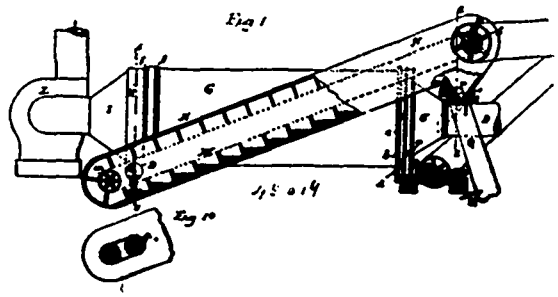
(*Machine à hydro-carbure.*)



The Daimler Motorengesellschaft, assignee of Carl Spiel and Adolf Spiel, all of Cannstatt, Wurtemburg, German Empire, 8th January, 1894; 6 years.

Claim. 1st. In a hydrocarbon engine, the combination, with the vaporizer *c*, arranged within the compression chamber *b*, of two air inlet channels *e* and *g*, channel *e*, being connected with the inlet *m*, for the hydrocarbon, and leading into the compression chamber, channel *g*, leading into the working cylinder, for the purpose as described. 2nd. In a hydrocarbon engine, the combination, with the vaporizer *c*, arranged within the compression chamber *b*, and filling the same wholly or nearly wholly, of two air inlet channels *e* and *g*, channel *e*, being connected with the inlet *m*, for *the hydrocarbon and terminating into* the rear part of the compression chamber, channel *g*, terminating into the working cylinder, for the purpose described. 3rd. In a hydrocarbon engine, the combination, with the vaporizer *c*, arranged within the compression chamber *b*, and consisting of a bundle of rods filling said chamber wholly or nearly wholly, of two air inlet channels *e* and *g*, channel *e*, being connected with the inlet *m*, for the hydrocarbon by means of chamber e^1, above valve *d*, and terminating into the rear part of the compression chamber, channel *g*, terminating into the working cylinder, for the purpose as described.

No. 45,019. Process of and Apparatus for Drying Brewers' Grain. (*Procédé et appareil pour sécher le grain pour les brasseries.*)



Birney C. Batcheller and William M. Crampe, both of Philadelphia, Pennsylvania, and Spencer D. Schuyler, New York, State of New York, all in the U.S.A., 9th January, 1894; 6 years.

Claim.—1st. The herein described method of drying brewers' grains, which consists in dropping the wet grains directly into a longitudinally open space and through a current of air heated to the temperature approximately of 700° F., so that the exterior of the grains are immediately caked and allowing the air current and grains to pass onward together in the same direction without deviation or obstruction. 2nd. The herein described horizontal and rotating drying cylinder having longitudinally arranged buckets, and an exit opening at one end concentric with the circumference of the cylinder and of less diameter, than the cylinder whereby a continuous end ledge is provided to prevent the premature discharge of the partially dried material, and a hot air supply leading to the opposite end of the cylinder whereby the hot air current passing through the cylinder carries the dried material out through said restricted exit opening. 3rd. The combination, with the rotating drying cylinder adapted to permit the drying material to pass longitudinally through it, of a conduit leading from one end of the cylinder to the other closed with respect to the atmosphere, and a mechanical conveyor therein for receiving the partially dried or drier material and conveying it back to said drying cylinder, substantially as described. 4th. The combination, with the stationary air conduit, of a rotating drying cylinder forming a continuation of the air conduit, and an annual packing wheel closing the joint between the rotating and stationary parts, substantially as described.

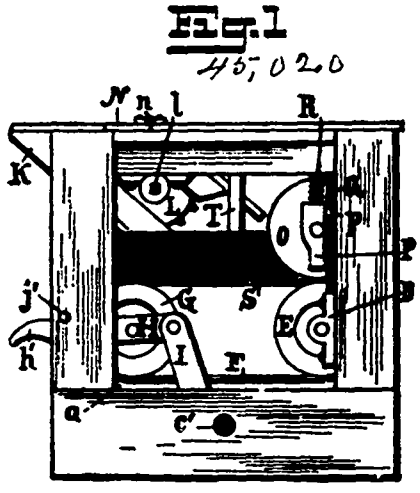
No. 45,020. Cider-mill and Press.

(*Moulin et pressoir à cidre.*)

Daniel F. Brunney, Lancaster, Ohio, U.S.A., 9th January, 1894; 6 years.

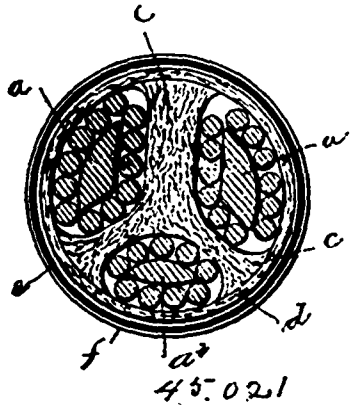
Claim.—1st. In a cider-mill, the combination with the casing having opposite removable sides, of a fixed belt roller mounted at one end and near the bottom of said casing, swinging roller supports, an opposite horizontally movable belt roller mounted in said swinging supports, means for adjusting said swinging supports, a permeable endless belt working over said rollers, a spring actuated vertically yielding pressure roller normally bearing on the belt directly over the fixed belt roller, a toothed feeding roller journalled over the other end of the belt, vertical supporting arms secured at their upper ends to the top inner sides of the casing, and horizontal side fenders secured to the lower ends of said arms and arranged over the opposite edges of the belt between the feeding and pressure rollers, substantially as set forth. 2nd. In a cider-mill, the casing having opposite side and end openings, a fixed belt roller located at one end of said casing, swinging supporting links pivotally secured at their lower ends to the opposite sides of the casing, horizontally adjustable bars working through said end openings and pivotally connected at their inner ends to said swinging links, and provided with a series of adjustable notches, locking studs projecting within said end openings and adapted to be engaged by the notches in said bars a horizontally adjustable belt roller journalled in said opposite

adjusting bars, an endless belt passing over said belt rollers, and crushing rollers arranged over said endless belt, substantially as set



forth. 3rd. In a cider-mill, the inclosing casing, a horizontally arranged endless belt working in said casing, a spring pressed pressure roller normally bearing on one end of said belt, an inclined hopper arranged over the other end of said belt within the casing, a toothed crushing and feeding roller arranged within said hopper, a drop door hinged to the top of the casing and having a depending vertical wall adapted to inclose a portion of the crushing roller to direct the apples thereunder, and the opposite screen fenders arranged along opposite edges of said endless belt between the pressure and crushing rollers, substantially as set forth.

No. 45,021. Electric Cable. (*Cable électrique.*)

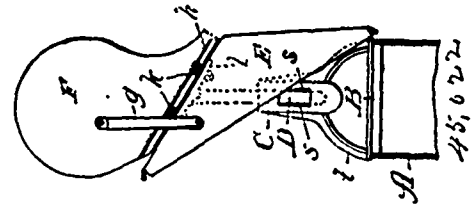


Theodore Guilleaume, Mulheim-on-the-Rhine, German Empire, 9th January, 1894; 6 years.

Claim.—1st. For electric light service or transmission of power, a cable circular in transverse section but comprising a body of grooved insulating material irregular in transverse section, and several conductors of unequal transverse section twisted together with the insulating material, each groove in the insulating material being just large enough to hold the conductor lying within the same, substantially as set forth. 2nd. For electric light service or transmission of power, a cable circular in transverse section but comprising a body of grooved insulating material irregular in transverse section, main and secondary conductors of unequal transverse section twisted together with the insulating material, each groove in the insulating material being just large enough to hold the conductor lying within the same, and a fifth conductor separated from the other conductors by insulating material, substantially as set forth. 3rd. For electric light service or transmission of power, a cable circular in transverse section but comprising a body of grooved insulating material irregular in transverse section, main and secondary conductors of unequal transverse section twisted together with the insulating material, each groove in the insulating material being just large enough to hold the conductor lying within the same, and a fifth conductor consisting of a series of single wires placed equidistantly around the exterior insulating envelope and twisted with the other conductors and the insulating material, substantially as set forth.

No. 45,022. Cowl for Chimneys.

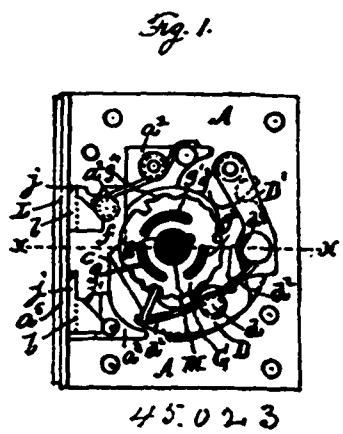
(*Couvercle pour cheminées.*)



Henry Iwan and Louis Iwan, both of Streator, Illinois, U.S.A., 9th January, 1894; 6 years.

Claim.—1st. In a rotary chimney cowl, the combination of the rim for the upper end of the chimney provided with a bearing extending across it, the cowl, and a spindle and a socket piece supporting the cowl revolubly upon said bearing, the spindle being provided with a laterally projecting pin, and the socket piece being provided with an annular retaining shoulder for the pin and with a groove for the passage of the pin to the shoulder, whereby the cowl may be readily placed in position, and is retained there against accidental displacement, substantially as described. 2nd. In a rotary chimney cowl, the combination with the spindle carrying the cowl and provided with a feather or pin *n*, of a rim to fit upon the chimney and socket piece supported from the rim to form a bearing for the spindle and provided with a vertical groove *m* for the passage of the pin and with a shoulder below the groove, whereby the cowl is readily placed in position and is retained there against displacement by the wind, substantially as described. 3rd. In a chimney cowl, a rim having integral converging arms, a cylindrical socket formed integral with said arms, an annular recess *o*, formed in the socket, a groove *m*, leading from the exterior of the socket to the recess, a spindle fitting within and supported by the socket and provided with a feather *n* to enter the groove *m* and adapted to rest beneath the shoulder formed by the recess, in combination with the cowl and vane secured to the spindle, substantially as described. 4th. The combination, with the spindle D, having the inclined bar *l*, rigid upon its top and provided with bolt holes, of the cowl E, vane F, provided with the flange *i* and crimped or deflected above the flange, as shown at *h*, and bolts *k*, securing the bar *l*, cowl and vane together, substantially as described.

No. 45,023. Combination Lock. (*Serrure à combinaison.*)



James D. Craig, Chicago, Illinois, U.S.A., 9th January, 1894; 6 years.

Claim.—1st. A sliding bolt provided with a catch for engagement within a notch of a hasp entering the lock, in combination with a cam plate provided with a tumbler key, and tumblers and driving mechanism positively engaging one of the tumblers. 2nd. A sliding bolt provided with catches, and having one of its sides arranged alongside the interior of the lock case flange through apertures which hasps enter to be locked by the bolt catches, the said bolt being provided with a spring to move it in one direction, in combination with a cam plate to move it in the opposite direction, and one or more regular tumblers and an index tumbler. 3rd. A sliding bolt in combination with a cam plate carrying a compound lever provided with a tumbler key at one end of a single lever thereof, the other single lever being provided with mechanism for operating it and thereby the lever carrying the key. 4th. A sliding bolt in combination with a cam plate having a compound lever provided with a tumbler key, and a switch cam mechanism. 5th. A two part tumbler, one part having a pin, and the other part having an annular series of apertures comprised of holes of suitable size for receiving the pin, and a slot likewise of suitable size in cross section for receiving the pin

and affording a course for the travel of the pin therein, in combination with the driver index tumbler G, and means for operating the same. 6th. A driver index tumbler having an elevated peripheral arc portion g^5, one or more radial notches g^3, serrations continuing throughout the periphery excepting the elevated arc shaped portion, and the part or parts occupied by the radial notches and having the slots g, g^1 and g^2 in its body combined with a bolt, and with means for operating the tumbler. 7th. The combination with a bolt, *and with tumbler operating means*, of a serrated index tumbler provided with an elevated peripheral arc shaped smooth portion, and having one or more radial notches g^3 in the remaining portion of the periphery, and provided with slots in its body so located with respect to the radial notch or notches and the serration that a corresponding end of each slot would be directly beneath the hollow of a serration or a radial notch or where such depression would be in the elevated smooth arc portion if continued therethrough, and the other end of each of said slots would have a different relation to said peripheral depressions. 8th. The driver index tumbler G, secured to the sleeve M, in combination with the cam plate C, provided with the compound lever D, D^1, having the key K, and the spring bolt J, provided with one or more catches j. 9th. The combination with a knob, of a spring pressed sleeve secured thereto, and the upper or driver tumbler connected with said sleeve. 10th. A knob and a spring pressed sleeve connected to an index tumbler, in combination with one or more tumblers. 11th. A knob contained within its recessed interior, an attaching cross piece in combination with a sleeve connected with a tumbler. 12th. A knob and a sleeve connected to a tumbler, in combination with one or more tumblers, a tumbler key and mechanism connecting the latter with a sliding bolt. 13th. A base plate A provided with a switch cam block a, two lugs a^2, a^3, and a standard. 14th. A base plate having the lugs a^2, a^3, each of said lugs having an inner concave surface, and a rim flange provided with one or more openings a^3.

No. 45,024. Cooking Utensil. (*Ustensile de cuisine.*)

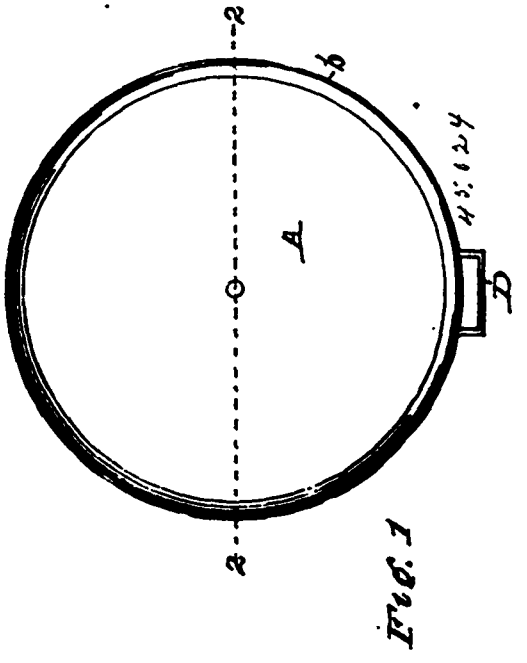


FIG. 1

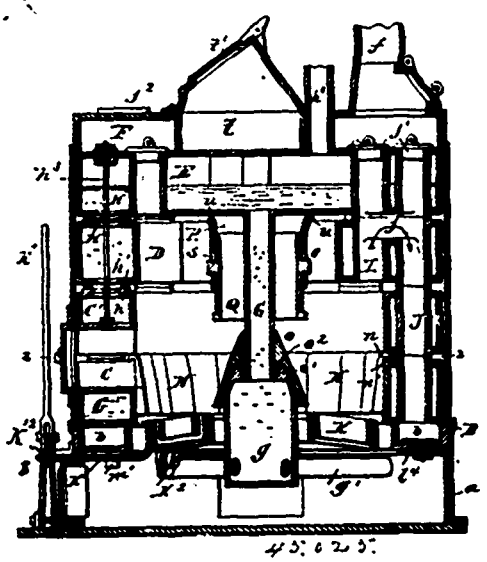
Alexander Dunn, Mount Healthy, Ohio, U.S.A., 9th January, 1894; 6 years.

Claim.—1st. A cooking utensil, consisting of the metal plate A, and the non-combustible piece B, connected thereto, by means of the inturned flange a, said metal plate being turned upward at its edge, forming a rim b, substantially as and for the purposes specified. 2nd. The combination of metal plate A, asbestus B, connected thereto by means of flange a, the peripheral upturned rim b, and handle D, the latter having its lateral portions d, locked to place beneath said flange, substantially as set forth.

No. 45,025. Steam Boiler. (*Chaudière à vapeur.*)

Miles L. Clinton, Ithaca, New York, U.S.A., 9th January, 1894; 6 years.

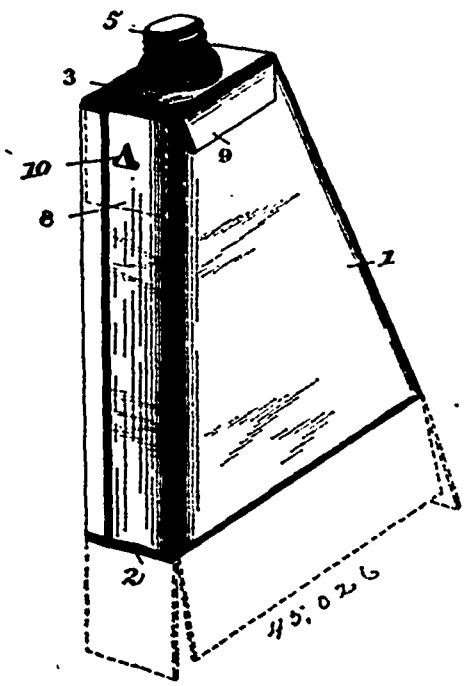
Claim.—1st. The combination with the fire-box, of an oscilating grate frame arranged in said box, and rollers supporting said frame, and provided with flanges which bear against the outer side of the grate frame, substantially as set forth. 2nd. The combination with the fire-box section, of an oscillating grate frame, rollers supporting the grate frame, and brackets detachably connected with the fire-box section and supporting the rollers, substantially as set forth. 3rd. The combination with the fire-box section, provided on its inner side with ways, of an oscillating grate frame, rollers supporting the grate frame and provided with flanges, which bear against the outer side of the grate frame, and supporting brackets



removably arranged in said ways and carrying the rollers, substantially as set forth. 4th. The combination with the fire-box section, provided on its inner side with dove-tail ways, and the oscillating grate frame, of a roller supporting said frame from the under side and a bracket consisting of a dove-tail plate arranged in said ways and provided with a stud carrying said roller, substantially as set forth. 5th. The combination with the fire-box section, provided on its inner side with downwardly converging ways and the oscillating grate frame, of a roller supporting said frame from the under side and a bracket consisting of a plate having downwardly converging sides arranged in said ways, and a stud supporting said roller, substantially as set forth. 6th. The combination with the fire-box section, provided on its inner side with ways and a lug between said ways and the oscillating grate frame, of a roller supporting the grate frame from the underside, and a bracket supporting said roller and arranged in said ways and provided with a shoulder bearing against said lug, substantially as set forth. 7th. The combination with the boiler sections having vertical flues and compartments connecting the lower ends of said flues and provided with openings, of gates arranged in the compartments and adapted to open or close the openings, and a movable ring connecting the gates, whereby the gates are shifted simultaneously, substantially as set forth. 8th. The combination with the boiler sections provided with vertical flues and compartments connecting the lower ends of the flues and provided with openings and slots, of gates adapted to close said openings and provided with depending lugs arranged in said slots, and a movable ring arranged underneath the compartments and provided with ears to which the lugs of the gates are secured, substantially as set forth. 9th. The combination with the flue compartments having openings for the escape of dust, the gates arranged over said openings and the movable ring connecting said gates and provided with stops or projections, of an oscillating grate having an arm which engages between said stops or projections, the distance between the latter being greater than the shaking stroke of the grate arm and less than the stroke which is required for shifting the ring, substantially as set forth. 10th. The combination with the boiler having a lower fire-box section and an upper fire-box section resting upon the lower section, of a rib formed on the upper edge of the lower section, and lining sections arranged within the fire-box and provided with hooks engaging over said rib, substantially as set forth. 11th. The combination with the boiler having a lower fire-box section, and an upper fire-box section resting on the lower section, of an annular rib formed on the upper edge of the lower section, and having a portion removed to form a blank space, and lining sections arranged in the fire-box, and provided with hooks engaging with said rib, said hooks being shorter than the space in the rib, substantially as set forth. 12th. The combination with a steam boiler provided with a fire-box, and a central water column extending into the fire-box, of a sectional core surrounding the water column in the fire-box, substantially as set forth. 13th. The combination with a steam boiler provided with a fire-box, and a central water column extending into said box, of an annular flange surrounding the water column, and a sectional core having each of its sections provided with a hook which engages over said flange, substantially as set forth. 14th. The combination with the boiler sections and the fire-box, of a fuel magazine arranged in the fire-box, and a sectional cylinder attached thereto and forming the lower portion thereof, substantially as set forth. 15th. The combination with the

boiler sections and the fire-box, of a fuel magazine arranged in the fire-box, and provided in its side with openings having enlarged upper portions, and a cylinder arranged in said magazine and composed of sections, each of which is provided with a projection having an enlarged head and engaging in one of said openings, substantially as set forth. 16th. The combination with the boiler *sections and the fire-box*, of a fuel magazine arranged in the fire-box and provided with two tiers of openings arranged horizontally one below the other, and a sectional cylinder arranged in said magazine, each section provided with a head adapted to engage with one of said openings, substantially as set forth. 17th. The combination with the boiler sections, one of which is provided with corrugations on its inner side, and the fire-box, of a fuel magazine arranged in the fire-box, and provided with laterally extending plates at its upper end, which rest upon the corrugated sections, and which have on their under-sides lugs which enter between said corrugations, substantially as set forth. 18th. The combination with the boiler sections, having water passages, one of the sections having a groove or socket around its water passage, and the other section having a flange around its water passages which is arranged in the groove or socket of the opposing section, and a packing arranged between the socket and the flange, substantially as set forth. 19th. The combination with the boiler sections, of a screw plug arranged in one of said sections and having a recess on its outer side, a tie rod, passing through said sections and the screw plug, a packing arranged in said recess around the tie rod, and a screw nut arranged on the outer screw threaded portion of the tie rod and bearing against said packing, substantially as set forth.

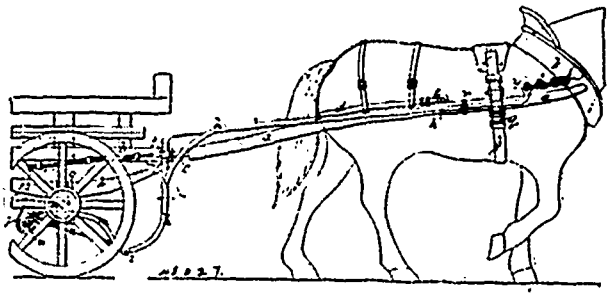
No. 45,026. Package for Pulverulent Material.
(*Paquet pour matières pulvérulentes.*)



David H. Greene, Charleston, South Carolina, U.S.A., 9th January, 1894; 6 years.

Claim.—1st. A package for pulverulent material, pyramidal in shape and formed with folding flaps at the base arranged to close the filling opening in the base of the package and provided at its opposite discharge end with a rigid stay and protecting plate of material different from the body of the package and covering the small end of the package and having a discharge orifice, and a closure for the same, substantially as and for the purposes described. 2nd. A package for pulverulent material formed of paper or similar material provided at its discharge end with an orificed rigid end plate covering the end of the package and formed with depending flanges bearing against the side walls of the package to stiffen the same, tongues to the flanges entering the walls of the package to secure the plate permanently in position, and a closure for the orifice in the plate, substantially as and for the purposes described. 3rd. A package for pulverulent material having its body formed of paper or similar material and provided with separable paper flaps at one end to close the filling opening therein, and a metallic plate applied to permanently cover the other end and formed with a discharge orifice and having depending flanges bearing against opposite side walls of the package to brace the same, substantially as and for the purposes described.

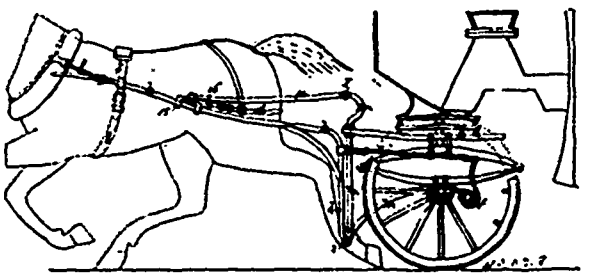
No. 45,027. Means for Connecting Draught Animals to Vehicles. (*Moyen d'atteler les chevaux de trait aux voitures.*)



Thomas Hargreaves Brigg, Bradford, Yorkshire, England, 9th January, 1894; 6 years.

Claim.—1st. The hereinbefore described improved system of connecting draught animals to vehicles, ground implements and the like having fore and aft axles and wheels or other fore and aft bearings upon the ground, the same consisting in so connecting the animal and vehicle as that when the vehicle is being drawn by the animal two component forces are caused to co-act through the instrumentality of rigid, arched, spring controlled trace, levers having their ends disposed in a downwardly inclined plane relative to flexible connections to the animal at the hame, with their rear ends pivotally connected to a lowly depending part of the fore carriage or equivalent part of the vehicle, and adapted to operate upon the animal through a belly band and a back band or their respective equivalents, the one force, effected by the spring or equivalent connections and operating through the trace levers and belly band, tending to support the fore quarters of the animal, and the other force, effected through the flexible traces and operating through the downwardly inclined trace levers and back-band, sending to modify the supporting tendency of the spring connections in the ratio of the pull exerted by the animal, and after neutralizing such supporting tendency) to bring a downward pressure upon the animal's fore quarters, effective in increasing its natual weight, such component forces so co-acting as to be operative in automatically determining and effective in giving the animal the benefit of the best attainable angle of draught at all times and on all conditions of road. 2nd. A draught device for connecting draught animals to vehicles of the nature aforesaid, characterized by the combination of rigid, arched trace-levers having their ends disposed in a downwardly inclined plane relative to flexible connections to the animal at the hame, with their rear ends pivotally connected to a lowly depending part of the fore-carriage or equivalent part of the vehicle, continuing flexible trace connections tending, when in draught, to draw the ends of the trace-levers into alignment with the attachments to the hame—a belly-band adapted to support the animals' fore quarters, a back-band adapted to bring downward pressure on the animals fore quarters, and a spring or springs connected to the fore-carriage or vehicle, and to the arched parts of the trace levers tending to raise the foreparts of the levers, the whole co-operating as hereinbefore set forth.

No. 45,028. Means for Connecting Draught Animals to Vehicles. (*Moyen d'atteler les chevaux de trait aux voitures.*



Thomas Hargreaves Brigg, Bradford, England, 9th January, 1894; 6 years.

Claim.—A draught attachment for connecting draught animals to vehicles, characterized by the combination of the rigid, arched trace levers, having their ends disposed in a downwardly inclined plane relative to the flexible connections to the animal at the hame, with their rear ends pivotally connected to a lowly depending part of the fore-carriage, continuing flexible trace connections tending, when in draught, to draw the ends of

the trace levers into alignment with the attachment to the hame, a belly-band adapted to support the animal's fore quarters, a back-band adapted to bring downward pressure on the animal's fore quarters, a spring or springs connected to the fore-carriage and to the arched parts of the trace levers tending to raise the fore parts of the levers, and combined steering and backing rod attachments connected to the trace levers at forward parts, and to the fore-carriage at high points of attachment, and together by a breech strap, the whole co-operating as hereinbefore set forth.

No. 45,029. Harness. (*Harnais.*)

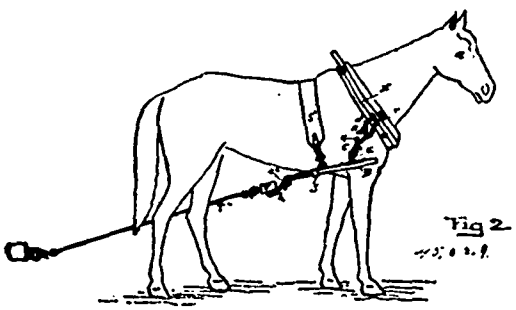


Fig 2.

Benjamin F. Baker, Ballston Lake, New York, U.S.A., 9th January, 1894; 6 years.

Claim.—1st. The combination with two bows having their bow ends projecting rearwardly, of an evener connected to each of the bows at the bow ends of the latter, a back strap arranged to pass over the back of each of the animals of a team, with the depending ends of each of said strap connected to one of the opposite sides of each of the bows, hames making a draft connection with each of the bow sides at each side of the animals of the team, and a horizontal strap connecting the sides of each of the bows, substantially in the manner as and for the purposes set forth. 2nd. The combination of the bows B, B, each suspended on the animal's back by means of a strap S^2, which at each of its lower ends connects with the opposite side of one of the bows, with the rounded ends of the bows projected rearwardly and laterally, the evener V, connected to the lower end of each of said bows, and the hames H, H, at each side of each of the animals of the team, connecting with the end of one of the bows, substantially in the manner as and for the purposes set forth. 3rd. The combination with the hames H, H, of the connections A, made with the forked bars a^2 and a^3, the bows B, B, and the chains C, connecting the bows with the hames, and the evener V connected to said bows, substantially in the manner as and for the purposes set forth.

No. 45,030. Valve. (*Soupape.*)

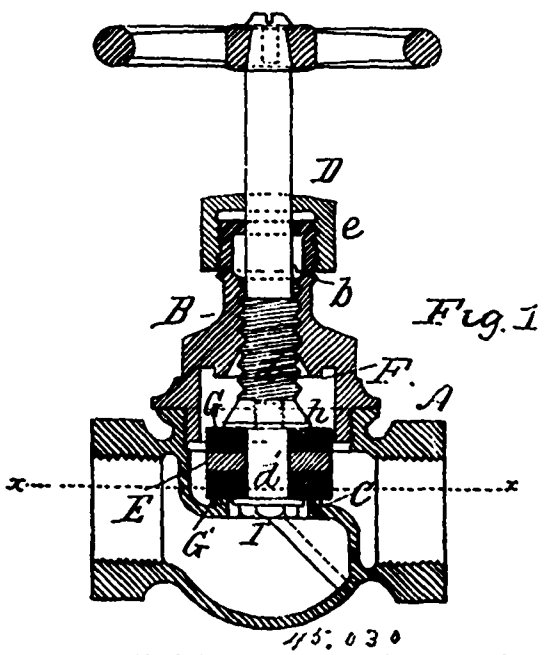
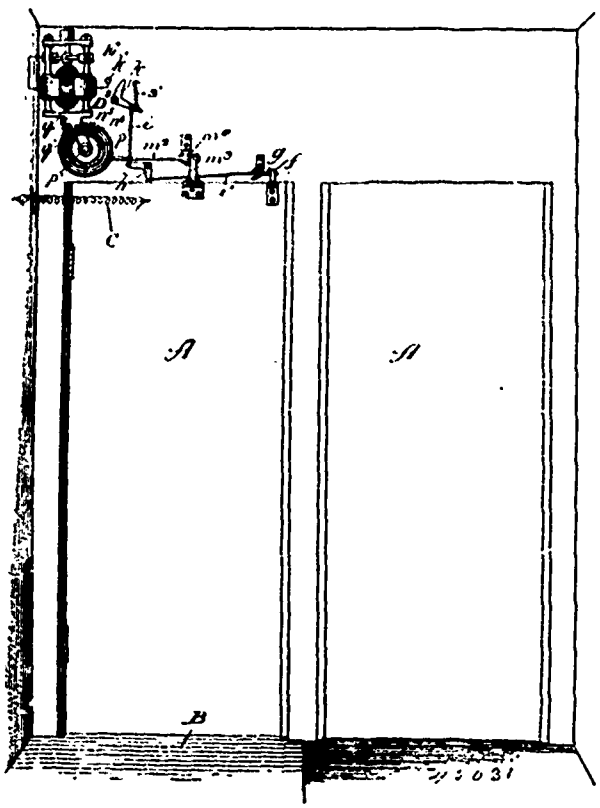


Fig. 1

Charles R. Schmidt, Baltimore, Maryland, U.S.A., 9th January, 1894; 6 years.

Claim.—In a globe valve, a cylindrical valve head having like cavities in its upper and lower faces, containing like packing discs of such form that they may be reversed and interchanged, in combination with a valve spindle having a cylindrical portion which passes through the valve head, and upon which the valve head is rotatable, substantially as described.

No. 45,031. Electric Device for Operating Doors.
(*Appareil électrique pour ouvrir et fermer les portes.*)



Oliver Hewlett Hicks and Robertus Francesco Troy, both of Chicago, Illinois, U.S.A., 9th January, 1894; 6 years.

Claim.—1st. In combination with a door, an electric motor, an electric friction clutch operatively connected with the motor and door, the clutch and motor being included in electric circuits, and a platform, stepping on and off which produces operation of the door, substantially as described. 2nd. The combination with a door, an electric motor, an electric friction clutch connected with the motor to be rotated thereby to operate the door in one direction, and having a spool armature supported on the clutch shaft, a flexible connection between the spool armature and door, a platform and means for operating the doors in the opposite direction to the said clutch operation thereof, the motor and clutch being included in electric circuits, whereby stepping on and off the platform produces operation of the door, substantially as described. 3rd. In combination with a door, an electric moter E, an electric friction clutch F connected with the motor to be rotated thereby to operate the door in one direction, and having a tapering spirally grooved spool armature m, supported to slide on the clutch shaft, a flexible connection m^2 between the spool armature and door, an electric mat B, and a spring C for operating the door in the opposite direction to the clutch operation thereof, the motor clutch and mat being included in electric circuits to be operated, substantially as described. 4th. In combination with a door, an electric mat B, controlling a normally open electric circuit closed by pressure on the mat, an electro-magnet D in said circuit, a motor E, in an electric circuit normally opened by the door when closed, and geared to an electric friction-clutch F, in a normally closed electric circuit opened by closure of the mat circuit, the clutch having a sliding spool armature connected by a flexible medium m^2, with the door to close it by operation of the motor, a contact finger U^2, normally closing the motor and clutch circuits and controlled to open the same by the armature of magnet D, and a spring C for opening the door, the whole being constructed and arranged to operate, substantially as described. 5th. In combination with a door, an electric mat B, controlling a normally open electric circuit closed by pressure on the mat, an electro-magnet D in said circuit, a motor E, in an electric circuit containing a circuit closer D^3, having a contact finger k, controlled by a spring s^1, and connected with a lever g above the door, a projection f on the door bearing against the lever g, and maintaining open the motor circuit when the door is closed, an electric

clutch F, geared to the motor, and in a normally closed electric circuit, the clutch having a sliding spool armature *m*, connected with the door by a cord m^2, a contact finger D^2, normally connecting the motor and clutch circuits, and a spring C for opening the door, the whole being constructed and arranged to operate, substantially as described.

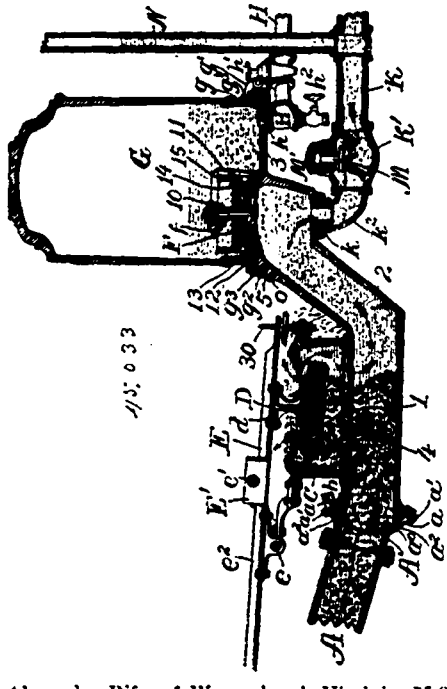
No. 45,032. Method of Making Marble.

(*Méthode de fabrication du marbre.*)

Pierre Aignan Moreau, Meung-sur-Loire, Loiret, France, 9th January, 1894; 6 years.

Claim.—1st. The method of manufacturing artifical marble from white porous stones, such for instance as chalk, Portland stone or Bath stone, by hardening such stone, substantially in the manner hereinbefore described. 2nd. Treating porous stones such as above mentioned after they have been coloured in the manner, hereinbefore described or referred to, or in any equivalent way, by the method of drying and immersing in a bath of sulphate of zinc, substantially as above described. 3rd. Hardening porous stones such as above mentioned interiorly by alternations of hardening bath, hot water bath and drying repeated if necessary, substantially as hereinbefore described. 4th. Hardening porous stones such as above mentioned interiorly by alternations of hardening bath, cold bath, hot bath and drying, repeated if necessary, substantially as hereinbefore described.

No. 45,033. Hydraulic Ram. (*Bélier hydraulique.*)

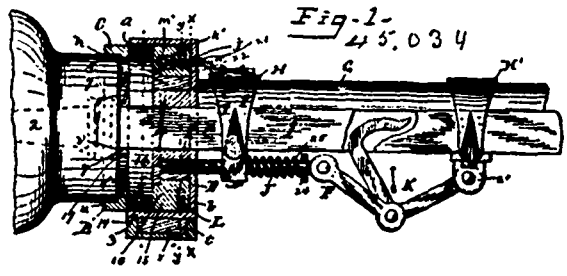


William Alexander Rife, of Waynesboro', Virginia, U.S.A., 9th January, 1894; 6 years.

Claim.—1st. In an escape valve for a hydraulic ram or engine, the combination, with a circular rigid support of greater diameter than the interior of the valve seat, of a ring of rubber or other yielding elastic material mounted near the periphery of said support, and adapted to engage the valve seat, a metal ring mounted over the inner portion of said rubber ring, bolts and nuts for compressing said rubber ring between said metal ring and said support, a rubber disc mounted on said support within said rubber ring and coincentric therewith, a flanged valve stem mounted over said rubber disc, and bolts and nuts adjustably connecting said support, said rubber disc and said flange together, substantially as shown and described. 2nd. In an escape valve for an hydraulic ram or engine, the combination, with a rigid support of greater diameter than the interior of the valve seat, of a ring of rubber or other yielding elastic material mounted near the periphery of the said support and adapted to engage the valve seat, a metal ring mounted over the inner portion of said rubber ring, and means for adjusting the compression of said rubber ring between said metal ring and said rigid support, a rubber disc mounted on said support within said rubber ring and coincentric therewith, and a stem secured to said rubber disc and said support, substantially as described. 3rd. In a hydraulic ram or engine, the combination, with a water chamber and an air chamber connected thereto, of a delivery valve mounted in said air chamber consisting essentially of a check valve provided with curved gridiron ports opening upwards and outwards covered with an annular flap of leather or similar material, and adapted to deliver water when raised both upwards through its body and laterally between the said valve and its valve seat, and a spider secured to the valve seat and surrounding said valve and forming a guide for the same, substantially as and for the purposes described. 4th. In a hydraulic ram or engine, the combination, with a water chamber, and an air chamber connected thereto, of a valve seat mounted in said air chamber and cut away exteriorly in annular steps, a delivery valve seated on the upper step of said valve seat, and having a gridiron body covered with an annular flap of leather or similar material, a spider having legs extending clear of said valve to the lower step of said valve seat, and an annular casing attached to said spider, and guiding said valve, substantially as and for the purposes described. 5th. In a hydraulic ram or engine, the combination, with a delivery valve having curved gridiron ports opening upwards and outwards, and a flap of leather or similar material mounted over said ports, of a valve seat cut-away exteriorly in a plurality of annular steps, a valve casing mounted over and adapted to guide said valve, and a spider attached to said casing and having legs extending clear of said valve to the lower step of said valve seat, substantially as and for the purposes described. 6th. In a hydraulic ram or engine, a circular delivery valve provided with a metallic body perforated with curved gridiron ports, a perforated rubber disc beneath said valve body, a perforated ring provided with curved ribs secured beneath said perforated rubber disc, and means for securing the said valve body, leather flap, rubber disc, and perforated ring together, substantially as described.

No. 45,034. Horse Hitching and Checking Device.

(*Enrénoire.*)

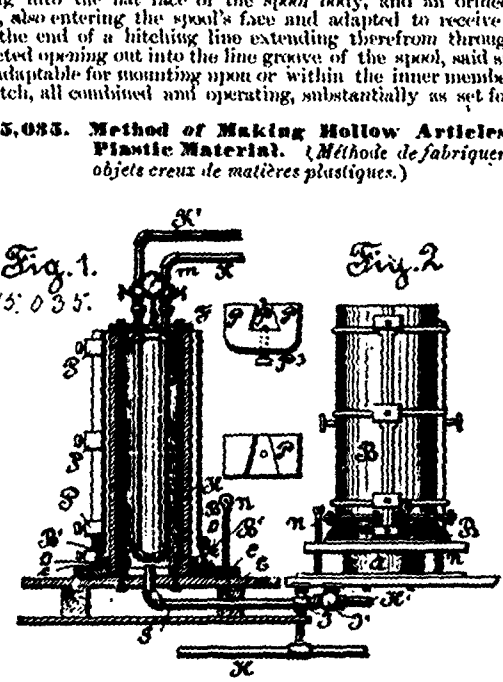


Louis House, Syracuse, New York, U.S.A., 10th January, 1894; 6 years.

Claim.—1st. In a hitching and checking device, the combination of an outer clutch member mounted upon and rotatable with the hub of a vehicle wheel, an inner clutch member supported upon the axle of the vehicle and longitudinally movable thereon, said inner clutch member having a non-rotatable hub and a rotatable line spool, the hitching line engaging said line spool, a spring-actuated pawl 9, pivoted at one end within an opening in said line spool, and means for so actuating said pawl that its free end will drop out of said opening into engagement with said barrier, whereby rotation of the line spool may be prevented the instant the hitching line is unwound from the line spool, substantially as described. 2nd. The combination, in a hitching and checking device, of an outer clutch member mounted upon and rotatable with the hub of a vehicle wheel, and inner clutch member supported upon the axle of the vehicle and longitudinally movable thereon, means for forcing such clutch members into and out of gear with each other, said inner clutch member having a non-rotatable hub and a rotatable line spool, a hitching line engaging said line spool, a barrier supported adjacent to said spool, and a spring pressed pawl pivoted at one end within an opening in said spool, and having at its opposite end a transverse pin received by a curvilinear slot in said spool, said pin being engaged by the hitching line, as specified, whereby when said hitching line is unwound from said spool, said pawl will be caused to drop into engagement with said barrier and further rotation of the spool thereby prevented, substantially as described. 3rd. The combination of the clutch of a hitching and checking device, one member of which is mounted upon and rotatable with a rotating part of a vehicle, and a hitching line coiled around the other member of said clutch, with a pawl pivoted at one end to said last mentioned clutch member, and having a transverse pin at its opposite end, said pin being engaged by said hitching line, and the pawl thereby normally held in its innermost position, and a barrier adapted to be engaged by said pawl when said line is disengaged from the latter, substantially as described and for the purposes specified. 4th. In a hitching and checking device, the inner and outer members of the clutch, said outer member being mounted upon and rotatable with the hub of the vehicle wheel, and said inner member being supported by the vehicle, and longitudinally movable thereon, and having a non-rotatable hub, a rotatable line spool, and a casing secured to said hub, a hitching line having its ends passing through openings in said casing, said hitching line being coiled around said line spool, a pawl engaged and supported at its non-pivoted end by said hitching line, and a barrier supported by said case adjacent to said pawl, and adapted to be engaged by the pawl when the hitching line is un-

wound from the spool, all combined and operating, substantially as described. 5th. In a hitching and checking device, the inner and outer member of the clutch, said outer member being mounted upon and rotatable with the hub of the vehicle wheel, and said inner member being supported by the axle of the vehicle wheel and longitudinally movable thereon, and having a non-rotatable hub, a casing secured thereto, and a line spool mounted on said hub, in combination with a hitching line having its ends passing through openings in said casing, a pawl within an opening in said line spool, said pawl being pivoted at one end and having a projection at its opposite end, said projection being engaged and the pawl normally held within said opening by said hitching line, a buffer plate supported by said casing adjacent to said pawl, and an elastic backing for said buffer plate, all substantially as shown and described. 6th. In a hitching and checking device, the combination of a hitching line, an outer rotating clutch member mounted upon a rotatable part of a vehicle, an inner longitudinally movable clutch member, said inner member having a rotatable line spool formed with an opening, a pawl pivoted at one end within said opening, normally holding said pawl within the opening, but permitting its free end to drop out of said opening when the hitching line is disengaged from the line spool, and a barrier adjacent to said pawl and adapted to be engaged by the same when its free end is out of said opening, substantially as described and for the purposes specified. 7th. A hitching and checking device, consisting of a hitching line, and outer rotating clutch member mounted upon a rotatable part of a vehicle, an inner longitudinally movable clutch member, said inner clutch member consisting of a non-rotatable hub, a collar or bushing thereon, and a rotatable line spool upon said collar, said line spool having an opening, a pawl pivoted at one end within said opening, means for normally holding the pawl within the opening but permitting its free end to drop out of the same when the hitching line is disengaged from the line spool, and a barrier adjacent to said pawl and adapted to be engaged by the same when its free end is out of said opening, said barrier being an elastic backing, all combined and operating substantially as and for the purpose specified. 8th. In a hitching and checking device, the outer and inner clutch members, said outer clutch member being mounted upon a rotatable part of a vehicle, and said inner clutch member being movable longitudinally and having an opening, and a spring-dog pivoted within said opening and adapted to project beyond the face of the inner clutch member and engage the outer clutch member, in combination with a stationary finger projecting into said inner clutch member, in line with an end of said dog, and adapted to engage the same and keep the dog within the opening in the inner clutch member when the members of the clutch are out of engagement with each other, and a hitching line engaging said inner clutch member, substantially as set forth. 9th. The combination of the outer and inner members, of the clutch, said outer member being mounted upon a rotatable part of a vehicle and said inner member consisting of a case having an open outer end, the vertical wall of said case having an orifice, a plate closing said orifice, a segmental hub, said plate and the vertical wall of the case being formed to provide an opening coincident with that through the hub, for the passage of the supporting means, a collar encircling said hub, a rotatable line spool supported on said collar, and a hitching line engaging said line spool, substantially as specified. 10th. The combination of the outer and inner members of the clutch, said outer member being mounted upon a rotatable part of a vehicle, and said inner member consisting of a case having an open outer end, the vertical wall of said case having an orifice, a detachable plate closing said orifice, and a segmental hub, the upper segment of which is formed integral with said plate, and the lower segment of which is formed integral with said vertical wall, of the case being also formed to provide an opening coincident with that through the hub for the passage of the supporting means, a collar encircling said hub, said collar being secured to said hub and also to the vertical wall of the case, a rotatable line spool supported on said collar, and a hitching line engaging said line spool, substantially as set forth. 11th. In a hitching and checking device, the combination of the inner and outer clutch members, said outer member being mounted upon a rotatable part of the vehicle, said inner clutch member having a non-rotating hub, a rotatable line spool, and a case secured to said hub and projecting over, and protecting said line spool and hub, said case having an aperture 2, formed with a contracted end, and an opening 12, and hitching line passing through said aperture 11, to and around said line spool and thence through said opening 12, said hitching line having an enlargement at one end to prevent said end from being drawn into said case through said aperture, all substantially as shown and described. 12th. In a hitching and checking device, the combination of the inner and outer clutch members, said outer member being mounted upon a rotatable part of a vehicle and said inner clutch member having a non-rotating hub, a collar or bushing, encircling said hub, and having a peripheral groove at one end, a line spool having a flange received by said groove in the collar, and a hitching line engaging said line spool, all substantially as described. 13th. In a hitching and checking device, the combination of the inner and outer clutch members, said outer member being mounted upon a rotatable part of a vehicle, and said inner clutch member having a non-rotating hub, a cylindrical inclosing box or casing, to which said hub is secured, said casing being open at its outer end, a collar or bushing encircling said hub, said collar having a peripheral groove at one end, a line spool having a flange received by said groove in the collar and a hitching line engaging said spool, substantially as shown and specified. 14th. In a hitching device, comprising a hitching line, outer and inner clutch members and mechanism for impelling the inner member to and from the outer companion member, said outer member being mounted upon a rotatable part of a vehicle, an annular shaped line spool provided peripherally with a groove for the wound up hitching line, and at a side thereof, with a recess wherein is pivotally secured a dog or pawl provided with a projecting pin adapted to travel in a slot in the spool body, a second dog or pawl pivotally secured in a recess entering into the flat face of the spool body, and an orified or pocket, also entering the spool's face and adapted to receive and retain the end of a hitching line extending therefrom through a contracted opening out into the line groove of the spool, said spool being adaptable for mounting upon or within the inner member of the clutch, all combined and operating, substantially as set forth.

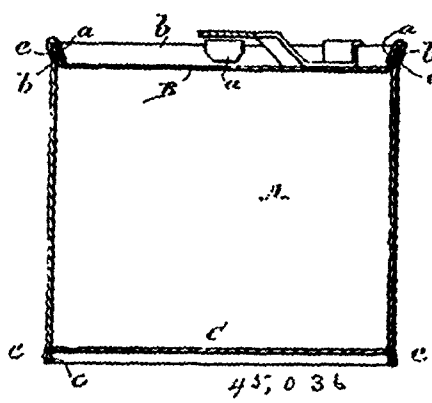
No. 45,035. Method of Making Hollow Articles of Plastic Material. (*Méthode de fabriquer des objets creux de matières plastiques.*)



Clemens Schnell, Paterson, New Jersey, U.S.A., 10th January, 1894; 6 years.

Claim.—The herein described method of making refractory cement pipe, consisting in forming the pipe in a mould having a hollow core, while in a cool condition, secondly heating the core and surrounding pipe to expand the core and enlarge the internal diameter of the pipe, thirdly artificially and quickly cooling the core, thereby contracting the same and reducing its external diameter, and finally, while the pipe is still in its heated and expanded state, removing the same from the core, substantially as described.

No. 45,036. Can. (*Bidon.*)



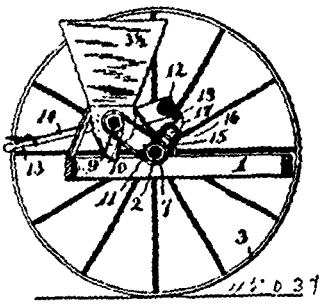
Albert Richard Whittall, Montreal, Quebec, Canada, 10th January, 1894; 6 years.

Claim.—1st. In a can, the combination of body, top and bottom pieces, the body pieces having integral projecting lugs on one edge adapted to be bent over and hold the top piece in place. 2nd. The combination of a can body having integral projecting lugs at its upper edge, a flanged bottom piece fixed in position at the opposite edge, and a flanged cover piece held in place by said lugs bent in over same. 3rd. The combination of body A, having circumferen-

tial seats e e, and lugs a a, and the flanged cover and bottom pieces B and C, as shown and described.

No. 45,037. Grain Drill.

(*Semoir en ligne.*)

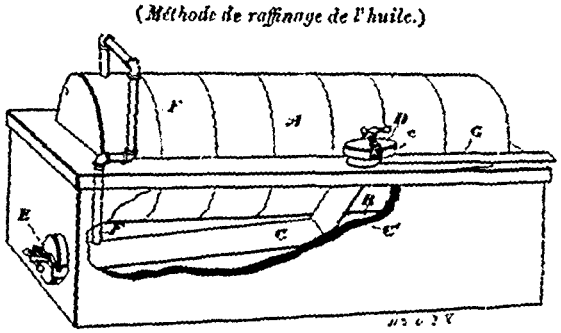


Samuel W. Rowell, Beaver Dam, Wisconsin, U.S.A., 10th January, 1894; 6 years.

Claim.—1st. In a grain drill, or like machine, the combination of a seed box, a feed cylinder shaft therein, having a sprocket-wheel mounted thereon, a roller or bar, means for rotating the same, a main axle, a clutch-head fixed upon the axle, a spring pressed clutch-head loose thereon, the latter formed with sprocket-teeth, a chain connecting said sprocket teeth with the sprocket-wheel of the feeding cylinder shaft, and a connection between the roller or bar, and the feeding cylinder, said connection constructed to normally hold the loose clutch in engagement with its companion fixed clutch, and to throw said loose clutch out of engagement, when the bar or roller is actuated, substantially as set forth. 2nd. In a grain drill, or like machine, the combination, of a seed box, a feeding shaft therein, having a sprocket-wheel mounted thereon, a roller or bar, means for rotating the same, a main axle, a clutch-head fast upon the axle, a spring pressed clutch-head loose thereon, the latter formed with sprocket-teeth, a chain connecting said sprocket-teeth with the sprocket-wheel of the feeding cylinder shaft, and a link having one end pivotally connected to the roller or bar and its opposite end formed into an elongated opening through which the shaft passes, the link inclined or cammed, and constructed to normally hold the loose clutch in engagement with its companion fixed clutch, and to throw said loose clutch out of engagement, when the bar or roller is actuated, substantially as set forth.

No. 45,038. Method of Refining Oil.

(*Méthode de raffinage de l'huile.*)

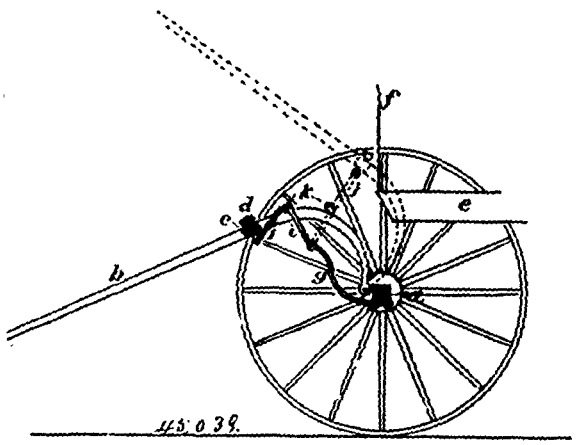


Lawrence George McKam, Toronto, James McMillan, George Samson and Nicholas Rainsberry, the latter three of Petrolia, all in Ontario, Canada, 10th January, 1894; 6 years.

Claim.—1st. In refining crude petroleum the process herein described of removing the sulphur from the oil consisting of passing the oil vapour from the still through a body of unslaked lime heated, and afterwards condensing such vapour, agitating it and treating it with sulphuric acid, water and alkali, as and for the purpose specified. 2nd. In the process described and in combination with the still, a pipe leading from the still to a tube designed to be filled or partially filled with unslaked lime and preferably located in the fire chamber where it is subjected to a suitable degree of heat and a pipe leading from the upper end of said tube to the condenser, as and for the purpose specified. 3rd. The combination with the still and pipe leading from the still into the fire chamber, of an inclined tube C, the ends of which extend through the top and end of the still and are provided with covers D and E, and a pipe G, leading from the upwardly extending portion C^1, of the tube C, as and for the purpose specified.

No. 45,039. Support for Vehicle Shafts.

(*Tuteur de limonière pour voitures.*)

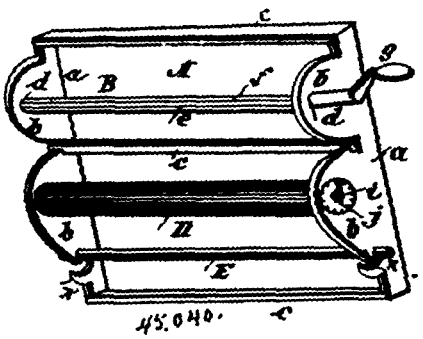


Chipman A. Steeves, assignee of Whitmore Irving, both of Moncton, New Brunswick, Canada, 10th January, 1894; 6 years.

Claim.—The combination of the arms *g*, *i*, and *j*, the clevis *h* and the rule joint *k*, substantially as and for the purpose hereinbefore set forth.

No. 45,040. Machine for Measuring Wall Paper.

(*Machine pour mesurer le papier de tenture.*)

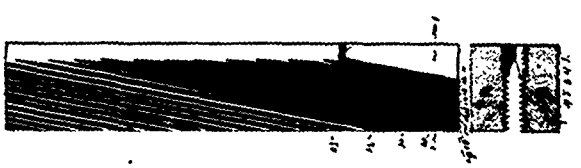


Sinclair Gray Lundy and Charles H. Knight, both of Elizaville, Kentucky, U.S.A., 10th January, 1894; 6 years.

Claim.—The combination in a machine of the character described of the crank bar, forked, having the slide, the main frame and knife, the serrated roller having the pointer adapted to engage the dial on the frame and the rod E, said rod, crank bar, and serrated roller having their end bearings in the frame, brackets, substantially as described.

No. 45,041. Die for Rolling Screw Threads.

(*Coussinet pour fileter les vis.*)



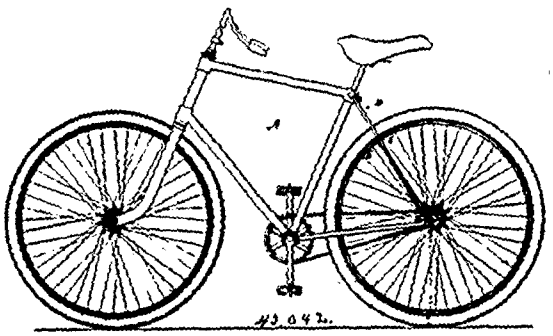
The Wire Goods Co., assignee of William Oscar Bement, all of Worcester, Massachusetts, U.S.A., 10th January, 1894; 6 years.

Claim.—1st. A die for rolling threads upon a blank, having a series of ribs running across its face, each working rib being wider than the preceding working rib, and each rib being of the same cross section throughout its working length. 2nd. A die for rolling threads upon a blank, having a series of ribs running across its face, each rib being of the same cross section throughout its working length, the first rib of the series having a sharp edge, and each of the remaining ribs being wider than the preceding one, whereby a screw thread may be rolled upon a blank by the action of the ribs. 3rd. A die for rolling threads upon a blank, having a series of ribs running across its face, each of which is of the same cross section throughout its working length, one or more of the ribs having a sharp edge, and two or more of the remaining ribs of the series increasing in width, each being wider than the preceding rib, whereby a screw thread may be rolled upon a blank by the action of the ribs.

4th. A die for holding threads upon a blank, having a series of ribs each of which is of the same cross section throughout its working length, the faces of all the ribs which start from the entering end of the die being of the same width, and the faces of the ribs which start from the side of the die increasing in width, each being wider than the preceding rib, until the required width is attained, when the remaining ribs are all of the same width, whereby a screw thread may be rolled upon a blank by the action of the ribs.

No. 45,042. Support for Bicycles.

(*Support pour bicycles.*)

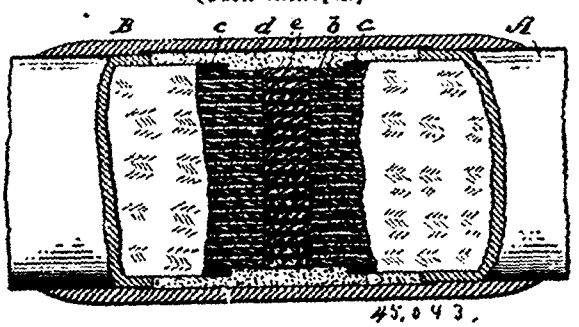


August Beck, assignee of Max E. Hertel, both of Chicago, Illinois, U.S.A., 10th January, 1894; 6 years.

Claim.—1st. The combination with a velocipede, of a supporting bar pivoted thereto, and provided with a bent or deflected end for engaging the frame of the velocipede, substantially as described. 2nd. The combination with a velocipede, of a braced supporting bar pivoted thereto, and provided with a spirally bent or deflected end to engage the frame of the velocipede, substantially as described. 3rd. The combination with a plate 2 rigidly secured to the axle of a velocipede, of a supporting bar B pivoted to said plate 2, and having a bent or deflected end to engage the frame of the velocipede, substantially as described. 4th. The combination with a velocipede having a brace bar 4, of a supporting bar pivoted to said velocipede, and having a bent or deflected end located to engage said brace bar, said bent or deflected end of the supporting bar being so arranged that when it is swung towards said brace bar it will engage the outer face of the same, substantially as described.

No. 45,043. Electric Cable.

(*Cable électrique.*)



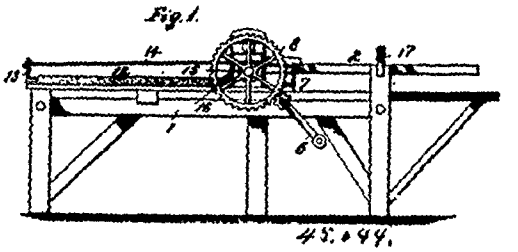
Henry Hirst Bentley, Philadelphia, Pennsylvania, assignee of Thomas Jefferson Dewees, Palmyra, New Jersey, U.S.A., 10th January, 1894; 6 years.

Claim.—The herein described method of constructing electric cables, which consists in drying the fibrous insulating covering of the wire or wires, to expel the moisture therefrom, applying a moisture absorbing medium, such as powdered lime, to the dried insulating covering to absorb such moisture as may remain therein, and finally enclosing the dried fibrous covered wire or wires with the moisture absorbing medium in a closed sheath or covering. 2nd. An electric conductor or cable having a fibrous insulation from which the moisture has been expelled, powdered with a moisture absorbing medium such as powdered lime, and a closed sheath or covering hermetically sealing the fibrous insulation in its dried and powdered condition. 3rd. A splice for an electric cable consisting of the combination of the two cable ends, each composed of one or more insulated wires, and an outer metallic sheath or casing, and in which the ends of the wires of the two cable ends are electrically united, an insulating covering over the united ends of the wires, a moisture absorbing substance, such as lime applied to the cables at their union, and a slice sleeve or covering united to the ends of the metallic sheaths of the two cables, so as to form a hermetically sealed splice. 4th. An electric cable, consisting of an outer closed sheath, a bunch of wires having dried insulated coverings within the outer closed sheath, and a powdered moisture absorbing medium, such as powdered lime, within the closed outer sheath and in the spaces between the dried insulated wires. 5th. An electric conductor or cable consisting of one or more electric conductors, having a porous insulation, an outer enclosing sheath or case, and a moisture absorbent material such as lime within the sheath or case, and in contact with the insulation of the wire or wires. 6th. An insulated electric conductor, having a moisture absorbing material, such as lime applied to its insulating covering. 7th. The combination of an electric cable, composed of insulated wires, an outer casing into which the ends of the insulated wires extend, electrical connections with said wires within the outer casing, and a moisture absorbing material such as lime applied to said wires at their union with the electrical connections within the casing.

No. 45,044. Machinery for Rolling Glass.

(*Laminoir pour le verre.*)

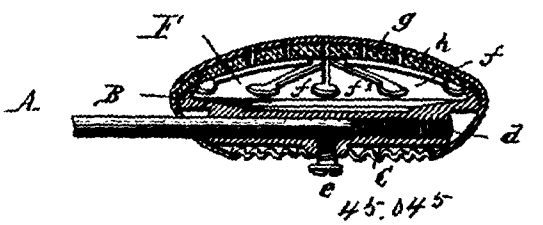
Fig. 1.



Peter V. Pettier, Ottawa, Illinois, U.S.A., 11th January, 1894; 6 years.

Claim.—1st. The combination of a stationary glass delivery table 2, the reciprocating glass receiving table 11 having its top covered with a slow conductor of heat and having means for passing it under and drawing it out from under said table 2, and the two rollers 4, 4 arranged one above the other at the edge of table 2 and adapted to be operated as the table 11 is drawn out to deliver a sheet of glass thereon, substantially as set forth. 2nd. The combination of the stationary glass delivery table 2, the reciprocating receiving table 11 having means for drawing it under or withdrawing it from under the table 2, the rollers 4 4 arranged one over the other at the edge of table 2 and changeable gearing 9, 10 arranged to separate one of said rollers from the other, whereby, by merely changing said gearing, the upper surface of the glass sheet may be plain or rippled, substantially as set forth. 3rd. In a machine for rolling glass the combination of the stationary table 2, the rollers 4 arranged at one edge thereof and having suitable means of operation, the movable table 11 and the apron 16 arranged in proximity to the lower roller and adapted to deliver the glass on to the said table 11, substantially as set forth.

No. 45,045. Truss. (*Bandage herniaire.*)



William C. Wetmore and John M. Cullis, Buffalo, New York, U.S.A., 11th January, 1894; 6 years.

Claim.—1st. In a truss pad the combination with a rigid supporting ring or open frame, of an annular metallic spring secured to the front side of said ring and bearing against the same only at its edge, whereby the middle portion of the spring is free to yield, while its marginal portion is comparatively stiff, substantially as set forth. 2nd. In a truss pad, the combination with the pad frame, of a slitted disc spring applied to the front side of said frame and forming the yielding bearing face of the pad, substantially as set forth. 3rd. In a truss pad, the combination with the rigid pad frame of a slitted disc spring applied to the front side of said frame, and a soft facing, covering said spring, substantially as set forth. 4th. In a truss pad, the combination with a supporting ring, of an attaching sleeve or socket arranged on the rear side of said ring, across the opening thereof, and adapted to receive the bow of the truss, and a circular spring applied to the front side of said supporting ring, substantially as set forth.

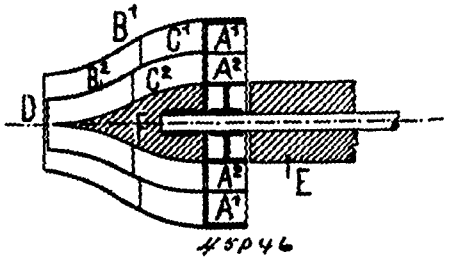
No. 45,046. Apparatus for the Propulsion of Ships.

(*Appareil pour la propulsion des vaisseaux.*)

Ewald Bellingrath, assignee of Gustav Zenner, both of Dresden, Germany, 11th January, 1894; 6 years.

Claim.—1st. In propellers acting by the reaction of a jet of water, the combination of an axial turbine, of the Jonval Henschel type,

with a casing which surrounds the wheel of the turbine and contracts towards the rear, so as to terminate in an outlet or delivery orifice



which is smaller than the orifice through which the water passes from the turbine, the said casing being provided with directing platfs behind the turbine wheel for guiding the water passing from the said wheel into an axial direction, substantially as hereinbefore explained. 2nd. The combination, with a propeller of the class described and characterized by the use of an axial turbine of the Jonval Henschel type, a casing which surrounds the wheel of the turbine and contracts towards the rear, so as to terminate in an outlet or delivery orifice which is smaller than the orifice through which the water passss from the turbine, and said casing provided with directing plates behind the turbine wheel for the purposes set forth, of a piece or pieces with a concave recess therein, and mounted so as to be capable of being placed before the orifice of the casing or of being withdrawn therefrom, the said concave recess being of such form as to enable it to deflect the jet or jets of water, and throw it or them forwards at an angle such as to cause reversal of the vessel, substantially as hereinbefore described. 3rd. The arrangement of the propelling turbine, characterized by the use of an axial turbine of the Jonval Henschel type on the exterior of a vessel and obliquely to the axis thereof, so that the axis of the turbine passes obliquely into the interior of the vessel, in combination with a turbine casing curved in such a manner as to direct the water, substantially as hereinbefore described. 4th. The propelling turbine arranged as described on the exterior of the vessel in such a manner that its axis is parallel with the axis of the vessel, and that it receives movement from a connecting rod passing through the side of the vessel. 5th. The arrangement of the propelling turbines in cavities or recesses provided for their reception in the sides of the vessel, as set forth. 6th. The propelling turbines arranged outside the vessel, so as to be partly above the water line, and provided with air excluding hoods, as set forth.

No. 45,047. Means for Manufacturing Rail Joints.

(*Moyen de fabriquer des joints de rail.*)

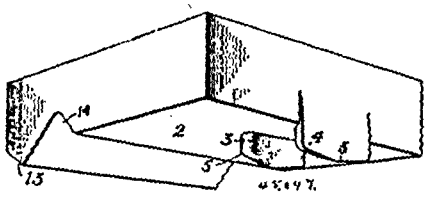


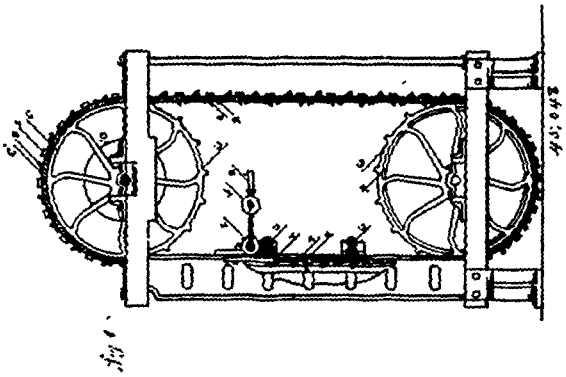
Fig. 1.

The Heath Rail Joint Company, assignee of Frederic H. Heath, all of Minneapolis, Minnesota, U.S.A., 11th January, 1894; 6 years.

Claim.—1st. The herein described dies for forming the trusses on sheet metal joints, and consisting in the surface blocks provided respectively with the punch heads 3 and 4, and the long pockets 6 and 7, as and for the purpose specified. 2nd. The herein described dies for punching the trusses formed of sheet metal, consisting of the surface block, one of said blocks provided with the parallel heads 3 and 4, having the rounded inner sides, the head 3, provided with the shearing edge, and the lower block provided with similarly shaped pockets 6 and 7, the former having a shearing edge 8, substantially as described. 3rd. The herein described dies for bending the plate and consisting in the blocks, one of which is provided with the V-groove 12, and with the central recess 11, and the other with the V-projection 13, and the groove 14, substantially as described. 4th. The herein described compound dies, consisting of the block provided with the puncher heads 3 and 4, the former of which has the straight shearing edge 5, said block provided with the V-projection and with the groove 14, and the other block having the truss pockets 6 and 7, the former having the shearing edge 8, said block provided with the V-groove 12, and with the depression 11, having the curved shoulder 19, substantially as described. 5th. The herein described dies, one provided with the deep groove 16, the truss pocket 17, and the rib 19, and the other having a similar groove 24, and pocket 25, and also a projecting rib 26, and a groove 27, as and for the purpose specified. 6th. The herein described dies, one of which is provided with a deep groove 16, having the perpendicular and the inclined walls 25 and 22, the projection 19, and the pocket 17, and the other block provided with the narrower groove 24, and the truss pockets 25, the forming rib 26, the groove 27, and the shoulder 28, substantially as and for the purpose specified.

No. 45,048. Excelsior Cutting Machine.

(*Machine pour couper la fibre.*)

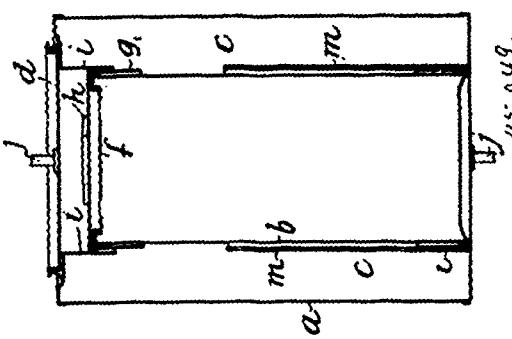


John Pratt, Chatham, Ontario, Canada, 11th January, 1894; 6 years.

Claim.—1st. The combination in a machine for cutting excelsior, of a frame A A supporting wheels B B, an endless travelling belt C provided with attached splitting and cutting knives D E, a pair of feed rollers F acting to advance the material towards the surface of the travelling bed, and each provided with a pinion G one of said rollers being mounted in bearings which are moveable toward and from the other feed roller, a single rotating drive shaft J having a series of bevelled gear-wheels J, J², a series of transverse shafts H geared to the drive shaft and provided with pinions I engaging the pinions on the feed rollers, and rack and pinions mechanism for reciprocating the moveable bearings, substantially as and for the purposes hereinbefore set forth. 2nd. The combination in a machine for cutting excelsior, of a frame A A supporting wheels B B a travelling bed C provided with attached splitting and cutting knives D E and a pair of rotating feed rollers F F provided with pinions J and serving to advance the material towards the surface of the travelling bed, one of said feed rollers being journalled in bearings which are moveable toward and from the other feed roller, a single rotating drive shaft J provided with bevel gear-wheels J, J², a series of transverse shafts geared to the drive shaft and provided with pinions I engaging the pinions on the feed rollers, the racks K secured to the frame, the transverse shaft I², journalled in the moveable bearings and having pinions L¹, engaging the racks and means for turning the pinion carrying shafts to reciprocate the movable bearings, substantially as and for the purposes hereinbefore set forth.

No. 45,049. Freezer for Ice Cream.

(*Congélateur pour crème glacée.*)



Leonard Roberts and Hedley George Roberts, both of London, England, 12th January, 1894; 6 years.

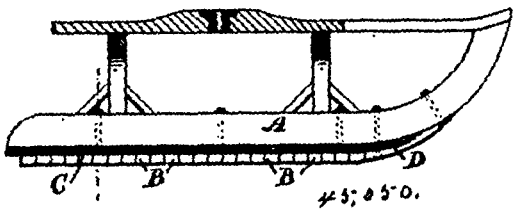
Claim.—1st. An ice cream freezing apparatus comprising an outer cylinder and one or more inner cylinders, the said cylinders being hermetically closed and adapted to be rotated, substantially as described. 2nd. An ice cream freezing apparatus comprising an outer cylinder and one or more inner cylinders, the outer cylinder having trunnion pins upon which the apparatus can be rotated, substantially as described.

No. 45,050. Sled Shoe. (*Patin de traineau.*)

Robert Harvey Gordon, Jefferson, Pennsylvania, U.S.A., 12th January, 1894; 6 years.

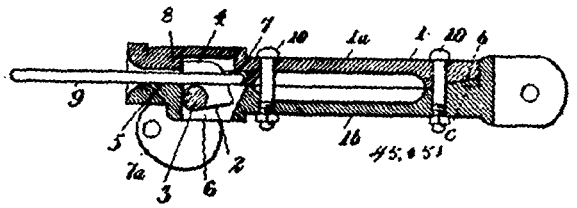
Claim.—1st. A sled shoe consisting of a plurality of short sections secured to the runner, substantially as described. 2nd. A sled shoe

consisting of a plurality of short sections of hard steel secured to a strip of tougher metal, substantially as described. 3rd. A sled



shoe consisting of a strip of metal having a dove-tail groove, and a plurality of sections having dove-tail tenons fitting into said groove, substantially as described. 4th. A sled shoe consisting of a strip of tough metal having a dove-tail groove, and a plurality of short sections of hard metal, each having a tenon fitting said groove, substantially as described. 5th. The combination with the sled runner, of the strip C having dove-tail groove *c*, the sections B, having tenons *b* fitting said groove, the block D and the stop E, substantially as described.

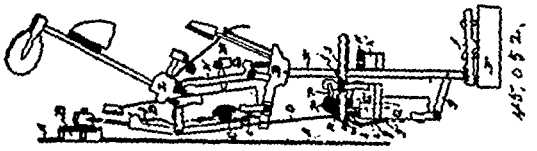
No. 45,051. Car Coupler. (*Attelage de chars.*)



John Evans, Toronto, Ontario, Canada, 12th January, 1894; 6 years.

Claim.—1st. In a car coupler, the combination of a draw-head, a spindle journalled therein, a coupling-pin rigidly secured to the pin and turning therewith, and a counter balance secured to the end of the spindle and adapted to turn the pin into a vertical position. 2nd. In a car coupler, the combination of a draw-head, comprised of two sections 1^a, 1^b, the section 1^b having formed therein and below the plane of the lower side of the mouth of the draw-head, bearings for a spindle and a recess extending rearwardly from the front of the said bearing to the rear extremity of the said mouth, a spindle journalled in said bearings, a coupling-pin mounted on said spindle, and a counterbalance mounted on each end of the said spindle adapted to turn the coupling-pin into a vertical position, substantially as specified.

No. 45,052. Pianoforte Action. (*Action de piano-forte.*)



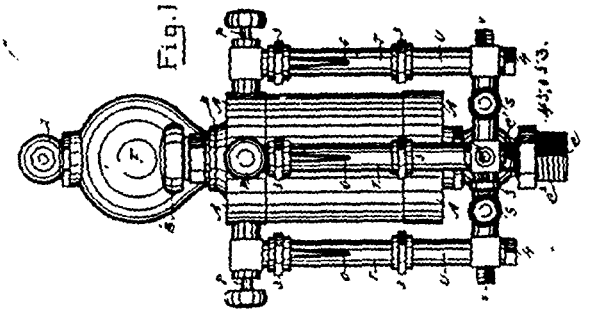
James Harper Phelps, Sharon, Wisconsin, U.S.A., 12th January, 1894; 6 years.

Claim.—1st. The combination in a piano action, of the levers J, with supports for said levers, consisting of a bar G, and a separate bar G^1 to which the levers are secured and which is itself supported upon said bar G, substantially as specified. 2nd. The combination with the series of levers J and their supporting blocks *j*, of bars G and G^1, and a filling piece inserted between said bars, substantially as specified. 3rd. The combination with the levers J, of the locking rod P, and the spring acting upon said rod, substantially as specified.

No. 45,053. Lubricator. (*Graisseur.*)

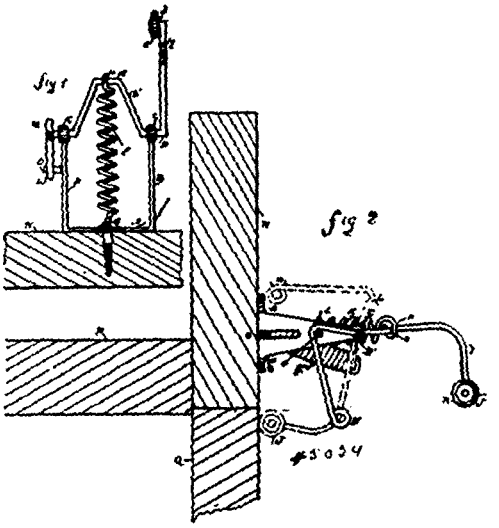
Benjamin A. Burgess, Hamilton, Ontario, Canada, 12th January, 1894; 6 years.

Claim.—1st. The oil cylinder A, having upper oil inlet B, with cover B^1, and lower aperture for blank shank C^4, of the central chamber C^1, having shank C^3, with opening C, and its three ways C^2, provided with regulation valves S, and elbowed stem D, in combination with the vertical tube E, arranged to enter the upper part of condensing chamber, supplied with steam deflector J, substantially as and for the purpose hereinbefore set forth. 2nd.



The combination of the vertical tube E, connected to the stem D, and upper inserted plug I, having aperture H, and the concaved deflector J, suspended in upper part of steam condenser F, in close proximity to the lower part of said inserted plug, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of the lower central chamber C^4, having shank C^3, with opening for steam, blank shank C^3, three steam ways C^2, steam stem D, valves S, plugs 4, with their down feeds V, each having aperture 2, and the threaded outlets V, substantially as and for the purpose hereinbefore set forth. 4th. In a three way sight feed steam lubricator, the combination of the cylinder A, inlet B, apertures *n*, valves P, sight-feeds *o* and *r*, with plug 4, glands 3, the three ways C^2, supplied with valves S, and the central chamber C^1, having blank shank c^4, shank C^3, with inlet C, steam stem D, tube E, plug I, having aperture H, deflector J, in steam condenser F, valve K, and the elbow L, substantially as and for the purpose hereinbefore set forth.

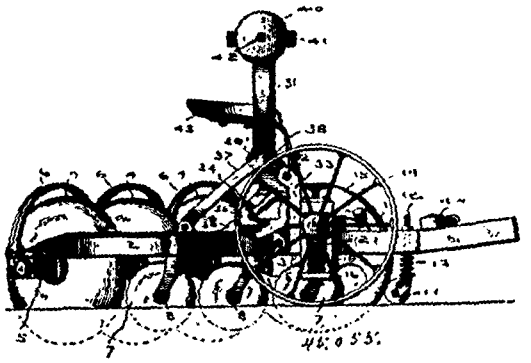
No. 45,054. Door Spring. (*Ressort de porte.*)



George W. Mallory, Township of Harwich, Ontario, Canada, 12th January, 1894; 6 years.

Claim.—1st. A wall plate A with outward extending arms B, B having bifurcated journals C, C, substantially as and for the purposes hereinbefore set forth. 2nd. A wall plate A with outward extending arms B, B, having bifurcated journals C, C, in combination with a crank D E, with a presser arm I and a crank arm L, substantially as and for the purposes hereinbefore set forth. 3rd. A wall plate A with outward extending arms B, B, having bifurcated journals C C, a crank arm D with a presser arm I, a crank arm L in combination with a rubber padded wheel J K, substantially as and for the purposes hereinbefore set forth. 4th. A wall plate A with outwardly extending arms B, B, having bifurcated journals C, C, a crank D, E, a presser arm I, a rubber padded wheel J, K, a crank arm L engaged to stop O in combination with a coil spring F having an elongated hook H, substantially as and for the purposes hereinbefore set forth.

No. 45,055. Rotary Plough. (*Charrue rotative.*)



Lafayette D. Railsback, Indianapolis, Indiana, U.S.A., 12th January, 1894; 6 years.

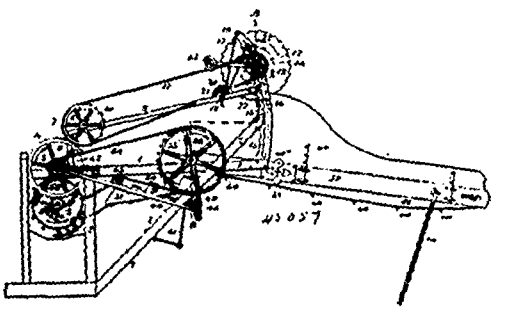
Claim.—1st. In a rotary disc plough wherein the plough beam is connected to the tongue, an axle consisting of a section on which the furrow wheel is mounted rigidly secured to the tongue, and a section on which the land wheel is mounted so combined with the tongue that such section of the axle and the tongue will be vertically movable independent of each other. 2nd. In a rotary disc plough wherein the low beam is connected to the tongue, an axle consisting of one section on which the furrow wheel is mounted rigidly secured to the tongue, and another section on which the land wheel is mounted provided with a central vertical opening through which the tongue may extend, and a bolt so mounted in the axle as to be vertically immovable and extending through the tongue, the central part of such bolt and the hole in the tongue through which the bolt passes being threaded. 3rd. In a rotary disc plough wherein the plough beam is secured to the tongue, an axle consisting of one section on which the furrow wheel is mounted rigidly secured to the tongue, a central section provided with a central vertical slot through which the tongue extends, a section on which the land wheel is mounted secured to and vertically movable in such central section of the axle, and bolts so mounted in such central section as to be vertically immovable, one bolt extending through the tongue and the other through the inner end of the section of the axle on which the land wheel is mounted, the middle part of each bolt and the hole through which it passes being threaded. 4th. In a rotary disc plough wherein the tongue and beam are connected, an axle consisting of one part on which the land wheel is mounted so combined with the tongue as to be vertically adjustable, and the other part of such axle rigidly secured to the tongue and provided with an opening in its end, and a slot in its top, a box fitting in such end opening and secured to such axle by a set screw operating in such slot and provided with vertical slots in its sides, and a stub axle on which the furrow wheel is mounted fitting in such boxing and secured thereto by clamping bolts extending through the slots in the sides of such box. 5th. In a rotary disc plough, a beam provided with a plurality of arms on which are mounted plough discs, and a guard formed solidly of a plurality of curves extending over the discs, the depending portion of such guard between the discs rigidly secured to the arms of the beam on which the discs are mounted, substantially as shown and described. 6th. In a rotary disc plough, a beam carrying the discs pivoted to the frame, a hand lever mounted on the frame, provided with a heel at its lower end, and a lug on the beam adapted to engage the heel of the hand lever and lock down the beam, substantially as shown and described. 7th. In a rotary disc plough, a beam carrying the discs pivoted to the frame of the plow, a hand lever mounted on the frame work and provided with a heel at its lower end and a slot above its pivotal point, a lug on the beam adapted to engage the heel and lock down the plough beam, and a link pivoted to the beam and engaging the slot in the hand lever, substantially as shown and described. 8th. In a rotary disc plough, a beam carrying the discs pivoted to the frame of the plough, a hand lever mounted on the framework and provided with a heel at its lower end, a lug on the beam adapted to engage the heel of the hand lever and lock down the beam, and a weight mounted on the upper end of such hand lever. 9th. In a rotary disc plough, a beam carrying the discs pivoted to the framework, a hand lever mounted on the framework and provided with a heel at its lower end and a slot above its pivotal point, a lug on the beam adapted to engage the heel of the hand lever and lock down the beam, a link pivoted to the beam and engaging the slot in the hand lever, and a weight adjustably mounted on the upper end of the hand lever.

No. 45,056. Churn. (*Baratte.*)

Isaac Key and Peter H. Hammer, both of Winamac, Indiana, U.S.A., 12th January, 1894; 6 years.

Claim.—1st. The churn, consisting of the cream receptacle or body of an approximately pyramidal shape, the dasher, having the cross bars or beaters successively varying in length and having its staff or shaft provided at the upper end with a cross pin, and the driving mechanism, the shaft of a pinion, of which carries a vertically adjustable or sliding sleeve adapted to engage said cross pin of the dasher shaft, substantially as set forth.

No. 45,057. Threshing Machine.
(*Machine à battre.*)



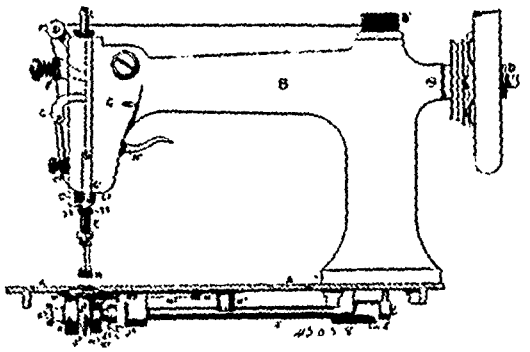
William Taylor, Carman, Manitoba, Canada, 12th January, 1894; 6 years.

Claim.—1st. In a feeding and hand cutting attachment for threshing machines, the knife drum having a series of circular knives secured thereon and said drum supported adjustably above the feed board of the machine, substantially as shown and described. 2nd. In combination, the knife-drum, driven from the cylinder of the threshing machine, and having a series of circular knives secured thereon, with a framework carried by said machine, and having a sectored guide frame to direct said knife drum therein, substantially as shown and described. 3rd. In combination, the gear-wheel, carried loosely on a transverse shaft, and meshing with a pinion on the cylinder shaft, the transverse shaft having said gear-wheel, and a friction clutch device thereon to connect the shaft to revolve cranks at the opposite ends of said shaft, connected to operate a rocker shaft, the shake rods connecting said cranks and rocker shaft, and the conveyors operated by said rocker shaft, substantially as shown and described. 4th. In combination, the governor connected to be driven by the cylinder shaft, a crank arm connected to a central rod in said governor, the shaft carrying said crank arm, the fingers arranged on said shaft and extending as described the crank arms or bell cranks connected to the lever having a notch therein, the rod connecting said lever to a transversely extending lever, said transversely extending lever operating a friction clutch device, and the loosely carried gear-wheel on a transverse shaft, substantially as shown and described. 5th. In a feeding and hand cutting attachment, the table carried by one end on the frame of the threshing machine, and having a joint or hinge therein, as a means by which it is folded in transport, substantially as shown and described. 6th. In combination, the table, supported by one end on the machine frame, and by support, as specified at the other end, said table having a hinge therein, the transverse shaft at one end driven as specified, rollers at the opposite end of said table, and the chain belts over said rollers, and transverse shaft and having cross bars connecting said belts, substantially as shown

and described. 7th. In combination, the table supported at its ends as specified, and having a hinge therein, as a means by which it can be folded, the transverse shaft at one end of the table and rollers at the other end, carriers formed of belts and bars, as specified, over said shaft and rollers, the knife drum supported adjustably over said table, and the means by which said drum is revolved from the cylinder of the machine, substantially as shown and described. 8th. In combination, the table supported by its ends, as specified, the carriers encircling said table, the shaft and rollers at the ends of said table to drive said carriers, the wheels and belts, as described, connecting said carriers with the cylinder of the machine to operate them, and the conveyors interposed between said table and cylinder of the machine and driven by means specified, substantially as shown and described.

No. 45,058. Sewing Machine.

(*Machine à coudre.*)

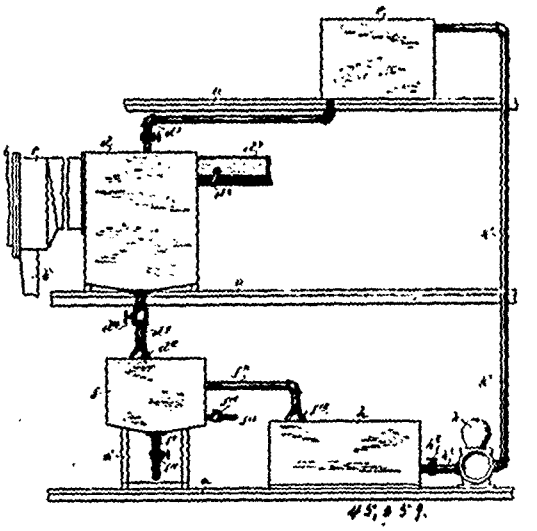


Victor Witte, London, England, 12th January, 1894; 6 years.

Claim.—1st. In a sewing machine, arranged to produce either a lock-stitch, a chain-stitch, or a locked chain-stitch, having a reciprocating needle-bar E, a thread supply-arm G, a presser-foot H, a looper-shaft J^1, a rotary-looper J^2, J^3, mounted thereon, and a ring-shaped holder K, for carrying the shuttle-spool case J^4, ring-arm K^1, on shaft K^2, spring K^4, and knob K^5, for disengaging and replacing the said spool-case J^4, from the ring K, together with ordinary mechanism, for actuating these parts, the combination therewith of loop-spreading and retaining fingers N^4, N^5, to co-act with the looper-hook and receive the loop therefrom, when forming a chain or locked chain-stitch, an arm N, pivoted to base plate to carry the fingers N^4, N^5, operating cam N^7, on looper-shaft J^1, and return spring N^2, for actuating the arm N, a finger lever P, pivoted to base plate at P^1, to throw the arm N, out of action when forming a lock-stitch, and a feed-jaw L^1, an arm L_1 carrying the said feed-jaw L^1, rock-shaft L^3, mounted in bearings on base plate, arms L^2, on rock-shaft L^3, between which the arm L_1 is pivoted, a cam J^5, on the looper-shaft to give vertical motion, and a cam J^6, thereon, to transmit lateral advance motion to the feed-arm L_1 and a spring L^5, to give return motion to the said arm L_1 together with a tapered-bar M, to co-act with part L^6, of arm L_1 and mechanism for sliding the bar M, for regulating the throw of the feed device and lengthening or shortening the stitch, as set forth. 2nd. The combination, with a rotating looper-shaft J^1, carrying a looper-hook and disc J^3, J^2, a separate circular case J^4, containing a shuttle-spool, and devices for holding the spool-case J^4, contiguous to the looper J^2, of a loop-spreading and holding device to co-act with the looper-hook and receive the loop therefrom, consisting of an arm N, pivoted to the base-plate, a finger N, fixed to the arm N, a finger N^4, pivoted to arm N, and a spring N^6, to hold finger N^5, adjacent to finger N^4, a cam N^7, on looper-shaft and return spring N^2, for actuating arm N, together with a finger lever P, pivoted at P^1, to the base-plate, to throw the arm N, and parts out of action when required, and an auxiliary intermittent spring tension T, attached to the bracket-head of machine, a recessed part E^1, on the needle bar E, to operate the tension spring T, and cause the needle thread to be gripped or released at proper times, as set forth. 3rd. A rotating looper-shaft carrying a looper-hook and disc J^3, J^2, containing a spool-case J^4, means for retaining the spool-case J^4, in position, a loop-spreading and holding device, composed of a fixed finger N^4, and a jointed finger N^5, suitably carried and operated to co-act with the looper-hook and receive the loop therefrom, when forming a chain or locked chain-stitch, a lever P, on the base-plate for throwing the loop-holding and spreading device out of action when required, in combination with feed mechanism, consisting of a feed-jaw L^1, an arm L_1 carrying the feed-jaw L^1, rock-shaft L^3, carried on bearings from base-plate, arms L^2, on rock-shaft L^3, between which the arm L_1 is pivoted, a cam J^5, on the looper-shaft to give vertical reciprocative motion to the feed-arm L_1, a cam J^6, also on looper-shaft to give lateral advance motion to the feed arm L_1, and a spring L^5, to give return motion to the said arm L_1, together with mechanism for regulating the throw of the feed device and lengthening or shortening the produced stitch, consisting of a bar M, with tapered end, to co-act with fixed bracket L^6, on feed-arm L_1, bearings on base-plate to carry sliding-bar M, pinion M^1, taking into teeth on rack of sliding-bar M, knob M^2, to operate pinion M^1, and slide bar M, index dial on knob M^2, and fixed pointer on base-plate, whereby any desired particular length of stitch may be produced or reproduced, as set forth.

No. 45,059. Method of and Apparatus for Separating Volatile Metals from Other Commingled Gases. (*Méthode et appareil pour séparer les métaux volatils des autres gaz mêlés.*)

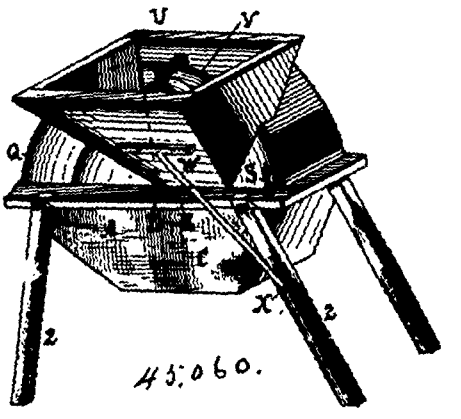
Fig. 1



Fessenden C. Butterfield, Minneapolis, Minnesota, U.S.A., 12th January, 1894; 6 years.

Claim.—1st. In an apparatus for treating refractory ores, a filtering chamber constructed with a receiving and a delivery compartment in communication below the liquid level, the horizontal filtering mediums, one in each of said compartments located respectively one above and the other below the liquid level, and an outflow passage leading from said delivery compartment, at the liquid level, substantially as and for the purpose set forth. 2nd. The combination with the ore roasting furnace, of the breeching collecting the gases therefrom, the condenser receiving from the breeching and provided with liquid spraying pipes, deflecting surfaces, a valved liquid outlet and a valved outlet flue for the free gases, the receptacle receiving from the condenser and provided with filtering mediums and settling chambers, the tank receiving from said filtering and settling receptacle, and the pump with circulating connections for successively circulating the same liquid, substantially as and for the purpose set forth.

No. 45,060. Vegetable Cutter. (*Coupe-légumes.*)

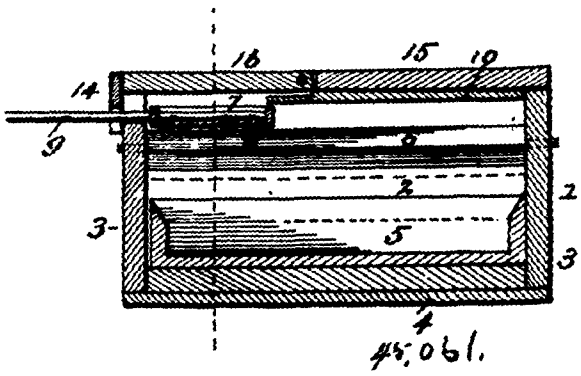


John F. Henlein, Richville, Michigan, U.S.A., 12th January, 1894; 6 years.

Claim.—1st. In a vegetable cutter, the combination with the main frame provided with a rotary cutter, of a top hinged thereto and provided with a feed opening and an upwardly extending ear, a hopper having an opening in its side communicating with the

feed opening, the upper edge of said opening embracing the upper surface of the cover, and a brace rod secured to said hopper and supported from the main frame, substantially as herein described. 2nd. In a vegetable cutter, a cutter wheel having a series of radial openings, plates secured to the recessed walls of said openings, knives secured to the opposite walls and bolts inserted through said knives, walls and plates, substantially as described.

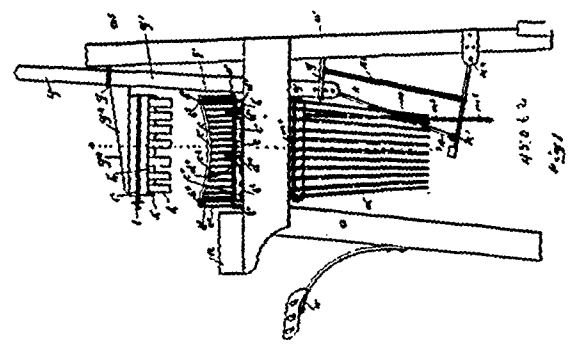
No. 45,061. Sifter for Ashes. (*Tamis à cendres.*)



Emil W. J. H. Divenger, Greenwich, Connecticut, U.S.A., 13th January, 1894; 6 years.

Claim.—1st. An ash sifter comprising the rectangular box, the removable ash receptacle, the inclined shelves, one of which is provided with a horizontal strip of india-rubber, the reciprocating screen, and the supplemental top and hinged cover, all constructed and combined, substantially as described. 2nd. An ash sifter comprising the rectangular box, having a coal or cinder compartment at one end, the removable ash receptacle, the inclined shelves, one of which is provided with a horizontal strip of india-rubber, the reciprocating screen, and the supplemental top and hinged cover, substantially as described.

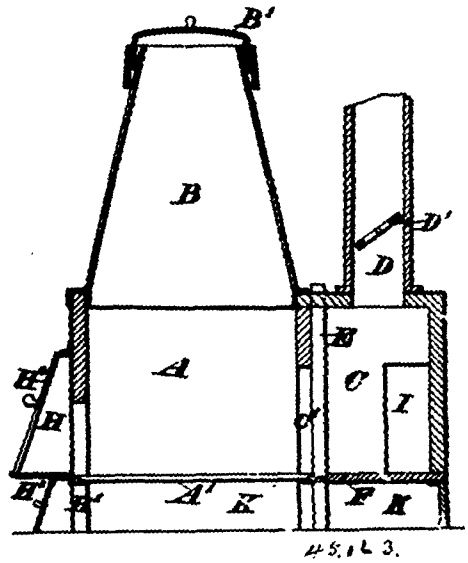
No. 45,062. Potato Cutting Machine.
(*Machine à hacher les potates.*)



Carvin V. Jones, Chillicothe, Ohio, U.S.A., 13th January, 1894; 6 years.

Claim.—1st. In a potato cutting machine, the combination with the supporting frame, a hopper thereon, a central longitudinal knife connecting the end of said hopper as described, and cross knives intersecting said central knive and secured on the opposite sides thereof, of guide frames *c* journalled in the ends of said hopper, a lever fulcrumed on one side of said hopper, arms jointedly connecting said lever respectively with said guide frames as described, and a spring connecting one of said arms with the framework and normally drawing one end of said lever inward, substantially as and for the purpose specified. 2nd. In a potato cutting machine, the combination with the frame, a hopper supported thereon and knives in said hopper, of a vertically sliding and spring support bar g^1, and an arm g^2 supported therefrom above said hopper, a plunger case carried on said arm having an open rear end and recesses in the ends of its sides, plungers blocks *h* detachably supported in said case, followers between said blocks, a yoke passing about said case, the rear end of which is adapted to bear within said case recesses and bear against the rear plungers or followers, and a set screw in the forward end of said yoke to bear against the forward edge of said plunger case, substantially as and for the purpose specified. 3rd. In a potato cutting machine, the combination with the frame, a hopper supported thereon, spring actuated frames *c* journalled in the end of said hopper, a central longitudinal knife connecting said hopper ends, and crossed knives adjustably secured on opposite sides of said central knife, of partition plate d^4 adjustably and detachably secured upon opposite sides of said central knife, raised central portions on said partitions, wings d^4 hinged to the upper side of said partition centres, and springs between said wings and partition plate centres, substantially as and for the purpose specified.

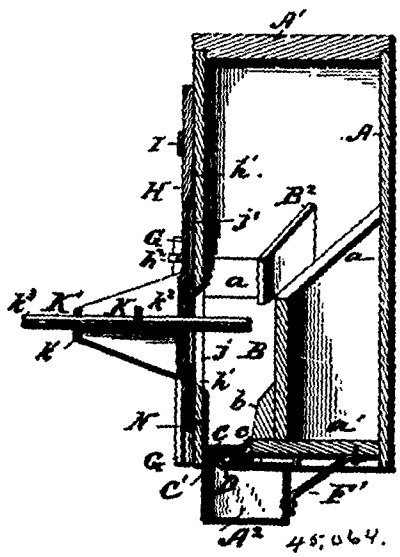
No. 45,063. Stove. (*Poêle.*)



Clement James Griffiths, Harefield, Westwood Park, Southhampton, County of Hants, England, 13th January, 1894; 6 years.

Claim.—The hereinbefore described construction of stove wherein a combustion chamber A, fuel chamber B, rear chamber C, chimney D, and vertical removable bars or grate E, separating the combustion chamber A from the rear chamber C, are constructed and arranged as set forth and illustrated, whether without a boiler or heater, as in figs. 1 and 2, or with a boiler or heater as in figs. 3 and 4 and in figs. 6 and 7, of the drawings.

No. 45,064. Measuring Vessel.
(*Vaisseau compteur.*)



William H. Bastin, Murphysboro, Illinois, U.S.A., 13th January, 1894; 6 years.

Claim.—1st. In a measuring vessel, of the character described, a vertically reciprocative slide, carrying a reciprocative cut-off, working at right angles thereto in guides thereon, as set forth. 2nd. In a measuring device of the character described, a vertically reciprocative slide mounted to move in guides, and having mounted to slide therethrough and into the chamber, a horizontally reciprocative cut-off, as set forth. 3rd. In a measuring device, the com-

bination with the receptacle, having a measuring chamber, of a hinged door at the bottom of said chamber, with cam-shaped projections, and a movable plate and actuating devices arranged beneath the door to hold the same closed, as set forth. 4th. The combination with the receptacle, having a measuring chamber and a hinged door at its lower end, of the devices for holding said door in its closed position, the vertically reciprocative slide, and the horizontally reciprocative cut-off, carried by said slide and mounted to move thereon and into the measuring chamber, as set forth. 5th. The combination with the receptacle with its measuring chamber, of the slide mounted on the chamber and carrying the cut-off, and means on the outer wall of the chamber for adjusting the slide and cut-off to measure materials of varying specific gravity. 6th. The combination with the receptacle with its measuring chamber, of the slide mounted to move in guides on the chamber, the cut-off carried thereby, to move at right angles thereto, the adjustable scale plate on the outer wall of the chamber, and the means for limiting the movement of the slide, as and for the purpose specified. 7th. The combination with the vertically reciprocative slide, and means mounted on the wall of the chamber for actuating the same, of the cut-off, carried by and movable in the slide at right angles thereto, as set forth. 8th. The combination with the receptacle with its hinged door, of the plate pivoted at one end to move beneath the door, the inclined protection upon the under side of the door, and means pivotally connected with said plate near its centre for moving said plate, as and for the purpose specified. 9th. The combination with the receptacle, of the slide fitted to move in guides thereon, the cut-off movable in a guide on the slide and having a stop for limiting the outward movement by contact with a portion of the guide in which the cut-off moves, as set forth. 10th. The combination with the receptacle and the slide, of the plate adjustably mounted on the chamber, and having lateral projections for limiting the movement of the slide, as set forth. 11th. The combination with the receptacle, of the slide, movable in guides thereon, and the adjustable plate, having portions engaging grooves in the slide to limit the movement thereof, substantially as specified. 12th. The combination with the receptacle, of the slide, having a rack portion, the cut-off carried by said slide, the toothed wheel, pivoted to the outer wall of the chamber, and provided with a lever and curved slot, and the set screw working in said slot, substantially as and for the purpose specified.

No. 45,063. Hydraulic Elevator. (*Elévateur hydraulique.*)

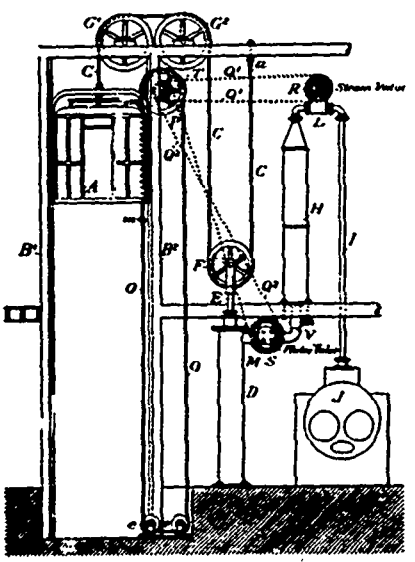


Fig. 1.

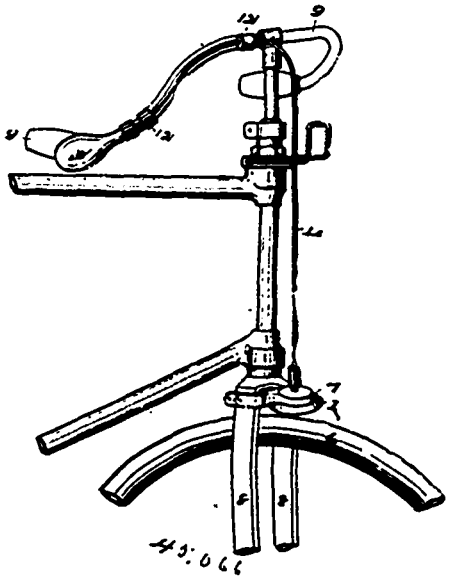
Cofran J. Hall, San Francisco, California, U.S.A., 13th January, 1894; 6 years.

Claim.—1st. In hydraulic hoisting and lowering machinery, a hydraulic cylinder placed vertically or horizontally, in combination with a receiver connected therewith, of such relative form, and at such height above the hydraulic cylinder, that the gravity of the fluid circulating between the hydraulic cylinder, and the receiver will compensate or counterbalance the weight of the cage and connected parts, except so much of this weight as is required to cause the cage to descend when unloaded, substantially in the manner described herein and illustrated in Fig. 1 of the drawings. 2nd. In hydraulic hoisting and lowering machinery, a hydraulic cylinder and a piston therein, both sides of which are acted upon by the fluid under pressure, with a valve or valves to control the flow of the water, and permit it to pass from one side of the piston to the other, the piston so arranged that the difference of pressure on its two sides, or on the outward and inward strokes, will equal and substitute a required counterweight for the cage and its connected parts, in the manner substantially as described herein and illustrated Fig. 2 and 3 of the drawings. 3rd. In hydraulic hoisting and lowering machinery, a hydraulic cylinder with distributing valves to permit the water pressure to act on one side, or on both sides, of the piston-head, a piston-rod, the diameter or area of which multiplied by the fluid pressure will equal the gravity of the cage, and its connected parts, and thus dispense with suspended or other counterweights for the cage, in the manner substantially as specified herein and illustrated in Fig. 2 and 3 of the drawings. 4th. In hydraulic hoisting and lowering machinery, a hydraulic cylinder and a piston moving therein, one side of the piston exposed to the constant pressure of circulated water, and the other side to a lesser pressure from the supply source, the latter acting in conjunction with the weight of the cage to produce the desired operating pressure each way, valves to control the flow of water from the supply source and to a waste pipe, independent pipes connecting to the two ends of the cylinder and the two sides of the piston, a body of circulating water connected to one end of the cylinder, and a supply of lesser pressure connected to the other end of the cylinder, so arranged that the weight of the cage or the dead load will make up the difference of pressure on the two sides of the piston, less what is required to overcome the friction of the machinery, substantially as herein described and illustrated in Fig. 4 of the drawings. 5th. In hydraulic hoisting and lowering machinery, a cylinder and a piston moving therein, independent pipes connecting to the two ends of said cylinder and to the two sides of the piston, as herein described, one pipe connecting to a tank containing circulated water, the tank so formed that the head and pressure of water therein will rise and fall, and the pressure vary so as to counterweight varying weight of the suspended portion of the rope or chain on which the cage is suspended, in the manner substantially as herein described and illustrated in Fig. 4 of the drawings. 6th. In hydraulic hoisting and lowering machinery, a hydraulic cylinder and a piston moving therein, pipes and connections for water, so arranged that one end of the cylinder and one side of the piston will be constantly in connection with the supply of water under pressure, the flow to and from this end of the cylinder being free and unimpeded in either direction, the other end of the hydraulic cylinder connected to the same source of water pressure, and provided with valves to control the flow outward and inward from the hydraulic cylinder, the hydraulic cylinder at each end, and the hydraulic piston at each side, connected to the water supply by separate and independent pipes, in the manner substantially as herein described and illustrated in Fig. 5 of the drawings. 7th. In hydraulic hoisting and lowering machinery, a hydraulic cylinder, one end of which is connected to and communicating with two vessels or tanks, each under pressure but of different degree, so the hydraulic piston may be subjected on the same side to the pressure in either vessel or tank, suitable pipes and valves to open connection between either vessel or tank and the hydraulic piston, as the latter may be raising or lowering a load, substantially in the manner herein specified and illustrated in fig. 6 of the drawings. 8th. In hydraulic machinery for hoisting and lowerig a hydraulic cylinder and piston connected by suitable pipes to two vessels or receivers; a valve or valves controlling communication between the hydraulic cylinder and the two vessels or receivers, in one of which is maintained pressure capable of performing the maximum duty required by the hydraulic piston, the other sustaining a variable pressure due to a descending load or weight acting on the hydraulic piston on its return stroke, thereby discharging the water in the hydraulic cylinder into the low-pressure vessel or receiver; a pump constituting the motive power, forcing water from one tank or receiver to the other, operating against the difference of pressure in the two, in the manner substantially as herein described and illustrated in Fig. 6 of the drawings. 9th. In hydraulic machinery for hoisting and lowering, a hydraulic cylinder and a single-acting piston therein; pipes connecting and forming communication from the hydraulic piston to two vessels or receivers, in which the difference of pressure on the water corresponds to the weight of a service load raised, so that any descending dead weight will be utilized in the vessel of least pressure, and be deducted from the duty of a pump supplying the motive power, in the manner substantially as herein specified and illustrated in Fig. 6 of drawings. 10th. In hydraulic machinery for hoisting and lowering, the primary force being derived from an elastic gas, steam or air; a main hydraulic cylinder connected to a receiver, the latter provided with an indicating float and announcing mechanism to guard against the water in the receiver, falling so low as to permit the steam or air to pass to the hydraulic cylinder, in the manner substantially as herein described and illustrated in Fig. 7 of the drawings. 11th. In hydraulic machinery for hoisting and lowering a main hydraulic cylinder connected to a receiver containing steam or air under pressure, an indicating or announcing float, or both, attached to the receiver, so as to show the height of the water therein, electric wires connecting to the float, so the circuit will be closed at some predetermined point, and by a gong or other apparatus give notice of the fall of water, in the manner substantially as herein described and illustrated in Fig. 7, of the drawings. 12th. In hydraulic machinery for hoisting and lowering, a main hydraulic cylinder connected to a water supply under pressure; a three-way piston valve to control the flow of water to and from the hydraulic cylinder, and from one end to the other thereof, the valve

actuated by pistons, a hollow supporting stem and primary controlling valves therein, in the manner substantially and for the purposes specified and described. 13th. In hydraulic machinery for hoisting and lowering a main cylinder and a controlling valve connected thereto, the latter having pistons and ducts whereby the water is admitted, circulated and discharged by the rectilinear movement each way of a primary central controlling valve placed in a tube formed integrally with and supporting the actuating and water-controlling pistons of the main valve, in the manner substantially as shown and described. 14th. In hydraulic machinery for hoisting and lowering a main controlling valve, having inlets and outlets as shown, actuating pistons to move the valve, and a retarding or regulating piston to determine the maximum flow and speed of the main hydraulic piston, and connected machinery when the load or resistance exceeds the primary moving force, in the manner substantially and for the purposes specified.

No. 45,066. Brake Apparatus for Vehicles, &c.

(*Appareil pour freins de voitures, &c.*)



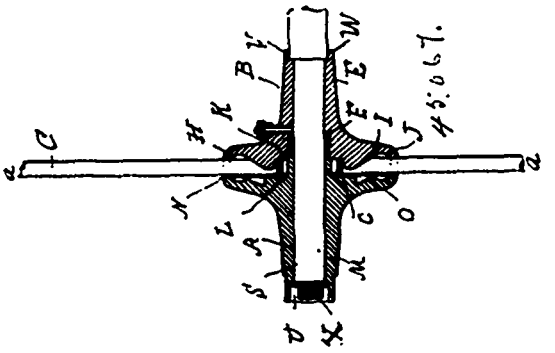
John G. A. Kitchen, Ardwich, Lancaster, England, 15th January, 1894; 6 years.

Claim.—1st. A brake for a cycle or other vehicle comprising an inflatable brake shoe, and means for forcing fluid into said shoe. 2nd. A brake for a cycle or other vehicle, comprising a hollow brake shoe having a flexible acting surface capable of being distended by internal fluid pressure, and means for forcing fluid into said shoe. 3rd. A brake for a cycle or other vehicle comprising a hollow fluid tight contractible brake shoe, and means for forcing fluid into said shoe. 4th. A pneumatic brake for a cycle or other vehicle, comprising an inflatable brake shoe and an air compressor in communication with the interior thereof. 5th. A pneumatic tyre for a cycle or other vehicle, comprising a hollow brake shoe, the acting surface of which is capable of being forced outward by internal air pressure, and a collapsible air compressor in communication with the interior of said shoe. 6th. A pneumatic brake for a cycle or other vehicle, comprising a hollow expansible brake shoe, and a collapsible air vessel in air-tight communication therewith, substantially as described for the purpose specified. 7th. As a new article of manufacture, a pneumatic brake consisting of an air-tight flexible tube terminating at one end in an air-tight contractile hollow brake shoe, and at the other end in an air-tight collapsible vessel. 8th. In a pneumatic brake for a cycle or vehicle, the combination of a hollow contractile brake shoe formed of flexible material, a compressible air ball, an air-tight tube connecting said shoe and ball, and a carrier adapted to be fixed to a suitable part of the said cycle or other vehicle and to hold said shoe in position for use, substantially as herein described. 9th. In a cycle, the combination with the cycle frame of a pneumatic brake comprising a pneumatic brake shoe, a holder fixed to said frame and adapted to hold said brake shoe in position above one of the cycle wheels, a compressible air vessel arranged in proximity to the steering handle of said cycle, and a suitably arranged tube in air-tight connection with said brake shoe and air vessel, substantially as herein described.

No. 45,067. Wheel. (*Roue.*)

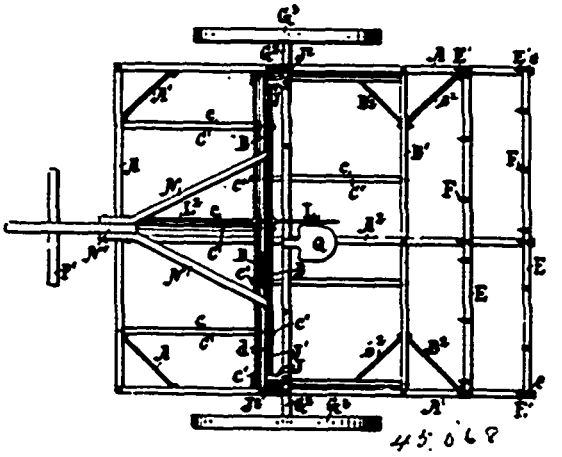
John Bell, Toronto, Ontario, Canada, 15th January, 1894; 6 years.

Claim.—1st. In a wheel the combination of the hub sections A and B, each of said hub sections having a bore formed therethrough, the hub section A having a screw threaded collar K adapted to enter a recess F in the hub section B to secure together the two hub sections, each of said hub sections having an enlarged flange, the flange of the hub section B having on its side face a series of lugs



adapted to hold the inner ends of the spokes, the spokes, the inner ends of which are held by the said lugs and the rim, to which are secured the outer ends of the said spokes, substantially as set forth. 2nd. In a wheel the combination of the rim, the substantially V-shaped spokes, the outer ends of the spokes secured to the rim, the hub comprised of two hub sections, each of said hub sections provided with a bore, an enlarged flange for each of said hub sections, the inner side face of the flange of one of the said hub sections provided with a series of lugs which are adapted to fit into the V-shaped end of the spokes, and hold the inner ends of the spokes in place, one of the said hub sections having a screw threaded collar adapted to fit into a screw threaded recess in the other of the hub sections, substantially as set forth. 3rd. In a metallic wheel the combination of the rim, the substantially V-shaped spokes, the outer ends of which are secured to the rim, a wheel hub comprised of two hub sections, each of said hub sections being provided with a bore, a flange for each of said hub sections, the inner face of each of said flanges having a cavity formed therein, a series of lugs formed on the inner side face of the flange of one of said hub sections, the said lugs adapted to fit into the V-shaped ends of the spokes, a groove formed in the metal surrounding the bore of each of the hub sections, a bushing having outwardly radiating flanges adapted to fit into said grooves to hold the bushing within the bore, substantially as set forth.

No. 45,068. Cultivator. (*Cultivateur.*)

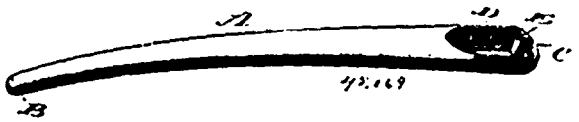


Edward A. Cardinal, and James Love, New Castle, Washington, U.S.A., 15th January, 1894; 6 years.

Claim.—1st. In a cultivator, the combination of an axle, vertically slotted rods depending therefrom, a tooth carrying frame secured to the rods and movable in its vertical slots, a shaft revolubly journalled in bearings secured to the axle, a chain connecting the shaft and frame by which the said frame is lifted, and an operating lever fixed to the shaft, substantially as described. 2nd. In a cultivator, the combination of an axle, vertically slotted rods rigidly secured to the axle and depending therefrom, a tooth carrying frame provided with studs fitting in the vertical slots, a shaft journalled in bearings fixed to the axle, segments fixed to the shaft and having chains operating therewith and with the toothed carrying frame, by which chain the frame is moved in the vertical slots of the rods, and an operating lever fixed to the shaft, substantially as described. 3rd. In a cultivator, the combination with the frame or body thereof, of a tooth-bar, U-shaped staples, one arm of which fits loosely in openings in the tooth-bar, and bolts for removably securing the said

tooth-bar in place, whereby upon removing the bolts, the tooth-bar may be swung from one arm of the staples to the other arm, and its teeth disengaged from the ground, substantially as described. In a wheel cultivator, the combination of an axle, rods depending therefrom, a body portion in sliding connection with said rods, a shaft journalled in boxes adjacent to the axle, means on the shaft by which the body portion may be raised or lowered, a series of revoluble rods journalled in the body portion, bolts fixed to the rods, levers for rocking and locking said rods, one or more beams located on the body, teeth fixed to the beams, and semi-circular bolts for securing the beams to the body, by which the said beams may be swung or revolved, so as to change the disposition of the teeth, substantially as described. 5th. In a cultivator, the combination of an axle, slotted rods depending therefrom, a body portion located below the axle, lugs on the body portion arranged to slide in the slots in the rods, a shaft journalled in boxes adjacent to the axle, segments on the shaft, chains connected to the segment and body, a lever by which the shaft is rocked, a number of rods journalled in the body portion, blades or knives secured thereto, links fixed to the rods, beams to which the remaining ends of said links are pivotally connected, levers by which the rods may be rocked, pawl and ratchet mechanism operating in conjunction with the levers, one or more laterally extending beams located on the body portion, teeth fixed thereto, semi-circular, bolts by which the said beams are secured to the body, and removable bolts connected to the beams and body, substantially as described.

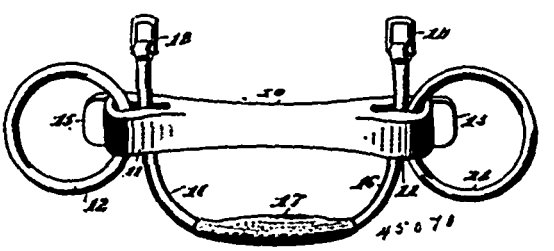
No. 45,069. Needle for Grain Binders.
(*Aiguille pour lieuse à grain.*)



Charles Paul, Sidney, Ohio, U.S.A., 15th January, 1894; 6 years.

Claim.—As an improved article of manufacture, a binding needle tapered from end to end and at its larger end formed with a depression extending in the direction of the length of the needle and made conical with the apex nearest the point of the needle and its base at the other end forming a shoulder to retain the knotted end of the binding cord and said end formed with a slot at right angles to the length of the depression, all substantially as shown and described.

No. 45,070. Bridle Bit. (*Mors de bride.*)



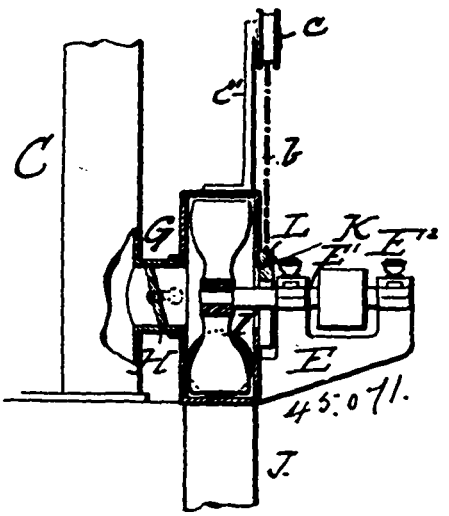
Robert Sears, Newark, New Jersey, U.S.A., 15th January, 1894; 6 years.

Claim.—1st. The combination with a bridle bit having elongated end loops or slots, at the ends of its mouth piece, of a strap adapted to extend beneath the chin of a horse and having its end portions projecting up through the bit loops to render freely therein and adapted to connect at their upper ends with a check rein, substantially as shown and described. 2nd. The combination with the bridle bit having elongated end slots or loops, of a chin strap adapted to extend beneath the chin of a horse and having a central pad to fit against the chin, the strap being held to move freely in the loops and having its ends adapted for attachment to a check rein, substantially as shown and described. 3rd. The combination with a bridle bit having end loops or slots which receive the rein rings, of a chin strap having its end portions extending up through and rendering freely within the said loops and inside of the rings, and an overdraw check, secured to the upper ends of the said chin straps, substantially as shown and described. 4th. The combination in a bridle bit, of a mouth bar having elongated end slots or loops, rein rings received in said slots, and a jaw strap having its ends passing freely through said slots and adapted for connecting with a check rein, substantially as shown and described.

No. 45,071. Furnace. (*Fournaise.*)

Milton Walter Keene, Dallas, Texas, U.S.A., 15th January, 1894; 6 years.

Claim.—1st. The combination, with a furnace, a smoke-stack, and a pipe extending from one to the other, of a chamber formed in the pipe, a rotary fan therein, said chamber having an opening for air formed around the axle of the fan, a valve pivoted at one end at a point adjacent to the axle of the fan, and provided with an open



slot whereby it straddles the axle, a flexible device for raising the free end of the valve, and said valve adapted to drop by gravity, and rest upon the axle when in its extreme depressed position, substantially as set forth. 2nd. The combination, with a furnace or other combustion device, a smoke-stack, and a return-pipe leading from the stack into the furnace or combustion device, of a fan casing in communication with the stack and return pipe, a rotary fan in the fan-casing, and a web or partition for dividing the fan-casing into two parts, substantially as set forth. 3rd. The combination, with a furnace or other combustion device, a stack, return-pipe, and a fan-casing or enlargement into one side of which a pipe leads from the stack and out of one edge of which the return-pipe leads, of a rotary fan located inside of the fan-casing or enlargement, a web or partition for dividing the fan-casing into two parts, and means for controlling the amount of air, and products of combustion admitted to the fan, substantially as set forth. 4th. The combination, with a smoke-stack, and a return-pipe, of a fan-casing having an air opening in one side, in open communication with the stack from the opposite side, and in communication with the return-pipe from one edge, a rotary fan in the valve-casing, and a partition or web for dividing the fan-casing into two compartments, substantially as set forth.

No. 45,072. Art or Process of Manufacturing Leather Ropes and Belts. (*Art ou procédé de fabrication de cordes ou courroies en cuir.*)

Harry Ellis, St. Catharines, Ontario, Canada, 15th January, 1894; 6 years.

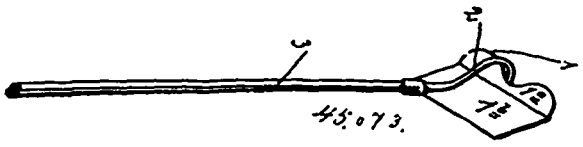
Claim.—1st. In the preparation of hides or strings for the manufacture of leather ropes or belts, the use of a tanning solution consisting of bichromate of potassium 2 to 5 parts, sulphate of alumina 8 to 10 parts, rock salt 10 to 12 parts, water 200 parts, substantially as described. 2nd. In the preparation of hides or strings for the manufacture of leather ropes or belts, the use of a tanning solution consisting of chrome alum 10 to 20 parts, sulphate of alumina 8 to 10 parts, rock salt 10 to 12 parts, water 200 parts, substantially as described. 3rd. In the preparation of hides or strings for the manufacture of leather belts or ropes, the use of the chemical solution hereinbefore described at a temperature of 340° F. or such lower temperature as may be desirable for the purposes herein set forth. 4th. In the preparation of hides or strings for the manufacture of leather ropes or belts, the use of a solution consisting of glycerine 3 or more parts, water 200 parts, substantially as described. 5th. In the preparation of hides or strings for the manufacture of leather ropes or belts, the use of a solution consisting of carbolic acid 1 or more parts, water 100 parts, substantially as described. 6th. In the manufacture of leather ropes or belts, strings of leather reduced to a rounded cross section by being drawn through a die plate or cylinder having sharpened edges, substantially as described. 7th. In the manufacture of leather ropes, ropes laid up of strands composed of leather strings of rounded cross section continuous without join or splice in their entire length, as hereinbefore substantially described. 8th. In the manufacture of leather belts, belts woven with leather strings of rounded cross section, the warp being of leather, or other strings in one continuous length without join or splice, as hereinbefore substantially described.

No. 45,073. Hoe. (*Houe.*)

Menzo A. Smith, Cooperstown, New York, U.S.A., 15th January, 1894; 6 years.

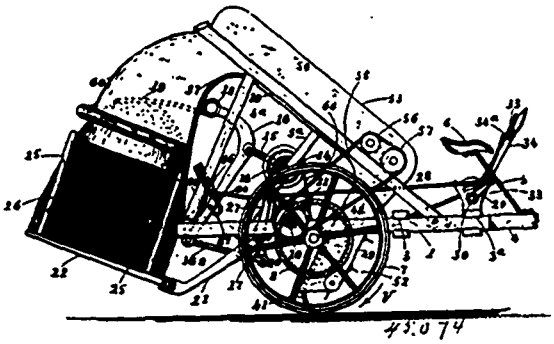
Claim.—A hoe, consisting of a handle, a goose neck shank, and a blade consisting of a part 1^a, attached to said shank and hung

at substantially right angles to the longitudinal axis of the handle,



and a cutting part 1^b, set at an acute angle to the longitudinal axis of said handle and having a plain straight cutting edge.

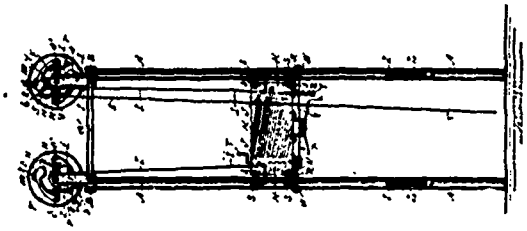
No. 45,074. Machine for Raking and Cocking Hay.
(*Machine pour rateler et mettre le foin en meule.*)



Andrew G. Park and William A Dexter, Wesley, New York, U.S.A., 15th January, 1894; 6 years.

Claim.—1st. In a hay cocking machine, the combination, with an elevator, of a receptacle pivotally secured to the rear of the machine, the bottom of which is [illegible]tted, and the sides are flexible and provided with upright bars, the front and rear of said receptacle being open, substantially as set forth. 2nd. In a hay-cocking machine, the combination with an elevator and a receptacle, of a spout projecting from the rear end of the elevator over the receptacle, a reciprocatory cross-bar between the elevator and the receptacle, flexible tines secured thereto, which are movable back and forth into and out of the spout, and means for stopping the tines within the spout and holding them there when the receptacle is being unloaded, substantially as set forth. 3rd. In a hay-cocking machine, the combination with an elevator and a receptacle, of a rock-shaft for raising and lowering the receptacle, a reciprocatory fork between the elevator and the receptacle, a rotary shaft adapted to be intermittingly operated by the operating mechanism of the machine, an arm rigidly secured to the rock-shaft for operating the receptacle, and means for connecting and disconnecting the rotary shaft, with the operative mechanism simultaneously with the operation of the rock-shaft, substantially as set forth. 4th. In a hay cocking machine, the combination with a frame, of an elevator mounted thereon, and a receptacle pivotally secured to the rear portion of the frame, a reciprocatory fork between the elevator and the receptacle, two pulleys on the frame, one of which is connected with the operating portion of the machine and the other one is connected with the fork, a belt upon the pulleys, a shaft in the machine provided with an arm rigidly secured thereto, the free end of which arm is provided with a tightening pulley and with a connecting rod, for connecting with the belt and with the fork respectively, substantially as set forth. 5th. In a hay cocking machine, the combination with the hay cocking fork of a tripping mechanism for catching the hay cocking fork and holding it stationary while the hay receiving platform or fork is being lowered and the hay cock being discharged, for the purposes of preventing the continually falling hay from dropping on the completed retiring hay cock, substantially as described. 6th. A hay cocking machine, consisting of the following elements, a frame supported upon wheels provided with a gathering rake for taking the hay as the machine advances, in combination with an elevating mechanism operated by a chain and sprocket-gear for taking up and carrying the hay to the rear of the machine to a hay cocking fork, mechanism substantially as above described, for operating the hay cocking fork and giving it an up and down and forward and back reciprocating movement, a forked platform to receive the hay as it is being deposited by the hay cocking fork, and a means, substantially as above described, for depositing the hay cock upon the ground when completed. 7th. In a hay cocking machine, a receiving table or fork pivoted to a shaft so as to be raised or lowered, and mechanism, substantially as above described, for raising or lowering it in combination with a frame or casing in which the hay is deposited. 8th. In a hay cocking machine, a hay cocking fork having its upper portion pivoted to a crank connected with a shaft mounted in bearings on the frame of the machine, and its lower end pivoted to a connecting rod pivoted to a stationary support on the machine frame, and a means, substantially as described, for operating the crank and thereby giving the proper movements to the hay cocking fork, as described.

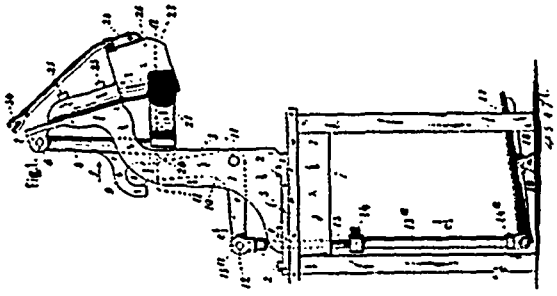
No. 45,075. Automatic Fire Escape.
(*Sauveteur d'incendie automatique.*)



Isaac Mills, and John Youngson, both of Hamilton, Ontario, Canada, 15th January, 1894; 6 years.

Claim.—1st. The combination of the vertical tubes A, provided at their upper ends with rigid collars B, having vertical standard bearings E, and cross-braces c, the shafts F, cable-pulleys H, cables I, with weights L, circular-casings *m*, provided with cross-arms *n*, with friction governors *o*, pivoted at o^1 thereto, and the receptacle *k*, provided with guide rollers *s*, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the vertical tubes A, having upper collars B, with standards E, and casings *m*, the cross-braces c, the through shafts F, with cable-pulleys H, and cables I, the cross-arms *n*, and the friction governors *o* pivoted thereto, the receptacle *k*, having guide rollers *s*, and semi-circular inner guides R, the vertical lever T, applied to eccentrics U, rods V, and outer clips *w*, and the independent cable 5, attached to lever of friction-arms 6, substantially as and for the purpose hereinbefore set forth. 3rd. In an automatic fire escape, the sliding receptacle *k*, having hinged-door, and with guide-rollers *s*, guides R, vertical tubes A, the brake lever T, supplied with the eccentrics U, rods V, and outer clips *w*, the ground cushion spring X, the floor bolt Y, with spring Z, in combination with the described rotary mechanism in casings *m*, located on top of said tubes, substantially as and for the purpose hereinbefore set forth.

No. 45,076. Machine for Forming Turn-Down Linen Collars. (*Machine pour donner la forme aux cols rabattus.*)



Adelbert Warren Cummings, Dunkirk, New York, U.S.A., 15th January, 1894; 6 years.

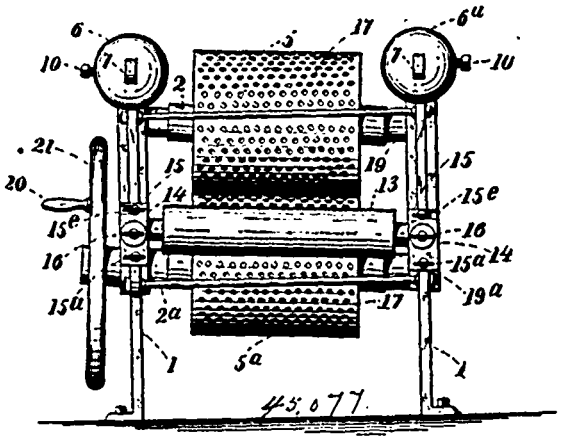
Claim.—1st. In a machine for forming collars, the combination with a supporting frame, of a hollow stationary former rigidly secured to the upper front portion of the frame, a means substantially as above described for heating it; a bar pivoted to the top at the rear of the supporting frame, and carrying at its lower end the forming jaws, and at its rear side a curved downwardly projection-hook portion, an angular-arm pivoted between the two side frame pieces, and having its upper end project into the hook portion, and its lower end pivoted to a substantially vertical-rod connected with a pivoted foot step for operating it, as set forth. 2nd. In a machine for forming collars, the combination with the supporting frame, of a hollow former rigidly secured to the upper front portion of the same, a swinging-arm pivoted to the upper rear portion of the frame, collar forming jaws secured to the lower end of the swinging-arm, a backwardly and downwardly projecting-hook portion secured to the back of the swinging-arm, an angular arm pivoted to the frame of the machine, and having its rounded upper end fitted into said hook portion, and its rearwardly projecting lower end pivoted to a connecting-rod, said connecting-rod having its lower end pivoted to the lower end of the pivoted foot-step, whereby the required forward movement of the forming jaws to form a collar is given by a pressure downward at the front end of the foot-step, and the weight of the several parts cause the forming jaws to move away from a collar former when the pressure on a foot-step is removed, substantially as described.

No. 45,077. Machine for Squeezing the Starch out of Collars. (*Machine pour désempeser les cols.*)

Adelbert Warren Cummings, Dunkirk, New York, U.S.A., 15th January, 1894; 6 years.

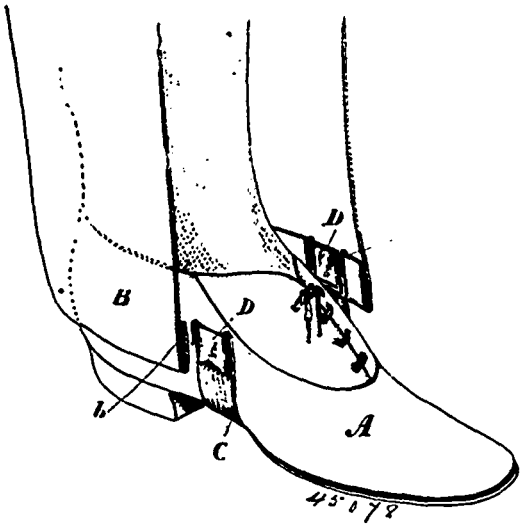
Claim.—1st. In a machine for squeezing the starch out of collars, the combination of two hollow perforated squeezing rollers mounted

in boxes in a suitable holding frame so that one roller rests on the other, two pivoted counterweighted arms for holding the upper



roller down in contact with the lower roller with a yielding force, a covering of cloth over the perforations in the face of the squeezing rollers, and a means for turning said rollers, substantially as described. 2nd. In a machine for squeezing the starch out of collars, the combination of two hollow perforated squeezing rollers mounted in boxes in a suitable holding frame, a means for holding said rollers together with a yielding force, a covering of cloth over the perforations in the face of the squeezing rollers, an elastic roller mounted in boxes in the frame of the machine and made adjustable to or from one of the squeezing rollers, and a means for turning said rollers, substantially as described.

No. 45,078. Straps for Trousers. (*Sous-pied de pantalon.*)



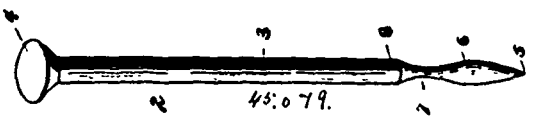
Walter Harland Smith, Toronto, Ontario, Canada, 15th January, 1894; 6 years.

Claim.—1st. A strap for trousers comprised of an elastic band on to the end of which is secured sharpened hooks, the strap being designed to be brought under the arch of the shoe, and the hooks inserted in the stem of the trousers, as and for the purpose specified. 2nd. The combination with the elastic band C, of the end plates D, U-shaped wires *c*, to which the ends of the elastic band are secured, the sides of the wires being passed through the turned in edge of the plates D, and being turned outwardly at the top so as to form sharpened hooks at each side of the top of the end plates, as and for the purpose specified.

No. 45,079. Nail for Fastening Hides.
(*Clous pour assujétir les peaux.*)

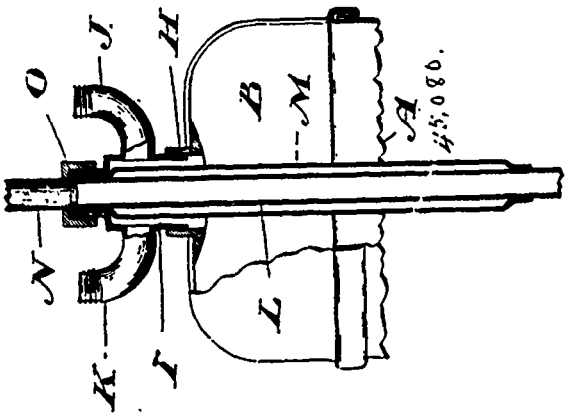
Theodore L. Baumgarten and Farrand C. Prindle, both of Hornellsville, New York, U.S.A., 16th January, 1894; 6 years.

Claim.—A nail hanger of the class described, consisting of a straight shank portion provided at one end with a head, and at its other end reduced into a contracted neck, and provided with a



rounded circumferential enlargement or bulge disposed beyond the neck and tapered into a rounded point, substantially as described.

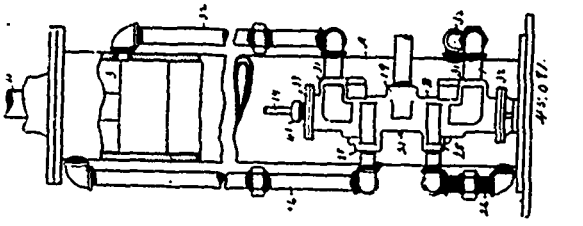
No. 45,080. Boiler for Ranges.
(*Bouilloire pour cuisinières.*)



Septimus Robert Campbell and William Coulter, both of Toronto, Ontario, Canada, 16th January, 1894; 6 years.

Claim.—1st. A joint for connecting the head of a range boiler to the cylindrical portion thereof, formed by so shaping the edges of the head and cylindrical portion that they may in the first instance be brought together to form a projecting rim, one edge extending beyond the other, the projecting edge then being turned over the other and the joint completed by folding the rim in the same direction as the first folk, and turning it down flat on the head or the cylindrical portion, as the case may be, substantially as and for the purpose specified. 2nd. In a range boiler, a combination cold water inlet and outlet, comprising a chamber connected to the boiler and having an outlet pipe connected thereto in combination with an inlet pipe extending through the said chamber into the boiler, and an outer pipe forming an air space about the inlet pipe, substantially as and for the purpose specified. 3rd. In a range boiler, a combination cold water inlet and outlet, comprising a chamber connected to the boiler, and an outlet pipe and vacuum gauge connected thereto, in combination with an inlet pipe, extending through the said chamber into the boiler, and an outer pipe forming an air space about the inlet pipe, substantially as and for the purpose specified. 4th. In a range boiler, the nipple G, having an inside flange thereon brazed to the boiler, substantially as and for the purpose specified. 5th. In a range boiler, the outlet E, connected to the end of a boiler, in combination with the nut F, and the pipe C, having a flange D, formed on its end, substantially as and for the purpose specified. 6th. In a range boiler, the cylindrical portion A, having the longitudinal joint therein formed by chamfering the edges, to be joined and then brazing them together to form a straight joint, substantially as and for the purpose specified. 7th. The process of forming a longitudinal joint in a range boiler, which consists in clamping together the opposite sides of the sheet of metal forming the cylindrical portion of the boiler, the parts of the sheet below the clamp being shaped to form a small tube with the edges of the sheet overlapping each other, brazing material then being placed in the tube, and the joint brazed, substantially as and for the purpose specified.

No. 45,081. Piston Valve. (*Tiroir cylindrique.*)



Samuel Otis Jones and George Henry Atwood, both of Stillwater, Minnesota, U.S.A., 16th January, 1894; 6 years.

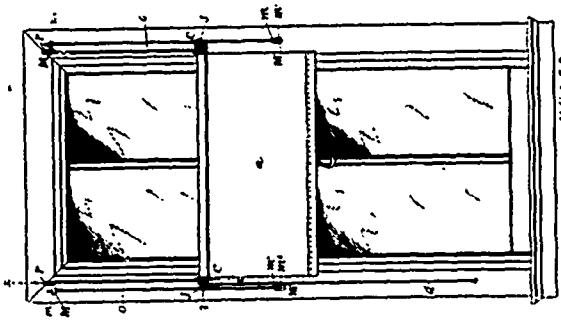
Claim.—1st. The combination with the valve chest having inlet and outlet live steam ports, of a series of inlet and outlet exhaust

ports arranged alternately and equi-distant from each other in a common plane at right angles with the axis of the chest, and the piston valve fitted to said chest and having a series of similar copes cut out of its surface near each end, and so arranged that each inlet and outlet exhaust port when opened by the superposing of the copes, shall communicate equally with two copes, substantially as described. 2nd. The combination with the cylinder, of the piston valve chest having a common, centrally arranged inlet steam port, series of outlet steam ports, and inlet and outlet exhaust ports on each side of said inlet steam port, the valve fitted to said chest exteriorly cut away to form communicating passages between the inlet and outlet steam ports and the inlet and outlet exhaust ports, when in proper position, the dimensions of said valve and the position of said ports being such that when the valve stands in mid position communication is cut off between the inlet and outlet steam ports, while communication remains between the series of inlet and outlet exhaust ports at each end of the chest, the pipe connecting each series of outlet steam ports with one end of the cylinder, and the pipe connecting one series of inlet exhaust ports with the same end of the cylinder at a slightly greater distance from the end of the cylinder, whereby when the valve stands in mid position and the piston in the cylinder is moved by the leakage of steam past the valve and into the cylinder so as to open communication with the exhaust pipe, such steam is thereby allowed to exhaust without further moving the piston, substantially as described. 3rd. The combination with the piston valve chest, of the valve working therein and extending over all of the ports in the chest so as to cut off communication between them and the chest beyond the ends of the valve, and the valve controlled air vents in the wall of the chest near each end thereof, whereby any desired amount of cushion may be provided for the valve, substantially as described. 4th. The combination with the piston valve, of the chest therefor having inlet and outlet steam ports and inlet and outlet exhaust ports so arranged that the exhaust ports at one end of the chest are full open before the steam ports in the other end of the chest are opened, and the adjustable stop at each end of the chest for limiting the throw of the valve, whereby the live steam port area may be limited at will without diminishing the exhaust port area, substantially as described. 5th. The combination with the valve chest having a plurality of inlet exhaust steam ports, and alternating outlet exhaust steam ports, all arranged equi-distant from each other, in a plane at right angles with the axis of the chest, of the piston valve having the same number of similar copes, cut around its surface as there are inlet and outlet exhaust ports, and so arranged that each will communicate equally with two adjacent copes, substantially as described. 6th. The combination with the piston valve chest, having steam inlet and outlet ports, and inlet and outlet exhaust ports on each side of the steam inlet ports, of the valve fitted thereto and adapted as reciprocated to open and close all said ports, said inlet and outlet exhaust passages standing normally open when the steam ports are closed, and the inlet and outlet ports at one end of the chest being full open before the steam ports at the other end of the chest begin to open, substantially as described. 7th. The combination with the piston valve chest having a side inlet steam port, and outlet steam ports, and inlet and outlet exhaust ports intermediate of said inlet steam port and each end of the chest, of the valve fitted thereto, and exteriorly cut away to furnish communicating passages between the inlet and outlet steam ports, and between the adjacent inlet and outlet exhaust ports, and extending over all said ports so as to cut off all communication between said ports and the chest, beyond either end of the valve, substantially as described. 8th The combination with the piston valve chest, having lateral inlet and outlet steam ports, and lateral inlet and outlet exhaust ports, of the valve fitted thereto and exteriorly cut away to furnish, when placed in proper position, communicating passages between the inlet and outlet steam ports and inlet and outlet exhaust ports, while at all times preventing communication between any of said ports and the chest beyond the valve, an adjustable stop at each end of the chest for regulating the throw of the valve, and the valve controlled air vents at each end of the chest for controlling the amount of cushion for the valve, substantially as described. 9th. A piston valve having narrowed or cut-away parts for exhaust passages, packing ring grooves, and passages connecting said grooves with said exhaust passages, substantially as described.

No. 45,082. Curtain Fixture. (*Attache de rideau.*)

Charles E. Goodrich and James B. Wheeler, both of Pioche, Nevada, U.S.A., 16th January, 1894; 6 years.

Claim.—1st. In a curtain fixture, the combination with opposite parallel guide rods, the spring actuated shade roller, winding wheels attached to the extremities of the shaft of said roller and having projecting spindle portions, supporting collars loosely receiving said projecting spindle portions, and having slots working over said guide rods, one of said collars having an automatic check device for one of the winding wheels, and flexible supporting ribbons winding and unwinding at one end on said winding wheels, substantially as set forth. 2nd. In a curtain fixture, the combination with the spring actuated and pawl arrested shade-roller, of winding wheels attached to the extremites of the shaft of said roller, and of less diameter than the same, said winding wheels having projecting spindle portions and one of which is further provided with an outer projecting notched hub, collars loosely receiving the spindle portions of the winding wheels and having outer slotted ends, one of said collars being further provided with a stop pawl adapted to engage said notched hub of one of the winding wheels, the flexible supporting ribbons secured stationary at their upper ends, and having their



lower ends winding and unwinding on the winding wheels, and the opposite stationary guide rods receiving the slotted ends of said collars, substantially as set forth. 3rd. In a curtain fixture, the combination with a spring actuated shade roller having the ordinary arresting pawls at one end, of winding wheels attached to the extremities of the shaft of said roller and having outer projecting spindles, one of said winding wheels being further provided at both sides thereof with notched pawl hubs, the inner one of which is adapted to be engaged by the roller arresting pawls, supporting collars loosely receiving the outer spindle portions of the winding wheels, and having discs at their inner ends and outer slotted ends, a stop pawl pivoted to one side of one of the collar discs and adapted to engage the outer notched pawl hub of one of the said winding wheels, the flexible supporting ribbons winding and unwinding on said winding wheels, and the opposite stationary guide rods loosely receiving the slotted end of said collars, substantially as set forth. 4th. In a curtain fixture, the combination with the spring actuated shade roller and its shaft therein, of the opposite bearing plates clamped in position to opposite ends of the roller, the opposite winding wheels having opposite spindle portions projecting from opposite sides thereof, the inner of said spindle portions being journalled in said opposite bearing plates, and having at their inner extremities inside of the roller, sockets which fit on to the extremities of the roller shafts, attaching sleeves embracing the inner spindle portions at one side of the opposite bearing plates, the supporting collars loosely receiving the outer spindle portions of the winding wheels and one of which carries a check device for one of the winding wheels, the flexible supporting ribbons, and the opposite stationary guide rods loosely receiving the outer ends of said supporting collars, substantially as set forth. 5th. In a curtain fixture, the combination with an ordinary spring actuated shade roller, of winding wheels attached to the outside extremities of the shaft of said roller, one of said winding wheels having pawl notches independent of the roller pawls, a disc supported loosely in a non-rotative position alongside of the notched winding wheel, and having a pawl adapted to engage said pawl notches and the flexible supporting ribbons, substantially as set forth. 6th. In a curtain fixture, the combination with the adjustable shade roller carrying winding wheels at one end, of the stationary grooved supporting discs having transverse notches intersecting their grooves, and the flexible supporting ribbons winding and unwinding on said roller winding wheels, and adapted to have their upper ends wrapped in the grooves of said discs and their extremities engage the notches thereof, substantially as set forth.

No. 45,083. Electric Heating Apparatus.

(*Appareil électrique de chauffage.*)

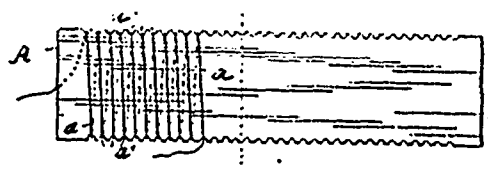


Fig. 1.

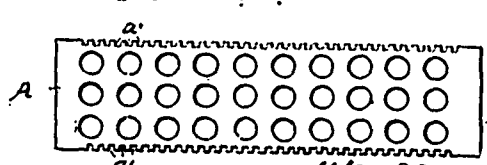


Fig. 2.

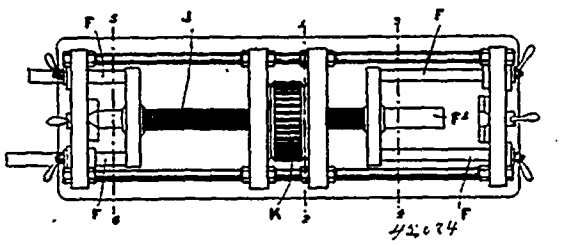
45083

Mark W. Dewey, Syracuse, New York, U.S.A., 16th January, 1894; 6 years.

Claim.—1st. The combination in an electric heater, of a thin body of suitable material, with its sides or faces having the greatest surface area plain or ungrooved, notches or indentations in and extending across one or more of its edges, and a wire forming part of

an electric circuit wrapped around said body across both faces thereof, and lying in said notches, as and for the purpose described. 2nd. The combination in an electric heater, of a slab of insulating material, with its sides or faces having the greatest surface area plain or ungrooved, notches or indentations in two of its opposite edges, and a wire forming part of an electric circuit, wrapped around said slab across both faces thereof and lying in said notches, as and for the purpose described. 3rd. The combination in an electric heater, of a thin body of suitable material, perforations extending through said body between the faces having the largest surface area, notches in two of its opposite edges, and a wire forming part of an electric circuit wrapped around said body across both faces thereof, and lying in said notches, as and for the purpose described. 4th. The combination in an electric heater, of a plurality of slabs of insulating material having plain or ungrooved sides or faces arranged side by side with air spaces between, means to hold said slabs apart, notches in and across the edges of the slabs, and wire forming part of an electric circuit wrapped around each of slabs across both faces thereof, and lying in said notches as set forth. 5th. The combination in an electric heater, of a plurality of slabs of insulating material without grooves in and extending across their sides or faces, arranged side by side with air spaces between, means to hold said slabs apart, notches in the edges of the slabs, wire forming part of an electric circuit wrapped around each of said slabs across both faces thereof, and lying in said notches, and a suitable casing enclosing the slabs, as set forth. 6th. The combination in an electric heater, of a plurality of thin slabs without grooves therein arranged side by side with air spaces between and facing each other, means to hold said slabs apart, notches in the edges of the slabs, wire forming part of an electric circuit wrapped around each of said slabs, and lying in said notches, and a perforated or open-work casing enclosing said slabs as set forth. 7th. The combination in an electric heater, of a thin body of suitable material, notches in two of its opposite edges, the notches on one edge being placed between the notches on the other edge or not opposite each other, and a wire forming part of an electric circuit wrapped around said body, across both faces thereof, and lying in said notches, as and for the purpose described. 8th. The combination in an electric heater, of a thin body of suitable material having its largest surface area sides or faces plain or without grooves running from edge to edge across the faces, and an exposed wire forming part of an electric circuit wrapped around said body across both faces thereof, as and for the purpose described. 9th. The combination in an electric heater, of a core of suitable material, supports for the core at the ends thereof, an exposed wire forming part of an electric circuit wound around said core, and a perforated or open-work casing around the core and wire. 10th. The combination in an electric heater, of a thin body of suitable material, having its sides or faces having the largest surface area plain or ungrooved, an exposed wire forming part of an electric circuit wrapped around said body across both of said faces, and suitable means on or in the edges of the body to hold or receive the wire.

No. 45,084. Machinery for the Manufacture of Shells, Vessels and Tubes. (*Machine pour la fabrication de coquilles, vaisseaux et tubes.*)



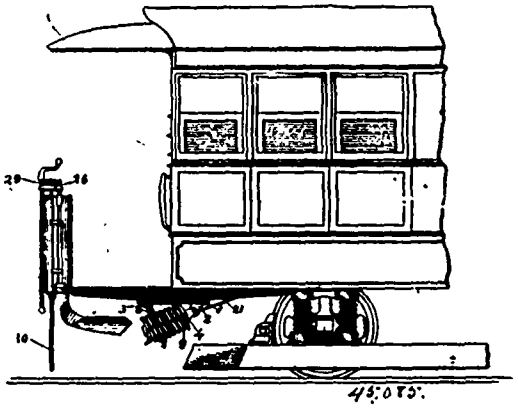
Benjamin Hewitt and Robert Wootton, both of Birmingham, England, 16th January, 1894; 6 years.

Claim.—In machinery for the manufacture of shells, vessels and tubes, the self-contained die D, and pressure plate E, substantially such as herein set forth and shown. 2nd. In machinery for the manufacture of shells, vessels and tubes, the combination die holder and pressure plate E¹, with joint and fastening, substantially such as and for the purpose herein set forth and shown. 3rd. In improvements in machinery for the manufacture of shells, vessels and tubes, the shaped dies or shaped rams, substantially such as and for the purpose herein described and shown.

No. 45,085. Pilot for Street Railways. (*Pilot pour chars de rue.*)

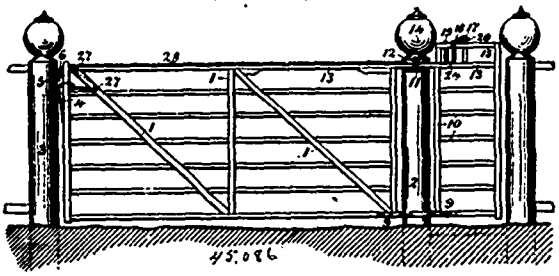
Charles W. B. Lyall and Walter H. Avis, both of Toronto, Ontario, Canada, 16th January, 1894; 6 years.

Claim.—1st. In a safety pilot, the combination of the brackets secured to the under side of the car, the cylinders having a spiral spring in each and hinged at their rear ends to said brackets, and the spiral springs connecting the said brackets and cylinders together near the opposite ends from said hinges, substantially as shown and described. 2nd. In combination, the brackets secured beneath the car platform, the cylinders hinged to said brackets by their rear ends, the spiral springs at the front ends, to support said



cylinders, the spiral springs within the cylinders, and a head within each cylinder and operated by said springs therein, substantially as shown and described. 3rd. In combination, the brackets secured as specified, the cylinders jointed at one end to said brackets, the springs supporting said cylinders at the front end, springs within said cylinders, a head within each cylinder and operated by one of said springs, and the lazy tongs or extensible lattice arms connected to and operated by said heads within the cylinders, substantially as shown and described. 4th. In combination, the brackets secured as specified, the cylinders jointed at one end to said brackets, the springs connecting the cylinders and the brackets, within the spring, the cylinders, heads within said cylinders and operated by the springs, the extension arms connected to and operated by the cylinders, and the netting carried between said arms, having a shoe on the outer end of each to engage the rails of the road, substantially as shown and described. 5th. In combination, the extension arms or tongs, supported as specified, the chains connected to a rod on said heads within each cylinder, and connected as specified to a hand-wheel to compress the springs encircling said rods, substantially as shown and described. 6th. In combination, the fender frame supported by the platform of the car and connected to disengage the pawl, securing the ratchet-wheel, the ratchet-wheel and pawl securing the drum on which the chain is wound, the drum having a vertical shaft carrying the ratchet-wheel, and the chains connected to the rods within the cylinders, substantially as shown and described.

No. 45,086. Gate. (*Barrière.*)



James Woods, Newtonbrook, Ontario, Canada, 16th January, 1894; 6 years.

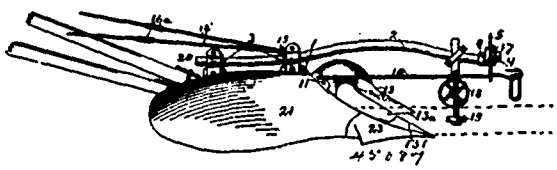
Claim.—1st. The combination in a gate having a counterweight portion in rear of the hinge post, of the hinge post having anti-friction rollers therein at the lower bearing, a ring enclosing the post and rollers therein, and clamp bars on the lower rail of the gate to secure said ring. 2nd. The combination in a gate having a counterweight portion in rear of the hinge post, of the hinge post having anti-friction rollers therein at the lower bearing, a ring enclosing the post and rollers therein, clamp bars on the lower rail of the gate to secure said ring, and a pin at centre of the post to support the upper rail of the gate. 3rd. In combination, the gate having a counterweight portion, as specified, the hinge post having anti-friction rollers therein, and a centre pin to support the bottom and top rails respectively, of the gate, a latch spring at the front, levers on the counterweight portions as specified, means to connect said latch with said levers, and an operating bar having a slot therein, and brackets to connect with said levers to draw said latch spring, substantially as specified.

No. 45,087. Plough. (*Charrue.*)

Hugh Johnston, Toronto, Ontario, Canada, 16th January, 1894; 6 years.

Claim.—1st. In a plough, a coulter vertically and horizontally adjustable attached to the land side, having its upper portion flared

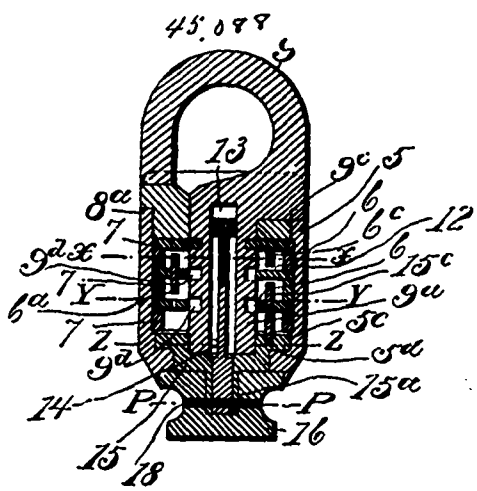
outward, and the point 13a in line with the underscore, substantially as and for the purpose hereinbefore set forth. 2nd. In a plough, the



combination of a vertically and horizontally adjustable coulter, with an underscore, substantially as and for the purpose hereinbefore set forth. 3rd. In a plough, the combination of a coulter formed as specified, with an underscore, substantially as and for the purpose hereinbefore set forth. 4th. In a plough, the combination of a clevis and draft rod, drawing from the head of the plough, substantially as and for the purpose hereinbefore set forth. 5th. In a plough, the combination of a cross slotted guide plate 5, and perforated head 4, substantially as and for the purpose hereinbefore set forth. 6th. In a plough, the combination of a cross slotted guide plate 5, and perforated head 4, and draft rod drawing from the head of the plough, substantially as and for the purpose herembefore set forth. 7th. In a plough, the combination of a width gauge-wheel travelling horizontally on inside of the furrow with the depth gauge-wheel, substantially as and for the purpose hereinbefore set forth. 8th. In a plough, the combination of adjustable handles and serrated wedges and adjustable brace rods, substantially as and for the purpose hereinbefore set forth. 9th. In a plough, the combination of a coulter and an underscore, an adjustable guide plate 5, and draft rod 10, and width and depth gauge-wheels and adjustable handles, substantially as and for the purposes hereinbefore set forth.

No. 45,088. Permutation Padlock.

(*Cadenas à permutation.*)



William H. Bolthoff, Denver, and William Preston Smith, Aspen, Colorado, U.S.A., 16th January, 1894; 6 years.

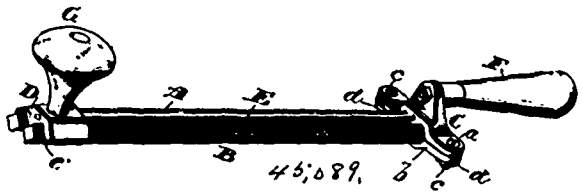
Claim.—1st. In a permutation padlock, the combination with the casing, of the tumblers, the separating rings, and the apertured disc enclosed by the casing, the screw ring for locking the parts in place, and the reciprocating integral shackle having a stem which enters central apertures formed in the tumblers, said stem being provided with recesses adapted to receive the edges of the tumblers, a connecting pin 12 having a shoulder 12c entering a longitudinal recess formed in the stem, the pin 12 being movable within the recess, a rotatable knob and a cross pin which passes through coinciding apertures formed in the knob, the apertured disc and the connecting pin, substantially as described. 2nd. In a permutation padlock, the combination of the casing, the rotatable knob, the tumblers, the separating rings, the apertured disc connected with the adjacent tumbler, the reciprocating shackle, the shouldered connecting pin, and means for connecting the knob, the apertured disk, and the connecting pin in operative relation, substantially as described.

No. 45,089. Sharpener for Horse-shoe Calks.

(*Appareil pour aiguiser les crampons de fer à cheval.*)

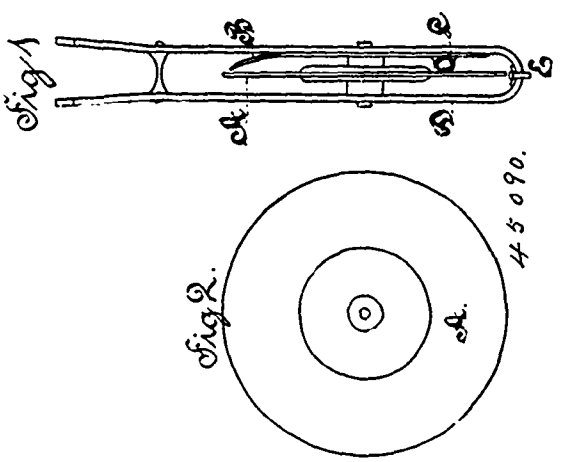
Sidney R. Brooks, Allegany, New York, U.S.A., 17th January, 1894; 6 years.

Claim.—A horse-shoe calk sharpener, consisting of a longitudinal brace rod, a clamp and a bracket independent of each other and adjustably and removably connected to the respective ends of the



rod, files held by the clamp and bracket, and handles removably connected thereto, substantially as and for the purpose set forth.

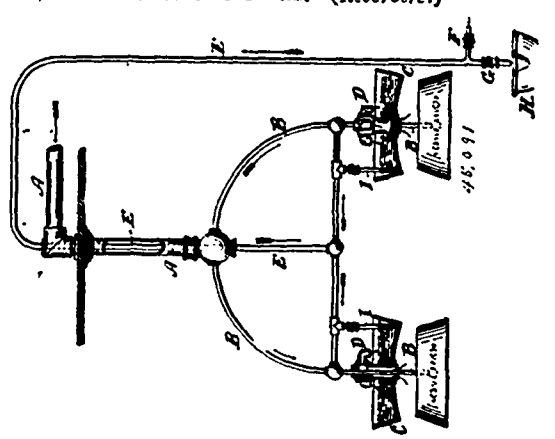
No. 45,090. Seed Drill. (*Semoir en ligne.*)



William A. Sims, Stonewall, Manitoba, Canada, 17th January, 1894; 6 years.

Claim.—1st. In a seed drill, the combination of the coulter A, revolving on the axle F in the frame D, and the shoe B secured to the said frame D, with the funnel and loop attachment E, substantially as and for the purpose above set forth. 2nd. In a seed drill the alternative arrangement of a convex coulter A and straight shoe B, with the frame D, the funnel C and loop attachment E, substantially as and for the purpose above set forth.

No. 45,091. Reflector for Gas. (*Réverbère.*)

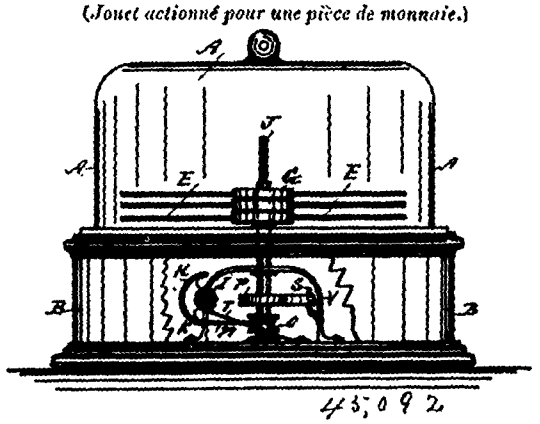


Thomas Gill, Cleckheaton, York, England, 17th January, 1894; 6 years.

Claim.—1st. A gas reflector containing water used for the purpose and in the manner herein shown and described. 2nd. A gas reflector containing water supplied by pipes in the manner herein shown and described. 3rd. A gas reflector containing water supplied with water by pipes in combination with a syphon pipe, as herein shown and described. 4th. A gas reflector for containing water, in combination with the funnel D, for purposes and in the manner shown and described. 5th. A gas reflector for containing water in combination with a circulating vessel J, all as described and illustrated.

No. 45,092. Coin Controlled Toy.

(Jouet actionné pour une pièce de monnaie.)

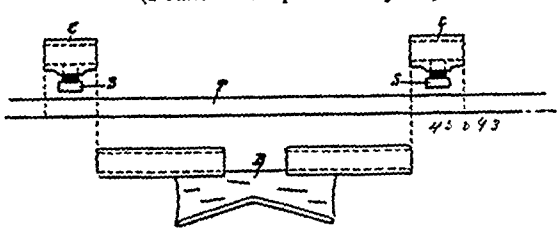


A Leroy Burke, Hamilton, Ontario, Canada, 17 January, 1894; 6 years.

Claim.—In a coin controlled toy machine, the horizontal shaft I, with its handle D, the casing B, and arched standard V, the coin receptacle H, secured to said shaft, and provided with aperture C, and lower catch 2, the spring F, having catch 3, the tension spring T, the cam eccentric K, having cord N, the verticle spindle J, having lower drum O, spring P, friction-casing C, and rotary arms E, and the stud S, all arranged and combined substantially as described and set forth.

No. 45,093. Stop-block for Hay Carriers.

(Poulie à arrêt pour monte-foin.)

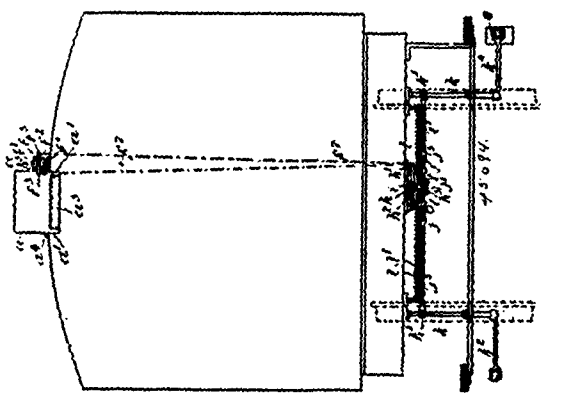


Mitchell T. Buchanan, Ingersoll, Ontario, Canada, 17th January, 1894; 6 years.

Claim.—1st. A pivotal or revolving stop-block B, substantially as shown and described, and for the purpose specified. 2nd. A pivotal or revolving stop-block B, in combination with, and supported by the track-rod or cable T, substantially as shown and described, and for the purpose specified. 3rd. A pivotal or revolving stop-block B, in combination with, and supported by a track-rod or cable T, and means for holding said stop-block at the point to which it is adjusted on said track-rod, substantially as shown and described, and for the purpose specified. 4th. A pivotal or revolving stop-block B, in combination with, and supported by a track-rod or cable T, the collars C, C, and set-screws S, S, substantially as shown and described, and for the purpose specified.

No. 45,094. Station Indicator.

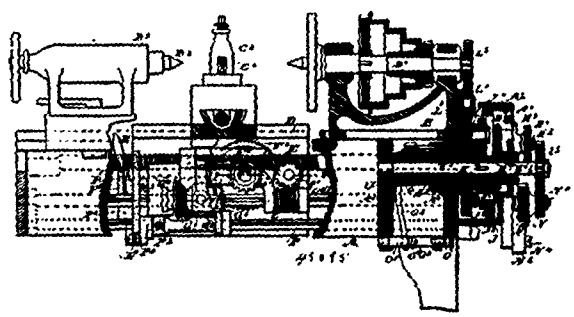
(Indicateur de station.)



George Washington Robertson, Haverstock Hill, England, 17th January, 1894; 6 years.

Claim.—1st. In station indicators for railway trains operated by mechanical means, the combination with a prime moving lever k^2, operated by a fixed cam or incline, of a lost motion apparatus interposed between such prime motion lever and the indicator, the parts being so arranged that, although a variable amount of motion may be given to the prime motion lever, the exact amount of motion required to correctly operate the indicator is always given to the latter, substantially as herein shown and described. 2nd. In station indicators for railway trains operated by mechanical means, the combination with a prime moving lever k^2, operated by a fixed cam or incline, of a cam provided with an operative part and a lost motion, connections between the lever k^2 and the lost motion cam, connections between the said cam and a longitudinal shaft f, on the top of the carriage by which a partial rotary motion is given to such shaft f, and gearing between such shaft f, and the station indicators, substantially as herein shown and described, and for the purpose stated. 3rd. In station indicators for railway trains, the combination with a prime mover k^2 of a lost motion cam, connections between such prime mover and said cam, connections between such cam and a vertical rod f^7, at the end of the carriage, a longitudinal shaft f, along the carriage top, a double acting ratchet-wheel f^2, fixed on shaft f, a double ended pawl lever f^3, mounted loosely on shaft f, a notched-wheel f^8, fixed on shaft f, a spring dog g, acting with said wheel f^8, said bevel-wheels f^4, on shaft f, giving motion to indicators by means of bevel-wheels b^3, fixed on indicator shafts b, substantially as herein shown and described, and for the purpose stated. 4th. In apparatus for indicating the names of stations in moving vehicles, the combination with prime movers k^2, and apparatus of the character herein described of movable cams or inclines capable of being placed in or out of position to act on the prime movers k^2, substantially as herein shown and described, and for the purpose stated.

No. 45,095. Screw Cutting Lathe. *(Tour à fileter les vis.)*

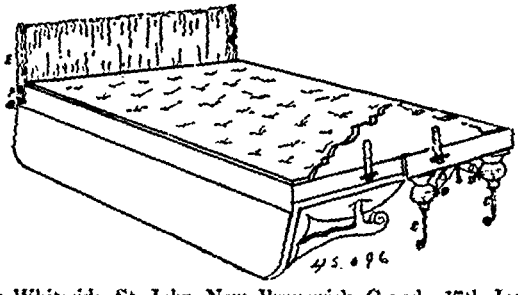


James Herbert Paterson, Ingersoll, Ontario, Canada, 17th January, 1894; 6 years.

Claim.—1st. A screw cutting lathe, provided with a mechanism intermediate of the feed shaft and the spindle, and provided with an auxiliary shaft driven from the moving carriage, and geared with the feed shaft to cause the latter to rotate at a different rate of speed than that otherwise given to the feed shaft by the spindle, substantially as shown and described. 2nd. A screw cutting lathe provided with an intermediate mechanism between the feed shaft and spindle, and comprising an auxiliary shaft, gearing for driving the said shaft by the moving carriage, a second shaft geared with the said auxiliary shaft, and a gear-wheel secured on the said second shaft, and in mesh with a pinion of the gearing connecting the feed shaft with the spindle, substantially as shown and described. 3rd. A screw cutting lathe comprising a revoluble spindle, a feed shaft, gearing for driving the said feed shaft from the said spindle, a carriage adapted to be connected with the said feed shaft, an auxiliary shaft adapted to be driven from the said carriage, a second shaft geared with the said auxiliary shaft, and a gear-wheel secured on the said second shaft and in mesh with one of the pinions of the said gearing connecting the feed shaft with the said spindle, substantially as shown and described. 4th. A screw cutting lathe, comprising a revoluble spindle, a feed shaft, gearing for driving the said feed shaft from the said spindle, a carriage adapted to be connected with the said feed shaft, an auxiliary shaft adapted to be driven from the said carriage, a second shaft geared with the said auxiliary shaft, a gear-wheel secured on the second shaft and in mesh with one of the pinions of the said gearing connecting the feed shaft with the said spindle, a half nut held on the carriage and adapted to engage the said feed shaft, and a lever for moving the half nut in or out of engagement with the said feed shaft, substantially as shown and described. 5th. A screw cutting lathe, comprising a revoluble spindle, a feed shaft, gearing for driving the said feed shaft from the said spindle, a carriage adapted to be connected with the said feed shaft, an auxiliary shaft adapted to be driven from the said carriage, a second shaft geared with the said auxiliary shaft, a gear-wheel secured on the said second shaft, and in mesh with one of the pinions of said gearing connecting the feed shaft with the said spindle, a half nut held on the carriage and adapted to engage the said feed shaft, a lever for moving the half nut in or out of engagement with the said feed shaft, and clutch

mechanism actuated from the said lever and adapted to lock or release the said second shaft, substantially as shown and described. 6th. In a screw cutting lathe, the combination with a gear-wheel adapted to be driven from the spindle, of a shaft carrying a gear-wheel, a pinion held on a stud secured on the said driven gear-wheel, and a gearing for connecting the said pinion with the feed shaft to impart a rotary motion to the latter, substantially as shown and described. 7th. In a screw cutting lathe, the combination with a gear-wheel adapted to be driven from the spindle, of a shaft carrying a gear-wheel, a pinion held on a stud secured on the said driven gear-wheel, in mesh with the said shaft gear-wheel, a gearing for connecting the said pinion with the feed shaft to impart a rotary motion to the latter, a clutch gear-wheel held loosely on the said shaft, a second pinion in mesh with the said clutch gear-wheel, the pinion being mounted on a stud of the said first-named driven gear-wheel, and a gear-wheel carrying on its face the last named pinion and in mesh with the said shaft gear-wheel, substantially as shown and described. 8th. In a screw cutting lathe, the combination with a gear-wheel adapted to be driven from the spindle, of a shaft carrying a gear-wheel, a pinion held on a stud secured on the said driven gear-wheel, in mesh with the said shaft gear-wheel, a gearing for connecting the said pinion with the feed shaft to impart a rotary motion to the latter, a clutch gear-wheel held loosely on the said shaft, a second pinion in mesh with the said clutch gear-wheel, the pinion being mounted on a stud of the said first named driven gear-wheel, a gear wheel carrying on its face the last named pinion, and in mesh with the said shaft gear-wheel, an auxiliary shaft, a second gearing for connecting the first named shaft with the said auxiliary shaft, and a third gearing connecting the auxiliary shaft with the carriage, substantially as shown and described. 9th. In a screw cutting lathe, the combination with a gear-wheel adapted to be driven from the spindle, of a shaft carrying a gear-wheel, a pinion held on a stud secured on the said driven gear-wheel, in mesh with the said shaft gear-wheel, a gearing for connecting the said pinion with the feed shaft to impart a rotary motion to the latter, a clutch gear-wheel held loosely on the said shaft, a second pinion in mesh with the said clutch gear-wheel, the pinion being mounted on a stud of the said first named driven gear-wheel, a gear-wheel carrying on its face the last-named pinion and in mesh with the said shaft gear-wheel, an auxiliary shaft, a second gearing for connecting the first named shaft with the said auxiliary shaft, and a third gearing connecting the auxiliary shaft with the carriage, and a clutch mechanism for controlling the said clutch gear-wheel, substantially as shown and described.

No. 45,096. Sofa Bed. (*Canapé-lit.*)



Henry Whiteside, St. John, New Brunswick, Canada, 17th January, 1894; 6 years.

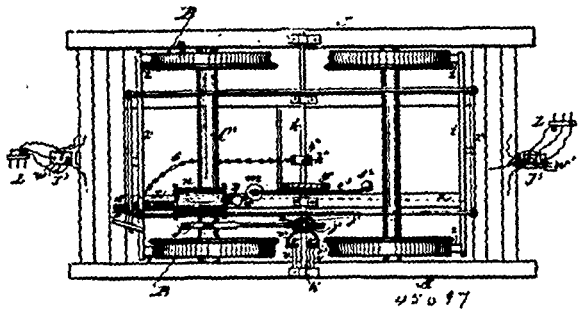
Claim.—1st. The extension legs D, in combination with the fixed legs C, and frames A and B, in the manner and for the purposes set forth. 2nd. The curtain posts G, in combination with the frames A, B, and the whole arranged together for the purposes herein described.

No. 45,097. Electric Railway Brake.

(*Frein électrique pour chars.*)

Walter Hulne Scott, Toronto, Ontario, Canada, 17th January, 1894; 6 years.

Claim.—1st. The combination with a railway car, of a brake rod h^1, carrying an oscillating frame j^1, operated by a pitman of the eccentric j on the main axle C¹, the said frame carrying a ratchet pawl j^3 on the spindle j^2, to engage a ratchet-wheel k, keyed on the said brake rod h^1, to rotate the said brake rod and brake chain s, substantially as described. 2nd. The combination with the actuating pawl bearing frame j^1, and ratchet-wheel k and its pawl j^3, of the relay M, electrical spring plates v^2 on the frame j^1, friction roller m^{11} on the stud m^1, attached to pawl j^3 on the pin j^4, of the said frame j^1, substantially as and for the purpose specified. 3rd. The combination with the shaft h^1, of the ratchet-wheel g^1 keyed thereon, its operating pawl f^4, the weighted lever e^3 pivoted to the short shaft f, and having a projection f^5 to operate the said pawl f^4, one end of the lever e^3 having a slot e^4, and pivoted to the end of the piston rod c, of the releasing cylinder n, substantially as and for the purpose specified. 4th. The combination with the brakes and brake lever d, of an air compressing cylinder n, having a piston and piston rod n^1, openings n^5; a spring n^{11} around the piston rod, a sliding rod c^1, head 1^{11}, rod 1, air valve E connected to the air compressing cylinder n by a pipe a^1, relay K, pipe a^{11} connecting



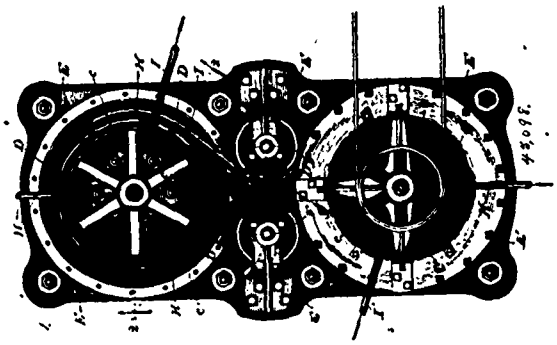
air valve E, and air releasing cylinder n, with its piston rod e to operate the pawl lever e^3, substantially as and for the purpose specified. 5th. In combination with the air compressing cylinder n and its attachments, the air valve E, having a vertical recess b^3 in the head to receive the small end of the piston rod b^{11}, the vertical recess b^6 in the lower end of it, and the annular notch c^1 below the same, the piston rod b^{11} terminating in a ball h, the rubber packing b^4 above and below the valve chamber, also inlet air pipe a^1, and outlet air pipe a^{11}, substantially as and for the purpose specified. 6th. The combination with the brakes of the shaft h^1, the cam h^{11} keyed thereon, double chains h^2 securing cam to brake chain s, with devices for operating the chains, substantially as and for the purpose specified. 7th. The combination of the notched piston rod b^{11}, valve E, armature c^{11} made to engage with the notch c^1 of the piston rod b^{11}, projection i on the armature, relay K, spring p, rod l, cylinder n, all constructed substantially as and for the purpose specified. 8th. The combination of the plate H, having a curved flange o, and constructed with recesses o^3, the plate I having corresponding recesses o^1, friction discs o^2 operating in said recesses o^1 and o^3, of the respective plates H and I, the lever q pivoted on the shaft f, the weighted lever q^2 pivoted on the shaft q^3, connecting rod q^1, from weighted lever q^2 to plate H, substantially as and for the purpose specified. 9th. The combination of the shaft q^3, lever r, eye bolt r^1, nuts r^{11}, r^{11}, chain r^3, brake chain s, substantially as and for the purpose specified. 10th. The combination of the plate H, plate I, each having their respective recesses o^1 and o^3, circular discs o^2, revolving in said recesses, cover plate p^1, and curved flange o, with operating mechanism, substantially as and for the purpose specified. 11th. The combination with the brakes and brake beams, of the rod z^3, provided with a projection 2, and made to pass through an eye in the lever D, and terminating in a head 3, so as to permit the said lever D, to have sufficient play when the hand-brakes are used, substantially as described. 12th. The combination of the axle C¹, eccentric j, with its pitman, frame j^1, shaft h^1, ratchet-wheel k, pawl j^3, arms v^2, relay M, spindle j^2, and friction rollers v^1, on rods v, with electrical connecting wires, substantially as and for the purpose specified. 13th. In combination with the brakes and operating mechanism, the indicator J^1, provided with handle J^{11}, projections u^1, u^{11}, centre pin 8, stop pin y, wires t, t^1, t^2, relays M, K, armature c^{11}, plates J^3, and L, rods v, v, friction rollers v^1, arms v^2, to operate electrically the mechanism of railway brakes, substantially as and for the purpose specified. 14th. The plate L, constructed with three insulated pins u, and the plate J^3, having corresponding holes u^1, in insulated segments, to receive the said pins for electrical connection with the wires t, t^1, t^2, and indicator J^1, and operating mechanism to move the brakes, substantially as and for the purpose specified. 15th. The combination of the plate N, with projecting points w, plate J^3, wires t, t^1, t^2, to establish electrical connection between the wire t, and the wire t^1, and the wire t and the wire t^2, on the end of the last car of a train, substantially as specified. 16th. The combination with the brakes of a railway car, of the eccentric j, and its pitman, frame j^1, ratchet-wheel k, pawl j^3, curved rods v^2, shaft h^1, ratchet-wheel q^1, pawl f^4, weighted lever e^3, cylinder m, valve E, and its mechanism and inlet and outlet air pipes a^1, a^{11}, spring p, relays M, K, air compresser n, with its mechanism for operating the piston rod of the valve E, armature c^{11}, plates H and I, with recesses for the discs o^2, o^2, lever q, weighted lever q^2, connecting rod q^1, shaft q^3, lever r, with its connections to chain s, all arranged to the brakes, substantially as and for the purpose described.

No. 45,098. Ore Separator. (*Séparateur de minerais.*)

Orvin Burten Peck, Chicago, Illinois, U.S.A., 17th January, 1894; 6 years.

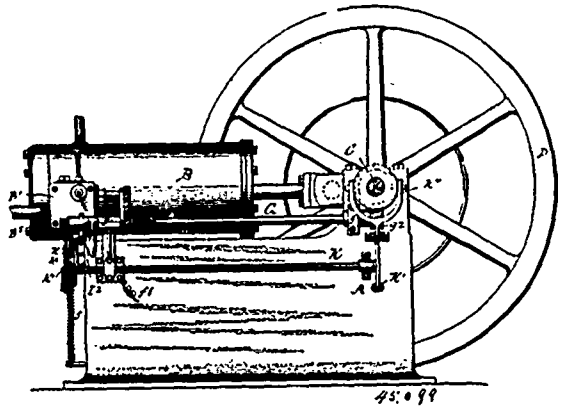
Claim.—1st. The process of separating powdered or finely divided particles containing mineral bearing substances of different degrees of specific gravity, which consists in depositing the material to be separated on the separating surface of a travelling belt, and first subjecting them to the action of centrifugal force in a direction towards the separating surface of the belt, and afterwards subjecting the particles adhering to the belt to the action of centrifugal force in an opposite direction to throw them off from the separating

surface, substantially as described. 2nd. The process of separating powdered or finely divided particles containing mineral bearing sub-



stances of different degrees of specific gravity, which consists in depositing the particles of material to be treated on the surface of a belt where it is travelling in a circular direction, and carrying the particles which adhere to the belt to a point where it ceases to travel in a circular course, where they are thrown off by the reversal of the direction of action of the centrifugal force, substantially as described. 3rd. The process of separating powdered or finely divided particles containing mineral bearing substances of different degrees of specific gravity, which consists in causing the lighter particles to be carried by the action of centrifugal force across the surface of a belt where it is travelling in a circular direction to a point of discharge, and carrying the heavier particles on the belt to a point where it ceases to travel in a circular course, where they are removed, substantially as described.

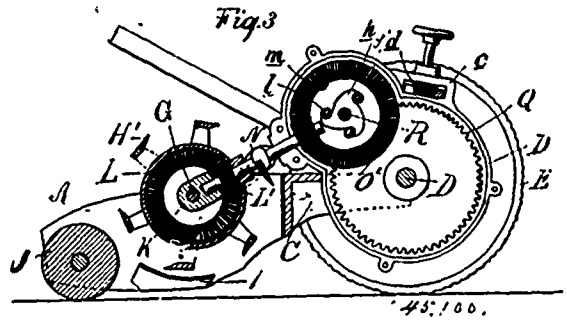
No. 45,099. Gas Engine. (*Machine à gaz.*)



George Washington Lewis, Chicago, Illinois, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. In a gas engine, the combination with an inlet valve for the explosive mixture, said valve being arranged to open by suction of the power piston, of a centrifugal governor and connecting mechanism controlled by the governor, said connecting mechanism being adapted to variously limit the opening of said valve. 2nd. In a gas engine, the combination with the inlet valve B^3, provided with a stem k, having a stop-shoulder thereon, of a rock-shaft K provided with an arm arranged to engage said stop-shoulder, and a centrifugal governor having operative connection with said rock shaft whereby the opening of the valve by suction of the power piston is variably limited, substantially as and for the purpose set forth. 3rd. In combination, the inlet valve B^3, having a stem k, provided with a stop-shoulder k^4, of the the rock shaft K, having an arm K^1, a spring interposed between said arm and stop-shoulder, and a centrifugal governor connected with and operating the rock-shaft, substantially as described. 4th. In combination with the ignition chamber of a gas engine, a stationary spring electrode and a rotary cam-shaped electrode having interrupted contact with the stationary electrode, and driving gear for the rotary electrode containing a pawl or equivalent connection, whereby the rotative electrode is adapted to be operated by hand when the engine is at rest. 5th. In combination with the ignition chamber of a gas engine, a rotary electrode consisting of a head within said chamber carried by a shaft which passes out through the wall of the chamber to connection with suitable devices for rotating it, said head having a contacting prominence on its end face, substantially as described, and a stationary spring electrode arranged to contact with the said prominence of the rotary electrode, and to press the head against the wall of the ignition chamber during such contact. 6th. In a gas engine, the combination with a rotary shaft, carrying an electrode of the igniting mechanism, a shaft G, operated by the crank shaft, and a pinion gearing connecting the shaft G, with the shaft of the electrode. 7th. In combination with the shaft of the rotary electrode and the driving shaft G, a pinion secured to a loose sleeve on the shaft G, a pawl carried by the sleeve and adapted to engage a shoulder on the shaft G, and a pinion on the electrode shaft driven by said sleeve pinion, whereby the rotary electrode may be operated without movement of the shaft G, substantially as described. 8th. In a gas engine, the combination with an exhaust valve lever and a rotative shaft, as G, carrying a cam for operating said exhaust valve lever, a hand lever adapted to actuate said valve lever to open and hold open the latter, substantially as described. 9th. The combination with the exhaust valve lever H^1, and the rotative shaft G, carrying a cam for operating said lever H^1, of a hand lever I, mounted on said shaft and provided with an arm I^1, adapted to engage the lever H^1, whereby the exhaust valve may be held open at pleasure, substantially as described. 10th. In combination with the rotative shaft G, and exhaust valve lever H^1, the sleeve h^3, splined on the shaft G, and carrying the opposite, offset cams H and h^4, and the screw h^2, engaging with the sleeve and provided with a head h^7, whereby the said screw may be operated by hand to give lengthwise movement to the sleeve upon the shaft, substantially as described. 11th. In a gas engine, the combination with the power cylinder and piston, of a vaporizing chamber provided with means for preserving a substantially uniform level of a volatile hydrocarbon liquid therein and having its space above said liquid level connected with said cylinder, and an air induction tube leading into said chamber, the open end of which tube is adjustable as to its distance from the surface of the liquid, substantially as described,

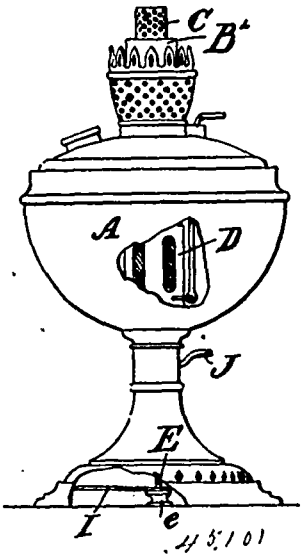
No. 45,100. Lawn Mower. (*Faucheuse de pelouse.*)



Simon Peter Graham, Detroit, Michigan, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. In a lawn mower, the combination of a cutter shaft, two cutters thereon having their meeting ends overlapped and staggered, and a crank drive shaft for the outer shaft arranged to present the opening in the crank to permit the passage of the cutter blades, substantially as described. 2nd. In a lawn mower, the combination of a cutter shaft, cutter blades thereon having their ends overlapped, a drive pinion upon the shaft, a drive shaft having a gear-wheel engaging therewith, and a crank in the drive shaft in the path of the blades, substantially as described. 3rd. A drive mechanism for lawn mowers, comprising a ground wheel and its shaft, a gear-wheel thereon, a drive shaft having a gear-wheel meshing therewith, a cutter shaft, cutters secured thereto, a bearing block journalled on the shaft, a gear-wheel secured to the shaft beside the bearing block between the cutters, a bearing for the drive shaft in the bearing block, a drive pinion on the drive shaft meshing with the gear-wheel, and a crank in the drive shaft in line with the cutters, substantially as described. 4th. In a lawn mower, a frame comprising two side pieces extending across the ends of the cutter, and bent to extend along one side thereof, a bracket connecting the ends thereof, and the ground shaft journalled in the bracket, substantially as described. 5th. In a lawn mower, the combination of the frame, the cutter shaft, the separated cutters thereon, a drive gear centrally on the cutter shaft, a block journalled on the shaft beside the gear-wheel, and a drive shaft having its end journalled in said block and having a pinion engaging said gear-wheel, substantially as described. 6th. In a lawn mower, the combination of the cutter shaft, a central drive gear thereon, a block journalled on the shaft beside the gear, a casing supported on the block enclosing gears, a drive shaft having its end journalled in said block, and a pinion thereon engaging said gear-wheel, substantially as described. 7th. In a lawn mower, the combination of the bracket, the ground wheel shaft journalled therein, a gear-wheel on the shaft, a casing on the bracket enclosing the gear-wheel, the stub shaft P^1, the pinion P^2 sleeved thereon, drive gear O^1 sleeved on the hub of the pinion, a ratchet and pawl device between the gear-wheel and pinion, the drive shaft M, and pinion O thereon meshing with the gear-wheel, substantially as described.

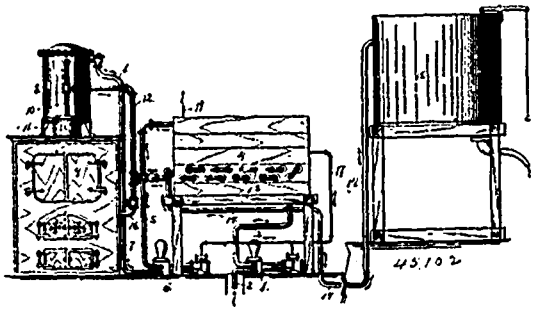
No. 45,101. Extinguisher for Lamps.
(*Eteignoir pour lampes.*)



Joseph Perrault, Montreal, Quebec, Canada, 18th January, 1894; 6 years.

Claim.—In a lamp extinguisher, the combination with the central tube B, of the slots *b*, grippers pivoted to a rod passing through the said tube, the said grippers passing through the said slot *b*, a nut *c* on the lower end of the said rod, a spring I adapted to press the said rod down, and a finger hold J, substantially as set forth.

No. 45,102. Apparatus for Supplying Purified Water to Locomotives. (*Appareil alimentateur d'eau purifiée pour les chaudières.*)



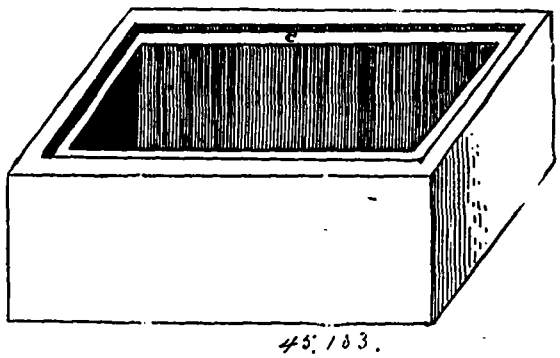
Robert Learmonth, Buffalo, New York, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. An apparatus for purifying water consisting essentially of a tank for the reception of the impure water, a purifier into which the impure water is forced from the tank, a boiler with which the purifier is connected and which furnishes the purifier with steam to effect the separation of the impurities, and a manifold of piping in the tank containing the impure water through which the heated and purified water is forced to the point desired, all combined and operating substantially as and for the purpose stated. 2nd. An apparatus for purifying water consisting essentially of a tank for the reception of the impure water, a purifier into which the impure water is forced from the tank, a boiler with which the purifier is connected and which furnishes the purifier with steam to effect the separation of the impurities, a manifold of piping in the tank containing the impure water through which the heated and purified water is forced to the point desired, and a manifold of piping in the same tank through which the waste steam passes from the pumps, which force the impure water into the tank, and from the tank to the purifier, all combined and operating substantially as and for the purpose stated.

No. 45,103. Process of Making Air Tight Covers for Tins. (*Procédé pour fabriquer des couvercles imperméables à l'air pour boîtes métalliques.*)

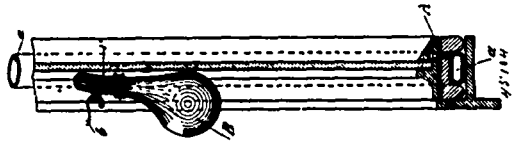
David Macdonald, and William T. Tassie, both of Toronto, Ontario, Canada, 18th January, 1894; 6 years.

Claim.—The within described process for making an air tight cover for tins which consists in making a frame of tin and inclosing in that frame tinfoil, leadfoil, paper glass or any similar material



that can be easily cut or broken, and then soldering the frame to the tin box, as specified.

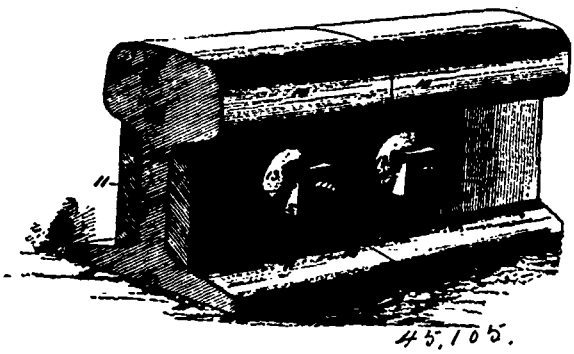
No. 45,104. Weather Strip. (*Bourrelet de porte.*)



Ernst Abraham Pilgram, assignee of Hermann C. W. Weyhe, both of Bremen, Germany, 18th January, 1894; 6 years.

Claim.—1st. For effecting an air tight closure of windows and doors, the application of a flexible air tight tube fitted round the window or door and its expansion by forcing air into the same, substantially as described. 2nd. In combination with the device for effecting an air tight closure of windows referred to in the preceding claim, the provision in windows with double panes of means whereby the air contained between the panes can be more or less exhausted for the purpose of lessening the transmission of sound, substantially as described.

No. 45,105. Nut Lock. (*Arrête-écrou.*)



William P. Sweetland and Donald Mackintosh, both of San Francisco, California, U.S.A., 18th January, 1894; 6 years.

Claim.—In a nut lock, the combination with a bolt, of a felt washer impregnated with a hardening preservative or paint compound, a metallic washer of less diameter than the felt washer arranged upon said felt washer, and a nut also of a diameter less than the felt washer arranged upon the metallic washer, whereby the nut will become embedded in the felt washer and be held in place by hardening of the paint compound surrounding said nut, substantially as shown and described.

No. 45,106. Metallic Coating.
(*Méthode de couvrir en métal.*)

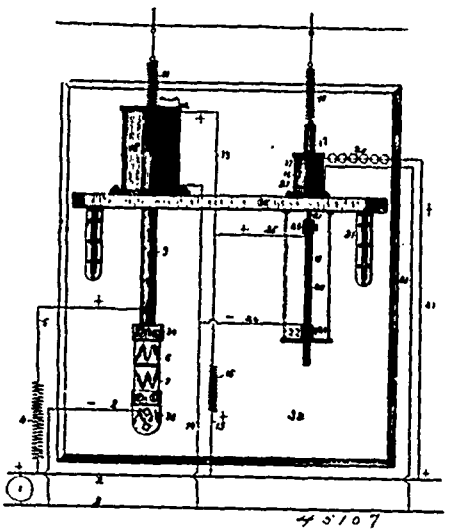
The London Metallurgical Company, assignee of Sherard O. Cowper Coles, London, England, 18th January, 1894; 6 years.

Claim.—1st. The method of depositing by electrolysis an alloy of silver and zinc or silver and cadmium, or silver, zinc and cadmium on metal and other suitable articles wherein the articles to be coated are placed in a bath of the double cyanides of zinc or cadmium and potassium, and of silver and potassium and of the carbonates and hydrates of the alkali metals, and an anode is employed consisting

of an alloy of the metals to be deposited in approximately the proportions of the required deposit, substantially as herein described. 2nd. As a new manufacture an article of metal or other suitable material that has been coated with an alloy or silver zinc and cadmium by electro deposition for the purpose specified, which article may or may not have been previously covered with a preliminary coating of metallic zinc or metallic cadmium or an alloy of zinc and cadmium, substantially as described.

No. 45,107. Electric Current Controller.

(*Contrôleur électrique de courant.*)



The Watertown Street Railway Company, assignee of Edward A. Barber, all of Watertown, New York, U.S.A., 18th January, 1894; 6 years.

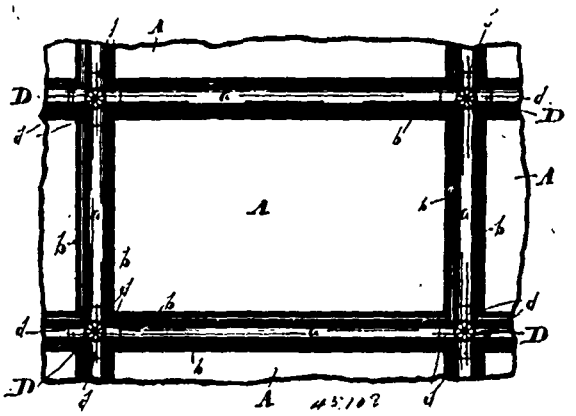
Claim.—1st. In an electric power system, wherein a generator is run by a uniform power, and the surplus electrical energy not used by the driven motors is transferred to a regulating resistance coil, the combination with the main circuit and the regulating resistance coil, of a switch operated directly by a solenoid, substantially as set forth. 2nd. In an electric power system, wherein a generator is run by a uniform power, and the surplus electrical energy not used by the driven motors is transferred to a regulating resistance coil, the combination with the main circuit and the regulating resistance coil of a switch operated directly by a solenoid, an auxiliary switch to short circuit said solenoid, controlled by an auxiliary solenoid, which is connected in parallel to the main circuit and operated by variations in the voltage of the main circuit, substantially as set forth. 3rd. In an electric power system, wherein a generator is run by a uniform power, and the surplus electrical energy not used by the driven motors is transferred to a regulating resistance coil, of a switch having one metallic terminal and one non-metallic terminal, for the purpose described, substantially as set forth. 4th. In an electric switch, operated directly by a solenoid acting on an iron core, the combination with the solenoid and the iron core, of a piece of soft iron located at one end of the solenoid to act as a brake to prevent oscillation of the switch, substantially as set forth.

No. 45,108. Metallic Ceiling Plate.

(*Plaque métallique pour plafonds.*)

Longley Lewis Sagendorph, Philadelphia, Pennsylvania, and Charles N. Harder, Philmont, New York, both in the U.S.A., 18th January, 1894; 6 years.

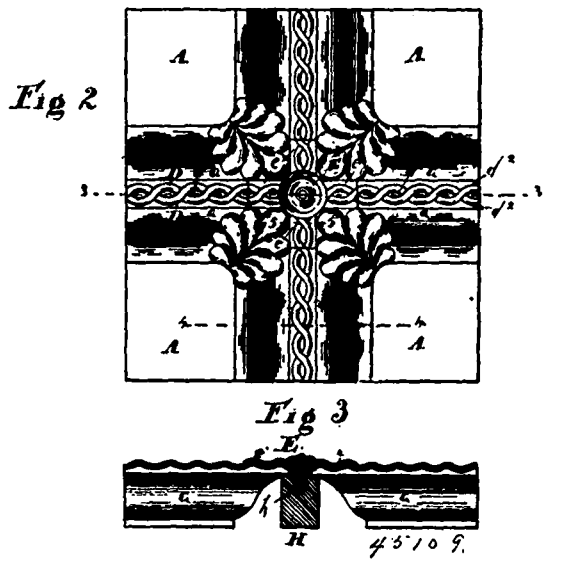
Claim.—1st. A metallic plate, having a raised margin or moulding on each side thereof, said moulding at the corners extending out beyond the margin of the plate, substantially as set forth. 2nd. A metallic plate, having a continuous raised moulding a, around its margin, said moulding extending out beyond their intersecting points, substantially as specified. 3rd. A metallic plate, having a continuous marginal moulding a, on each side thereof, and an inner continuous raised bead b, adjacent to said moulding, the latter extending out beyond their points of intersection, forming projections a^2, as and for the purposes set forth. 4th. A metallic ceiling composed of plates, each of which having a raised marginal moulding a, at each side thereof, said mouldings extending out beyond their intersecting points, forming projections a^2, which latter are adapted to overlap a portion of the moulding on adjacent plates, and a suitable rosette for each corner thus formed, substantially as set forth. 5th. In a metallic ceiling, the plates A, having a raised continuous moulding at each side thereof, and extending beyond their points of intersection, forming projections a^2, the latter overlapping a portion of the moulding on adjacent plates at the corners thereof



and a rosette D, having lateral arms d, overlapping the corner mouldings and their projections a^2, and properly secured thereto, substantially as set forth.

No. 45,109. Metallic Ceiling Plate.

(*Plaque métallique pour plafonds.*)



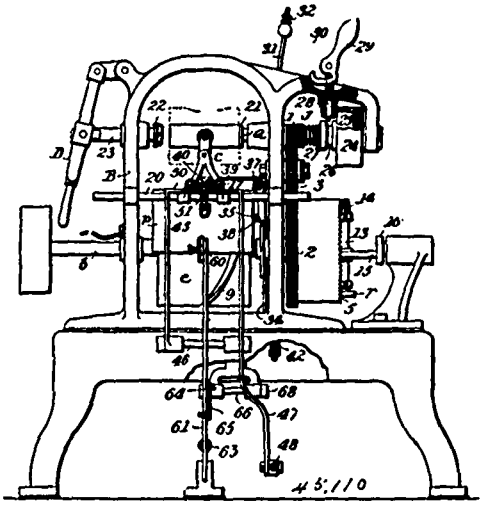
Longley Lewis Sagendorph, Philadelphia, Pennsylvania, and Charles N. Harder, Philmont, New York, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. A metallic ceiling plate having a continuous raised moulding terminating in flanges of a dove-tailed configuration in cross section, substantially as set forth. 2nd. A metallic ceiling plate having side interlocking flanges, the latter having raised beads D, of a serpentine outline intersecting and crossing each other as shown, said beads on one plate being adapted to overslap corresponding beads on an adjacent plate, substantially as set forth. 3rd. A metallic ceiling plate having a continuous raised moulding terminating in interlocking flanges b, b^2, the top face portion b, being provided with raised beads, substantially as specified. 4th. A metallic ceiling consisting of plate having a continuous raised moulding terminating in interlocking flanges, the flange at one side of a plate interlocking with the flange on the side of an adjacent plate, the corners of said plates being covered with rosettes having arms c, and interlocking flanges c^2, substantially as set forth. 5th. A metallic ceiling plate having interlocking flanges b, with beads D, formed thereon, in combination with a metallic rosette having arms c, adapted to engage with said flanges, said arms having beads D^1, on their top face corresponding in outline with beads D, substantially as set forth. 6th. A metallic ceiling plate having a continuous raised moulding a terminating in flanges b, the latter having on their top face the beads D, and a continuous flat portion or shoulder d at each side of said beads, the flange thus formed being adapted to overslap a correspondingly formed flange on an adjacent plate, substantially as set forth. 7th. A metallic ceiling made-up of plates A,

each plate having a continuous raised moulding terminating in a flange, interlocking with a like flange on the adjacent plate, with a single block H, beneath the corners thereof, and a rosette over the corners of the plates, the latter being connected to said block, substantially as set forth.

No. 45,110. Winding Cop and Bobbin.

(*Enroulage des fils sur les bobines.*)

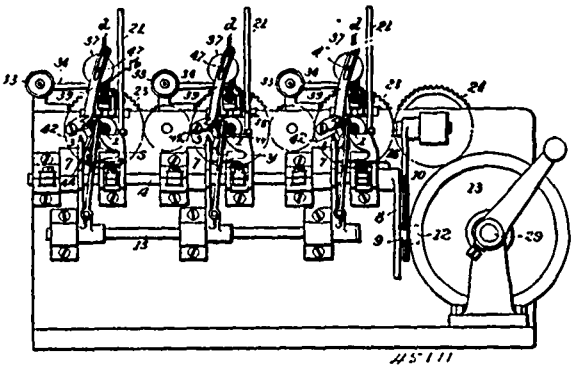


Joseph Robert Leeson, assignee of Simon Williard Wardwell, both of Boston, Massachusetts, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. The combination of the winding shaft *a*, thread guide shaft *b* and connections for imparting reciprocation to the thread guide, gears connecting the two shafts, and means for imparting to one of said gears an additional rotary movement independent of that of the shaft, substantially as set forth. 2nd. The combination of the winding shaft, the thread guide, means for reciprocating said guide, and a shaft operating said means, connections between the two shafts whereby one is driven from the other, and means for imparting an increment of motion to part of the connections independently of the shaft, substantially as and for the purpose set forth. 3rd. The combination of the winding shaft *a*, driving shaft *b*, intermediate gears, and means for imparting an increment of motion to one of said gears independent of that of the driving shaft, substantially as described. 4th. The combination with the two shafts, one for operating the cop and the other the thread guide of a winding machine, of gears connecting the two shafts, and means for moving one of said shafts in one direction independently of the movement of the other shaft to a limited extent, substantially as and for the purpose set forth. 5th. The combination with the shafts *a*, *b*, one operating the cop and the other the thread guide, of gears connecting the two shafts, a gear connection between one of the shafts and one of the gears, and means for turning said gear connection, to move said shaft independently of said gear, substantially as set forth. 6th. In a machine for winding cops, a revolving holder, a reciprocating thread guide, and means for varying the relative movement of the holder and guide at each rotation and adjusting devices for regulating the extent of the varying movement, substantially as described. 7th. The combination of the winding shaft, the shaft driving the thread guide, gears connecting the two, means for imparting an additional rotary movement to one of the shafts, a l adjustable devices for regulating the extent of said movement, substantially as set forth. 8th. The combination of the cop shaft, thread guide, the shaft driving the thread guide, and gears between the two, one carrying a rack, a pinion carried by one of the shafts, and gearing with said rack, and means for controlling the turning of said pinion, substantially as set forth. 9th. The combination of the cop shaft, thread guide, and the thread guide shaft of a winding machine and the gears between the two, of a rack carried by one of the gears, a pinion engaging with said rack and carried by one of the shafts, devices for controlling the turning of said pinion during the rotation of the shaft, and means for adjusting said devices to vary the movement of the pinion, substantially as set forth. 10th. The combination of the cop-shaft, the thread-guide and shaft for driving the same, gears between the two shafts, a rack upon one of said gears, a pinion engaging with said rack and a shaft carrying the pinion, a wheel upon the pinion shaft, and a friction plate for said wheel, substantially as set forth. 11th. The combination of the cop-shaft, a thread-guide, guide driving shaft *b*, intermediate gears, a rack on one of the gears, shaft 13, carried by the shaft *b*, and provided with a friction wheel, and with a pinion in gear with the rack, and means for adjusting the said wheel to and from the axis of the shaft *b*, and a friction plate for said wheel, substantially as set forth. 12th. The combination of the cop-shaft, shaft connected to operate the thread-guide, gears between the two shafts, one provided with a rack, a pinion on a shaft carried by one of the shafts *a*, *b*, a friction-wheel upon the pinion-shaft, a friction-plate for the friction-wheel, and means for sliding the wheel upon its shaft, substantially as set forth. 13th. The combination of the cop-shaft *a*, shaft *b* for driving the thread-guide, gears between the two, one provided with a flange, a yoke carried by one of said shafts, a shaft carried by the yoke, a pinion engaging with said rack, a friction-wheel upon the shaft carried by the yoke, and a friction-plate for the friction-wheel, and means for adjusting said friction-wheel to and from the axis of the shaft *b*, substantially as set forth. 14th. The combination with the shaft, of a thread-winding machine and with the gears for driving the same, of a rack on one of the gears, a friction-wheel 15, and friction-plate 16, therefor, a pinion connected with said friction-wheel and engaging with said rack, and means for adjusting the wheel to vary the rotation of the pinion, substantially as set forth.

No. 45,111. Winding Cop and Bobbin.

(*Enroulage des fils sur les bobines.*)



Joseph Robert Leeson, assignee of Simon Willard Wardwell, both of Boston, Massachusetts, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. The combination of a cop-shaft, a sliding and expansion spindle adapted to receive the cop tube, and means including an operating handle 21, for sliding and expanding the spindle in the tube, substantially as and for the purpose set forth. 2nd. The combination with the cop-shaft, of a thread guide arm supported to maintain contact with the cop, and a rock shaft supporting said arm, substantially as set forth. 3rd. The combination of the cop-shaft, a rock-shaft, a carrier in position to maintain contact with the cop, and movable to and from the cop-shaft, substantially as set forth. 4th. The combination of the revolving cop-shaft, a rock-shaft 15, a carrier 3, connected to the shaft 15, a guide arm 2, pivoted to the carrier 3, connected to shaft 15, a guide arm 2, pivoted to the carrier 3, a rock-shaft carrying an arm 7, a pin projecting from the carrier and having bearings upon the arm 7, and means connected to be operated from the arm 2, for automatically adjusting said pin as the guide arm moves outward from the cop-shaft, substantially as set forth. 5th. The combination of a series of cop-shafts connected to turn together, a series of separate reciprocating thread guides, and means for positively shifting all of said guides laterally, and gears adjustable to insure an increment of motion, connecting the guide shifting means and the cop-shafts, substantially as set forth. 6th. The combination with a series of cop-shafts, and with a series of thread guides, of gears for driving the cop-shafts, a shaft for driving the thread guides, gears between the cop-shafts and the shafts for driving the thread guides, and means for imparting to one of the shafts a movement, independent of that imparted by the said gears, substantially as set forth.

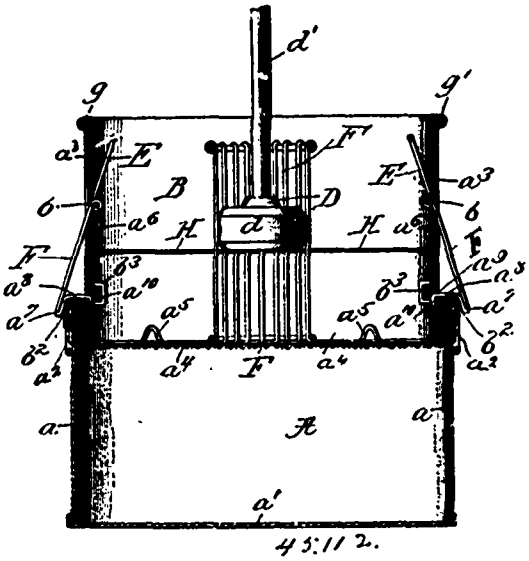
No. 45,112. Dish-washer.

(*Machine à laver la vaisselle.*)

Milo Covel, Chicago, Illinois, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. A dish-washer, comprising an outer enclosing vessel, an inner removable vessel, having a perforated or open-work bottom, an open cylinder or plunger-chamber, rising upwardly from said bottom, a cover, tightly closing said vessels, and a plunger, having a reciprocating movement in said cylinder, the handle of said plunger extending out through the cover, substantially as set forth. 2nd. In a dish-washer, an outer tight enclosing vessel, and an inner removable dish-holding vessel, said inner vessel having imperforate sides, and open bottom, and adapted to be lowered inside the outer vessel to submerge the dishes during the process of washing, and then raised upwardly and seated on the edge of the outside vessel to receive the rinse-water which drains into the wash-water, substantially as set forth. 3rd. In a dish-washer, a dish-holding vessel, having a perforated or basket bottom, imperforate sides and an open-work cylinder or plunger-chamber rising up from said bottom, substantially as set forth. 4th. In a dish-washer, a dish-holding vessel, provided with a perforated or basket bottom, and a member of standards thereon, whereby

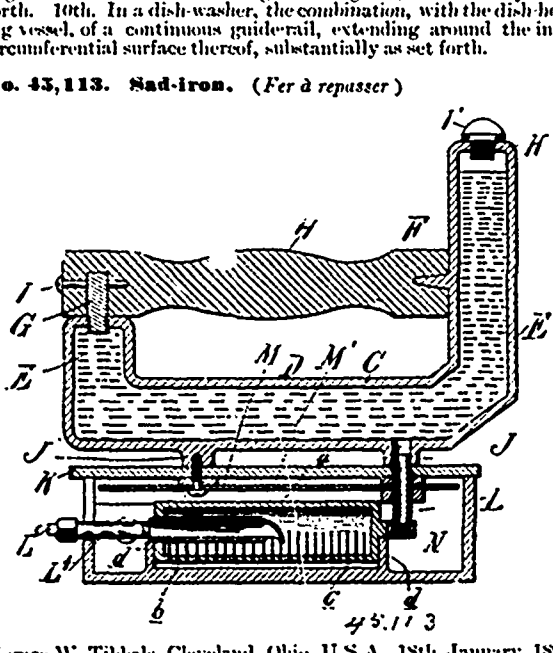
the dishes placed on said bottom may be so arranged as to expose all surfaces to the section of the water, substantially as set forth. 5th.



45,112.

In a dish-washer, the combination, with an outer enclosing vessel, of an inner dish-holding vessel, provided with handles pivotally mounted near their longitudinal centre leaving both ends free, the upper ends serving as means for lifting, and the lower ends adapted to be thrown into position to support the inner vessel on the edge of the outer vessel, and above the wash-water, substantially as and for the purpose set forth. 6th. In a dish-washer, the combination, with a dish-holding vessel, of a pair of handles free at both ends, and having a pivotal bearing near their longitudinal centre, the upper handle-ends proper being on the inside of said vessel, and then extending through the sides and down along the outside for some distance, and turning inwardly through the sides again to the interior and terminating in a hook-end, substantially as set forth. 7th. In a dish-washer, the combination, with a cover, of a tube fixed thereon and projecting from each side thereof, the respective end of said tube being made flaring, substantially as set forth. 8th. In a dish-washer, the combination, with a cover, of a tubular-bearing fixed thereon, and provided with flaring ends, and the plunger-handle, working in said tubular bearing, substantially as set forth. 9th. In a dish-washer, the combination of the outer enclosing vessel, the inner vessel, and the cover, provided with an overhanging rim and a downwardly projecting annular flange fitting in between the edges of said vessels and closing them tightly, substantially as set forth. 10th. In a dish-washer, the combination, with the dish-holding vessel, of a continuous guide-rail, extending around the inner circumferential surface thereof, substantially as set forth.

No. 45,113. Sad-iron. (*Fer à repasser*)

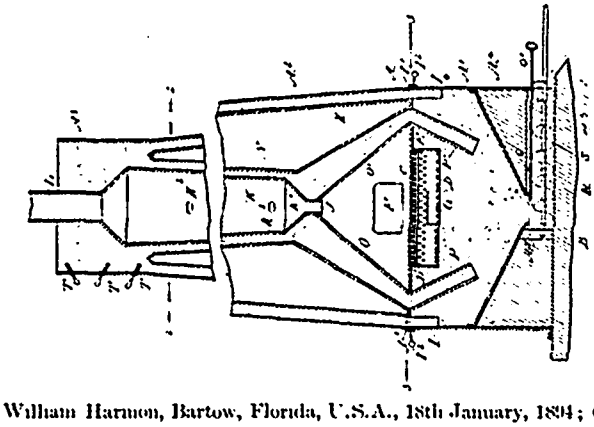


45,113

Horace W. Tibbals, Cleveland, Ohio, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. In a sad-iron, the combination with a hollow base, of a superimposed reservoir, a burner in the base, non-combustible absorbent material in the base, a feed opening formed in the base, a cap for the opening and a vapour tube above the non-combustible material, substantially as described. 2nd. In a self heating sad-iron, the combination with the hollow casing having the combustion chamber formed therein, of a vapour burner within said combustion chamber, a commingling tube within said burner, a vapour tube arranged at the side of said burner, and a supplementary heater for said vapour tube consisting of a basin formed in the casing below containing a porous non-combustible substance adapted to be saturated with inflammable liquid, substantially as described. 3rd. In a self heating sad-iron, the combination with the hollow casing having the combustion chamber formed therein, of a reservoir arranged above said combustion chamber, having upward extensions E and E^1, one at each end, the spur F, the lug G, the handle H, and the fastener I passing through the handle and lug, substantially as described. 4th. In a self heating sad-iron, the combination of the hollow casing having the combustion chamber M, the partition S, and chamber S^1, the burner Q in the combustion chamber, the commingling tube *b* having the down turned end, the vapour tube L^2 at the side of the burner, and the jet tube in the chamber S^1, substantially as described. 5th. In a self heating sad-iron, the combination of the hollow casing, the combustion chamber N, the partition S, the chamber S^1, the burner Q, the commingling tube *b* having the downward turned end, the vapour tube L^2 at the side of the burner, the lateral bend L^3, the jet tube L^4 in the chamber S^1, the reservoir C having extensions E and E^1 the handle H, the shield M, the air space M^1, the aperture T and cover U, substantially as described.

No. 45,114. Drier. (*Séchoir.*)



William Harmon, Bartow, Florida, U.S.A., 18th January, 1894; 6 years.

Claim.—1st. A drier, comprising an exterior shell having a conical bottom with a discharge opening therein, a concentric inner shell forming an annular space with the exterior shell, the said annular space discharging at its lower end on to the bottom of the said exterior shell, a smoke flue arranged inside the said shells, and a concentric shell around the said smoke flue, and connected at its upper end with the first named concentric shell to form a heating chamber, substantially as shown and described. 2nd. A drier, comprising an exterior shell having a conical bottom with a discharge opening therein, a concentric inner shell forming an annular space with the exterior shell, the said annular space discharging at its lower end on to the bottom of the said exterior shell, a smoke flue arranged inside the said shells, a concentric shell around the said smoke flue, and connected at its upper end with the said first named concentric shell to form a heating chamber, and a grate arranged in the said shell at the bottom of the said heating chamber, substantially as shown and described. 3rd. A drier, comprising an exterior shell having a conical bottom with a discharge opening therein, a concentric inner shell forming an annular space with the exterior shell, the said annular space discharging at its lower end on to the bottom of the said exterior shell, a smoke flue arranged inside the said shells, a concentric shell around the said smoke flue, and connected at its upper end with the said first named concentric shell, to form a heating chamber, and pipes leading from the said second concentric shell to the bottom part of the exterior shell, substantially as shown and described. 4th. A drier, comprising an exterior shell having a conical bottom with a discharge opening therein, a concentric inner shell forming an annular space with the exterior shell, the said annular space discharging at its lower end on to the bottom of the said exterior shell, a smoke flue arranged inside the said shells, a concentric shell around the said smoke flue, and connected at its upper end with the said first named concentric shell to form a heating chamber, pipes leading from the said second concentric shell to the bottom part of the exterior shell, a grate arranged in the bottom of the said heating chamber, and an ash pit below the said grate, substantially as shown and described. 5th. A drier comprising an exterior shell having a conical bottom with a discharge opening therein, a concentric inner shell forming an annular space with the exterior shell, the said annular space dis-

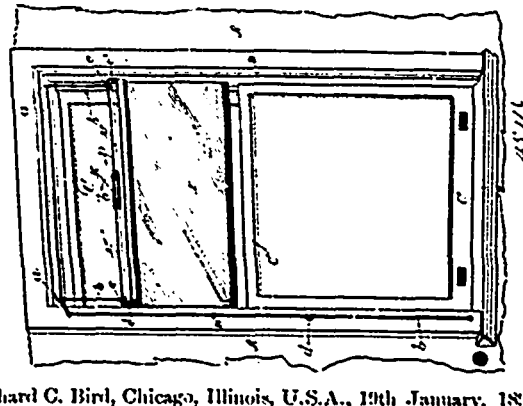
charging at its lower end on to the bottom of the said exterior shell, a smoke flue arranged inside the said shells, a concentric shell around the said smoke flue, and connected at its upper end with the said first named concentric shell to form a heating chamber, pipes leading from the said second concentric shell to the bottom part of the exterior shell, and a conveyor upon which discharges the outlet opening of the said bottom to remove the dried material, substantially as shown and described. 6th. A drier comprising an exterior shell having a discharge chamber in its bottom portion, and a heating chamber above the same, an inner concentric shell above said bottom chamber, the annular drying space between the two shells being open at its upper end to receive the descending material to be dried, a series of doors for establishing and closing communication between the lower end of said annular space and the said discharge chamber, a smoke flue within said shells, and a concentric shell around the said smoke flue and connected at its upper end with the said inner concentric shell to form the said heating chamber, substantially as set forth.

No. 45,115. Car Ventilator. (*Ventilateur pour chars.*)

Charles Knapp, St. Louis, Missouri, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. A car ventilator serving as an eductor, consisting of a T-shaped coupling, the vertical arm of which enters the car, and the oppositely horizontal members of which are flanged, of two long gradually flared pipes, the smaller ends of said pipes resting within the opposite flanged ends of the horizontal members of the said coupling, and projecting therefrom longitudinally of the car to approximately a great distance therefrom, whereby the current of air passing through the pipes will educt the air from the car, hangers supporting the ends of the said pipes and secured to the car, and a graduating damper at the projecting end of the vertical member of the coupling adapted to regulate the proper amount of suction, substantially as described. 2nd. A car ventilator serving as an eductor, consisting of a T-shaped coupling, the vertical arm 7 of which enters the car, and the opposite horizontal members 9 of which are flanged, of two long gradually flared pipes 11, the smaller ends of the said pipes resting within the opposite flanged ends of the horizontal members of the said coupling, and projecting therefrom longitudinally of the car to approximately a great distance therefrom, whereby the current of air passing through the pipes will educt the air from the car, hangers supporting the ends of the said pipes and secured to the car, a valve composed of a plate 15 secured in the floor of the said car above the said vertical member, and having a circular depression therein provided with a central depression 21, and radially arranged openings, a circular plate contained in the said circular depression, having a central projecting part 19 contained in the central depression 21, and being radially slotted, and a bolt 22 passing through the centre of the central depression 21, and secured to the projecting part 19 of the circular plate, substantially as described.

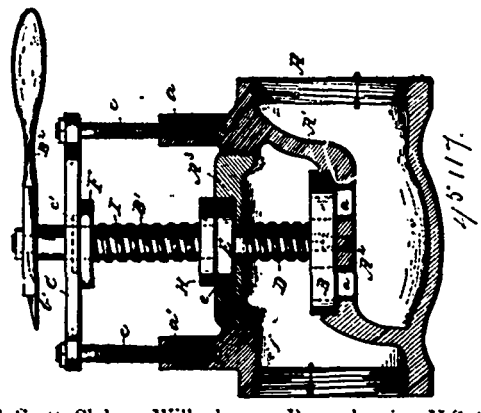
No. 45,116. Adjustable Bracket for Window Shades.
(*Console mobile pour rideaux de fenêtre.*)



Richard C. Bird, Chicago, Illinois, U.S.A., 19th January, 1893; 6 years.

Claim.—1st. An adjustable and movable bracket for window shades, consisting of a sleeve, provided with thumb or set-screws, and two supporting pieces having their inner portions secured in the sleeve by means of the screws, and their outer ends bent down and provided with openings to receive the projections on the ends of the shade roller, substantially as described. 2nd. In an adjustable and movable bracket for window shades, the combination of two supporting pieces flat in form, but presenting their edges vertically, and having their inner portions passed through and secured in a sleeve, and their outer ends bent down and provided with openings to receive the projections on the ends of the shade roller, with a hollow sleeve adapted to receive the supporting pieces, and having thumb or set-screws to secure the same, substantially as described. 3rd. An adjustable and movable bracket for window shades, consisting of two supporting pieces flat in form, but presenting their edges vertically, and having the down turned ends c^1, c^2, provided with openings f, and f^1 respectively, and the sleeve H, having the thumb or set-screws h, constructed, arranged and operating, substantially as and for the purpose set forth. 4th. An adjustable and movable bracket for window shades, consisting of the supporting pieces E^2, E^3, flat in form, but presenting their edges vertically, and having the slots i, the down turned ends c^1, c^2, provided with openings f, f^1, respectively, and a sleeve having thumb or set-screws to secure the inner portions of the supporting pieces, substantially as described.

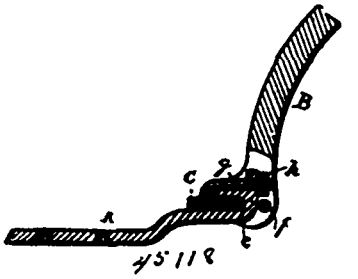
No. 45,117. Valve. (*Soupape.*)



Alfred Scott Slyker, Wilkesbarre, Pennsylvania, U.S.A., 19th January, 1893; 6 years.

Claim.—1st. In combination with the valve casing, the valve disc seated therein, the spring-pressed valve stem having the disc formed integrally therewith, the cap-piece or cover having the countersink adapted to receive said disc and forming a ground joint connection between said valve stem and casing, the spring adapted to press said disc to its seat, and the actuating lever for rotating the disc valve, substantially as described. 2nd. A rotary valve comprising a suitable casing with the disc valve seated therein, the valve stem, the actuating lever, the disc rigid with said valve stem, the cross-bar, the adjusting screws connecting said cross-bar and casing, the washers fitted loosely on said valve stem between said cross-bar and casing, the spring interposed between said washers, and a second spring for holding the disc valve to its seat, substantially as described. 3rd. In combination with the valve casing having the disc valve seated therein, the valve stem having the disc rigid therewith seated above said disc valve, so as to form a ground joint above the valve stem, the loose washer having the friction rollers bearing on said rigid disc, and the spring bearing on said washer, so as to force said disc to its seat, substantially as described. 4th. In combination with the valve casing having the valve seat with disc valve seated therein, the valve stem having the disc rigid therewith seated above said disc valve, so as to form a ground joint about the valve stem, the cross-bar and adjusting screws for centering said stem and discs, the loose washer having the friction rollers bearing on said rigid disc, the spring bearing on said washer, so as to force said disc to its seat, and the actuating lever, substantially as described.

No. 45,118. Anti-Rattling Thill Coupling.
(*Compensateur pour armons de limonières.*)

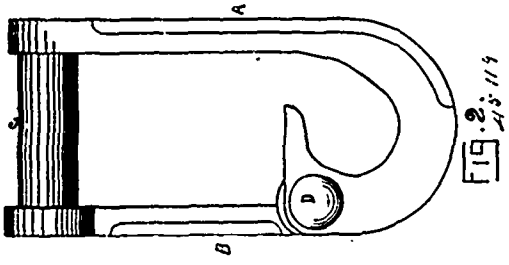


Peter Stalker, Union, New York, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. The herein described thill coupling, comprising the bracket A, having an upturned perforated end, an arm c, forming

a recess *i*, a bifurcated thill-iron B, having a draw-bar, and a plate C, provided with an arm *g*, means for securing it within the opening *h*, said plate adapted to slide in the recess *i*, and engage with the draw-bar. 2nd. The herein described thill coupling, comprising the bracket A, having an upturned perforated end, an arm *c*, forming a recess *i*, a bifurcated thill-iron B, having a draw-bar, and a plate C, provided with an arm *g*, means for securing it within the opening *h*, said plate adapted to slide in the recess *i*, and engage with the draw-bar, and a safety-bar *f*, as set forth.

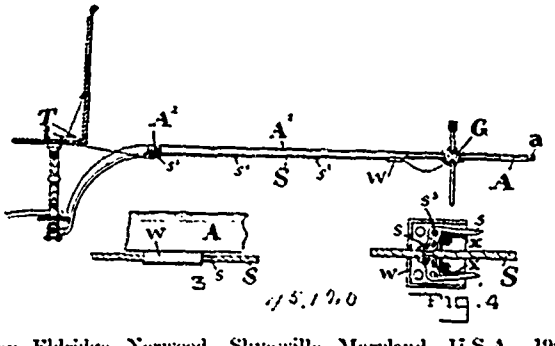
No. 45,119. Clevis. (*Fer d'attelage.*)



Ira J. Ribble, St. Thomas, Ontario, Canada, 19th January, 1894; 6 years.

Claim.—1st. The combination of the hook-shaped bars A and B, with the ball-joint D, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of two hook-shaped bars, provided with a ball-joint, with a pedestal cast or forged integral on one of the said hook-shaped bars, substantially as and for the purpose set forth.

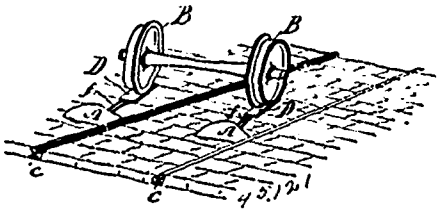
No. 45,120. Shaft and Harness Attachment.
(*Limonière et attache de harnais.*)



John Eldridge Norwood, Skyesville, Maryland, U.S.A., 19th January, 1894; 6 years.

Claim. 1st. The combination of the tubular vehicle shaft, a spring located within the tubular part, and means for connecting the spring in the shaft with parts of the harness, whereby the strain in pulling and backing is cushioned. 2nd. The combination of the tubular vehicle shaft, having a longitudinal slot, a spring located within the tubular part, a centre-piece or frame for the attachment of parts of the harness, and means, passing through and sliding in the said slot in the shaft, for connecting the centre-piece with the spring in the shaft. 3rd. The combination of the tubular vehicle shaft, having a longitudinal slot, a spring in said tubular shaft and secured at one end thereto, a sliding-piece fastened to the other or free end of the spring, and a centre-piece for the attachment of the parts of the harness and connected through the slot in the tubular shaft with the said sliding-piece. 4th. The combination of the tubular vehicle shaft, having a longitudinal slot, a slideway on the shaft and having projecting side flanges parallel with said slot, a spring in the tubular shaft, a sliding-piece connected with the spring and having clips which take over the flanges of the slideway, a centre-piece or frame for the attachment of parts of the harness, and means for securing the said centre-piece to the said sliding-piece, as described. 5th. The combination of the tubular vehicle shaft, having a longitudinal slot, a spring within the shaft, a bolt having one end attached to the spring, and screw threads at its other end, a cap-nut which turns loosely on the end of the shaft and engages the threaded end of the bolt, a sliding piece moving in a slideway outside the vehicle shaft and connected to the rear end of the spring through the slot in the tubular shaft, a centre-piece for the attachment of parts of the harness, and means connecting the said sliding-piece with the centre-piece. 6th. The combination of the releasing trigger on the shaft, a cord connecting with said trigger and passing along the shaft to the vehicle, and a tension device on the shaft, through which the cord passes, said tension device operating to permit the cord to be drawn toward the vehicle but preventing it from being drawn the other way.

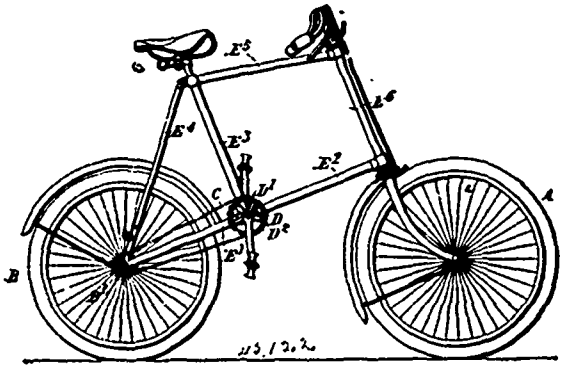
No. 45,121. Car Replacer and Hose Bridge.
(*Lève-char et pont pour boyaux.*)



Burt E. Tilden, Chicago, Illinois, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. The replacing frog A, having braces *a*, *a*, *a*, *a*, and spurs *b*, *b*, *c*, *c*, *d*, *d*, and opening *g*, substantially as and for the purposes described. 2nd. The replacing frog A, having opening *g*, substantially as described and for the purposes specified. 3rd. In combination with a replacing frog, the circuit connecting strip D connected with the frog by any suitable means, substantially as and for the purposes described. 4th. In combination with the replacing frog A, the circuit connecting strip D having metallic connection *f*, substantially as and for the purposes described.

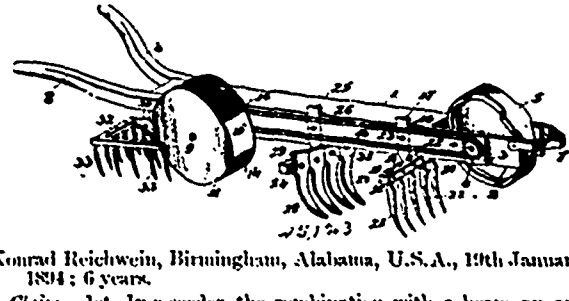
No. 45,122. Velocipede. (*Vélocipède.*)



Samuel McCormack, Dublin, Ireland, 19th January, 1894; 6 years.

Claim.—1st. In a rear driven bicycle having chain driving gear, the combination with the driving-wheel, of a chain-wheel D on the pedal crank axle raised entirely above the level of the centre of said driving-wheel, a bottom bracket in which the said crank axle rotates, a rigid bottom member of the frame which supports said bottom bracket and connects the driving-wheel with the front fork, and a chain connecting the said chain-wheel with the sprocket-wheel on the driving-wheel axle, for the purpose specified. 2nd. In a rear-driven bicycle having chain driving gear, the combination with the driving-wheel, of a chain-wheel D on the pedal crank axle raised entirely above the level of the centre of said driving-wheel, a bottom bracket in which the said crank axle rotates, two rods E^1 and E^2, which are in the same straight line and are rigidly connected to form the bottom member of the frame, and at the junction of which the bottom bracket is supported, and a chain connecting the said chain-wheel with the sprocket-wheel on the driving-wheel axle, substantially as and for the purpose specified.

No. 45,123. Combined Plough and Seeder.
(*Charrue et semoir combinés.*)



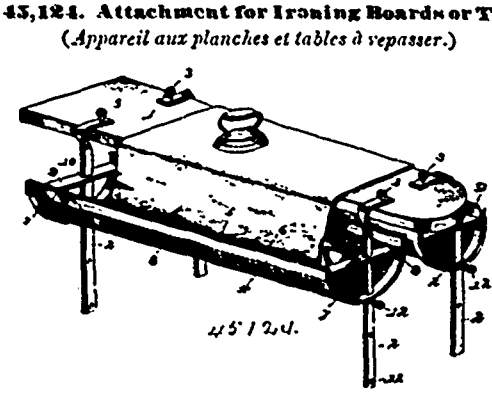
Konrad Reichwein, Birmingham, Alabama, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. In a seeder, the combination with a beam, an axle at the front end thereof, and a shaft in rear of the axle, of a revolvable hopper, and a sprocket-wheel mounted on the shaft, the hopper being provided with seed opening, a ground-wheel and sprocket-wheel mounted on the axle, a chain belt connecting the two sprocket-

wheels, pulverizing devices carried by the beam between the ground-wheel and hopper, and pulverizing devices located in rear of the hopper and connected to the beam, substantially as specified. 2nd. In a seeder, the combination with a beam, a front axle, a rear shaft, a hopper, and sprocket wheel mounted on the rear shaft, a ground-wheel and sprocket-wheel mounted on the axle, and a drive chain between the sprocket-wheels, of a knife carrying frame arranged transversely under the beam in rear of the ground-wheel, a turning device arranged under the beam in rear of the knife carrying frame, and a harrow frame connected with the beam in rear of the hopper, substantially as specified. 3rd. In a seeder, the combination with a beam, a revoluble hopper, and means for operating the same, of a transverse bar connected with the beam in rear of the ground-wheel and provided with angular openings, a series of cutters tapered toward their lower ends, triangular in cross section, and provided with angular shanks mounted in the openings and depending from the bar, binding screws passed through perforations in the bar and bearing on the shank, a rear diagonally disposed bar connected with the beam and having in its front face dove-tail groove, a series of tines, curved, pointed, and spaced apart applied to the front face of said bar and terminating at their upper ends in widened plates, provided upon their rear sides with dove-tailed ribs, and screws passed through the plates into the bar, and a harrow frame arranged in rear of and connected with the beam, substantially as specified. 4th. In a seeder, the combination with the beam having the front bifurcated end provided opposite bearings, the ground-wheel, the axle, and the sprocket-wheel, the rear bearing plate, the transverse shaft extending beyond the same, the revoluble hopper and sprocket-wheel carried by the shaft, the drive chain connecting the two sprocket-wheels, of the cutting device arranged below the beam in rear of the wheel, the turning device arranged in rear of the cutting device, and the harrow arranged in rear of the beam and hopper, substantially as specified. 5th. The combination with the beam having the front and rear recesses, the vertical shanks 17 and 25 secured in the recesses, of the front and rear bars 19 and 24 secured to the shanks, said bars having recesses, the curved pointed cutters depending from the front bar, and the curved turning tines depending from the rear bar, substantially as specified. 6th. In a combined plough and seeder, the beam provided at its front end with the ground wheel 5, the shaft of which carries a sprocket-wheel, the cutting device secured to the beam in rear of the ground-wheel and having a series of triangular cutters arranged at right angles to the beam and tapered toward their lower ends, the turning device arranged in rear of the cutting device and also secured to the beam but at an obtuse angle thereto so as to throw the earth to one side, said turning device having a series of curved pointed tines, and the revoluble hopper arranged in rear of the turning device and having a sprocket-wheel on its shaft connected with the sprocket of the ground-wheel shaft, substantially as described. 7th. The turning device consisting of the shank 25 adapted to be connected at its upper end to the beam, the bar 24 provided with dove-tail grooves 27, having perforations and secured to the lower end of the shank and the curved tines 23 having dove-tail ribs 30 on their rear sides fitting the grooves, and screws passed through the tines and ribs and into the bar, substantially as described. 8th. In combination with the revoluble hopper, and the beam on which it is mounted, the triangular harrow frame 32 provided at its front and inner angles with hooks 34, and brace rods 35, secured to the side and also to the rear of the beam and connected to the hooks of the harrow frame, whereby the latter is held from turning and yet a vertical movement of the same is permitted, substantially as specified.

No. 43,124. Attachment for Ironing Boards or Tables.

(*Appareil aux planches et tables à repasser.*)



Frederick N. Lewis, Jackson, Michigan, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. The combination with an ironing board, of hangers depending from opposite edges thereof, and opposite independent semi-cylindrical receptacles supported by the hangers at each side of the board, substantially as specified. 2nd. The combination with an ironing board, and opposite depending hangers, of semi-cylindrical receptacles consisting of opposite parallel side and curved end bars, transverse connecting bars, and an intermediate web of wire cloth, the end and transverse bars being slotted to receive the hangers and secured thereto, substantially as specified. 3rd. The combination with an ironing board or table, and opposite depending hangers, of opposite receptacles slotted to receive the hangers, and vertically adjustable thereon, perforations formed in the hangers, and keys passed through the perforations, substantially as specified. 4th. An attachment for ironing boards, consisting of the wire cloth receptacles arranged along the sides of the board and having open upper sides and vertically adjustable, and hangers for securing the receptacles to the board, substantially as specified.

No. 43,125. Pneumatic Tire.

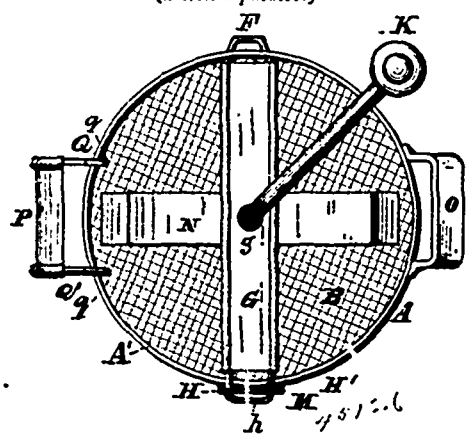
(*Bandage pneumatique.*)

Frederick Henry Sprang, Wallington, England, 19th January, 1894; 6 years.

Claim.—1st. The treatment of rubber with oil after vulcanizing, whereby the bulk or volume of that portion of the rubber which has absorbed the oil is increased. 2nd. A pneumatic tube or tire treated with oil after vulcanizing. 3rd. A pneumatic tube or tire in which a portion only of the thickness of the rubber has absorbed the oil. 4th. A pneumatic tire consisting of an air-tube which has absorbed oil after vulcanizing, in combination with a cover. 5th. A pneumatic tire consisting of an air-tube which has absorbed oil after vulcanizing in combination with a canvas pocket and an outer cover. 6th. A pneumatic tire consisting of an air-tube which has absorbed oil after vulcanizing.

No. 43,126. Potato Masher.

(*Pilon à patates.*)

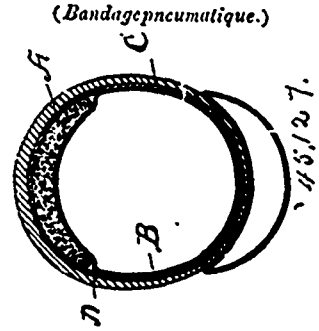


Alexander M. Amos, Buffalo, New York, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. In a vegetable masher, the combination, with the shell A, having the slot hole E, of the cross-bar G, having the U-shaped wire tongue on one end and the hook-shaped clamps H H¹, at the other, and the hasp M engaging the outwardly projecting portion *h* of the said hooks, as and for the purpose indicated. 2nd. In a vegetable masher, the combination, with the shell, of the removable shield consisting of the U-shaped plate I¹, having on its upper end the hooks Q Q¹, and at its lower end the wire guard R and clamp, as and for the purpose specified. 3rd. In a vegetable masher, the masher-wings J J¹, affixed to the spindle I, and having the oppositely-arranged inclines *n n*¹, one of which is above the plane of the other, as stated, and the substantially U-shaped brace N, as and for the object stated.

No. 43,127. Pneumatic Tire.

(*Bandage pneumatique.*)

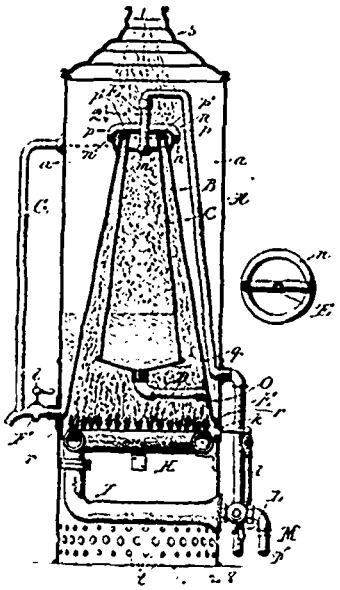


Thomas James Williams, London, England, 19th January, 1894; 6 years.

Claim.—1st. The use in a pneumatic tire of a pad composed of any suitable fibrous or similar material impregnated with or con-

taining powered resin or its cognate for the purpose set forth. 2nd. The use in a pneumatic tire of powered resin or its cognate applied either directly or indirectly to the canvas lining or pocket for the purpose of protecting the air-tube from puncture. 3rd. The use in a pneumatic tire of a pad composed of any suitable material impregnated with resin and located between the inner tube and the outer cover of the tire, for the purpose set forth.

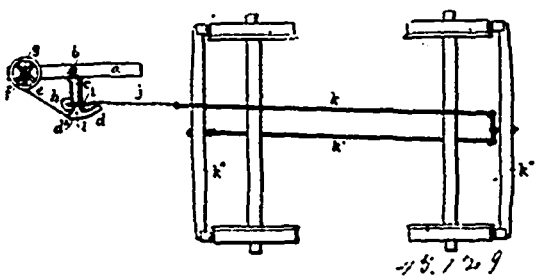
No. 45,128. Water Heater. (*Calorifère à eau.*)



Samuel Bernstein, Chicago, Illinois, U.S.A., 19th January, 1894; 6 years.

Claim.—The water heater, having the large water space *a*, and overflow G, in combination with the conical shells, B and C, between which pass the products of combustion from a gas or other burner H, as shown and described. 2nd. In a water heater, a connection between the water-cock and the gas-cock, whereby the gas cannot be turned on without turning on the water, while the water may be turned on without turning on the gas, substantially as described.

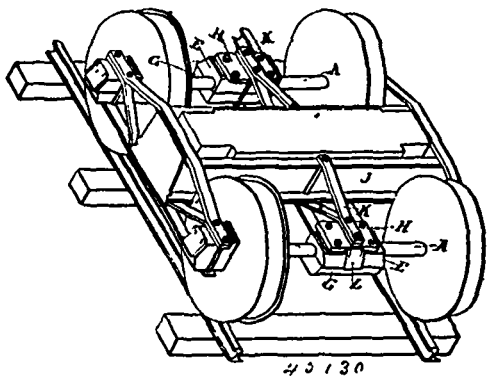
No. 45,129. Apparatus for Operating Car Brakes.
(*Appareil pour actionner les freins de chars.*)



Marcus E. Ellsworth, Hudson, Ohio, U.S.A., 19th January, 1894; 6 years.

Claim.- 1st. In an apparatus for operating railway car brakes, a radial arm *c*, provided with a grooved segmental arm *d*, having axle connection with a frame, in combination with the chain *e*, attached to said segmental arm and brake-shaft arm *f*, the roller *h*, operating on said radial arm and provided with a bail connected with the brake-chain, substantially as and for the purpose specified. 2nd. In an apparatus for operating railway car brakes, a roller connected with the brake chain by means of a bail, and operating on a radial arm, in combination with the brake-shaft, an arm extending therefrom and a chain attached to said arm, substantially as and for the purpose set forth. 3rd. In combination with a railway car brake, a radial arm pivoted to a frame and provided with a segmental arm at the free end thereof, a roller or its equivalent operating on said arm, and provided with a bail connected with the brake-chain, in conjoint operation with a chain connected with the segmental arm and extending from the brake-shaft, substantially as and for the purpose set forth. 4th. In combination with the brake-shaft of a car, an arm *f*, extending therefrom and connected by means of a chain with a segmental arm at the end of a radial arm, pivoted as described, having connections with the brake, substantially as and for the purpose set forth.

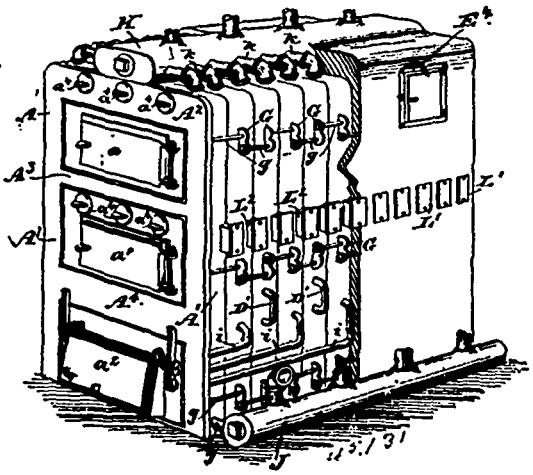
No. 45,130. Railway Car Axle. (*Essieu de chars.*)



James A. Mahood, Victoria, British Columbia, Canada, 19th January, 1894; 6 years.

Claim.—1st. The coupling plates H, holding securely together the centrally and transversely divided axle A, having bearing D and F, upon upper and lower side of journals, and securing the same by a tie-frame K to the bolster J. 2nd. The common bearing F on the lower side of and engaging the flanges C, C, of centrally and transversely divided axles A. 3rd. The combination of bolster J, the tie-frame K, central bearing D and F, coupling plates H, and the journalled compound axle A, having flanges C, C, as and for the purposes set forth. 4th. The combination with a centrally and transversely divided and centrally supported car axle A, of the combined grease box and central bearing consisting of an upper section E and lower section G, and having its door or lid in the upper section E, and on the side of the axle, substantially as described.

No. 45,131. Boiler Furnace. (*Foyer de chaudière.*)



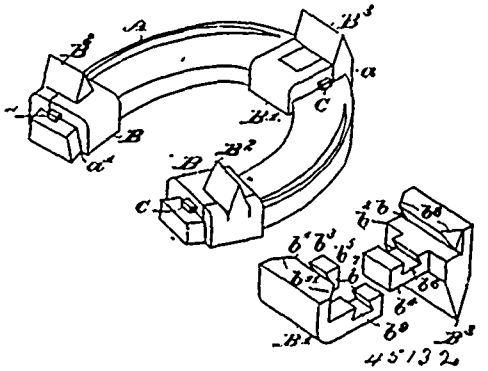
Judson W. Warner, Oneida, New York, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. In a sectional boiler, the combination with the front, rear and intermediate water holding sections, of a series of independent water circulating pipes extending between fire chamber and ash-pit, and connected by one end to an intermediate section, and by the other end to the front or rear section, substantially as set forth. 2nd. In a sectional boiler, the combination with a water holding section, having vertical water holding legs and transverse water holding limbs, and constituting part of the fire chamber and flue passages of a separate water circulating pipe extending transversely between and entirely through the legs of the section below, and adapted to sustain a grate piece, substantially as described. 3rd. In a sectional boiler, the combination of the front, rear and intermediate sections, one of the sections D, E, having legs B^1, and transverse limbs B^2, B^3, B^4, and coal reservoir partly formed in the opposed faces of said sections, opening at the side of the boiler, and the water drum at top of the boiler, substantially as specified. 4th. In a boiler having horizontal return flue passages, the combination of the hollow front and rear sections and hollow intermediate sections, constructed substantially as described so that each forms and contains part of the base, ash pit, fire chamber and upper and lower flue passages of the boiler and supports part of the grate, and a grate piece mounted on each of said intermediate sections,

between the ash-pit and fire chamber portions thereof, with another intermediate section similar to the other but having the grate piece replaced by an integral hollow water circulating limb, whereby two fire chambers are formed in the boiler, substantially as set forth. 5th. In a return flue boiler, the combination of the transverse sections forming part of the ash-pit, fire chamber, and having transverse water holding limbs above the fire chamber, and pockets intermediate said limbs, and lateral recesses in the meeting faces of the sections forming openings in the sides of the boiler at the ends of said pockets for cleaning them, substantially as specified. 6th. In a return flue boiler furnace, the combination of the separate sections each forming part of the ash-pit and fire chamber and having transverse water holding limbs above the fire chamber, and pockets intermediate said limbs, and recesses in the meeting faces of the sections forming lateral openings in the sides of the boiler at the ends of said pockets, and transverse openings through said limbs, substantially as set forth. 7th. In a return flue sectional boiler, the combination of similar transverse water holding sections each forming part of the base, ash-pit, fire chamber, and flue passages, and having lateral recesses in their opposed meeting faces forming brush openings between the sections, substantially as described. 8th. For a sectional boiler, the herein described water holding section B, having vertical legs B^1, transverse limbs B^1, B^3, B^4, and brush openings b in said limbs, and lateral recesses in its sides at the ends of the lower limbs, substantially as set forth. 9th. For a sectional horizontal return flue boiler, the herem described water holding section C, having vertical legs B^1, transverse limbs B^2, B^3, B^4, and hollow transverse back C^1 below and separated from said limbs, constructed as shown. 10th. For a sectional boiler, the herein described section C, having vertical legs B^1, transverse limbs B^2, B^3, B^4, hollow transverse water back C^1 below said limbs, brush openings through said limbs, and lateral recesses in the legs adjoining the lower limbs, for the purpose specified. 11th. In a sectional boiler, the combination of the front section A, rear section F, intermediate sections B, and intermediate coal reservoir sections D E, the water circulating pipes supported in sections B, D, E, and extending therethrough communicating at their opposite ends with separate sections by connections exterior to the sections, and the supply and return pipes, substantially as set forth. 12th. The combination of the middle section C, the fuel feed reservoir sections D E, having curved reservoir channels in their meeting faces at one side of the section C, the intermediate similar sections B B at each side of section C, and the outermost front and rear sections A and F, each section forming part of the base, ash-pit, fire chamber and flue passages, and all combined to form a horizontal return flue boiler, having two fire chambers, one of which is beneath the feed reservoir, substantially as specified.

No. 45,132. Calk for Horse-shoes.

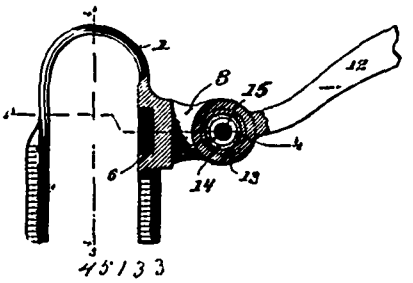
(*Crampon de fer à cheval.*)



Patrick H. Guyton, Lowell, Massachusetts, U.S.A., 19th January, 1894; 6 years.

Claim.—1st. A clamp, formed in two parts or jaws, one of which is provided with a calk, one of said jaws having a tongue, and the other of said jaws having a recessed part to receive said tongue, a key, passing through transverse slots, with which the upper surfaces of said tongue and recessed part are provided, to draw said jaws toward each other, and to cause said jaws to grasp the inner and outer edges of a horse-shoe, and to protect said key between the bottom of said shoe and said tongue, and recessed part, as and for the purpose specified. 2nd. The combination, with a horse-shoe of a clamp, formed in two parts or jaws, one of which is provided with a calk, one of said jaws having a tongue, and the other of said jaws having a recessed part to receive said tongue, a key, passing through transverse slots, with which the upper surfaces of said tongue and recessed part are provided, to draw said jaws towards each other, and to cause said jaws to grasp the inner and outer edges of said horse-shoe, and to protect said key between the bottom of said shoe and said tongue, and recessed part, as and for the purpose specified. 3rd. *The combination of a horse-shoe, bevelled at the top at its outer* and inner edges, a clamp having a calk and having jaws, provided with inclined inner faces to fit said bevelled surfaces of said shoe, one of said jaws having a tongue, and the other of said jaws having a recessed part to receive said tongue, and a key passing through transverse slots, with which said tongue and recessed part are provided, to draw said jaws towards each other, and to cause said jaws to grasp said inner and outer edges of said shoe, as and for the purpose specified.

No. 45,133. Thill Coupler. (*Armon de limonière.*)

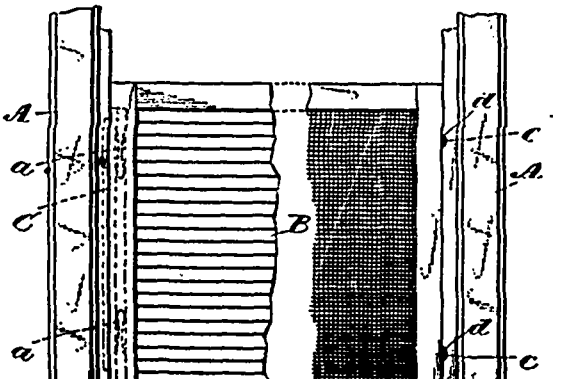


Frank J. Buff, Milwaukee, Wisconsin, U.S.A., 20th January, 1894; 6 years.

Claim.—1st. In a thill coupling, the combination, of an axle clip having the rear side of its fore leg adjacent to the axle provided with a recess, and having an integral arm projecting forward from the front face of the fore leg, said arm having an inward projecting conical lug, an arm provided at its rear end with a lug adapted to fit in the recess of the fore leg of the clip, and to abut against the axle, and provided at its forward end with an inward extending conical lug, a thill, the eye thereof being of double conical form to receive the lugs, and a bolt passing through the arms and through said lugs, substantially as set forth. 2nd. In a thill coupling, the combination of an axle clip having the rear side of its fore leg adjacent to the axle provided with a recess, said recess provided with an inward tapering bottom and inward tapering sides, the clip also having an integral arm projecting forward from the front face of its fore leg, said arm having an inward projecting lug, an arm provided at its rear with an inward extending lug, fitting the recess of the fore leg of the clip and abutting against the axle, the edges and inner face of said lug tapered or bevelled to register with the corresponding bevels of the recess, and said arm also provided at its forward end with an inward extending lug, a thill, the eye thereof adapted to receive the inward extending lugs at the forward ends of the arms, and a bolt passing through the arms and forward lugs thereof, substantially as set forth.

No. 45,134. Window Blind and Screen.

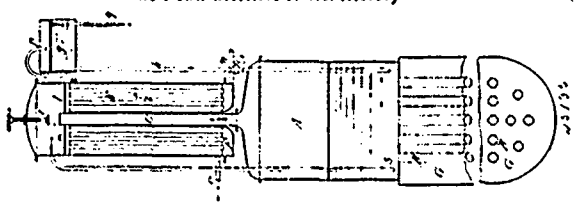
(*Store de fenêtre.*)



George E. Blaine, Alliance, Ohio, U.S.A., 20th January, 1894; 6 years.

Claim. 1st. In a window blind or screen, the combination with one side thereof, having a mortise extending nearly the entire length, of a f ction strip C, provided with retaining shoulders and fitted to rein, springs *a*, of the shape described, in said mortise for forcing the friction strip outward, and retaining piece *b*, engaging the shoulders at the ends of ' o strip to hold the same permanently to the blind or screen, substantially as described. 2nd. In a window screen, the combination of the grooved ways D, one of which is provided with openings *d*, of the screen side bars, the one carrying *in its mortised side a spring friction strip*, and the other screws *c*, substantially as and for the purpose specified.

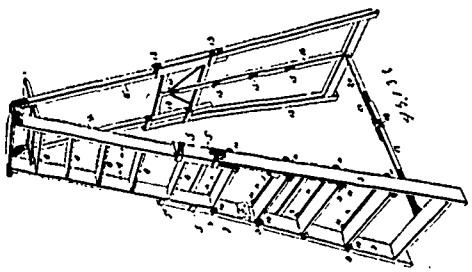
No. 44,135. Apparatus for Obtaining Distilled and Sterilized Water. (*Appareil pour obtenir de l'eau distillée et stérilisée.*)



Josef Nagel, Chemnitz, Germany, 20th January, 1894; 6 years.

Claim.—1st. An apparatus for producing distilled water, characterized by an upcast tube C, connected with a boiler A, which tube C, is surrounded with tubes E, which are encircled by a suitable cooling medium, and through which tubes E, the steam developed in the boiler A, is condensed and conveyed from above downwards, substantially as described and shown. 2nd. A modification of the apparatus described in claim 1, for obtaining sterilized water, by means of boiling, characterized by the arrangement of an upcast pipe S, and a valve r, the water which is forced by the steam, developed in the boiler A, during the heating of the water, being caused to rise through the said tube S, to the cooling pipes E, where it is cooled down by these latter, substantially as described and shown.

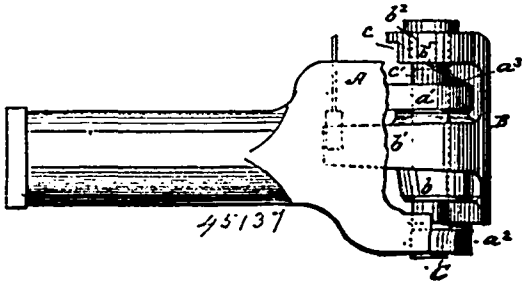
No. 45,136. Step-Ladder. (*Echelle à marches.*)



Louis A. Weiland, Pittsburg, Pennsylvania, U.S.A., 20th January, 1894; 6 years.

Claim.—1st. In an adjustable step-ladder, legs having upper and lower extensible parts, the lower part having pivoted steps, and means for holding them detachably in horizontal position, the lower ends of the upper parts of the legs being longitudinally movable in the path of the pivoted steps, and being adapted to be upheld thereby, substantially as described. 2nd. In an adjustable step-ladder, legs having upper and lower extensible parts, the lower part having pivoted steps, loose pivot-bearings permitting horizontal motion of the steps, and detachable hooks, substantially as described.

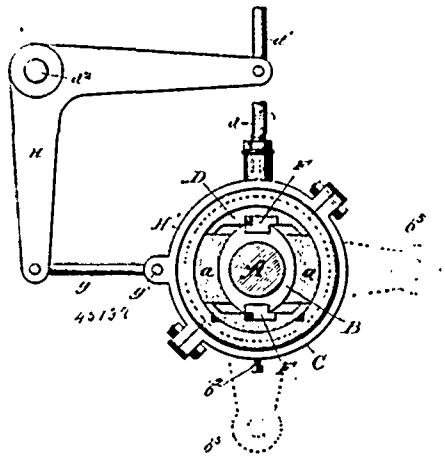
No. 45,137. Car Coupler. (*Attelage de chars.*)



John La Bart, Brooklyn, New York, U.S.A., 20th January, 1894; 6 years.

Claim.—1st. In a car coupling, the combination, with a coupling-head having the pivot lugs, the pivot-pin, and the swinging-knuckle having the hub-like portion, and the lug extending over the upper lug of the coupling-head, substantially as specified. 2nd. In a car coupling, the combination, with a coupling-head having the pivot-lugs, one of said lugs having on its inner side, an inclined portion and a transverse depression and the swinging-knuckle having the inclined way and the projection to receive the said transvere depression, substantially as specified. 3rd. In a car coupling, the combination, with a coupling-head having the pivot-lugs, one of said lugs having on its inner side, an inclined portion, a horizontal portion, and a vertical shoulder at one end of said incline, and a depression at the other end of said incline, and the swinging-knuckle having the inclined way, the horizontal portion and the projection substantially as specified. 4th. In a car coupler, the combination, with the coupling-head and the swinging-knuckle of a locking-latch movable in one direction by the inward movement of the knuckle, and means for swinging the latch to release the knuckle, substantially as specified. 5th. In a car coupler, the combination, with the coupling-head and the swinging-knuckle, of a locking-latch and a locking-link provided with a shoulder or projection to engage against a portion of said knuckle, when in a closed position and prevent an accidental upward movement of said latch, substantially as specified.

No. 45,138. Reversing and Cut-off Mechanism for Steam Engines. (*Mécanisme de relevage et détente pour machines à vapeur.*)



Andrew J. Schindler, Chicago, Illinois, U.S.A., 20th January 1894; 6 years.

Claim.—1st. The combination, with the main shaft, of a sleeve, provided with guide-wings and grooves, as described, and rigidly mounted on said shaft, a disc or eccentric-plate, loosely mounted on said sleeve, and having a lateral movement on said wings across the line of the shaft, an eccentric, encircling the shaft and adjustably secured to said disc-plate, shifting-feathers, loosely engaging with the sleeve and disc-plate, and a collar, to which the outer ends of said feathers are rigidly secured, substantially as set forth. 2nd. The combination, with a stationary sleeve, provided with guide-wings and longitudinal grooves, as described, of a disc-plate, provided on its inner opposite edges with diagonal grooves, companion shifting-feathers, each consisting of a parallel and diagonal-bar, the parallel-bars seating in the longitudinal grooves in said sleeve, and the diagonal-bars seating in the corresponding grooves in said disc or eccentric-plate, and an eccentric, adjustably attached to said plate, whereby a longitudinal movement of said feathers imparts a lateral movement to the plate and eccentric, substantially as set forth. 3rd. The combination, with a sleeve, provided with guide-wings and grooves on diametrically opposite sides and held in a rigid position, a disc-plate, provided with diagonal grooves, companion shifting-feathers, located on opposite sides and engaging with the grooved sleeve and plate, a collar, loosely mounted on said sleeve and to which the outer ends of said feathers are secured, the operating lever, and the eccentric, attached to said plate, substantially as set forth. 4th. The combination, with a disc or eccentric-plate, provided with a number of elongated bolt-holes and notched edges at opposite points, of an eccentric, provided with lugs projecting into said notches, adjusting-bolts, inserted through said lugs, and the clamping-bolts, securing the eccentric to its plate, whereby the eccentric may be adjusted at right angles with reference to the movement imparted by the shifting-feathers, substantially as set forth.

No. 45,139. Machine File.

(*Machine serre-papier.*)

Andrew Blackburn (in trust for Andrew S. Blackburn, of Boston, Mass., U.S.A.) and Alice M. Biette, assignees of Henry C. Biette, all of Toronto, Ont., Canada, 20th January, 1894; 6 years.

Claim.—1st. In a manifold machine file, the combination of an outer case 1, an inner case 4, enclosed by said outer case, said inner case arranged to form a desk, a series of spindles B, B^1, B^{11}, for holding a plurality of sheets of writing material, guide rollers 8, 8^a, adapted to feed the material across the top of said inner case, a knife 11, a spindle 13, upon which is wound one or more sheets of the said writing material, a pinion 16, a spindle 15, for said pinion, one end of the winding spindle mounted upon the end of the spindle 15, of the pinion 16, a gear-wheel 17, to transmit motion to said pinon 16, a spindle 18, for said gear-wheel 17, a pinion 19, mounted on said spindle 18, a gear-wheel 20, transmitting motion to said spindle 18, a spring 22, to cause the rotation of said gear-wheel 20, and means for winding said spring, substantially as and for the purpose set forth. 2nd. In combination with a manifold

machine file, a self-inking stamp comprising a shell, the stamp proper within the shell, a plunger secured to said stamp proper at

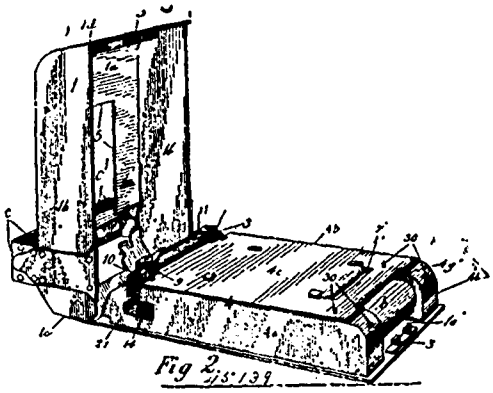


Fig 2. No. 139.

or near its centre, a spring enclosed by said plunger, an inking pad disposed below the stamp proper and divided into two sections, said sections being pivotally secured to said shell and adapted to open outwardly, and V-shaped guides for opening out each of said sections, substantially as and for the purpose set forth. 3rd. In a manifold machine file, the combination of an outer case, an inner case enclosed by said outer case, said inner case arranged to form a desk, a plurality of sheets of writing material b, b^1, b^{11}, disposed within said inner case, transfer sheets 6, 6^a, arranged alternately between the sheets of writing material b, b^1, b^{11}, guide rollers adapted to draw said writing material across the top of said inner case, a spindle 12, a spindle 13, upon which is adapted to be wound on one or more sheets of said writing material, and means for preventing the sheets of said writing material becoming slack, substantially as and for the purpose set forth. 4th. In a manifold machine file, the combination of an outer case, said outer case being hinged at the forward end of its bottom, an inner case in which is disposed the machine proper, said inner case mounted on the bottom of said outer case, and means for locking the upper portion of the outer case with its bottom, substantially as and for the purpose set forth. 5th. In a manifold machine file, the combination of an outer case, an inner case enclosed by said outer case, uprights 9, mounted in the forward end of said inner case, and projecting through the top thereof, vertical slots in the upper portion of said uprights, guide rollers 8, 8^a, the roller 8 being permanently journalled in the top of the uprights, the roller 8^a, having the ends of its spindle projecting through the slots and riding therein, recesses provided in the forward ends of the sides of the inner case, S-shaped springs mounted in the said recesses and exerting their tension to press the roller 8^a, against the roller 8, a knife and a cam 10, for regulating the pressure of the roller 8^a, against the roller 8, substantially as and for the purpose set forth. 6th. In a manifold machine file, the combination of an outer case, an inner case enclosed by said outer case, said inner case arranged to form a desk, a plurality of sheets of writing material mounted in said inner case, guide rollers for drawing the writing material across the top of the inner case, a spindle 12, a spindle 13, one or more sheets of said writing material adapted to be wound upon the spindle 13, said spindle 13 being removably secured within the inner case, substantially as and for the purpose set forth. 7th. In a manifold machine file, the combination of an outer case, an inner case enclosed by said outer case, said inner case arranged to form a desk, a plurality of sheets of writing material disposed within the inner case, guide rollers adapted to draw said writing material across the top of the inner case, a spindle 12, a spindle 13, upon which is adapted to be wound one or more sheets of said writing materials, one end of said spindle 13 mounted upon the rectangular end of a spindle 15, the other end mounted in a spring bearing 14, a pinion 16 mounted upon the spindle 15, a gear-wheel 17, meshing with the pinion 16, a spindle 18, a gear-wheel 20, meshing with and imparting motion to the pinion 19, a spring 22 for rotating the gear-wheel 20, and means for winding said spring, substantially as and for the purpose set forth. 8th. In a manifold machine file, the combination of the inner case 4, an outer case 1, enclosing said inner case 4, a series of spindle B, B^1, B^{11}, within said inner case, the top 4^c of said inner case forming a desk, guide-rollers 8 and 8^a located at the front of said desk, a knife 11, a winding spindle 13, a pinion 16, a spindle 15 for said pinion, one end of the spindle 13, mounted on the rectangular-shaped end of the spindle 15, and adapted to be revolved thereby, a gear-wheel 17, a spindle 18 for said gear-wheel, a pinion 19 mounted on the spindle 18, a gear-wheel 20 meshing with the pinion 19, a coiled spring 22, to rotate the gear-wheel 20 and a stamp C, substantially as and for the purpose set forth.

No. 45,140. Retouching Device. (*Appareil à retoucher.*)

Albert S. Harry, Steubenville, Ohio, U.S.A., 20th January, 1894; 6 years.

Claim. A retouching device comprising a suitable hand-piece provided with a curved base, whereby it may be rocked, an electro-magnet supported in said hand-piece, a stylus projected by the armature of said magnet, a spring for retracing said stylus, and side plates

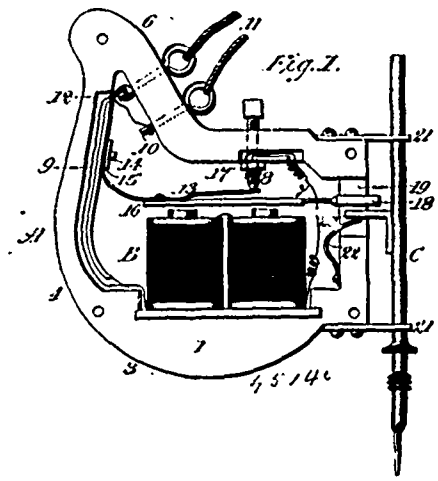
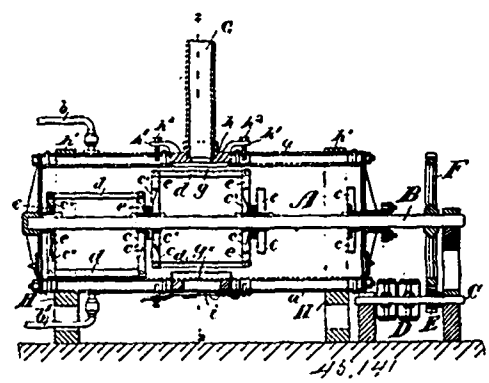


Fig. 1. No. 140.

secured to said hand-piece to cover and protect the magnets and armature, substantially as herein described.

No. 45,141. Drier. (*Séchoir.*)



No. 141.

Theodore Smith and Henry Smith, both of Jersey City, New Jersey, U.S.A., 20th January, 1894; 6 years.

Claim.—1st. In a drier, the combination with a cylinder provided with a steam jacket and a longitudinal stirrer shaft rotatively mounted in said cylinder, of a stirrer mounted on said shaft, said stirrer being made up of sections having three blades each, and divided by planes transversely of the shaft, the blades on the respective sections being arranged in different radial planes, and adapted thereby to be brought into operation successively when the stirrer is rotated, substantially as set forth. 2nd. In a drier, the combination with a cylinder provided with a steam jacket, and a stirrer shaft rotatively mounted in and extending longitudinally through said cylinder, of a stirrer fixed on said shaft, said stirrer being made up of sections, each of which comprises two three-armed spiders, and three stirring blades fixed to the arms of the spiders and arranged parallel to the shaft, the said stirrer sections being set on the shaft with the several stirring blades in different radial planes, whereby they come into play in regular order or succession as the stirrer rotates, as set forth.

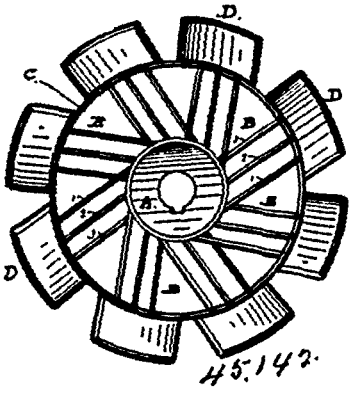
No. 45,142. Propeller for Ships.

(*Appareil de propulsion pour vaisseaux.*)

Alfred Townsend Elford, San Francisco, California, U.S.A., 22nd January, 1894; 6 years.

Claim. 1st. The herein described propeller comprising a hub A, a number of series of arms seated thereon, each series having three arms arranged in different circles around the length of the hub, the first of the series standing at a tangent to the hub, the third truly radial thereto, and the second at an angle between the other two, a band C surrounding the hub in a plane with each of said circles and through which band said arms pass, and a blade D secured to the outer ends of the arms of each series and set spirally around the hub, as and for the purpose set forth. 2nd. In a propeller, the combination with a hub and arms projecting therefrom, of a series of blades secured to the arms, each blade forming a segment of a circle

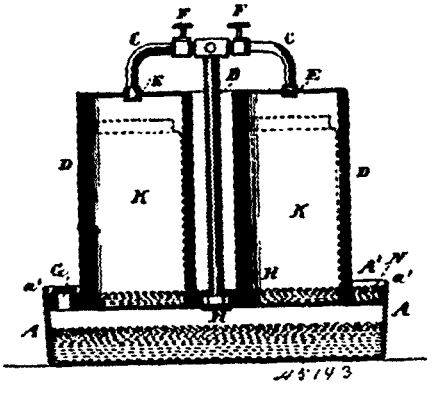
and standing spirally around the hub, and the edges and ends of the blades being rounded in cross section to less than the smallest



curve of an ellipse with a sharp corner along its transverse centre, as and for the purpose set forth.

No. 45,143. Steam Canning Cooker.

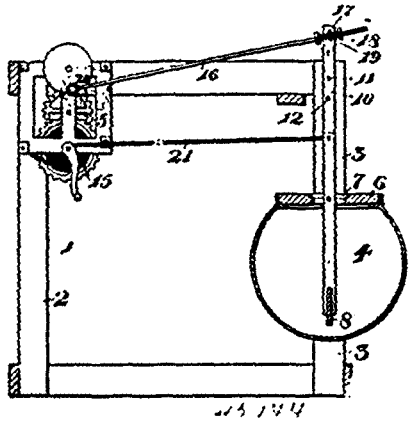
(*Appareil pour la cuisson à la vapeur des conserves.*)



Stephen D. Smith, and Francis J. Kennard, both of Orlando, Florida, U.S.A., 22nd January, 1894; 6 years.

Claim.—The combination of the steam generator A, with a rim or flange a^1, on top of cover for holding water, the median pipe B, the supply pipes C, connected with said pipe and the receivers admitting the supply pipes into the same, substantially as described.

No. 45,144. Churn. (*Baratte.*)

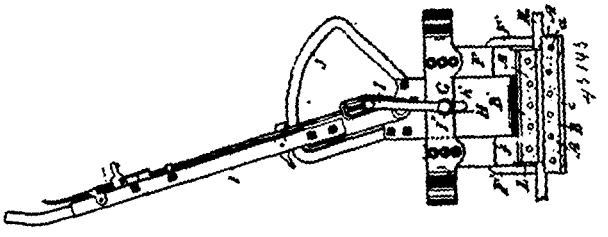


John Corwin Budd, Defiance, Ohio, U.S.A., and George M. Everest, Arkona, Ontario, Canada, 23rd January, 1894; 6 years.

Claim.—1st. In a churn, the combination of a supporting frame, an oscillating churn-body provided with upward extending suspension-bars pivotally connected to the frame and extending above the pivotal point, a dasher arranged within the churn body and having a stem pivoted to the top thereof; and projecting above the same, a motor having a pitman connected with the suspension-bars above their pivotal point and adapted to oscillate the churn-body, and a stationary rod connected with the stem of the dasher above the pivotal point of the same, substantially as described. 2nd. In a churn, the combination of a supporting frame, an oscillating churn-body provided with upward extending suspension-bars, a cross-rod journalled in their upper ends and having an opening, a motor having a pitman arranged in the opening of the cross-rod and threaded thereat, nuts arranged on opposite sides of the cross-rod and screwed on the threaded portion of the pitman, and spiral springs disposed on the pitman and arranged between the nuts and the cross-rod, substantially as described. 3rd. In a churn, the combination of a supporting frame, an oscillating churn-body, the suspension-bars extending upward from the opposite sides of the churn-body and each provided with a series of perforations, a pivot-rod arranged in perforations of the suspension-bars, a cross-rod journalled in the upper ends of the suspension-bars, a motor having a pitman connected with the cross-rod, an oscillating dasher mounted in the churn-body, and having a stem extending above the body, and a stationary rod connected with the stem of the dasher, substantially as described.

No. 45,145. Grip for Cable Cars.

(*Serre de cables de chemin de fer.*)



William H. Russell, Vancouver, British Columbia, Canada, 23rd January, 1894; 6 years.

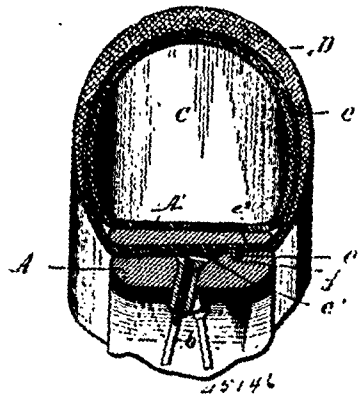
Claim.—1st. In a cable grip, the combination of two series of small grooved pulleys or friction rollers placed one above the other the rollers in each series being placed comparatively close together, and in the centre of the space of the opposite series, one series formed in a jaw open at the top and secured to an upright plate at each end which is carried by frame bars attached to the car, the other series formed in a jaw open at the bottom and secured to a central plate adapted to move vertically between the plates holding the bottom jaw and the frame bars, and having the operating lever attached to it, substantially as set forth. 2nd. The combination of two journal plates or plates or bars B, having their upper edges recessed and provided with a cover to form a reservoir for lubricants, the filling or blocking piece C shaped to allow room for pulleys open at the top and to receive one of the bars B on one side, and the edge of an angle iron on the other, an angle iron E receiving and carrying one of the journal plates B, and the blocking piece C, bolts D passing through said journal plates, filling piece and angle iron, and a series of grooved pulleys or rollers A and A^1, having a reduced journal bearing or axle *a* journalled in said journal plates comparatively close together, substantially as set forth. 3rd. The combination of two journal plates or bars B^1, having their upper edges recessed to form a reservoir for lubricants, a blocking or filling piece C^1 shaped to allow room for pulleys open at the bottom, bolts D connecting the journal plates and blocking piece, and a series of grooved pulleys or rollers A and A^1, having a reduced bearing or axle *a* journalled in said journal plates comparatively close together, and the series containing one less than the mate with which it is to work, substantially as set forth. 4th. The combination of frame bars C attached to a car, yoke plates F rigidly secured to said frame, and having a set-back *f*, an angle iron E secured to the lower end of said yoke plates, and a jaw open at the top and having a series of friction pulley A and A^1 journalled in it secured to said angle iron, a plate H adapted to move vertically between the yoke plates and pass between the frame bars C, an operating lever pivoted to said plate, links pivoted to said frame bars G, and connected with said lever, a jaw open at the bottom and having a series of friction pulleys A and A^1 journalled in it so as to be central between two of them in the jaw below, and said jaw secured to plate H, substantially as set forth.

No. 45,146. Wheel Tire. (*Bandage de roue.*)

Charles Frederick Lavender and Thomas Fane, Toronto, Ontario, Canada, 23rd January, 1894; 6 years.

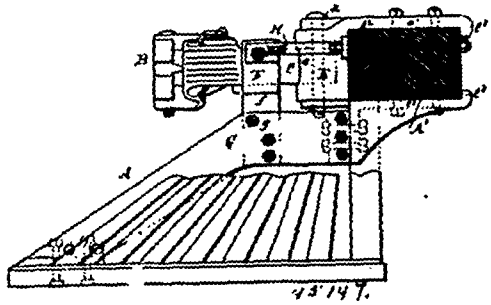
Claim.—1st. The combination with a wheel rim having a flat face, bevelled transversely, at a uniform angle from edge to edge of the rim, of a single clamping band of substantially the same width as the rim, surrounding the latter and having a flat inner face bevelled transversely to correspond to the bevel of the rim face, and a pneumatic tire having a split cover or envelope provided with flaps or marginal portions, which are clamped between the bevelled faces of the rim and clamping band, substantially as set forth. 2nd. The combination with a wheel rim composed of an outer ring or clamping band, and an inner ring having a groove or recess, of a tire consisting of an inner inflatable tube and a cover or envelope having one of its marginal portions provided with a rib or enlargement seated in the groove of said inner ring, substantially as set forth. 3rd. The combination with the wheel rim composed of an outer bevelled

clamping ring and an inner bevelled ring having a longitudinal groove or recess in its face, of a tire consisting of an inner inflatable



tube and a cover or envelope having its marginal portion clamped between the bevelled rings of the rim, and having one of its marginal portions provided with a longitudinal rib or enlargement arranged in the groove of said inner ring, substantially as set forth. 4th. The combination with the tire consisting of an inner inflatable tube and an open sided cover or envelope, of a wheel rim composed of an inner bevelled ring to which the spokes are secured and an outer bevelled ring or clamping band which is secured to one of the marginal portions of said envelope and adapted to clamp the intervening marginal portions of the tire cover against the inner ring of the rim, substantially as set forth. 5th. A pneumatic tire, consisting of an inner air tube, an open sided cover enveloping the air tube, and a clamping band attached to one of the marginal portions of the cover and adapted to encircle a wheel rim, substantially as set forth.

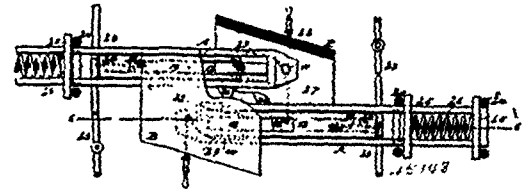
No. 45,147. Car Coupler. (*Attelage de chars.*)



The Gould Coupler Company, New York, assignee of William Fillmore Richards, Buffalo, New York, U.S.A., 23rd January, 1894; 6 years.

Claim.—1st. The combination with the pilot beam of a locomotive, of a draw-bar pivoted at its rear end to the said beam, and a yoke secured to the pilot and supporting the draw-bar in advance of its pivot, substantially as set forth. 2nd. The combination with a pilot beam of a locomotive, of a draw-bar pivoted at its rear end to the pilot beam, a yoke supporting the front portion of the draw-bar and having a shank secured to the pilot, and braces extending from opposite sides of said yoke to the pilot beam, substantially as set forth. 3rd. The combination with the front frame of a locomotive, the pilot and longitudinal plates extending along the ridge of the pilot, of a draw-bar pivoted at its rear end to the locomotive frame, and a yoke supporting the front portion of the draw-bar and having a downwardly extending shank secured between the longitudinal plates of the pilot, substantially as set forth. 4th. The combination with the front frame of a locomotive and the pilot, of a bracket secured to said frame and having a depending lug, longitudinal plates extending along the ridge of the pilot and secured at their front portions to the pilot and at their rear portions to the lug of said bracket, a draw-bar pivoted at its rear end to said bracket, and a yoke supporting the front portion of the draw-bar and having a depending shank secured to the longitudinal plates of the pilot, substantially as set forth. 5th. The combination with the front frame of a locomotive, of a draw-bar pivoted to said frame, a yoke for supporting the front portion of the draw-bar, arranged in front of the draw-bar pivot, and a centering spring carried by said yoke and operating against the draw-bar, substantially as set forth. 6th. The combination with the front frame of a locomotive, and the pilot, of a draw-bar pivoted at its rear end to said frame, a yoke supporting the front portion of the draw-bar and having a depending recessed shank secured to the pilot, and an upright centering spring arranged in the recess of said shank and having its upper free end engaged with the draw-bar, substantially as set forth.

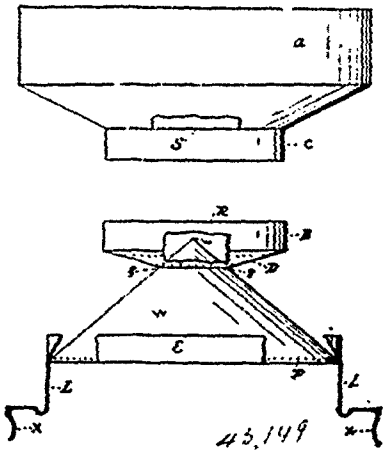
No. 45,148. Car Coupler. (*Attelage de chars.*)



Carman Frost, of Hewletts, and Richard Sandford, Brooklyn, all in New York, U.S.A., 23rd January 1894; 6 years.

Claim.—1st. A car coupler comprising a draw-bar, a coupling dog located in the draw-bar, a draw-head located at one side of the draw-bar, and provided with a keeper adapted to receive the coupling dog of an opposing coupler, and a trip mechanism connected with the coupling dog, substantially as shown and described. 2nd. In a car coupler, a draw-bar, a coupling dog pivoted therein, a mechanism for rocking the dog, and a draw-head located at one side of the draw-bar, and provided with a keeper to receive the coupling dog of an opposing coupler, and guides to direct the entering draw-bar, as and for the purpose set forth. 3rd. In a car coupler, a draw-head formed at one side of the draw-bar, the front face of the draw-head being back of the forward end of the draw-bar, the draw-head being narrower over the draw-bar than its body portion, a spring-controlled and pivoted coupling dog located in the draw-bar, and shifting levers connected with the said dog, substantially as and for the purpose specified. 4th. In a car coupler, the combination with a draw-bar having a buffing cushion at one end, a dog pivoted at its forward end, and a spring controlled slide connected with the dog, whereby it is raised and lowered, of a draw-head connected with the draw-bar and located at one side thereof, the draw-head being provided with a keeper to receive the coupling dog of an opposing coupler, substantially as shown and described. 5th. In a car coupler, the combination with a draw-bar adapted to enter an opposing draw-head, of a coupling dog pivoted therein, normally maintained in a vertical and coupling position, a spring-controlled slide connected with the dog, and levers whereby the slide is manipulated, as and for the purpose set forth. 6th. In a car coupler, a draw-bar provided with a coupling dog and means for operating the same, and having its forward end shaped to receive a coupling pin and a link, and a draw-head located at one side of the draw-bar and connected therewith, the draw-head being provided with a keeper to receive the coupling dog of an opposing coupler, substantially as shown and described. 7th. In a car coupler, a draw-head, a coupling dog pivoted therein, and an actuating mechanism, substantially as shown and described, connected with the dog, a draw-head located at one side of the draw-bar, having a keeper adapted to receive the coupling dog of an opposing coupler, and a guide provided with bevelled faces located adjacent to the keeper in the draw-head and adapted to direct the entering draw-bar, as and for the purpose set forth.

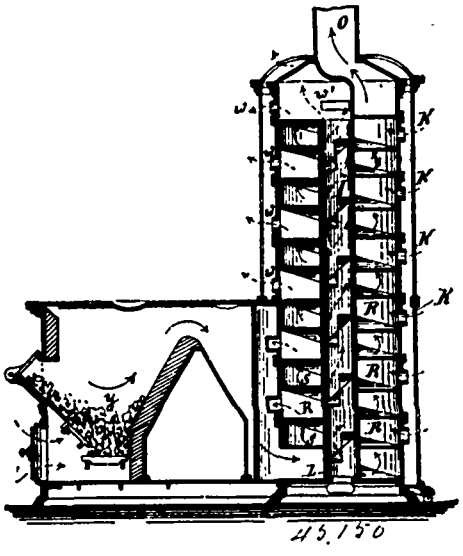
No. 45,149. Milk Aerator. (*Garde-lait.*)



Charles Frederick Smith, Belleville, Ontario, Canada, 23rd January, 1894; 6 years.

Claim.—1st. In a device of the character described, the combination of the reservoir R, with the perforations in its bottom, and cone-shaped cooling tray W, with legs L, L, substantially as described and for the purpose hereinbefore set forth. 2nd. In a device of the character described, the combination of a receiver having a strainer S, and a rim C, a distributing reservoir R having perforations in its bottom outside the point of contact S, with the cone-shaped tray W, a cone-shaped tray W, and legs L, L, substantially as and for the purpose hereinbefore set forth.

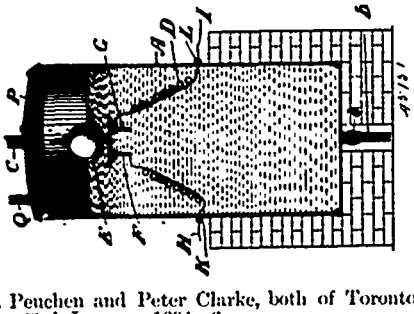
No. 45,150. Stove. (*Poêle.*)



Max Jahn, Leipzig, German Empire, 23rd January, 1894; 6 years.

Claim.—1st. In a stove, the combination with the fire-room J, of the outer spirals R and S, wound around an inner tube L, with a spiral J, substantially as and for the purpose as described. 2nd. In a stove, the combination with the fire-room J, of the spirals R and S, openings *k*, and opposite openings *w*, the inner tube L, spiral J and openings k^1, substantially as and for the purpose as described.

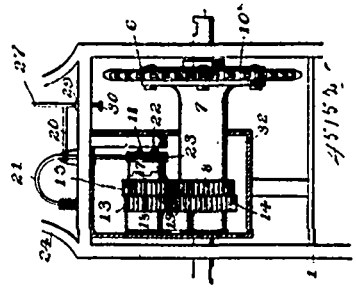
No. 45,151. Method of and Apparatus for Vaporizing Petroleum and other Liquids. (*Méthode et appareil pour la vaporisation de pétrole et autres liquides.*)



Stanley C. Peuchen and Peter Clarke, both of Toronto, Ontario, Canada, 23rd January, 1894; 6 years.

Claim.—1st. The method of vaporizing petroleum or other liquids contained in a still, by means of an electric heating apparatus held in suspension below and near the surface of the liquid to be vaporized, substantially as specified. 2nd. The method of vaporizing petroleum or other liquids contained in a still, by means of the heat generated by carbon plates or other resisting media connected with the positive and negative poles of a battery, and held in suspension below and near the surface of the liquid to be vaporized, substantially as specified. 3rd. The method of and apparatus for vaporizing petroleum or other liquids contained in a still by means of an electric heating apparatus held in suspension below and near the surface of the liquid to be vaporized, substantially as specified. 4th. The method of and apparatus for vaporizing petroleum and other liquids contained in a still by means of carbon plates or other resisting media suspended from a float below and near the surface of the oil to be vaporized, the carbon plates or other resisting media being connected by wires to the positive and negative poles of a battery, so that only the upper portion of the oil or other liquid in proximity to the carbon plates or other resisting media is sufficiently heated to throw off the vapour which is conveyed away by the vapour pipe, substantially as described. 5th. The still A, adjusted for filling with petroleum or other liquid and supplied with inlet and outlet vapour pipes, in combination with an adjustable float E, which carries the carbon plates F, and G, suspended near the surface of the petroleum or other liquid, and wires H, and I, connecting the said carbon plates with the poles of a battery, substantially as specified. 6th. The adjustable float E, provided with sleeve M, and adapted to float on the surface of the liquid to be vaporized, in combination with the stem N, plate O, and carbon plates F, and G, or other resisting media connected with the poles of a battery, substantially as specified. 7th. The combination of the still A, adapted for filling with petroleum or other liquid, the inlet pipe Q, outlet pipe B, and cock *b*, vapour pipe C, adjustable float E, sleeve M, stem N, plate O, plates U, and G, battery wires H, and I, and insulating plugs K and L, substantially as specified. 8th. The apparatus for vaporizing petroleum consisting of an electric-heating apparatus held in suspension below and near the surface of the liquid to be vaporized, by means of a float, substantially as specified.

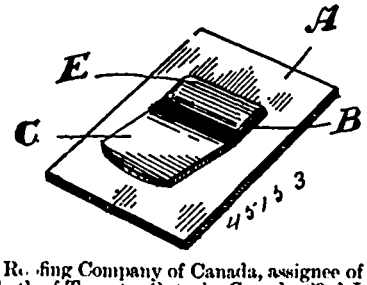
No. 45,152. Multiple Gearing.
(*Engrenage multiple.*)



Ignatius L. Unterbrink, Fryburgh, and Cyrenius A. Layton, Wapakoneth, all in Ohio, U.S.A., 23rd January, 1894; 6 years.

Claim.—1st. The combination with a driving shaft, of a chain-wheel loosely mounted upon said shaft, a clutch connection between the chain-wheel and the shaft, a rotatable spindle carrying a fixed gear, which meshes with a fixed gear upon the driving shaft, a loose gear mounted upon said spindle and meshing with a gear carried by the chain-wheel, and means for locking said loose gear to the spindle, substantially as specified. 2nd. The combination with a driving shaft, of a chain-wheel loosely mounted upon the shaft, a clutch connection between the chain-wheel and shaft, a spindle carrying a fixed gear, which meshes with a fixed gear upon the driving shaft, a loose gear mounted upon said spindle and meshing with a gear carried by the chain-wheel, a clutch, one member of which is carried by said loose gear and the other member, of which is slidably mounted upon the spindle, and means for operating said slidable member, substantially as specified. 3rd. The combination with a driving shaft, a chain-wheel loosely mounted upon said shaft, and a clutch connection between the chain-wheel and the shaft, of a rotatable spindle carrying a fixed gear which meshes with a fixed gear upon the driving shaft, a loose gear mounted upon said spindle and meshing with a gear carried by the chain-wheel, a clutch having one member fixed to said loose gear, and the other member slidably mounted upon the spindle, an actuating spring arranged to normally hold the members of the clutch in operative relation, and means for disengaging the members of the clutch, substantially as specified. 4th. The combination with a driving shaft, a chain-wheel loosely mounted upon said shaft, and a friction clutch connection between the chain-wheel and the shaft, of a gear 14 fixed to the shaft, a gear 8 carried by the chain-wheel and connected thereto by an interposed collar, a spindle arranged parallel with the driving-shaft, a speed-gear fixed to said spindle and meshing with the fixed gear 14, a loose speed-gear rotatably mounted upon the spindle and meshing with the loose gear 8, a clutch having one member carried by the loose speed-gear, and the other member slidably mounted upon the spindle, means for operating the slidably member of the clutch, and a box or housing enclosing said gears and clutch, substantially as specified.

No. 45,153. Metallic Shingle. (*Bardeau métallique.*)

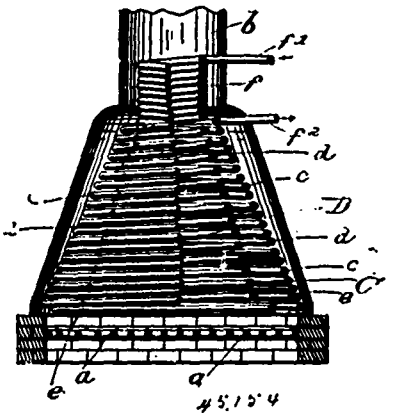


The Metallic Roofing Company of Canada, assignee of Carleton W. Conner, both of Toronto, Ontario, Canada, 23rd January, 1894; 6 years

Claim. 1st. A metallic shingle having a slot formed therein, in combination with a clip having a portion thereof, shaped to pass through the slot and turned to clasp the shingle between itself and the body of the clip, substantially as and for the purpose specified. 2nd. A metallic shingle having two slots formed therein, in combination, with a clip having portions thereof, shaped to pass through the slots and turned to clasp the shingle, substantially as and for the purpose specified. 3rd. A metallic shingle having two slots

formed therein at right angles to the upper edge of the shingle, in combination, with a clip having fingers formed on the edges of the body thereof, which fingers are passed through the slots and turned to clasp the shingle, substantially as and for the purpose specified.

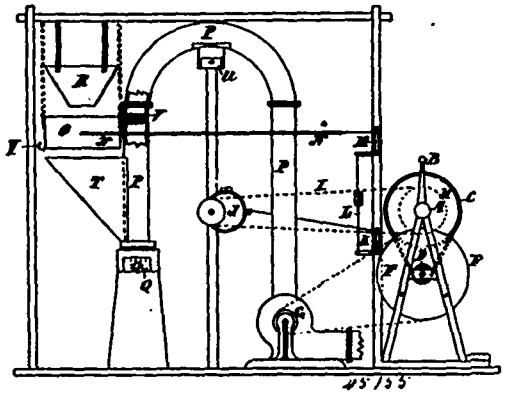
No. 45,154. Steam Generator. (*Générateur à vapeur.*)



Otis Jones, Henry P. Ashley, Robert M. Farrar, John P. Woodson, Robert L. Sibley, George A. Cabaniss, Walter G. Paschal, Samuel M. Wall, and Eugene J. Dobbs, all of Atlanta, Georgia, U.S.A., 23rd January, 1894; 6 years.

Claim.—In a steam generator, the combination of the two series of coils, substantially conical in form, one placed within the other, the inner series having a cylindrical extension above the outer series and having coils of its outer portion wound farther apart than those of the outer series, substantially as described.

No. 45,155. Machine for Separating Gold from Gravel.
(*Machine pour séparer l'or du gravier.*)



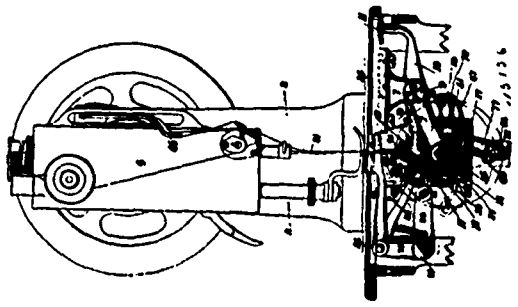
Joseph Allison Coombes, 46 Southampton Buildings, Holborn, London, England, 23rd January, 1894; 6 years.

Claim.—The tube P fitted with drawers Q, U, and swivels or breaks V, in combination with the agitator and screens O, S, hopper T, fan G and regulator W, said screens and fan being operated by the hand-gear, substantially as herein described and shown in the drawings.

No. 45,156. Sewing Machine. (*Machine à coudre.*)

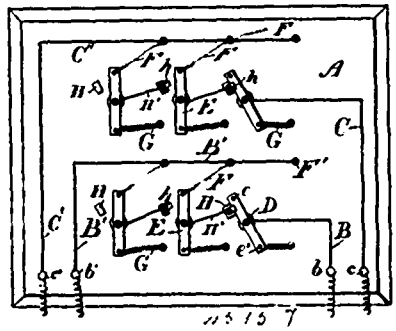
The New Branston Two-Reel Sewing Machine Company, assignee of John Hobroyd and Charles B. Hunt and Richard J. Johns, all of London, England, 24th January, 1894; 6 years.

Claim.—1st. In a two-reel sewing machine the devices composed of the arm 10, button 11, nose 12, for releasing bracket 17, which casts forwardly by spring 15, in socket 21 of extension 19, substantially as described. 2nd. In a two-reel sewing machine, supporting a reel carrying bracket 17 by axles 28, 29, in socket 21, and hollow 30 of under shaft 6 respectively, substantially as described. 3rd. In a two-reel sewing machine the reel holder composed of two discs 48, 49 and bar 59 with front ends connected by post 51. 4th. In a two-reel sewing machine the swivel plate 53, hollow pedestal 54, spring 56 and plunger 55 therein, substantially as described. 5th. In a two-reel sewing machine the cam 31 on the undershaft 6, appliances 40, 41, 42, lifted by said cam in combination with horns 43, 44, substantially as described. 6th. In a two-reel sewing machine, arms 66, 67 on collar 64 in combination with arms 77, 78, on socket 79 employed in conjunction with cranks 70, 71, 73, 74, for



operating hook 80 from eccentric 63, arm 77, 78, with boss 79 being fixed to under shaft 6, substantially as described.

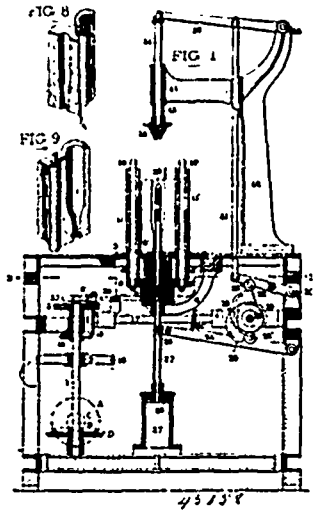
No. 45,157. Electric Fuse Box.
(*Boîte de fusée électrique.*)



Edward Avery Parson, Ottawa, Ontario, Canada, 24th January, 1894; 6 years.

Claim.—1st. The combination of a disrupted conductor B B^1, provided with suitable terminals *b* and b^1, a series of posts F^1, electrically secured upon the disrupted part B^1, a series of levers E, each pivoted upon a base D, electrically connected with a part of a conductor, and having pins or posts *e* and e^1, at the ends, a fuse wire F connecting each pin *e* to a post F^1, and a spring G drawing the lever by the post e^1, in a direction to strain said fuse wire, and the series of stops H serving as abutments for the lever E when operated by the springs and having electric conductors H^1 connecting the base D of the next lever, the disrupted part B of said conductor secured to the first lever in the series, and the insulating base A upon which said parts are secured, substantially as set forth. 2nd. In a multiple fuse box, the combination of a lever in electric connection with a circuit tended to be swung upon its pivot in one direction and held by a fuse wire in the opposite direction, of an electric bell circuit having a contact piece so placed as to be closed by an insulated part of said lever when operated after the fuse wire has become inoperative, substantially as set forth. 3rd. In a multiple fuse box, the combination of a disrupted conductor having one end of one part secured to a base carrying a lever, a lever pivoted upon said base and making electric connection therewith, and adapted to transmit the current to one end thereof, a spring swinging the lever in one direction, a fuse wire secured to one end of the lever and preventing its being swung by the spring, a post secured to the disrupted part of the conductor to which the other end of said fuse wire is secured, a stop placed in the path in which the lever is swung adapted to make electric connection therewith, and an electric connection of said stop with the pivot base of another similar lever similarly held connected and operated, substantially as set forth. 4th. In a multiple fuse box, the combination of one end of a conductor with a base upon which a lever is pivoted with which it makes electric connection, a lever pivoted upon said base adapted to transmit the current received at its pivot point to one end, a fuse wire connecting said end of said lever, and a post secured to the disrupted part of the same conductor, and a spring tending to swing said lever in the opposite direction in which it is held by the fuse wire and an insulating base or plate upon which said parts are secured, substantially as set forth. 5th. In a multiple fuse box, the combination of a disrupted conductor, a series of posts electrically secured to one part of said conductor, a fuse wire connected to each of said posts at one end and to the end of a lever at the other, a spring adapted to move said lever in a direction opposite to that in which it is held by the fuse wire, a lever pivoted upon a base with which it makes electrical connection, and one of which is electrically connected with the other part of the disrupted conductor, and the others with an electrically connected stop against which the preceding levers in the series will abut when unrestrained by the fuse that holds it, substantially as set forth.

No. 45,158. Method of and Apparatus for Making Glass Articles. (*Méthode et appareil pour la fabrication d'objets en verre.*)

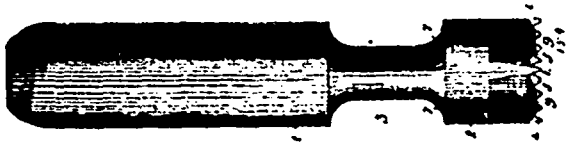


Jean-Baptiste Vernay, 31 Rue de l'Hotel de Ville, Lyon, France, 24th January, 1894; 6 years.

Claim.—In apparatus for manufacturing glass articles, the arrangement of a movable lump mould, in which the casting of the molten glass takes place, and which opens after the casting and is automatically replaced by a movable final mould, having an interior cavity corresponding to the form of the article to be manufactured, these moulds consisting either of two parts which by their displacement form successively the lump mould and the final mould, or of four parts, two of which form alternatively by their approach, one or the other of the said two moulds, substantially as set forth. 2nd. In apparatus for manufacturing glass articles, the combination with the final mould of a part which, being applied automatically to the said mould, is designed to form the hollow or flat bottom of the article to be made, substantially as set forth. 3rd. In apparatus for manufacturing glass articles, the combination with the final mould and the part for making the bottom of the article, of a pump conveying air under pressure to the interior of the mould in order to force the glass against the inner periphery of the said mould, so as to give the article its final shape, substantially as set forth.

No. 45,159. Cancelling Stamp.

(*Machine à maculer les timbres-poste.*)

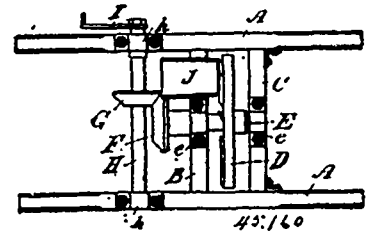


Mike Peabody, New York, U.S.A., 24th January, 1894; 6 years.

Claim.—1st. In a combined stamp and cancelling device, the combination with a head, a cutting or perforating edge formed upon the head, and letters and the like secured to or formed upon the head adjacent to said cutting or perforating edge, whereby the cutting edge will operate conjointly with the teeth to both cut and stamp at one movement of the head, substantially as described. 2nd. The combination, in a device of the kind herein described, of a head, a cutting or perforating edge formed on said head, and a type or stamp section detachably secured to the head adjacent to said cutting edge, substantially as described. 3rd. The combination in a device of the kind herein described, of a head, a series of cutting or perforating teeth extending from said head, recesses formed in said head about said cutting edge, and a series of detachable stamp sections secured within said recesses adjacent to said cutting edge, substantially as described. 4th. The combination, in a device of the class herein described, of a head, and a weighted stock secured thereto, the head being provided with a cutting or perforating edge or edges, and a stamp formed on said head adjacent said cutting edge, substantially as described. 5th. The combination, in a device of the class herein described, of the head having the toothed projections 4 and recesses 6 between them, the apertures 7 extending entirely through the rear of the head, and the type sections 8 having the stem 10 for entry into said apertures, the end of said stem being accessible through said apertures, substantially as described. 6th. The combination, in a device of the kind herein described, of the head having the projections 4 provided with cutting or perforating edge, the recesses 6 between said projections, the apertures 7 in the head below the recesses, and a detachable type section provided with a stem 10 for entry into said apertures, the type sections lying within the recesses adjacent said cutting edge, substantially as described. 7th. In a tool of the class described, the combination with the head, the weighted stock, and a stem of smaller diameter than the head and stock connecting them, substantially as described.

No. 45,160. Curd Cutting Machine.

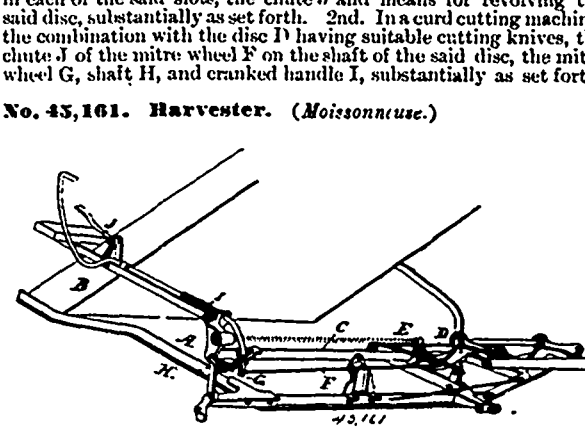
(*Machine à couper le lait caillé.*)



George Fortin and Alcide Nadeau, both of Weedon, Quebec, Canada, 24th January, 1894; 6 years.

Claim.—1st. In a curd cutting machine, the combination with the frame A A, B, C, of the disc D, secured on a shaft journalled in boxes on the transverse sills, midway between the two longitudinal sills, the radial slots *d*, the knife L and transverse knives *l* secured in each of the said slots, the chute J and means for revolving the said disc, substantially as set forth. 2nd. In a curd cutting machine, the combination with the disc D having suitable cutting knives, the chute J of the mitre wheel F on the shaft of the said disc, the mitre wheel G, shaft H, and cranked handle I, substantially as set forth.

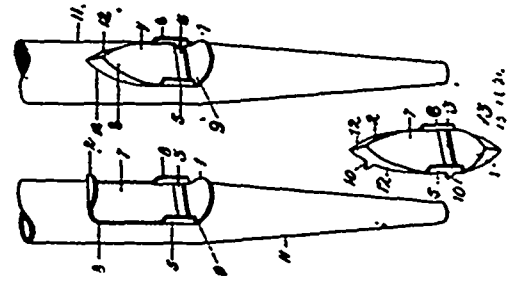
No. 45,161. Harvester. (*Moissonneuse.*)



Thomas Henry Noxon, Ingersoll, Ontario, Canada, 24th January, 1894; 6 years.

Claim.—1st. A bar properly braced to the main frame parallel with the bottom rail thereof, the said bar forming a support for that portion of the adjustable binding table which has previously been carried by the frame of the stationary binder table, substantially as and for the purpose specified. 2nd. A crank rod connected by a rod to the adjustable binder frame and held in contact with a notched quadrant fixed to the main frame, in combination with a bell crank set behind the crank rod, substantially as and for the purpose specified.

No. 45,162. Organ Pipe. (*Tuyau d'orgue.*)



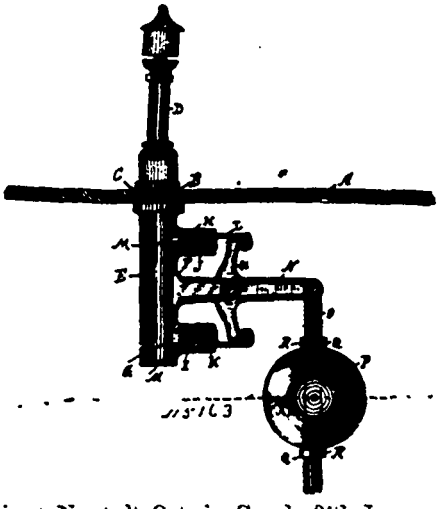
Olivier Bissonnette, Toronto, Ontario, Canada, 24th January, 1894; 6 years.

Claim.—1st. In organ pipe lips, the combination with the lip of a collar formed integrally with the upper lip and adapted to raise the upper lip from the organ pipe when fitted in place, substantially as and for the purpose specified. 2nd. In organ pipe lips, the combination of the upper and lower lips, a mouth formed between the said lips, and an ear arranged on either side of the said mouth and formed integrally with the lips, substantially as set forth. 3rd. In

organ pipe lips, the combination of the upper lip, the lower lip, a mouth between the said lips, an ear arranged on each side of the said mouth and formed integrally with the lips, and lugs adapted to enter the organ pipes, substantially as set forth. 4th. In organ pipe lips, the combination of the upper lip, the lower lip, a mouth between the said lips, an ear on either side of the said mouth and formed integrally with the lower and upper lips, lugs integrally with the said lips adapted to enter the pipe, and a collar formed integrally with the said lips, and adapted to raise the lips from the organ pipe when in place, substantially as set forth.

No. 45,163. Water Level Alarm.

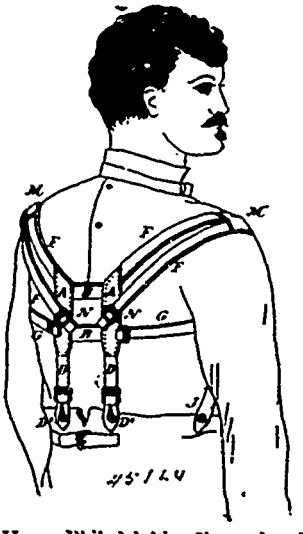
(*Indicateur du niveau d'eau.*)



John J. Weinert, Neustadt, Ontario, Canada, 24th January, 1894; 6 years.

Claim.—In a high and low water indicator, the combination with the boiler of an alarm whistle secured thereto, a tube connected to the alarm whistle, provided with two ports, valves arranged to close each of the said ports, an arm connected to said tube, a lever pivoted to said arm adapted to operate said valves, and a float connected to said lever and adapted to operate said lever by the rise and fall of the water in the boiler to move said valves.

No. 45,164. Shoulder Brace. (*Bretelles.*)

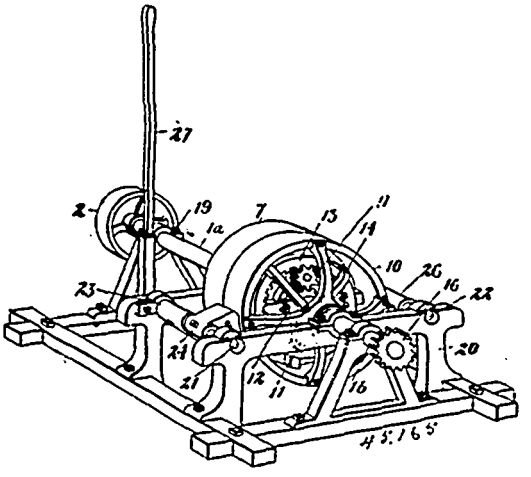


William Henry Horn, Philadelphia, Pennsylvania, U.S.A., 24th January, 1894; 6 years.

Claim.—1st. The combination, in shoulder braces, of the back portion, with the shoulder caps providing a broad and continuous bearing upon the tip of the shoulder, the double shoulder straps connecting each of said caps with the back portion, and the arm-pit straps, also connecting said caps with the back portion, substantially as specified. 2nd. The combination, in shoulder braces, of the back portion, the shoulder caps providing an extended and continuous bearing upon the tips of the shoulders, the arm-pit straps connecting the front portions of said shoulder caps with the back portion of the brace, the double shoulder straps connecting the rear portions of said shoulder caps with the back portion of the brace, and means for adjusting the length of one of said shoulder straps in each pair, relatively to the other strap of the pair, substantially as specified. 3rd. The combination, in shoulder braces, of the rear portion, the arm-pit straps, the double shoulder straps, and means for adjusting in length the lower of said straps, without changing the length of the upper strap, substantially as specified. 4th. The combination, in shoulder braces, of the rear portion, the arm-pit straps, the double shoulder straps, the shoulder caps, connecting said arm-pit straps and shoulder straps, and means for adjusting the length of the lower shoulder straps relatively to the upper straps, substantially as specified.

No. 45,165. Feeder for Saw-Mills.

(*Alimentateur pour scieries.*)



John Bell, Nelson, British Columbia, Canada, 24th January, 1894; 6 years.

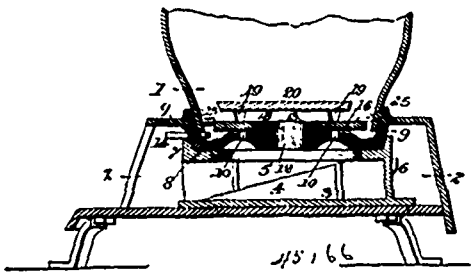
Claim.—1st. In a variable feeder for saw-mills, the combination of a shaft comprised of two shaft sections l^a and l^b, a pinion mounted on the end of the shaft sections l^b, means for transmitting a rotary motion from the shaft section l^a and l^b, to cause the shaft section l^b, to revolve at the same rate of speed as the shaft section l^a and in the same direction, and also to revolve the shaft section l^b at a higher rate of speed than the rotation of the shaft section l^a in the same direction, and also to rotate when required the shaft section l^b in the opposite direction to the rotation of the shaft section l^a, substantially as hereinbefore described. 2nd. In a variable feeder for saw-mills, the combination of a shaft comprised of two shaft sections l^a and l^b, a disc 3 mounted upon the shaft section l^a and revolving therewith, sun-wheels 4, revolvably connected to the disc 3, and carried thereby in transit about the shaft section l^a, a pulley 7 loosely mounted upon the shaft section l^a, a gear-wheel 5 connected to the pulley 7, and adapted to mesh with the sun-wheels 4, a pulley 10 loosely mounted upon the shaft section l^a, an annular gear 8 connected to the pulley 10, adapted to mesh with the sun-wheels 4, and to be revolved thereby and revolve the pulley 10, sun-wheels 11 connected to the opposite side of the pulley 10, an annular gear 13 rigidly mounted on the shaft section l^b, sun-wheels 11 adapted to revolve the annular gear 13 and shaft section l^b, and a pinion mounted upon the end of the shaft section l^b, substantially as hereinbefore described. 3rd. In a variable feeder for saw-mills, the combination of a shaft comprised of two shaft sections l^a and l^b, a disc 3, mounted upon the shaft section l^a and revolving therewith, sun-wheels 4, revolvably connected to the disc 3, and carried thereby in transit about the shaft section l^a, a pulley 7 loosely mounted upon the shaft section l^a a gear-wheel 5 connected to the pulley 7, and adapted to mesh with the sun-wheels 4, a pulley 10 loosely mounted upon the shaft section l^a, an annular gear 8 connected to the pulley 10, adapted to mesh with the sun-wheels 4, and to be revolved thereby and revolve the pulley 10, a gear-wheel 12 rigidly mounted on the shaft section l^a, and adapted to mesh with the sun-wheels 11, and an annular gear 13, rigidly mounted upon the shaft section l^b, and adapted to mesh with the sun-wheels 11, the sun-wheels 11 adapted to revolve the annular gear 13 and shaft section l^b, and a pinion mounted on the end of the shaft section l^b, substantially as hereinbefore described.

No. 45,166. Oil Stove. (*Poêle à huile.*)

James D. Foster, Ironton, and Charles A. Hammel, Findlay, all in Ohio, U.S.A., 24th January, 1894; 6 years.

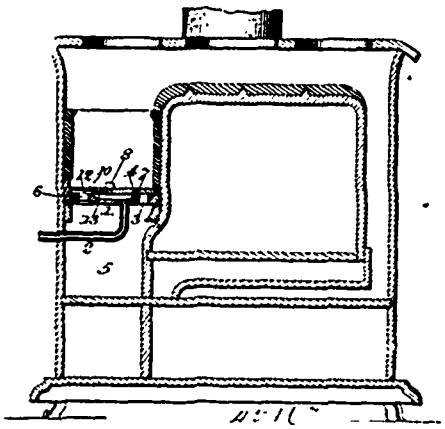
Claim.—1st. An oil burner for an oil burning stove consisting of an oil receptacle, having a central opening and a boss, a series of air openings outside of said boss, a disc located above said oil receptacle, having a central opening with which said boss engages, and a deflecting plate, substantially as described. 2nd. In an oil burning stove, the combination with the fire pot, of the flanged

oil receptacle, having a central opening and a boss, a series of openings outside of said boss, a disc located above said oil recep-



tacle, having a central opening with which said boss engages, a deflecting plate and means for elevating and lowering said oil receptacle, substantially as described. 3rd. In an oil burning stove, the combination with the fire-pot and ash-pit, of the plate located in the ash-pit, provided with a series of bevelled segments, the rotatable annulus having similar segments engaging therewith, and formed with a peripheral flange, the oil receptacle having oil openings and a central opening and boss, and the disc and deflecting plate, substantially as described.

No. 45,167. Oil Stove. (*Poêle à huile.*)



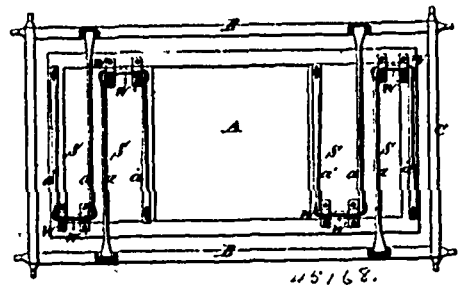
James D. Foster, Ironton, and Charles A. Hammel, Findlay, all in Ohio, U.S.A., 24th January, 1894; 6 years.

Claim.—1st. An oil burner for a cook-stove, consisting of the plate recessed on its upper side, forming an oil receptacle, and having holes at its rear and front portions, the cover and strip, with an intervening space, and the feed or supply pipe, substantially as described. 2nd. In a cook-stove, the combination with the fire-box and ash-pit, of the rectangular plate recessed on its upper side, forming an oil receptacle, and having holes and channels at its rear edge, and holes at its front edge, the cover, the movable strip, having bevelled recesses on its under side and the supply pipe, substantially as described. 3rd. In a cook-stove, the combination with the fire-box and ash-pit, of the rectangular plate, recessed on its upper surface to form an oil receptacle, and having holes and channels at its rear edge and holes at its front edge, the lugs on said plate, the movable strip, having bevelled recesses on its under side, the cover having slots at its sides, and the supply pipe, substantially as described.

No. 45,168. Vehicle Spring. (*Ressort de voiture.*)

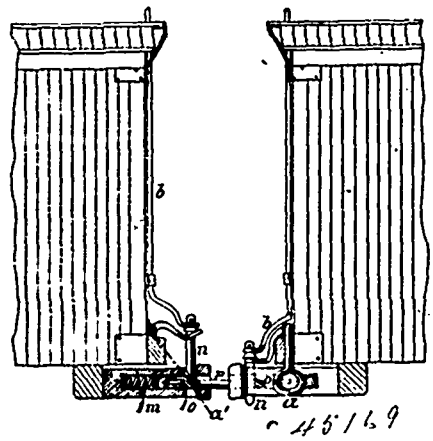
Henry Timkin, St. Louis, Missouri, U.S.A., 25th January, 1894; 6 years.

Claim.—1st. The combination with the body and running gear of a vehicle, of a spring comprising a wrist portion and flexion arms extending laterally therefrom, and a support on the under side of said body, said wrist portion resting in said support, and the outer end of one arm resting against the under side of said body, and one of them having a loose connection with its bearing, whereby one end of said arms is free to move in the direction of the length of said arm, and one end of said arm being at a distance from said body, the other end of the other arm being connected to said running gear, substantially as described. 2nd. The combination with the body and running gear of a vehicle, of a spring consisting of a wrist portion and two flexion arms extending laterally therefrom, and a support fastened to the under side of said body and having an open space larger than said wrist, said wrist resting in said open space, the outer end of one of said arms being against the under side of said body, and the outer end of the other arm being connected to said running gear, substantially as described. 3rd. A vehicle spring consisting of a wrist having large rigid ends and an intermediate



portion of less thickness, whereby said intermediate portion is susceptible of torsion, and laterally extending arms integral with said enlarged ends, substantially as described.

No. 45,169. Car Coupler. (*Attelage de chars.*)



Guillaume D. Lamarche, Ste. Brigide, d'Iberville, Québec, Canada, 25th January, 1894; 6 years.

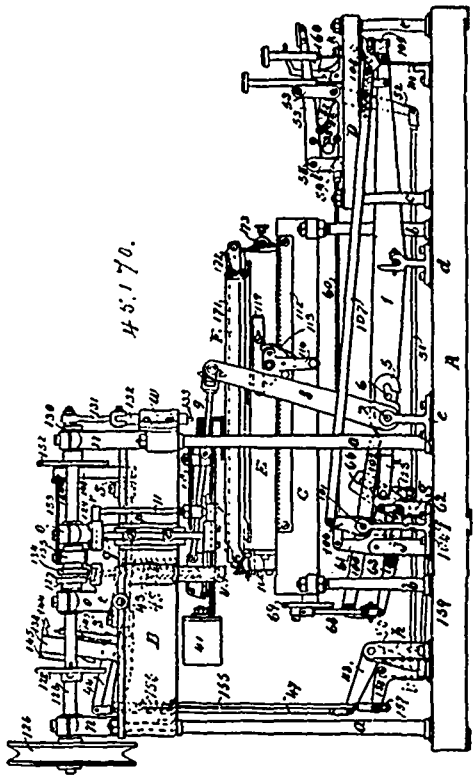
Résumé.—Dans un attelage de chars la combinaison du levier *a*, *a*, de la targette *b*, de la cheville *n*, du pène O, et du ressort *m*, le tout tel que décrit et pour les fins indiquées.

No. 45,170. Matrix-making Machine.
(*Machine à faire les matrices.*)

The Standard Matrix Machine Co., East St. Louis, assignee of Albert John Kletzker, St. Louis, both of Illinois, U.S.A., 23rd January, 1894; 6 years.

Claim.—1st. In a matrix-making machine, the combination with a fixed axis or hub, of a sliding plate movable radially with relation to the hub, segmental die plates secured to the sliding plate, angle-levers fulcrumed on the hub, and means for actuating the angle-levers and the sliding plate therefrom, substantially as and for the purposes specified. 2nd. In a matrix-machine, the combination, with a fixed axis or hub, of a main plate secured thereto, a sliding plate provided with shifting blocks, levers fulcrumed on the hub or axis, connecting rods which connect the levers on the hub with the shifting blocks, a suitable die carrier, and means for actuating the levers on the hub, substantially as and for the purposes specified. 3rd. In a matrix-machine, the combination with a suitable die-holder, of a hub or axis, a main plate secured to the said hub, a sliding plate provided with shifting blocks and to which the die-holder is secured, and means to move the sliding plate in a radial line to and from the hub or axis, substantially as and for the purposes specified. 4th. In a matrix-machine, the combination with a fixed axis, of a main plate secured thereto and provided with a counterpoise, a radially sliding plate, a die-carrier secured to the radially sliding plate, and means for causing the movement of the radially sliding plate to and from the fixed axis of the hub, substantially as and for the purposes specified. 5th. In a matrix-machine, the herein described die holder, consisting in two parallel plates rigidly secured together at a proper distance apart, said plates being correspondingly formed with several rows of guide-holes for the reception of the dies, arranged in circular arcs, the centres of which, when the dies are in operative position, are in the axis of a pivot-shaft, one of said plates being rigidly secured to a radially sliding plate, the said sliding plate being supported and guided by parts rigidly secured to a main plate, which is secured by means of a hub to the pivot shaft, about the axis of which the device as a whole can be rotated in a plane parallel to that of the

said plate, substantially as described and for the purposes specified. 6th. In a matrix-machine, the herein described die-holder, consist-



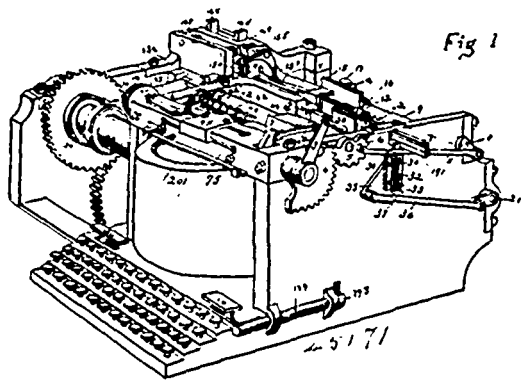
ing in two parallel plates rigidly secured together a proper distance apart, said plates being correspondingly formed with several rows of guide-holes for the reception of the dies arranged in circular ares, the centres of which, when the dies are in operative position, are in the axis of a pivot shaft, one of said plates being removably secured to a radially slidi ɜ plate, the said sliding plate being supported and guided by parts rigidly secured to a main plate, which is secured by means of a hub to the pivot-shaft, about the axis of which the device, as a whole, can be rotated in a plane parallel to that of the said plates, substantially as described, and for the purposes specified. 7th. In a matrix-making machine, the combination, with a pivoted die-holder arranged and adapted to slide radially to and from its axis, of a projection on the die-holder, and two levers pivoted on opposite sides of the die-holder, and having forks which engage the projection on said die-holder, substantially as and for the purposes specified. 8th. In a matrix-machine, the combination, with a vibratory die-holder provided with dies arranged in the arc of a circle and having a friction roller arranged on a radial line from the axis of vibration of said holder, of two pivoted forked levers the forks of which engage the friction roller on the die holder, two independent fulcrum shafts, separate connections between the respective pivoted forked levers and the independent fulcrum shafts, and two series of keys, the keys of each series having graduated connections with its fulcrum shaft, substantially as and for the purposes specified. 9th. In a matrix machine, the herein described die holder, in which the receptacles for the dies are arranged in a circular arc concentric with a pivot-shaft about which the said die holder is adapted to be rotated, in combination with means for giving the said die holder different degrees of rotation for the similar degrees of movement given to the different key levers, said means consisting in a series of lever arms of relatively different lengths, *rigidly secured to a common fulcrum shaft, mechanical connections* between said fulcrum shaft and said die holder, and pins on the key levers which engage with the said lever arms, combined and operating substantially in the manner and for the purposes specified. 10th. In a matrix machine, the combination with a vibratory die holder having a stud for the engagement of forked levers, of two pivoted forked levers, each lever having one prong shorter than the other, and means for independently actuating said pivoted forked levers, substantially as and for the purposes specified. 11th. In a matrix machine, the combination with a fixed axis or hub, of a radially sliding die holder mounted on said hub, means for causing the movement of said die holder to and from the hub, a stud on said die holder, said stud arranged on a radial line from the axis of vibration of the die holder, two pivoted levers having forks which engage the stud on the die holder, and means for independently actuating each of said forked levers, substantially as and for the purposes specified. 12th. In a matrix-making machine, the herein described die holder, in which the receptacles for the dies are arranged on circular ares in two series equally disposed on either side of a central line, said die holder being adapted to be rotated about a pivot shaft in opposite directions and also adapted to move to and from its axis of rotating in combination with a stud rigidly secured to said die holder at a distance from its axis of rotation, two bifurcated levers adapted to engage with said stud and rotate the said die holder in relatively opposite directions, respectively, key levers, and intermediate connections between the said bifurcated levers, substantially as described and for the purposes specified. 13th. In a matrix-machine, a key lever provided with a laterally projecting pin, a fulcrumed lever arm formed with a hooked shaped end adapted to engage with the pin on said key lever, thereby defining the relative angle between the two levers and thereby limiting the operative extent of movement of the key levers, combined and operating substantially in the manner described and for the purposes specified. 14th. In a matrix-machine, a series of key levers supported on a common fulcrum-pin, said levers being provided with laterally projecting pins at graduated relatively different distances from the common fulcrum bearing of the said levers, combined and operating with a series of lever arms rigidly secured to a common fulcrum-shaft, said lever arms being of relatively different graduated lengths and being formed with slots adapted to engage with the said laterally projecting pins, said slots being open on one side, adapting any one of the series of lever arms to be operated by the key-lever, coacting therewith independently of the other key-levers, substantially as described and for the purpose specified. 15th. In a matrix-machine, the herein described die-holder, adapted to be given a rotary movement about a pivotal axis, a stud rigidly secured to the said die-holder at a distance radially from its axis of rotation, a bifurcated lever arm adapted to engage with said stud, intermediate connection between said lever-arm and an oscillating fulcrum-shaft, a lever-arm rigidly secured to said fulcrum-shaft, said lever-arm being formed with a closed ended slot, key-levers, and laterally projecting pins on said key levers, combined and operating substantially in the manner described and for the purposes specified. 16th. In a matrix-machine, the herein described mechanism for forcing the die into the matrix-board, consisting in two shafts revolubly supported in line, a coupling between said shafts whereby the said shafts may be operatively connected or disengaged, a drive pulley secured to one shaft, a punch operated by the other shaft, a disc on the drive-pulley shaft, a fulcrumed vibrating lever actuated by the disc, a shaft actuated by the vibrating lever, and a second lever-arm on said shaft, which actuates the coupling or clutch for connecting the said shafts by the depression of the key-levers and for automatically disconnecting the same, combined and operating substantially as and for the purposes specified. 17th. In a matrix-machine, two shafts supported in line in fixed journal bearings, adapted, to be mechanically connected and disconnected, one of said shafts having secured to it at or near one of its ends a driving-pulley and to its other end a coupling-check, the other shaft having secured to one of its ends a shifting coupling-check and to its other end a crank connected by a link to a guide-head to which is removably secured a stamping-punch, combined and operating substantially as described and for the purposes specified. 18th. In a matrix-machine, the herein described mechanism for forcing the die into the matrix-board, consisting in two shafts revolubly supported in line, a coupling between said shafts, whereby the said shafts may be operatively connected or disengaged, a driving pulley secured to one shaft, a punch operated by the other shaft, and means substantially as described, for connecting the said shafts by the depression of the key levers and for automatically disconnecting the same, combined and operating substantially as described and for the purposes specified. 19th. In a matrix-machine, two shafts supported in line in journal bearings, a coupling between said shafts adapted to operatively connect and disconnect the same, and a disc secured to each of said shafts, each of said discs having a pin projecting from its face, adapted when the discs to which they are secured are rotated to engage, respectively, with two lever-arms secured to a common fulcrum-shaft, one of said lever-arms being connected to the shifting member of said coupling, combined and operating substantially as described and for the purposes specified. 20th. In a matrix-machine, a power-driven shaft, a shaft by which the die-punch is operated, a shifting coupling between said shafts, a crank pin secured on the said power-driven shaft, a lever-arm secured to a fulcrum-shaft, and connections between the said fulcrum-shaft and the shifting member of the said coupling, whereby the rotation of said fulcrum-shaft is adapted to be operatively connect and disconnect the said power-driven shaft and the said punch-operating shaft, said lever-arm being formed with a curved cheek eccentric to the lever-arm being fulcrumed on a pin secured diametrically to said fulcrum shaft, adapting the said lever-arm to be tilted to a position in which the said curved cheek is in a position to be engaged by the said revolving crank-pin, the said lever-arm being formed with an inclined cheek adapted to engage with the end of said revolving crank-pin, whereby the said lever-arm is tilted to an oblique position relative to said fulcrum-shaft, placing the said curved cheek of the said lever in a position beyond the path of said revolving crank-pin, combined and operating substantially in the manner and for the purposes specified. 21st. In a matrix-machine, a power-driven shaft, a shaft by which the die-punch is

operated, a shifting coupling between said shafts, a disc secured on the said power-driven shaft, a projecting pin on said disc, a lever-arm secured to a fulcrum-shaft, connections between the said fulcrum-shaft and the shifting member of the said coupling, whereby the rotation of said fulcrum-shaft is adapted to operatively connect and disconnect the said power-driven shaft and the said punch-operating shaft, said lever-arm being formed with a curved cheek eccentric to the path of revolution of the said pin and the said lever being fulcrumed on a pin secured diametrically to said fulcrum-shaft, adapting the said lever-arm to be tilted to a position in which the said curved cheek is in a position to be engaged by the said revolving pin, the said lever-arm being formed with an inclined cheek adapted to engage with the end of said revolving pin, whereby the said lever arm is tilted to an oblique position relative to the said fulcrum-shaft, placing the said curved cheek of the said lever in a position beyond the path of the said revolving pin, and means, substantially as described, for retaining the said lever arm in the said tilted oblique position, combined and operating substantially in the manner and for the purposes specified. 22nd. A power-driven shaft, a second independently supported shaft, a shifting coupling between the said shafts, a crank-pin secured to said power-driven shaft, a lever-arm fulcrumed to a fulcrum-shaft, and intermediate connections between the said fulcrum-shaft and the said coupling, said lever-arm being formed with a curved cheek eccentric to the path of revolution of the said crank-pin and a cheek inclined to the plane of revolution of the said crank-pin, combined and operating substantially in the manner and for the purposes specified. 23rd. In a matrix-machine, a power-driven shaft, a second independently supported shaft, a shifting coupling between the said shafts, a crank-pin secured to the said power-driven shaft, a lever-arm fulcrumed to a fulcrum-shaft, intermediate connections between the said fulcrum-shaft and the said coupling, a crank-pin secured on said second independently supported shaft, and a second lever-arm rigidly secured on said fulcrum-shaft, said fulcrumed lever-arm being formed with a curved cheek eccentric to the path of revolution of the crank-pin secured on the said power-driven shaft, and a cheek inclined to the plane of revolution of said crank-pin, and said second lever-arm being formed with a stop-shoulder adapted to engage with the crank-pin secured on the said second independently supported shaft, combined and operating substantially in the manner and for the purposes specified. 24th. In a matrix-machine, a power-driven shaft, and independently supported shaft to one end of which is secured a crank-head and connected reciprocating punch-head, a shifting coupling between the said shafts, a crank-pin secured on the said power-driven shaft, a lever-arm fulcrumed on a fulcrum-shaft, intermediate connections between said fulcrum-shaft and said coupling, a crank-pin secured on said punch-operating shaft, and a second lever-arm rigidly secured on said fulcrum shaft, said fulcrumed lever-arm being formed with a curved cheek eccentric to the path of revolution of the crank-pin on the said power driven shaft, and a cheek inclined to the plane of revolution of the said crank-pin and said second lever-arm being formed with a stop-shoulder adapted to engage with the crank-pin secured on said punch-operating shaft, combined and operating substantially in the manner described and for the purposes specified. 25th. In a matrix-machine, a power-driven shaft, and independently supported punch-operating shaft, a shifting coupling between the said shafts, a crank-pin secured in the said power-driven shaft, a double fulcrumed lever-arm adapted to engage with , nd be operated by the said crank-pin, intermediate connections between the said lever-arm and the said coupling, key-levers and intermediate connections, substantially as described between the said key-levers and the said lever-arm, whereby the manipulation of the said key-levers will bring the said lever-arm into a position to engage with the said crank-pin, thereby effecting the connection and disconnection of the said shafts, combined and operating substantially in the manner and for the purposes specified. 26th. In a matrix machine, in combination with the stationary carriage frame and matrix-carriage, an intermediate carriage adapted to be given a movement transverse to the line length, and means for effecting and governing such movement, consisting in a gear-pinion and operating ratchet-wheel, and pawl and pawl-lever secured on the said intermediate carriage, and a rack secured to the supporting framework, combined and operating substantially as and for the purposes specified. 27th. In a matrix machine, in combination with the matrix-carriage, an intermediate carriage adapted to be given a movement transverse to the line length, and means for effecting and variably governing such movement, consisting in a gear-pinion and operating pawl, and pawl-lever secured on the said intermediate carriage, said pawl-lever being provided with stops adapted to engage with a sliding plate formed with differential notches, and a rack secured to the supporting framework, combined and operating substantially as and for the purposes specified. 28th. In a matrix machine, the herein described means for rewinding the matrix carriage propelling mechanism, consisting in a double rack secured to the matrix-carriage, intermediate gear-wheel between one member of said rack and the gear-wheel secured to the spring-hub, intermediate gear between the other member of said rack and a rachet-wheel and coacting spring-governed pawl secured on the escapement-wheel, combined and operating, substantially in the manner and for the purposes specified. 29th. In a matrix machine, the herein described line-length signaling device, consisting in an adjustable button 168, formed with a projecting interference-pin, rod 167, lever-arm 165, lever-arms 163 and 164, spring tapper-rod 162, with attached tapper, and bell 161, combined and operating, substantially in the manner and for the purposes specified. 30th. In a matrix-machine, the herein described line-length device, consisting in an adjustable button 168, formed with a projecting interference-pin, rod 167, lever-arm 165, lever-arms 163 and 164, spring tapper-rod 162, with tapper attached, and bell 161, in combination with the adjustable button 168^1, formed with a projecting stop-pin, combined and operating, substantially in the manner and for the purposes specified. 31st. In a matrix machine, the herein described device for indicating in the operation of the machine the unoccupied line-space on the matrix board, consisting in a graduated dial-plate, indicating the dial-hand, and operating gear-wheels supported by the intermediate carriage, and a rack secured to the matrix carriage, said gear-wheels being supported in such manner as to adapt them to engage with and be disengaged from the said rack, combined and operating, substantially in the manner and for the purposes specified. 32nd. In a matrix machine, the herein described means for locking the keys against depression, consisting in a cross-bar dependently supported at either end by pivoted-arms, intermediate connections between said pivoted-arms, and the different key-levers, whereby the said cross-bar is brought by the depression of any key-lever under the ends of the other key-levers, substantially as described. 33rd. In a matrix-machine, the herein described means for locking the keys against depression, consisting in a cross-bar dependently supported at either end by pivoted-arms and intermediate connections between said pivoted-arms and the different key-levers, in combination with a catch, a slot in the end of the connecting-bar directly connected with the said pivoted-arms, and a recoil-spring whereby the said cross-bar may be brought under the ends of all the keys, substantially as described, and for the purposes specified.

No. 45,171. Type Line Forming Machine.

(*Machine à former les lignes de caractères.*)

Fig 1



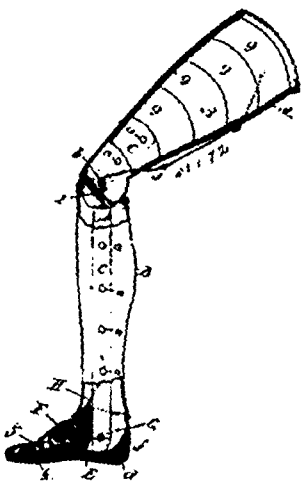
Alexander W. Maynes, joint inventor with and assignee of Louis Ransom, both of Akron, Ohio, U.S.A., 24th January, 1894; 6 years.

Claim.—1st. In a type-forming machine, a composing stick or holder adapted to receive a strip of compressible and non-elastic material, keys representing characters, mechanism for impressing said characters one by one upon said material, and means for automatically justifying the formed line subsequent to the forming of characters thereon, substantially as set forth. 2nd. In a type forming machine, characters, keys and connections therewith adapted to move character dies adjacent to a piece of compressible non-elastic material, means for impressing said dies upon said material, and means for justifying the impression after the same has been taken, substantially as set forth. 3rd. In a type-forming machine, mechanism for forming characters upon a compressible non-elastic material, and means for elongating said material subsequent to the forming of characters thereon, substantially as set forth. 4th. In a type-forming machine, mechanism for forming characters, such as words and the like, upon suitable compressible non-elastic material, means for forming spaces between such words, and suitable mechanism adapted to enlarge said space if desired, subsequent to the forming of said characters, substantially as set forth. 5th. In a type-forming machine, mechanism for forming characters, such as words and the like, upon compressible non-elastic material, suitable means for spacing said words, and mechanism for elongating said material at said spaces, substantially as set forth. 6th. In a type-forming machine, mechanism for forming characters, such as words and the like, upon impressionable material, mechanism adapted to notch said material either before or after a word formed or to be formed thereon, so as to make portions of said material not occupied by any word or character blank, substantially as set forth. 7th. In a type-forming machine, type forming dies, mechanism for operating same against suitable impressible material, space forming mechanism adapted to notch said material between words or the like, a suitable actuating mechanism adapted to likewise notch the body of

said material when the width of said notch exceeds an ordinary space, substantially as set forth. 8th. In a type-forming machine, mechanism for forming characters on suitable material comprising a compressible and non-elastic blank, mechanism adapted to compress said blank to elongate the same, substantially as set forth. 9th. In a type-forming machine, mechanism comprising periodically actuated feed rollers adapted to feed intermittently line blanks of impressible material upon a holder, a pivotal support for said holder, and means adapted to vibrate said holder upon its pivotal support and thereby deliver the same adjacent to an impression orifice, mechanism for impressing said line with characters as words and the like, and means for variably feeding said line over said orifice and other means for delivering said holder with its formed lines contiguous to a justifying mechanism, substantially as set forth. 10th. A type-forming machines, a vibrating holder or carriage, a line of impressible material thereon, means for vibrating said carriage, thereby delivering the line, first, adjacent to character dies and second to a justifying mechanism, substantially as set forth. 11th. A carriage or composition stick adapted to vibrate upon its support, means for feeding thereon a blank of impressible material, and means for moving said carriage adjacent or contiguous to an orifice or opening, feeding mechanism in operative relation to said carriage, character dies and key operating mechanism therefor, means in connection with said key mechanism adapted to variably actuate the carriage feeding device, and subsequently moving said character dies consecutively into the said orifice, and means for impressing the same upon said blank, substantially as set forth. 12th. A continuous length of impressible material, feed rollers periodically operative, thereby adapted to feed said material intermittently upon a holder and mechanism set in motion by the movement of said material adapted to sever the same adjacent to the holder therefor, substantially as set forth. 13th. A continuous band of impressible material provided with a groove, a carriage or composition stick and a projection upon the same, and an intermittent feeding device adapted to feed the said material upon the said projection, substantially as set forth. 14th. A suitable carrier or composing stick, a dove-tail projection thereon, impressible blanks having a dove-tail groove thereon, and an intermittent feeding device adapted to feed said blanks upon the projection of said carrier, substantially as set forth. 15th. A carrier or composing stick supporting a line of impressible material having formed characters thereon, means for vibrating said carrier, thereby delivering the same contiguous to justifying and feeding devices, a continuous band of blank impressible material, means for feeding the same upon the carrier, thereby delivering the formed line to the adjacent justifying mechanism, substantially as set forth. 16th. Character forming devices, feeding and justifying mechanism, a carrier supporting a line of impressible material, a pivotal support for said carrier, and means whereby said carrier is vibrated, thereby delivering the said line from the character formers to the feeding mechanism, in combination with means for periodically feeding upon said carrier, a new blank from a continuous band thereby delivering the formed line to the justifying mechanism, and other means set in action by the movement of said band, adapted to sever the same into required lengths, substantially as set forth. 17th. In a type-forming machine, a suitable blank and means for passing successive character dies upon one of its edges to form words upon said blank, spacing mechanism adapted to separate the words of the composition, and means adjacent to the opposite edge of said blank adapted to notch the same in duplication and in opposite relation to the respective word spaces, substantially as set forth 18th. An impressed blank comprising the line of composition upon one edge thereof, and spaces separating the words of said composition, niches or notches directly opposite the spaces upon the opposite edge of said blank, justifying compressors and means for operating the same, a projecting toe or the like from one of the said compressors adapted to engage the impressed blank upon its under side, means for feeding the blank between such compressors, and mechanism for moving the projecting toe and its compressor into the notches of the said line, thereby making operative the justifying compressor to compress the blank opposite each of the spaces of the said blank, substantially as set forth. 19th. An impressed blank comprising a line of composition upon one edge thereof, spaces separting the words of said composition, and means for elongating or compressing the said line opposite said spaces, thus justifying the same, substantially as described. 20th. In a type forming machine, mechanism for forming characters upon a compressible non-elastic material, and means adapted to change the form of said material without disturbing the characters thereof, thereby justifying the same, subsequent to the forming of characters thereon, substantially as described. 21st. In a type-forming machine, mechanism forming characters upon a compressible non-elastic material and means for justifying the same subsequent to the forming of characters, substantially as described. 22nd. In a type-forming machine, a justifying chamber and means adapted to move into the same a formed line of composition, justifying compressors contiguous to said chamber, and means in connection therewith adapted to automatically justify said line, substantially as described. 23rd. In a type-forming machine, a justifying mechanism comprising justifying compressors contiguous to the formed line, and operating means in operative connection with the line, said means being adapted to make said compressors operative or inoperative as directed by the varying lengths of line to be justified, substantially as described. 24th. In a type-forming machine, a justifying mechanism comprising suitable dies contiguous thereto and adapted to justify a line of composition, means in connection therewith adapted to make said dies operative upon said line in a variable manner in accordance with the varying length of the lines to be justified, substantially as described. 25th. A formed line of composition comprising characters, as words and the like, upon its own edge, and suitable notches on its opposite edge, said notches occuring at the end of each word of said composition, substantially as described. 26th. A formed line of composition comprising characters and the like upon its one edge and suitable notches on its opposite edge, said notches occuring at the end of each word of said composition, and a justifying mechanism regulated by said notches, substantially as set forth. 27th. A formed line of composition upon a compressible non-elastic material comprising characters, as words and the like thereon, spaces between said words of a minimum width, and means adapted to increase this width and thus justify the same, substantially as described. 28th. A compressible and non-elastic formed line composition comprising characters, as words and the like thereon, spaces between said words of a maximum width, and means adapted to decrease this width and thus justify the same, substantially as described. 29th. A formed line of composition upon a compressible and non-elastice material comprising characters, as words and the like thereon, spaces between said words, and means whereby said spaces may be increased or decreased to justify the line, substantially as described. 30th. A formed line of composition upon compressible non elastic material comprising characters thereon, said line being of a length dissimilar to that of the newspaper column width or other arbitrary size, and means adapted to justify said line so as to be of a similar length as a predetermined size, by lengthening or shortening the same, substantially as described. 31st. In a type-forming machine, a formed line of composition upon a suitable blank, the length of said blank being greater than that of the composition, means for severing off said blank, and mechanism for subsequently lengthening said line to a predetermined size, substantially as described. 32nd. In a type-forming machine, a justifying mechanism, comprising suitable compressors, adapted to compress formed lines of composition, and means in operative relation therewith, adapted to make said compressors operative in a variable manner according to the varying number of words or the like upon said lines, and the varying length of the lines themselves, substantially as set forth. 33rd. In a type-forming machine, a justifying mechanism, suitable compressors, adapted to justify formed lines of composition, comprising words and the like, mechanism in operative relation therewith, adapted to variably cause said compressors to become operative upon said lines to compress the same according to the variation in the length and number of spaces of said lines, substantially as set forth. 34th. In a type-forming machine, a justifying mechanism comprising suitable compressors, adapted to justify lines of composition and mechanism in connection therewith, adapted to vary the operation of said compressors, in proportion to the varying slack of said lines, and the variable number of words or spaces thereon, substantially as set forth. 35th. In a type-forming machine, key operating mechanism in operative connection with suitable character dies, a feeding device and a key actuating mechanism therefor, and suitable power connections adapted to impress suitable dies of said character devices upon a strip of compressible and non-elastic material carried upon said feeding device when so directed by the key operating mechanism, substantially as set forth. 36th. In a type-forming machine, a formed line of composition upon suitable blank, said blank and the composition thereon being of an excesssive length, and means for shortening the same to a predetermined size, substantially as set forth. 37th. In a type-forming machine, justifying mechanism and means in operative connection therewith, adapted to variably regulate suitable justifying compressors, a movable support or plate upon the lower side of said justifying mechanism, and mechanism in connection therewith, adapted upon the movement of said plate to retract or withdraw the justifying compressor regulating mechanism, substantially as set forth. 38th. In a type forming machine, a feeding device, a carrier, a line of impressible material therein, a severing knife and mechanism in operative relation thereto adapted to cause said severing knife to become operative by the movement in one direction of the line of material and to cause the same to become inoperative by a reverse movement of the feed device, substantially as set forth 39th. In a type-forming machine, a stick or carrier adapted to detachably hold a blank of suitable material, a feed screw adapted to operate or move said carrier in one direction by the movement of a suitable key operative mechanism, suitable power connections in operative relation with the said screw, and means in connection therewith adapted to move the said feed screw in an opposite direction, substantially as set forth. 40th. In a type-forming machine, a carrier or carriage, a pivotal support therefor, feeding mechanism adapted to feed a blank line of impressible material upon said carrier, means for vibrating said carrier upon its support, a carriage feed mechanism to which the carrier is thereby delivered, power connections for operating said mechanism in one direction, a key for connecting said power feed mechanism, whereby said carriage is automatically moved in one direction, and keys for moving said carriage in the opposite direction, substantially as set forth. 41st. In a type-forming machine, feed-rollers, means for periodically actuating the same, impressible

blanks, each having a dove-tail groove, a holder, means for feeding said blank upon said holder, and means comprising a dove-tail formation thereon for retaining the blanks, substantially as set forth.

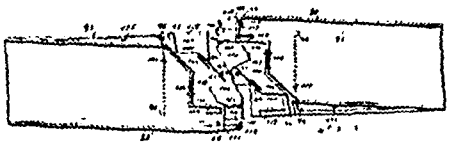
No. 45,172. Artificial Leg. (*Jambe artificielle.*)



Terence Sparham and James Hall, both of Brockville, Ontario, Canada, 25th January, 1894; 6 years.

Claim. 1st. An artificial leg having ribs C, longitudinally at opposite sides pivotally connected at the knee joint and pivotally connected near the ends to the foot, as set forth. 2nd. A raw-hide foot having a filling of wood, provided with recesses or cavities *f*, at opposite sides, in combination with stiffening ribs C, secured to the leg section, and a spring H, extending from the foot between the ribs and into the leg section, substantially as described. 3rd. The thigh section, constructed of an internal re-enforcing structure 9, and an external covering of raw hide or aluminum, as set forth. 4th. In an artifical limb, a knee joint having a spring bolt or catch 2, locking the joint, and a strap 3, to retract the bolt and thereby make the joint flexible when so desired, as set forth. 5th. The combination with the leg section, the foot, and the filling block therein, of the ribs C, secured to the leg on opposite sides and pivotally connected to said block, the transverse pin I, on the ribs, and the spring H, attached to the block and bearing against said pin, as set forth. 6th. The foot section E, having a filling F, subdivided between the toes and the instep, and connected by a hinge 5, and provided with a spring 6, for giving motion to the toe section of the foot, as set forth. 7th. A harness for an artifical limb, consisting of suspenders J, having widened shoulder straps J^1, and adjacent limb-supporting straps J^2, substantially as described.

No. 45,173. Non-Telescopic Railway Cars.
(*Char non-télescopique.*)



Justus E. Page, Independence, and Adelbert P. Nichols, Kansas, both of Missouri, U.S.A., 25th January, 1894; 6 years.

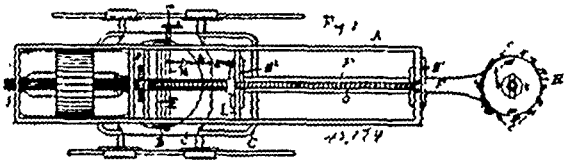
Claim. 1st. In a railway car, a platform having sliding or telescopic frames projecting from each end, and a car body pivotally mounted upon said platform, substantially as described. 2nd. An improved railway car, having a platform mounted upon trucks, and the body of a car having its ends bevelled and pivotally mounted upon said platform, substantially as described. 3rd. An improved railway car, having a truck platform mounted upon trucks, a car body pivotally mounted above said platform, and telescopic or sliding frames projecting from each end of the truck platform, and mechanism for holding the telescopic or sliding frames in an extended, longitudinal position, fixed to the platform and adapted to yield automatically to the sliding or telescopic frames when necessary, substantially as described. 4th. In a railway car, the combination of a supporting frame, mounted upon trucks, and a car body pivotally mounted on said frame, and means for moving the car body laterally upon its pivot, whereby the power for so doing is exerted upon its centre and upon each of its ends simultaneously, substantially as described and for the purpose set forth. 5th. In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting from the supporting frame at each of its ends, a car body pivotally mounted upon the supporting frame, with mechanism for moving the car body laterally upon its pivot, by the exercise of force upon each of its ends, simultaneously by the driving inward of either of the telescopic frames, substantially as and for the purpose set forth. 6th. In a railway car, a rectangular frame mounted upon trucks and having a sliding or telescopic frame projecting from each of its ends, and having a car body with bevelled ends pivotally mounted thereon, with means for rotating the body of the car laterally upon its pivot by power exerted upon its centre, and upon each of its ends simultaneously by the driving inward of either of the telescopic frames, substantially as set forth. 7th. An improved railway car, having a truck platform, mounted upon trucks, a car body pivotally mounted upon said truck platform, a guide and sustaining rails, or track, arranged concentrically to the pivot joint of the car, and mechanism for locking the car body to the platform, and mechanism f r automatically unlocking the car body from the truck platfor to its pivotal motion, whereby portions of the car body may be moved laterally upon the truck platform, substantially as described. 8th. An improving railway car, consisting of a rectangular platform having its ends mounted upon trucks, and having a turn table centrally located upon the platform, a car body mounted upon the turn table longitudinally with the platform and adapted to be rotated laterally, and having suitable locking and unlocking mechanism fixed to the car body and to the platform whereby the car body may be automatically unlocked and rotated laterally upon the turn table while the car is in motion, substantially as described. 9th. An improved railway car, comprising a stationary platform mounted upon trucks, telescoping platforms projecting from the ends of said stationary platform, a car body pivotally mounted upon said platform, and suitable mechanism carried by said platform and car body, for locking and unlocking the car body longitudinally above and to the said platform, whereby said car body may be rotated upon its pivot by the telescoping or folding in of either of the telescopic end platforms, carried by the stationary platform, substantially as described. 10th. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted thereon, a telescopic frame projecting from each end of the supporting frame, a latch receiver secured to the bottom of the car body, a pivoted latch bar, means for normally holding the latch bar in engagement with the latch receiver, and mechanism located at each end of the supporting frame for operating the latch bar, locking and unlocking the car body, said mechanism consisting of a rock shaft, having a depending arm with the latch bar and an arm 10, on the rock shaft for engaging the telescopic frame, whereby the driving inward of the telescopic frame at either end of the car will unlock the car body, substantially as set forth. 11th. In a railway car, the combination of a platform, mounted upon suitable trucks, a car body pivotally mounted on the platform and adapted to be moved laterally on its pivot, suitable brakes, supported by the platform, and means for connecting the brakes with the car body, whereby the lateral movement of the car body will automatically set said brakes, substantially as described and for the purpose set forth. 12th. An improved railway car, consisting of a rectangular platform mounted upon trucks, having a brake fixed to the said trucks, and having a car body pivotally mounted upon said platform, and having a brake staff mounted upon the said car body, adapted to be operated by hand so connected to the brake upon the trucks as to be operative in locking or unlocking the brakes when the car body is in its normal position, substantially as described. 13th. In a railway car, the combination of a platform mounted upon trucks, a car body pivotally mounted upon the platform and adapted to be rotated laterally upon its pivot, and means for automatically applying force to its pivotal support in order to rotate the car body, substantially as described and for the purpose set forth. 14th. In a railway car, the combination of a supporting frame mounted upon suitable trucks, a telescopic frame projecting from the supporting frame and adapted to be driven inward, a car body pivotally mounted on the supporting frame, and means for connecting the telescopic frame with the pivotal support of the car body whereby the same may be rotated by the driving inward of the telescopic frame, substantially as described. 15th. In a railway car, the combination of a car body mounted upon suitable trucks, a window guard secured to the car body, and means in connection therewith whereby the sudden and dangerous stoppage of the car body will cause said window guard to be automatically thrown across the windows of the car, substantially as set forth. 16th. In a railway car, the combination of a frame suitably mounted upon the trucks, a car body pivotally mounted upon said frame and capable of being moved laterally, a window guard which is automatically thrown across the windows of the car as the body moves laterally, substantially as described and for the purpose fet forth. 17th. In a railway car, the combination of a platform mounted upon trucks, a car body pivotally mounted upon said platform, and capable of being moved laterally, a movable window guard secured to the car body, and suitable means in connection with said window guard whereby the lateral movement of the car body will cause the same to be thrown across the windows of the car, substantially as described and for the purpose set forth. 18th. In a railway car, the combination of a car body mounted upon trucks and having pivotal support whereby the car body is capably of being moved laterally, a window guard secured to the car body, means for normally holding the guard in a

depressed position beneath the window opening and means for throwing said guard across the window opening as the car is moved longitudinally, substantially as set forth. 19th. In a railway car the combination of a platform, mounted upon trucks, a car body pivotally mounted on said platform, a window guard 172, secured to the car body, a hooked rod 173, secured to the guard and engaging a staple 174, on the car platform for holding the guard below the window opening, and a spring 176 for throwing said guard across the window opening when the lateral movement of the car body causes the hooked rod to be disengaged from the staple 174, substantially as described and for the purpose set forth. 20th. In a railway car the combination of a car body mounted upon suitable trucks, a window guard consisting of a cushioned rail hinged to the car body and adapted to extend across the window opening, and a latch 170 for securing and holding said guard across said opening, substantially as described and for the purpose set forth. 21st. In a railway car the combination of a car body, mounted upon suitable trucks, a window guard consisting of a cushioned rail hinged to the car body and adapted to extend across the window opening, and a latch 171, for holding said guard in a raised position so as not to interfere with the window opening, substantially as and for the purpose set forth. 22nd. In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting therefrom, pilot guards secured to said telescopic frames and extending rearwardly and downwardly therefrom, and means for connecting the pilot guards with the supporting frame, substantially as described and for the purpose set forth. 23rd In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting therefrom, pilot guards secured near the outer end of the telescopic frames, and extending rearwardly, downwardly and diverging therefrom, and depending brackets secured to the supporting frames in which the pilot guards have a movable bearing, substantially as described and for the purpose set forth. 24th. In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting therefrom, pilot guards having their outer ends secured to the telescopic frames and extending rearwardly, downwardly and diverging therefrom, and having a suitable support whereby they are held at a point beneath the truck axles, substantially as and for the purpose set forth. 25th. In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting therefrom, and inverted V-shaped pilot guards secured to the telescopic frames, substantially as and for the purpose set forth. 26th. In a railway car, the combination of a platform mounted upon trucks, a car body pivotally mounted upon the platform, and tension bars 91 being secured at 90, to the platform and to the car body at 92, for tensionally holding the car body in horizontal alignment with the platform, substantially as set forth. 27th. An improved railway car, consisting of a platform mounted upon trucks, and a car body pivotally mounted upon the platform, and adapted to be rotated laterally, with a car door which will automatically open by rotating the car body upon the platform, substantially as described. 28th. In a railway car, the combination of a platform mounted upon trucks, a car body pivotally supported upon the platform, safety doors hinged to the car body, and means in connection with the car body and platform whereby when the car body is moved laterally on its pivot the safety doors will be automatically opened, substantially as and for the purpose set forth. 29th. In a railway car, the combination of a platform mounted upon trucks, a car body pivotally supported upon the platform, safety doors hinged to the car body, a bell crank lever 126, pivoted to the car body and having a downwardly extending arm 131, a plate 125 secured to the platform over which the arm 131 travels and automatically releases the safety door, and permits it to open as the car moves laterally on its pivot, substantially as described and for the purpose set forth. 30th. In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting therefrom, and means for locking the supporting frames of adjacent cars in longitudinal alignment when said telescopic frames have been driven inward, substantially as and for the purpose set forth. 31st. In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting therefrom and interlocking members 181, 182, locking said supporting frames in longitudinal alignment when said telescopic frames have been driven inward, substantially as described and for the purpose set forth. 32nd. In a railway car, the combination of a supporting frame mounted upon trucks, telescopic frames projecting therefrom, rods 181, and bell-mouthed tubes 182 secured to the supporting frames, said rods and tubes being alternate and mounted on each end of the supporting frames whereby when the telescopic frames have been driven inward, the rods and tubes on adjacent supporting frames will into lock with each other, substantially as described and for the purpose set forth. 33rd. In a railway car, the combination of a supporting frame mounted upon trucks, truss bars extending parallel with the supporting frame and beneath the truck axles, and means for connecting said bars with the supporting frame, substantially as and for the purpose set forth. 34th. In a railway car, the combination of a supporting frame mounted upon trucks, truss bars extending parallel with the supporting frame and beneath the truck axles, and depending brackets secured to the supporting frames and adjacent to the trucks to which the truss bars are connected, substantially as and for the purposes set forth. 35th. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted thereon, and adapted to move laterally on its pivot, and means for automatically connecting the top of the car body with an adjacent car when said car has been moved laterally, substantially as and for the purpose set forth. 36th. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted thereon and adapted to move laterally with mechanism mounted upon the ends of the car body, which will automatically unite with mechanism on the adjacent end of another car body of its like, when in longitudinal alignment therewith, and thus form a friction clutch, and by the lateral movement of the car body form a positive connecting tension clutch and which will automatically and freely release either or both of said connections when necessary, substantially as and for the purpose set forth. 37th. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted thereon, and a vestibule having a chafing plate so attached to the end of the car as to have a swinging and lateral movement upon the same, substantially as and for the purpose set forth. 38th. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted thereon, a vestibule having a chafing plate so mounted upon a car body having bevelled ends as to be automatically adjustable from a transverse alignment with the body of the car to an alignment with its bevelled portion, substantially as and for the purpose set forth. 39th. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted thereon and having bevelled ends, a vestibule having a chafing plate fixed thereto and having a gangway platform fixed to the chafing plate, substantially as set forth. 40th. In a railway car having a vestibule, the combination of a pivoted post 149, having extended arms 152, a chafing plate hinged to said arms, a spring for holding said arms in an obliquely extended position with the chafing plate, a tension spring 160, a bolt 159, passing through the same, and a bracket 158, forming a bearing for said spring, substantially as and for the purpose set forth. 41st. A railway car body, having bevelled ends, a gangway platform pivotally connected therewith, and having face plates secured thereto in transverse alignment with the car body and adapted to be moved into oblique alignment therewith, substantially as and for the purpose set forth. 42nd. A railway car having bevelled ends, a gangway platform 150, pivoted thereto, having a face plate 166, with extensions 167, and springs for normally holding the platforms in transverse alignment with the body of the car, substantially as and for the purpose set forth. 43rd. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted on said frame, a telescopic frame projecting from the supporting frame, a compression cylinder and means for connecting the telescopic frame with the compression cylinder when the same has been driven inward, substantially as and for the purpose set forth. 44th. In a railway car, the combination of a supporting frame mounted upon trucks, a car body pivotally mounted on said frame, a telescopic frame projecting from the supporting frame, a compression cylinder having a piston, a thrust rod between the cylinder piston and the telescopic frame, a support for said thrust rod, and a spring located upon said rod on each side of said support, substantially as described and for the purpose set forth. 45th. In a railway car, the combination of a supporting frame mounted upon trucks, a telescopic frame projecting therefrom, and a locking device for locking the telescopic frame in its extended position, consisting of a rock shaft 11, having a movable bearing, an arm 10 secured thereto, said arm being provided with an extension for engaging the rear end of the telescopic frame, substantially as described. 46th. In a railway car, the combination of a supporting frame mounted upon trucks, a telescopic frame projecting therefrom, a rock shaft having a movable bearing, an arm 10 secured thereto, an extension on said arm for engaging the rear end of the telescopic frame, an angular bar 27 fulcrumed to the supporting frame, a hinged connecting bar 24 for connecting the bar 27, with the arm 10, and a guide bolt 30 having a spring thereon with which the arm 27 engages, substantially as and for the purpose set forth. 47th. In a railway car, the combination of a supporting frame mounted upon trucks, a telescopic frame projecting therefrom, an arm 10 mounted on a shaft 11, having a movable bearing consisting of a hinged bar 12, having a guide bolt with which said bar engages, substantially as and for the purpose set forth. 48th. An improved railway car, consisting of a rectangular platform mounted upon trucks, having telescopic or sliding frames projecting from each end, and having a turn-table mounted thereon, and having a car body mounted upon the turn-table and adapted to be rotated laterally, and mechanism for checking the lateral rotating movement of the car body upon the rectangular platform, substantially as described. 49th. An improved railway car, comprising a platform supported at each end by a truck of the usual, or any preferred construction, a folding or telescopic platform located at each end of the truck platform, a car body pivotally located above said platform, and having formed at its opposite ends and diagonally opposite to each other oblique deflecting sides, and having also a door located in each squared end portion of the car and adapted to open automatically when necessary, substantially as set forth. 50th. An improved railway car, comprising a truck platform supported near each end by a truck of the usual or any preferred construction, a sliding or telescopic platform located at each end of the truck platform, a car body pivotally located above said truck platform, and having formed at its opposite ends and diagonally opposite to each

other, oblique deflecting sides and having a door located in each squared end portion of the car, adapted to open automatically when necessary, and a door located also at each end of the car of the ordinary construction and arrangement, and in longitudinal alignment with each other, substantially as described. 51st. An improved railway car, comprising a platform supported at each end by a truck of the usual, or any preferred construction, a folding or telescopic platform located at each end of the truck platform and pivotally connected thereto through the medium of a turn table, comprising an upper section secured to the car body and a lower section secured to the truck platform, having check springs, a set of guide rollers located in the upper section of the turn table, and a set of guide rollers located below the lower section of the turn table, a guide roller secured to the car body and a chain or cable guided by said rollers and connecting the hand brake staffs at each end of the car to the brake levers of the trucks, substantially as described. 52nd An improved railway car, comprising a platform supported at its opposite ends on trucks of the usual, or any preferred construction, a car body pivotally located above said truck platform, guide tracks or rails located upon said platform, and depending from the car body engaging said guide track, substantially as described. 53rd. An improved railway car, comprising the platform, mounted upon trucks and the car body pivotally mounted above said platform, the friction roller carried by the sliding or telescopic frames located at opposite ends of the platform, with the deflecting plate arranged parallel with the bevelled end of the car, substantially as described and for the purpose set forth.

No. 45,174. Coal Mining and Coal Cutting Machine.

(*Machine à creuser et diviser le charbon*)



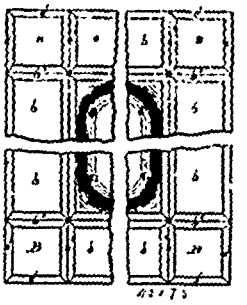
Isaac Wantling, James T. Johnson and Eugene Zimmerman, all of Peoria, Illinois, U.S.A., 25th January, 1894; 6 years.

Claim.—1st. In a coal cutting machine, the expanded head F^1, grooved as at V, V, and forwardly tapering to provide an oblique forward bearing for the cutting-wheels H, H, all substantially as described, and set forth. 2nd. In a coal cutting machine, the expanded head F^1, grooved as at V, V, and forwardly tapering to provide an oblique bearing for the cutting-wheels H, H, and having the rearwardly extending perforated stem F, for supporting the driving mechanism for operating the cutting-wheels H, H, all substantially as described and set forth. 3rd. The combination in a coal cutting machine, of the cutting wheels H, H, provided with suitable cutting tools, and with internal gears, a gear-wheel meshing therewith rotated by suitable mechanism, the expanded head integrally connected with the rearwardly extending stem and forwardly tapering to provide a wedge-shape formed with grooves in its sides parallel with rearwardly extending stem upon which the cutting-wheels are mounted, all substantially as described and set forth. 4th. In a coal cutting machine, the combination with the stem F, bearing the cutting wheels H, H, shaft J, and sleeve I, of the mechanism for turning the said stem, consisting of the sleeve T, provided with an opening through which the stem is carried, journalled in a circular opening in the framework A, and cross-piece L, and provided with extension 1, provided for securing bolt, all substantially as described and set forth. 5th. In a coal cutting machine, the combination with the stem F, internally bored, having the expanded head F^1, forwardly tapering to provide an oblique bearing surface and grooved as at V, V, of the wheels H, H, internally cogged and provided with suitable cutting tools, the shaft J, bearing the pinion K, in mesh with the cogs of the wheels H, H, and the sleeve I, having a spline and groove connection with shaft J, and suitably actuated for rotation, all substantially as described and set forth. 6th. In a coal cutting machine, the combination with the stem F, internally bored, and having the expanded head F^1, forwardly tapering to provide an oblique bearing surface, and grooved as at V, V, of the wheels H, H, internally cogged and provided with suitable cutting tools, the shaft J, bearing the pinion K, in mesh with the cogs, and the wheels H, H, the sleeve I, having a spline and groove connection with shaft J, and suitably actuated for rotation, and the thread bar O, provided with clamping nut R, for bearing relation with stem F, for feeding the stem forward, and while the wheels H, H, are rotated for the purpose of cutting coal, all substantially as described and set forth. 7th. In a coal cutting machine, the stem F, internally bored and having the expanded head F^1, forwardly tapering and grooved as at V, V, carrying the wheels H, H, internally cogged and driven by pinion, meshing therewith, connected with shaft J, the rearward extension thereof centrally bored and supporting shaft J, and sleeve K, with the framework A, suitably grooved for sliding projections, provided upon the rearward extremity of said stem, and with an opening in its forward part for the passage through of said stem, and supported on arms B, journalled in boxes on plate D, connected therewith for tilting the machine and supported upon pivoted plate D, bearing upon plate C, of the truck providing for the turning of the head from side to side, all substantially as described and shown. 8th. In a coal cutting machine, the combination of the stem F, provided with the forwardly tapering expanded head F^1, the cutting-wheels H, H, internally cogged, and shaft J, provided with gear-wheel K, meshing with cogs of wheels H, H, the sleeve I, having the spline and groove connection with shaft J, the frame A, within which the stem F, is carried and suitably formed to enable the said stem to slide back and forth therein as shown, and provided with arms B, rigidly secured to the sides thereof and connected below by shaft E, journalled in boxes on plate D, to enable the machine to be tilted up or down, and the plates C and D, supported upon a truck suitably pivoted at their central point to enable the cutter head to be turned from side to side, the feeding mechanism consisting of shaft O, suitably journalled and connected with power by suitable cog-wheel as P, and provided with clamping nut R, having threaded relation with thread bar O, and designed to contact with projections N^2, connected with stem F, which provides for the forward bearing of the said stem F, as the clamping nut R, is fed forward on thread bar O, and suitable power for turning sleeve I, and thread-bar O, and suitable connections therewith, all substantially as described and set forth.

No. 45,175. Metallic Ceiling Plate.

(*Plaque métallique pour plafonds.*)

Fig 3.

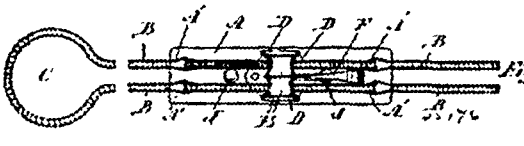


Longley L. Sagendorph, Philadelphia, Pennsylvania, and Charles N. Harder, Philmont, New York, 26th January, 1894; 6 years.

Claim.—1st. A metallic ceiling plate having raised side and end flanges *b*, with grooves b^4, formed therein at their intersecting points, substantially as set forth. 2nd. A metallic ceiling plate having raised side and end flanges *b*, and corner caps B, the latter being separated from said flanges by grooves b^4, as set forth. 3rd. A metallic ceiling plate having a raised moulding *a*, terminating in side and end flanges *b*, and corner caps B, with grooves b^4, between said caps and flanges and on a line with the intersection of said moulding and flanges, as set forth. 4th. A metallic ceiling plate having a continuous raised moulding *a*, terminating in side and end flanges *b*, said plate having the raised corner cap B, the latter being separated from said flanges by grooves b^4, substantially as set forth. 5th. A metallic ceiling composed of separable plates, each plate having the raised interlocking flanges *b*, and corner caps B, integral with said plate, the flanges and caps of one plate overlapping the flanges and caps of the adjacent plate, said plates being secured to place by means of suitable nails passed through said overlapping caps, as set forth.

No. 45,176. Fastener for Mail Bags.

(*Fermeture de sacs à lettres*)

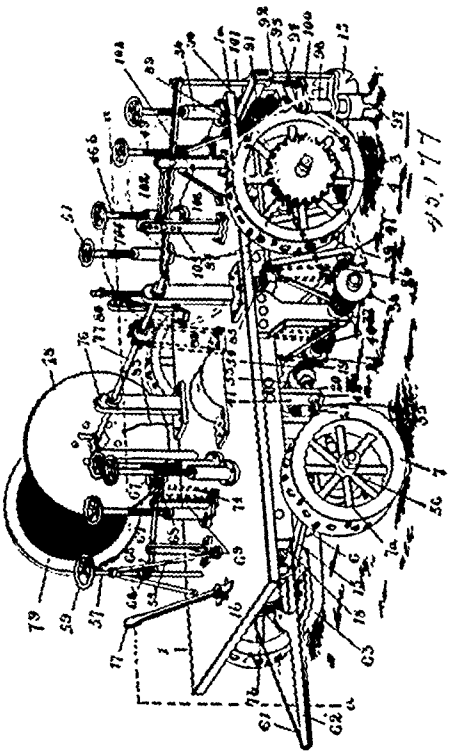


George Low, Ottawa, Ontario, Canada, 27th January, 1894; 6 years.

Claim. 1st. The combination of the plate A, having guide grooves A^1, at the ends, the U-shaped bearing D, secured thereto, and the cam or eccentric E, journalled to said bearing, for clamping a cord B, as set forth. 2nd. The combination with a mail bag, of the plate A, having guide grooves A^1, at the ends, the U-shaped base or bearing D, having a perforation D^1, the cam or eccentric E, journalled in said bearing and provided with a handle or lever J, and a cord D, clamped near the ends by said cam against said bearing or plate, as set forth. 3rd. In a mail bag fastening, the combination of the plate A, having grooves G, the journal bearing D, and the

cam or eccentric E, rocking in said bearing, the address card or label H, slipping into said grooves and cord B, clamped by said eccentric, as set forth.

No. 45,177. Traction Machine. (*Machine de traction.*)

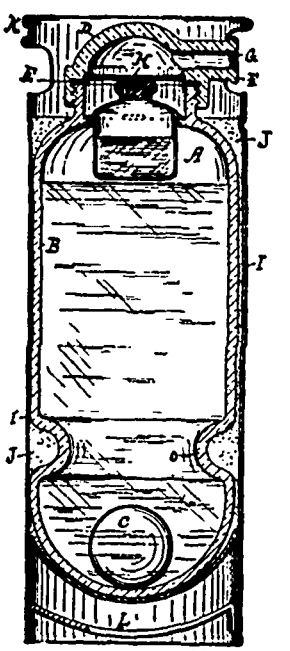


James Commee, Port Arthur, Ontario, Canada, 27th January, 1894; 6 years.

Claim. 1st. In a traction machine the combination of a framework, carrying the wheels supporting the framework, a motor, means for transmitting motive power direct from the motor to the carrying-wheels, substantially as set forth. 2nd. In a traction machine the combination of the frame, carrying wheels supporting the front end of the frame, axles on which the carrying-wheels are mounted, cross-arms mounted upon the front axle, a cap resting on the top of the cross-arms, a bolster pivotally connected to the said cap, and the front of the framework rigidly connected to the bolster, substantially as set forth. 3rd. In a traction machine the combination of the frame, an axle connected to the rear end of the frame, carrying-wheels mounted upon said axle, an axle at the front of the machine, means for connecting the front axle to the frame, carrying-wheels mounted on the front axle, a motor, means for transmitting motion direct from the motor to the rear carrying wheels, and from the motor to the front carrying-wheels, said machine so arranged that the weight is adapted to be distributed evenly over all of the carrying-wheels, substantially as set forth. 4th. In a traction machine the combination with the frame of an axle secured to the rear end thereof, carrying wheels mounted on said axle and supporting the rear end of said frame, an axle connected to the front end of said frame, carrying-wheels loosely mounted on said axle, splines on said axle, clutch members mounted on said axle and splines, and longitudinally movable thereon, a clutch member mounted on the side face of each of said wheels, and adapted to clutch with the clutch members mounted on said axle, a motor, and means for transmitting motion from the motor to the front axle, substantially as set forth. 5th. In a traction machine the combination of the framework, an axle secured to the rear of the framework, carrying-wheels mounted on said axle, an axle connected to the front end of the frame work, carrying-wheels loosely mounted on said axle, splines formed on said axle and located one contiguous to either of the said carrying-wheels, a clutch member rigidly secured to the side face of each of said carrying-wheels, clutch members mounted on said axle and splines, and located one contiguous to either of said wheels, and adapted to clutch with the clutch members on the side face of said wheels, a forked lever engaging with each of the clutch members on the axle, and adapted to move the clutch members on the axle into or out of clutch with the clutch members secured to the wheels, a motor, and means for transmitting motion from the motor to the front axle, substantially as set forth. 6th. In a traction machine the combination of the frame, an axle secured to the rear end of the frame, carrying-wheels mounted on said axle, an axle secured to the front end of the frame, carrying-wheels mounted upon said axle and revolving therewith, a grooved pulley mounted upon said axle, a main driving shaft, a pulley mounted upon said main driving shaft, a slack belt, chain or cable passing around the grooved pulleys an idler to take up the slack from the belt or cable (whilst the machine is advancing in a straight line) an idler, means for raising the idler to relieve the front axle from tension by reason of the strain from the belt or cable whilst the machine is turning, a motor, and means for transmitting motion from the motor to the main driving shaft, substantially as set forth. 7th. In a traction machine, the combination of the frame, an axle secured to the rear end of the frame, carrying-wheels mounted on said axle, an axle secured to the front end of the frame, carrying-wheels mounted on said axle adapted to revolve therewith, cross-arms mounted upon and spanning said axle, journal bearings in said cross-arms through which is adapted to pass said axle, a cap resting on the top of said cross-arms, a plate, with socket resting in said cap, a bolster, a turning plate secured to said bolster and adapted to enter the socket in the plate of said cap, anti-friction bearings secured to the under side of said bolster and adapted to travel on a semi-circular plate connected to said cross-arms, and means for rigidly securing the frame to the said bolster, substantially as set forth. 8th. In a traction machine, the combination, with the frame of an axle secured to the rear end of the frame, carrying-wheels mounted on said axle, an axle secured to the front end of the frame, carrying-wheels mounted on said axle and adapted to revolve therewith, cross-arms mounted upon and spanning said axle, journal bearings in said cross-arms, through which is adapted to pass said axle, a cap on the top of said cross-arms with a socket-plate, a bolster, a turning-plate secured to said bolster and adapted to enter the socket in the plate on said cap, anti-friction bearings secured to the under side of said bolster and adapted to travel on a semi-circular-plate connected to said cross-arms, and means for rigidly securing the frame to the arms of the said bolster, and a steering device to alter the direction of the advance of the machine, substantially as set forth. 9th. In a traction machine, the combination, with the frame of an axle secured to the rear end of the frame, carrying wheels mounted upon said axle, an axle pivotally secured to the front end of the frame, carrying-wheels mounted upon said axle, a steering apparatus to turn the front axle comprised of a spindle having a grooved pulley located at the lower end of the spindle, and a hand-wheel secured to the upper end of the spindle, a tongue connected to the axle, a rope or cable connected to the tongue and passing around the grooved-wheel, the rotation of the grooved-wheel and spindle adapted to turn the tongue and axle in either required direction, substantially as set forth. 10th. In a traction machine, the combination, with the frame of an axle secured to the rear end thereof, carrying-wheels mounted upon said axle, an axle at the front end of the machine carrying-wheels mounted upon said axle, cross-arms mounted upon and spaning said axle, a cap secured to said cross arms, a bolster pivotally connected to said cap, the front end of the frame rigidly secured to the bolster, a rack secured to said cross-arms, a pinion meshing with said rack, a spindle upon which said pinion is mounted, a sprocket-wheel mounted upon said spindle, a spindle mounted in standards secured to the top of the frame, a sprocket-wheel mounted upon said spindle a drive-chain passing around said sprocket wheels, substantially as set forth. 11th. In a traction machine, the combination, with the frame of an axle secured to the rear end thereof, carrying-wheels mounted upon said axle, an axle at the front end of the machine carrying-wheels mounted upon said axle, cross-arms mounted upon and spanning said axle, a cap secured to and resting on said cross-arms, a bolster pivotally connected to said cap, the front end of the frame rigidly secured to the bolster, a rack secured to the rear ends of said cross-arms, a pinion meshing with said rack, a spindle upon which said pinion is mounted, a sprocket-wheel mounted upon said spindle, a spindle mounted in standards secured to the frame, a sprocket-wheel mounted upon said spindle, a drive chain passing around said sprocket-wheels, a tongue connected to the front ends of said cross-arms and projecting outwardly in front of the machine, a rope or cable secured to said tongue, a grooved pulley around which the said rope passes, a spindle upon which said grooved pulley is mounted, a bevel-gear mounted upon said spindle, and a bevel-gear secured to the end of the spindle mounted in the standards secured to the frame, said bevel-gear meshing and transmitting motion from one to the other of the said spindles, substantially as set forth. 12th. In a traction machine the combination with the frame of an axle secured to the rear end thereof, a bolster connected to the front end of the frame, roller bearings connected to the bolster, the front axle, a supplemental frame mounted upon the front axle, a track connected to the supplemental frame upon which run the roller bearings of the bolster, substantially as set forth. 13th. In a traction machine the combination with the framework of an axle secured to the rear end thereof, carrying-wheels mounted upon said axle, a front axle, a supplemental frame mounted upon said front axle, the front end of the framework connected to the supplemental frame, and means for turning the front axle in either direction, substantially as set forth. 14th. In a traction machine the combination with the frame of an axle secured to the rear end thereof, carrying-wheels mounted on said axle, an axle secured to the front end of the machine, carrying-wheels mounted upon said axle, a main driving-shaft, a motor, means for transmitting motion from the main driving-shaft to the

front and the rear carrying-wheels respectively and cutting implements, substantially as set forth. 15th. In a traction machine the combination with the framework and the carrying-wheels and axles, of a main driving-shaft secured to the framework of the machine, a motor, means for transmitting motion from the motor to the main driving-shaft, a series of rotating cutting implements, a counter-shaft for each of the cutting implements, means for transmitting a rotary motion from the main driving-shaft to the counter-shafts, and vertically adjustable bearings for the said counter-shafts, substantially as set forth. 16th. In a traction machine the combination with the frame and carrying-wheels supporting the frame of a main driving-shaft secured to the frame, a motor, means for transmitting a rotary motion from the motor to the main driving-shaft, a series of counter-shafts, means for transmitting motion from the main driving-shaft to each of the counter-shafts, each of the counter-shafts comprised of two sections hinged together in such a manner that that section of the counter-shaft farthest remote from the main driving-shaft can be raised vertically, a vertically adjustable bearing for the said section of the counter-shaft, and a cutting implement mounted on the said section of the counter-shaft, substantially as set forth. 17th. In a traction machine the combination of the frame and the carrying-wheels of a main driving-shaft, a motor, means for transmitting a rotary motion from the motor to the main driving-shaft, a series of counter-shafts, means for transmitting a rotary motion from the main driving-shaft to each of the counter-shafts, a cutting implement mounted on each of the counter-shafts, a vertically adjustable hanger, a bearing formed in the lower end of the said hanger for its respective counter-shaft, and a swivel jointed at its upper end, a screw-threaded spindle having its lower end swivelled to fit into the swivelled joint in the upper end of the adjustable hanger, and means for rotating the said spindle to raise or lower respectively the adjustable hanger, substantially as set forth. 18th. *In a traction machine, the combination, with the frame and* carrying-wheels of a motor, a main driving-shaft secured to the framework, means for transmitting a rotary motion from the motor to the main driving-shaft, a series of counter-shafts, each comprised of the two sections joined together in such a manner that those sections of the counter-shaft farthest remote from the main driving-shaft can be raised vertically, a series of bevel-gear on the main driving-shaft, a bevel-gear on each of the counter shafts meshing with its respective gear on the main driving-shaft, and a cutting implement fitted on each of the counter-shafts, substantially as set forth. 19th. In a traction machine, the combination, with the framework and carrying-wheels of a main driving-shaft, means for transmitting motion to the main driving-shaft, a series of cutting implements, means for transmitting a rotary motion from the main driving-shaft to the cutting implements, means for transmitting a rotary motion from the main driving-shaft to the carrying-wheels, substantially as set forth. 20th. In a traction machine, the combination, with the frame of carrying-wheels secured thereto, a main driving-shaft, a series of cutting implements, means for transmitting a rotary motion for raising the cutting implements to regulate the depth of the cut, substantially as set forth. 21st. In a traction machine, the combination, with the frame of carrying-wheels secured thereto, a main driving-shaft, a series of cutting implements, means for transmitting a rotary motion from the main driving-shaft to the cutting implements, means for rotating the cutting implements to regulate the depth of the cut, and means for transmitting motion from the main driving-shaft to the carrying-wheels, substantially as set forth. 22nd. In a traction machine, the combination, with the framework of carrying-wheels secured to the front and rear thereof, a main driving-shaft, means for transmitting motion from the main driving-shaft to the carrrying-wheels, means connected with the carrying-wheels at the front of the machine to change the direction of the advance of the machine, cutting implements and means for transmitting motion from the main driving-shaft to the cutting implements, substantially as set forth 23rd. In a traction machine, the combination, with the frame of carrying-wheels secured to the front and rear thereof, a main driving-shaft, means for transmitting motion from the main driving-shaft to the carrying-wheels, means connected with the carrying-wheels at the front of the machine to change *the direction of the advance of the machine, cutting implements and* means for transmitting motion from the main driving-shaft to the cutting implements, to regulate the depth of the cut, substantially as set forth. 24th. In a traction machine, the combination with the frame, of carrying-wheels secured thereto and supporting the frame, a main driving-shaft, a motor, means for transmitting motion from the motor to the main driving-shaft, a spindle mounted on the top of the frame, drums mounted upon said spindle, electric wires wound on said drums, means for revolving said drums to wind or unwind the electric wires respectively, connections between the electric wires and the motor, and means for transmitting motion from the main driving-shaft to the carrying-wheels, substantially as set forth. 25th. In a traction machine, the combination of the framework, of carrying-wheels, means for cutting the soil after the machine has passed, and means for propelling the machine, substantially as set forth. 26th. In a traction machine, the combination of the frame, carrying-wheels supporting and carrying said frame, and means located at the rear of the machine for propelling the machine, substantially as set forth. 27th. In a traction machine, the combination of the frame, carrying-wheels supporting the frame, cutting implements secured to the rear of the machine, a vertical spindle for each cutting instrument, and a lever to vertically raise or lower the said spindle, substantially as set forth. 28th. In a traction machine, the combination of the main frame, carrying-wheels supporting the main frame, means for propelling the machine, a vertical spindle mounted at the rear of the machine, a spline on said spindle, a sleeve mounted on said spindle having a groove engaging with said spline, said sleeve being rotated by and during the rotation of the said spindle, a cutting implement mounted on the end of said sleeve mounted in vertical adjustable bearings, means for raising and lowering said bearings to raise and lower said sleeve and cutting implements, and means for transmitting a rotary motion to said spindle and sleeve, substantially as set forth.

No. 45,178. Fire Extinguisher. (*Extincteur d'incendie.*)



Omar A. Stempel, St. Louis, Missouri, U.S.A., 27th January, 1894; 6 years.

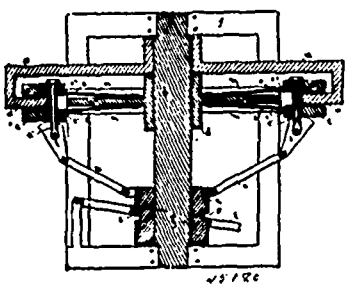
Claim.—1st. A fire extinguisher, consisting of a casing I having a hemispherical bottom, and a lateral top aperture, and adapted to be supported by hand either end up, an alkali containing vessel B having a corresponding bottom and an inward flange at the neck, a solidified packing between the casing and the vessel up to the neck of the latter, a cap having a lateral nozzle adapted to discharge through said casing aperture, *an outwardly flanged acid* receptacle supported from the shoulders by said neck flange, and means to mix its contents with the alkali in said vessel B on reversing said extinguisher. 2nd. In a fire extinguisher, the combination, with a cylindrical casing I, having a downwardly concave bottom and a lower handle L, of a cylindrical vessel B, snugly fitting said casing and having an inward flange at the neck, an interposed packing J up to the neck of said vessel introduced in a fluid state and solidified, a cap D for said vessel having a discharge nozzle F, a sealed frangible receptacle A, having shoulder lugs to support it on said neck flange, a screen H above said receptacle, and a loosely rolling weight C in the bottom of said vessel B, substantially as shown and described. 3rd. In a fire extinguisher, the retaining ridge O for the bell, substantially as shown and described. 4th. In a fire extinguisher, the combination, with the alkali containing vessel B having an inward projecting ledge at the neck, of an acid containing vessel mounted on said ledge between the latter and the cap, a cap having a guarded outlet nozzle, and a loose ball weight normally at the bottom of the vessel B, to break said acid receptacle on reversing said extinguisher. 5th. In a fire extinguisher, the combination, with a casing, of a non-corrodible lining separately inserted therein, a nozzle-cap, and fire extinguishing chemicals and operating devices located inside said lining.

No. 45,179. Screw. (*Vis.*)

George Augustus Macnutt, Melbourne, Victoria, Australia, 27th January, 1894; 6 years.

Claim.—1st. A pointed screw the longitudinal section of which shows that the thread is cut in such a manner that vertical steps are formed, each of which said steps are concave on their under side and curving down to the lower step and the top of each step curving inwardly to the shank at an inclination from the outer edge of the thread, as and for the purposes set forth and described and in manner illustrated. 2nd. In screws for woodwork and analogous materials a pointed screw the thread of which comprises a series of steps the top of such steps being formed of a curve, said curve springing from the shank out to the edge of the thread at such an angle that the outer point of such curve is at a higher plane than at its junction with the screw shank, and the under side or rise of such step being formed of a concave curve leading from the outer point of the curved top down to the inner point of the next and liner step, as and for the purposes explained and in the manner illustrated.

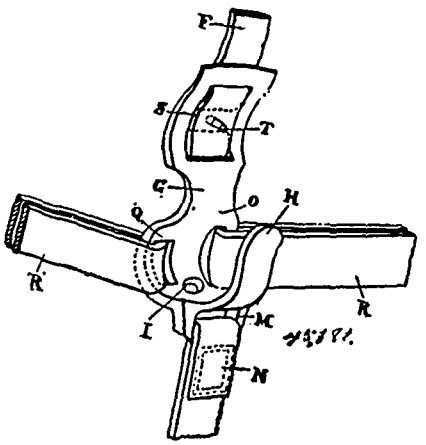
No. 45,180. Friction Clutch Machine.
(*Embrayage à friction.*)



Charles Edmond Tewitt and William Theodore Grundel, both of Ravenna, Ohio, U.S.A., 27th January, 1894; 6 years.

Claim.—1st. In a friction clutch, the combination of a shaft a loose pulley formed with a concentric flange grippers at opposite sides of said flange, a radial flange rigidly connected with said shaft and formed with radial grooves, springs attached in said grooves and connecting with said grippers and means for operating said grippers to clutch and release said pulley flange. 2nd. In a friction clutch, the combination of a shaft, a loose pulley formed with a flange at right angles to said shaft, friction rings formed with grooves at opposite sides of said pulley flange, a radial flange rigidly connected with said shaft and formed with radial grooves, springs attached in said grooves and extending into the grooves in said rings and means for operating said rings to clutch and release said pulley flange. 3rd. The combination of shaft *b* pulley *a* formed with flange a^1 grippers *c c* at opposite sides of said flange, flange *r*, springs *s* attached thereto, and connected with and wholly supporting said grippers and means for operating said grippers.

No. 45,181. Harness. (*Harnais.*)



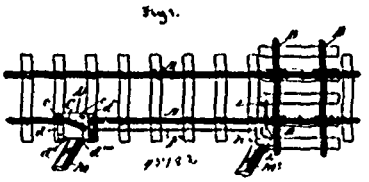
George Fierheller, Markham, Ontario, Canada, 27th January, 1894; 6 years.

Claim.—1st. A shaft tug for harness having a hook-shaped end to fit and receive the shaft, and having an opening in the bottom of the hook-shaped end, a buckle integrally formed with the hook-shaped end to receive the back strap, a loop on either side of the hook-shaped end to receive respectively the britchin-strap and the hame tug-strap, and a loop connected to the under side of the hook-shaped end to receive the girth, substantially as and for the purpose specified. 2nd. A shaft tug comprised of a hook-shaped end to receive and fit the shaft, an opening through the bottom of the hook-shaped end, a buckle formed integrally with the hook-shaped end, a loop on either side of the hook-shaped end, and a loop on the end side of the hook-shaped end in combination with the hame tug-strap, the britchin-strap and the girth-strap, substantially as and for the purpose specified.

No. 45,182. Safety Device for Railway Crossings.
(*Appareil de sûreté pour passages de chemins de fer.*)

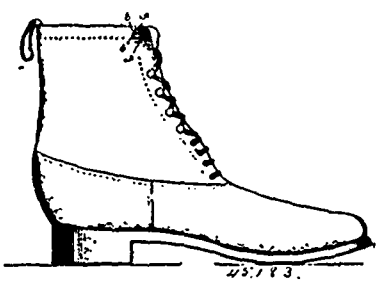
Kennet William Blackwell, Montreal, Quebec, Canada, 27th January, 1894; 6 years.

Claim.—1st. In a railway crossing, the combination, with the rails A of a derail C, pivoted at one end and having a downwardly projecting pin, a box or chair D upon which said derail is pivoted and having limited stops, a bell-crank E pivoted in said box and engaging the pin of the derail, a spring G operating said pin and



bell-crank, a box H placed near the inter-section of the rails, an arm I pivoted in said box and provided with a socket *i*, a tube F^1 connecting the two boxes D and H, a draw-rod F passing through said tube and connecting the other arm of the bell-crank and the arm I, a loose lever L adapted for insertion in the socket *i*, and drains M and M^1 under the said boxes, substantially as set forth. 2nd. The combination, with the rails of a street railway line, of an adjustable derail inserted therein at such a distance from another line crossing the former that the front of the street car is on the side line when the rear wheel has cleared the derail, a spring keeping said derail open means of operating said derail against the pressure of the spring, a box, casing or chair supporting said derail and enclosing and holding said spring and operating mechanism, and a drain under said box, a box placed at the inter-section of the lines open at the sides facing said lines, a drain under said box, an arm pivoted in said box and provided with a socket adapted to receive a bar or lever, a rod connecting said arm with the operating mechanism, and a tube connecting said boxes and encasing said rod, substantially as set forth. 3rd. The combination of a rail A having a gap therein, a box or chair D open at the bottom placed in said gap, a grooved and flanged rail-head C, adjustably supported on the top plate of said box pivoted at one end and having a pin c^1 projecting through a slot in the same and having the other end limited by stops $d^{1\,1}$ and d^4, a bell-crank lever E pivoted to the underside of the top plate and engaging said pin, a rod F connected to the other arm of said bell-crank, a tube F^1 having one end secured to said box through which said rod passes, and a spring G engaging the pin c^1, and pressing it so that the rail C butts against the open stop d^4, substantially as set forth. 4th. The combination of the inter-section of rails A and B, a box H placed at the said inter-section, an arm I pivoted therein and provided with a socket *i*, adapted to receive the end of a lever extending across the inter-section, a lever L adapted to be inserted in said socket and operate the same, a draw-rod F, connected to said arm, and a tube F^1, having one end secured to said box and encasing said rod, substantially as set forth.

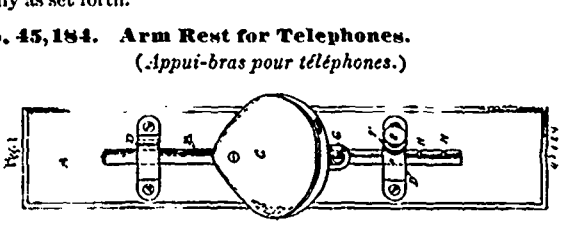
No. 45,183. Lace Clasp. (*Agrafe de chaussures.*)



Harry Beecher Baker, Dighton, Massachusetts, U.S.A., 27th January, 1894; 6 years.

Claim.—The herein described lace clasp, consisting of a centrally located tongue projecting upward at one end and lying between side arms provided with legs adapted to be inserted through the material to which the device is secured, bent upward against said material, and having their ends converge to thereby form a lower spring acting against the upper spring of the said tongue, substantially as set forth.

No. 45,184. Arm Rest for Telephones.
(*Appui-bras pour téléphones.*)

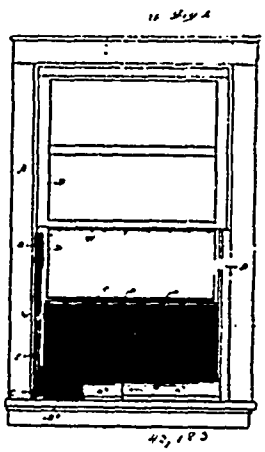


Arthur Sampson Barwick, Montreal, Quebec, Canada, 27th January, 1894; 6 years.

Claim.—1st. In an elbow rest, a rotating spindle with graduating notches at its lower extremity, brackets D, and cup-shaped rests C,

as shown and described. 2nd. In an elbow rest, brackets D, and a rotative spindle provided with notches H, as shown and described. 3rd. In an elbow rest, a cup-shaped rest and means to oscillate by a rotative spindle, as shown and described. 4th. In an elbow rest, an oscillating cup, with right or left motion by notches H, and brackets D, as shown and described. 5th. In an elbow rest, a cup-shaped receptacle for the elbow, fastened to a wall for support, as shown and described. 6th. The combination of a cup-shaped elbow rest, a spindle B, with notches H, as shown and described. 7th. The combination of a spindle, having notches H, and the brackets D, as shown and described. 8th. The screw shank E, lock nut F, and brackets D, as shown and described. 9th. The combination of the oscillating spindle D, provided with notches H, the brackets D, screw shank E, provided with lock nut F, as shown and described. 10th. The bracket D, provided with a threaded shank E, and lock nut F, as shown and described.

No. 45,185. Window Screen. (*Store de fenêtre.*)



Cyrus D. Bennett, Lincas J. Halsey and George S. Darling, all of Tawas City, Michigan, U.S.A., 30th January, 1894; 6 years.

Claim.—1st. The combination of a sash and springs attached thereto, each of which is opposed to the other, substantially as described. 2nd. The combination of a sash, a screen connected thereto, a roller on which the said screen is adapted to be wound, springs secured to the ends of the roller, and springs secured to the casing in a vertical plane above the former, both springs secured to the side frames of the sash and so arranged that their tension shall be opposed, substantially as described. 3rd. The combination of a sash, a screen connected thereto, a roller on which said screen is adapted to be wound, springs secured to the ends of the roller, and springs secured to the casing in a vertical plane above the former, both springs secured to the side frames of the sash and so arranged that their tensions shall be opposed, and means for guiding the sides of the screen, substantially as described. 4th. The combination of a sash, a screen attached at one edge thereto, the other edge being attached to a roller around which it is adapted to be wound, means whereby the roller is compelled to rotate and wind up the screen by the descent of the sash, substantially as described. 5th. The combination of a window casing, sash, a screen attached at one extremity to the sash, and at the other to a roller controlled by the movement of the sash, a chain connecting the roller and sash, and adjustably unyielding means for tightening the chains, substantially as described. 6th. The combination of a window casing, sash, a screen attached at one extremity to the sash and at the other to a roller controlled by the movement of the sash, in such manner that the opening of the sash operates the screen, means for controlling the movement of the screen, and the closure strip W, substantially as described.

No. 45,186. Ore Concentrator. (*Concentrateur de minerai.*)

George Johnston, San Francisco, California, U.S.A., 30th January, 1894; 6 years.

Claim.—1st. In an ore concentrating machine, a movable vibrating frame having drums and an endless apron or band thereon, the frame suspended or supported on radial links or struts, so that when vibrated from side to side the radial links or struts will cause the sides of the frame to move in circular arcs, producing in conjunction with a lateral reciprocating movement, an oscillating motion dependent on the length of the links or struts, and the angle at which they are adjusted, in the manner substantially and for the purposes herein set forth and explained. 2nd. In an ore concentrating machine, a main frame and a movable band or apron suspended or supported thereon by means of radial links that swing in curves, which in combination with a lateral or vibratory motion of the movable frame produces a rocking motion thereof, the sides moving in arcs described by the radial supporting links, the links adjustably mounted on the main frame so their angle, and the consequent curve provided at the sides of the belt frame, can be changed as the nature

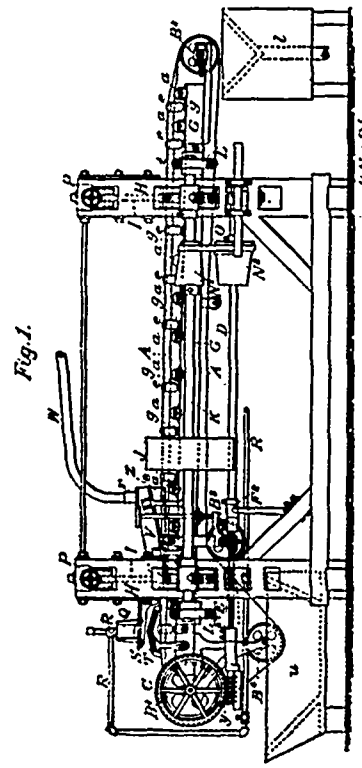


Fig. 1.

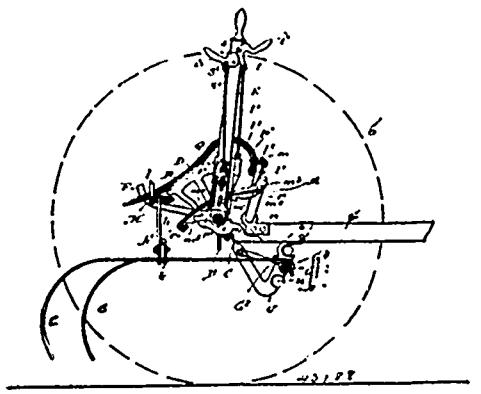
of the work may demand, in the manner substantially as described. 3rd. In an ore concentrating machine, a fixed main frame, and a movable band frame suspended thereto, the latter provided with drums and the required gearing to support and produce a traversing motion of the band or apron, a flexible shaft or connection connecting the machinery on the main frame with that of the movable frame, and communicating rotary motion from the fixed to the movable frame irrespective of the lateral movement of the latter, in the manner substantially as described. 4th. In an ore concentrating machine, a movable or reciprocating frame provided with drums and other required gearing to support and operate a flexible traversing band, parallel adjustable rollers set obliquely along the sides of the flexible band, so the edges of the latter will be bent up by the rollers, and move without sliding thereon, forming thus a retaining flange so the water and pulp cannot escape over the sides, in the manner substantially as described. 5th. In an ore concentrating machine, water-distributing apparatus provided with a series of outlets and channels, as herein described, attached to and moving with the band-supporting frame, and partaking of the lateral movements of the band, so the water will be deposited in streams and ridges constantly, in lines parallel to its traversing motion, in the manner substantially as described. 6th. In an ore concentrating machine, water-distributing apparatus, as herein described, attached to and moving with the band-supporting frame, consisting of a series of channels and surfaces so disposed as to prevent fall or disturbance of the water as it is applied to the band, and to dispose it in distinct streams along the surface of the band parallel to the direction of its traversing motion, in the manner substantially as described. 7th. In an ore concentrating machine, as herein described, distributing apparatus for the ore or pulp, consisting of inclined surfaces, baffling ledges and narrow feeding slots, the latter set close to the surface of the band so the pulp and water when properly mingled escapes with little agitation through these slots, and is deposited in ridges parallel to the traversing movement of the band, and disposed in equidistant spaces thereon, in the manner substantially as shown and described.

No. 45,187. Method of Treating Canvas.
(*Méthode de traitement de la toile.*)

George Jacob Junk, Berlin, Prussia, 30th January, 1894; 6 years.

Claim.—1st. The herein described method of preparing a bromide of silver arrowroot (or starch) emulsion. 2nd. The herein described method of treating canvas, shirting, silk, paper, etc., with an emulsion consisting of bromide of silver and arrowroot or starch, for the purpose of rendering the same sensitive to light.

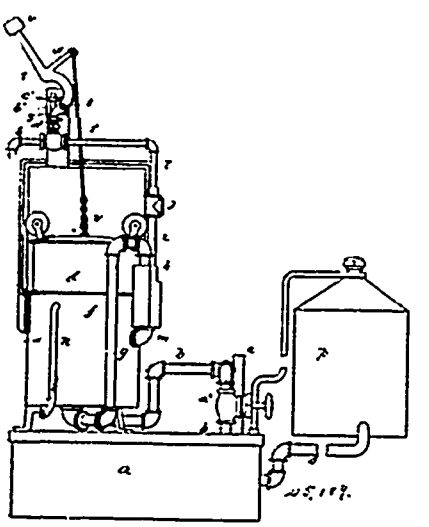
No. 45,188. Cultivator. (*Cultivateur.*)



Thomas Belair, of Montreal, Quebec, Canada, 30th January, 1894; 6 years.

Claim.—1st. In a cultivator or like implement, having a series of depressible working fingers and suitable supporting framing, the combination with same, of an intermediate pressure distributor connected with said fingers and adapted to receive a depressing force at a single point and to distribute and maintain it upon each finger, with means for furnishing such depressing force. 2nd. In a cultivator or like implement having a series of depressible working fingers and suitable supporting framing, the combination with same of an intermediate pressure distributor composed of a series of equalizing bars including a main bar to receive the depressing force at a single point, and bars connected with said fingers, the device adapted to distribute the depressing force received by its main bar, to and maintain it upon each finger, with means for furnishing such depressing force. 3rd. In a cultivator or like implement having a series of depressible working fingers, and suitable supporting framing, the combination with same, of an intermediate pressure distributor of substantially whipple-tree construction connected with said fingers, and a spring pressure device located centrally of the machine and exerting a depressing force upon the pressure distributor, for the purpose set forth. 4th. In a cultivator or like implement having a series of depressing working fingers, and suitable supporting frame pieces, the combination with same, of an intermediate pressure distributor connected with said fingers, a spring pressure device located centrally of the machine, and exerting a depressing force upon the pressure distributor, and means for regulating the degree of such depressing force, for the purpose set forth. 5th. In a cultivator or like implement, having a series of depressible working fingers, and suitable supporting frame pieces, the combination with same, of the intermediate pressure distributor, comprising a main stationary bar and movable bars pivoted to the stationary bar, connections between the movable bars and said fingers, and a spring pressure device located centrally of the machine and exerting a depressing force upon the main stationary bar of the distributor. 6th. In a cultivator or like implement, having a series of depressible working fingers, and suitable supporting frame pieces, the combination with same, of the intermediate pressure distributor, comprising a main stationary bar, and movable bars pivoted to the stationary bar, connections between the movable bars and said fingers, and a spring pressure device located centrally of the machine, and exerting a depressing force upon the main stationary bar of the distributor, and means for regulating the degree of such depressing force, for the purpose set forth. 7th. In a cultivator or like implement, having a series of depressible working fingers, suitable frame pieces and a rotatable axle, the combination with the same, of lifting mechanism, a pressure distributor connected with said fingers, and supported at times by said lifting mechanism, and an operating lever projecting from said axle, and adapted to rotate same, for the purposes set forth. 8th. In a cultivator or like implement, having a series of depressible working fingers, suitable frame pieces and a rotary axle, the combination with same, of lifting arms projecting from said axle, a pressure distributor connected with said fingers, and supported at times by said lifting arms, and an operating lever projecting from said axle and adapted to rotate same, for the purpose set forth. 9th. In a cultivator or like implement, having a series of depressible working fingers, suitable supporting frame pieces, a rotatable axle, and an operating lever, the combination with such parts, of a pressure distributor connected with said fingers, and a spring exerting a depressing force upon said distributor, a movable carrier or mounting for said spring, and a connection between said operating lever and said carrier, for the purposes set forth. 10th. In a cultivator, or like implement, having a series of depressible working fingers, suitable supporting frame pieces, a rotatable axle, and an operating lever, the combination with such parts, of a pressure distributor connected with said fingers, a spring exerting a depressing force upon said distributor, a movable carrier or mounting for said spring, and an adjustable connection between said lever and said carrier, for the purposes set forth. 11th. In a cultivator, the combination with the operating lever, and the movable carrier of the spring pressure device, of the adjustable connection between them in the form of a bar pivoted at one end to said carrier, and having notches on its lower edge to engage a projection from said lever with means for disengaging said bar from said projection for the purpose set forth. 12th. In a cultivator, the combination, with the operating lever and the movable carrier, of the spring pressure device, of the notched adjustable bar pivoted to the carrier and engaging a projection from said lever, a lifting slide carried by said lever and provided with a projection to engage an extension from said bar and a thumb lever and connection for operating said slide, for the purpose set forth. 13th. In a cultivator, the combination, with the operating lever, the means for locking it in position and the slide for disengaging from said lever the adjustable table bar connection between it and the carrier of the spring pressure device, of the cam lever S, and bell crank lever T, pivoted to said operating lever and the former adapted upon being drawn inward to operate the latter, as and for the purpose set forth. 14th. In a cultivator or like implement, having a main operating lever and two interlocking mechanisms, of a pair of thumb levers carried by said main operating lever, one of which is adapted to be operated without acting upon the other, while the latter upon being operated also actuates the former, and connections between said thumb levers and the interlocking mechanisms, for the purpose set forth. 15th. In a cultivator or like implement, having a main operating lever, as E, and two interlocking mechanisms, of a pair of thumb levers S, T, carried by said lever E, the lever S, having an eccentric or cam shaped body *s*, and the lever T, being of bell crank form and located so as to be in contact with the cams of lever S, and be operated by same, as described, with connections between said thumb levers and the interlocking mechanisms, for the purpose set forth. 16th. In a cultivator or like implement, having working fingers attached at their bases or inactive ends to a movable shaft or frame piece, a graduated bearing or holder for said shaft or frame piece, for the purpose set forth. 17th. In a cultivator or like implement, having suitable supporting framing and working fingers attached at their bases or inactive ends to a movable shaft or frame piece, the combination with such framing, of the dependent brackets U, having notches formed in the edge thereof to receive said shaft or frame piece and means for retaining it in place. 18th. In a cultivator or like implement having suitable supporting framing and working fingers attached at their bases or inactive ends to a movable shaft or frame piece, the combination with such framing, of the depending brackets A having notches formed in the edge thereof to receive said shaft or frame piece and a pivoted hook G^3, for retaining it in place.

No. 45,189. Carburetting Machine. (*Carburateur.*)



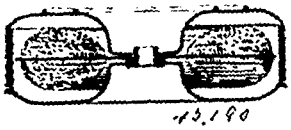
George Henry Burrows, Somerville, Massachusetts, U.S.A., 30th January, 1894; 6 years.

Claim.—1st. In a carburetting apparatus, the combination of a floating holder, an air inlet pipe opening thereinto, a tromp located in said air inlet pipe, a water supply pipe for the tromp provided with a regulating valve having an upwardly projecting stem fitted with upper and lower collars, a lever having one end engaging said collars, its other end being weighted, and a connection between said lever and the floating holder, substantially as set forth. 2nd. In a carburetting apparatus, the combination of a floating holder, a tromp, an air inlet pipe opening into said holder and provided with a chamber and check valve, substantially as described, said tromp being located in said air inlet pipe, as set forth. 3rd. The combination of the water and air induction pipe, the chamber for distribut-

ing the air and water from the tromp to the floating holder, the floating holder, arranged as described, and the shallow gasoline receiver, with the carburetted air chamber, the carburetter arranged therein, means as set forth for diluting the carburetted air, as set forth. 4th. The combination of the carburetting chamber having a tortuous passage containing wicks, and a chamber k^1 communicating with said passage, a gas or air supply pipe b communicating with the said passage, and having a valve a^2, and the branch gas or air pipe c^1 communicating with the chamber k^1, and provided with a valve a^1, the arrangement being such that gas or air can be admitted in any desired relative proportions to the said passage and chamber, as set forth.

No. 45,190. Box for Thread Holders.

(*Boîte pour porte-fils.*)

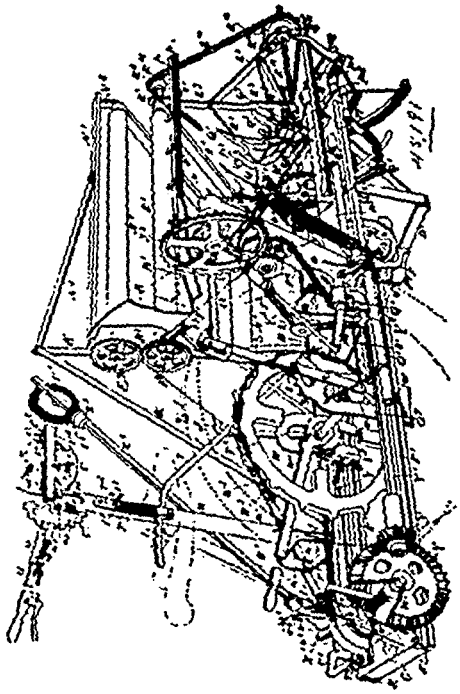


45,190

John Keats, Bagnall Hall, Stafford, England, 30th January, 1894; 6 years.

Claim.—Boxes for thread holders, consisting of two circular shells fitting the one into the other, and formed with inwardly projecting centres for gripping the thread holder, one of such centres being fitted with an axle which the thread holder is free to rotate, and the periphery of the shells being notched to provide for the exit of the thread from the closed box and put a regulated drag on the thread as it is drawn off the rotating holder.

No. 45,191. Harvester. (*Moissonneuse.*)



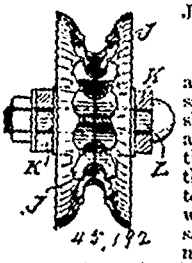
45,191

John Allan McMaster, Orangeville, Ontario, Canada, 30th January, 1894; 6 years.

Claim.—1st. In a harvester binder, the combination with the angle-bars D, D^1, supporting the grain table, of the upwardly extending brackets E and F, secured to the front of the angle-bar D^1, and having attached to their upper ends the side bars E^1 and F^1, of the driving-wheel frame, as and for the purpose specified. 2nd. In a harvester binder, the combination with the angle-bars D, D^1, supporting the grain table, of the upwardly extending brackets E and F, secured to the front of the angle-bar D^1, and having attached to their upper ends the side-bars E^1 and F^1, of the driving-wheel frame, and the upright E, secured to the rear angle-bar, D, and having attached to it the angle-bar H, which is also secured to the bracket E, and to the front end of the side-bar E^1, of the driving-wheel frame and the brace I^2, as and for the purpose specified. 3rd. The combination with the angle-bars D, D^1, the brackets E and F, secured to the angle-bar D^1, the upright E^3, secured to the angle-bar D, the side bars E^1 and F^1, secured to the brackets E and F, the angle-bar H, secured to the upright E^3, bracket E, and attached by the bar V, at the front end to the side-bar E^1, the L-shaped bar J, secured at the front end to the angle-bar D^1, the upright K, secured at the bottom to the angle-bar H, and braced by the rod j, to the rear end of the L-shaped angle-bar J, and by the bar N^5, to the cross-bar N^4, and the end board I, extending upwardly, and secured to the upright portion of the L-shaped angle-bar J, and the upright bar K, as and for the purpose specified. 4th. The combination with the angle-bars D, D^1, the brackets E and F, secured to the angle-bar D^1, the upright E^3, secured to the angle-bar D, the side-bars E^1 and F^1, secured to the brackets E and F, the angle-bar H, secured to the upright E^3, bracket E, and attached by the bar V, at the front end to the side bar E^1, the L-shaped bar J, secured at the front end to the angle-bar D^1, the upright K, secured at the bottom to the angle-bar H, and braced by the rod j, to the rear end of the L-shaped angle-bar J, and by the bar N^5, to the cross-bar N^4, the end board I, extending upwardly and secured to the upright portion of the L-shaped angle-bar J, and the upright bar K, brace j, the bars I^1, supporting the lower canvas elevating rollers E^2, and E^7, and the bars for supporting the upper elevating canvas rollers N^1, N^{11}, the rear bar N, of which is supported on the downwardly projecting portion J^1, of the angle-bar J, and the brackets N^3, secured to the cross-bar N^4, as and for the purpose specified. 5th. The combination, with the angle-bars D, D^1, the angle-bar H, secured to and supported upon the bracket E, attached to the angle-bar D^1, and the upright E^3, secured at the bottom to the angle-bar D, of the packer frame O, supported at its inner end by the arm O^{11}, upon the guide rod o^1, secured to the angle-bar H, and at the outer end by the bracket O^1, on the pipe O^4, attached to sleeve P^2, and supported upon the roller O^5, journalled at the upper end of the bracket O^6, which is fastened to the end of the angle-bar D^1, beneath the binding table, as and for the purpose specified. 6th. The combination, with the packer-frame O, supported by the arm O^{11}, bracket O^1, and sleeve P^2, as specified, of the packers, packer cranks and shaft, supported upon the side bars of the packer frame by the hanger journals Q^5, which are provided with lips q^1, and secured in position by bolts and nuts q, as and for the purpose specified. 7th. The combination, with the packer-frame O, supported by the arms O^{11}, and brackets O^1, and packers, packer cranks and shaft supported upon the side bars of the frame, as specified, of the driving-shaft Q^4, journalled in the standard P^6, provided at its rear end with a gear-wheel Q^5, which meshes with the gear-wheel Q^6, on the packer-shaft proper, as and for the purpose specified. 8th. The combination, with the packer-frame O, supported by the arm O^{11}, and bracket O^1, and packers, packer cranks and shaft, supported upon the side bars of the frame, as specified, of the driving-shaft Q^4, journalled in the standard P^6, provided at its rear end with a gear-wheel Q^5, which meshes with the gear-wheel Q^6, on the packer-shaft proper and the square rear end E^{12}, of the packer-shaft which is supported in journals upon the bar E^4, which is secured to the upright E^3, attached to the rear angle-bar D, and braced by the rods E^9, to the angle-bar H, as and for the purpose specified. 9th. The combination, with the angle-bars D, D^1, the end board I, secured upon the upright portion of the angle-bar J, and upright K, supported as specified, and the upright E^3, secured at the bottom of the angle-bar D, of the brackets E^4, secured to the upper end of the upright E^3, and the bracket E^5, secured to the end board I, the grooved bar P, supported upon these brackets and the bottom bar P^1, forming part of the sleeve P^{11}, partly supported by the bracket O^1, and the sleeve P^{11}, forming part of the standard P^6, which is supported by the bracket P^7, upon the pipes O^4, and rod o^6, as and for the purpose specified. 10th. The combination, with the elevating roller P^6, supported in the upper end of the bars I^1, and carrying the canvas, of the fingers p^1 secured to the upper bar P of the binding table, and extending towards the roller E^6, as and for the purpose specified. 11th. The combination with the binding table R, adjustable at the top in the groove p, of the bar P, of the angular batter board R secured to the end board, and having the base extending from the top to the bottom of the binding table, as and for the purpose specified. 12th. The combination with the binding table, packer frame, standard p^6 secured to a bracket P^7, to which is connected the binding mechanism, as specified, of the guide rod o^1, supporting rod o^6, pipe O^4, and the connecting rod s^1, the looped end of which extends over the lug p^6, on the bracket P^7, and the forward end of which is connected to the lower end of the lever S, which is pivoted on the rack O^2, and has a spring plunger s, which engages with the quadrant S^1 at the top of the rack, as and for the purpose specified. 13th. The combination with the main driving-wheel, main sprocket-wheel W^{11}, sprocket-chain W^2, sprocket-pinion w^3 on the counter-shaft W^4, bevel-wheel Y on the opposite end of the counter-shaft, gear pinion y on the shaft y^1, sprocket-chain Y^3, sprocket-wheel Y^6, gear-wheel Y^{11} connected to the sprocket-wheel as specified, and knotted gear-wheel y^2, sprocket-wheel Y^4 on the the end of the shaft Q^4, gear-wheel Q^8 secured on the opposite end, gear-wheel Q^6, shaft E^{12}, sprocket-wheel E^{13}, sprocket-chain E^{14}, sprocket-wheel E^{15} on the end of the roller E^{16}, gear-wheel E^{17} secured at the opposite end of the roller E^6, and meshing with the roller E^{19} on the end of the roller N^{11}, and roller E^{17} secured on the end of the roller driving the canvas of the grain table, as and for the purpose specified. 14th. The combination with the angle-bar D^1, brackets E and F supporting the side bars E^1 and F^1, of the stiffening casting G connecting the outer ends of the

side bars together and forming journals E^{21} for the countershaft W^4, as and for the purpose specified. 15th. The combination with the casting G, counter-shaft W^4 supported in bearings G^{11}, sprocket-pinion G^3 provided with a groove n^4 in its hub designed to engage with the pins n^5, spiral spring W^5 located upon a shaft W^4 between the opposite end of the hub and bearing G^{11}, of the rod W^6, the ring end of which fits into a groove in the elongated portion of the hub, which rod is designed to engage with the slanting end Q^2, of the cover Q^0, which is secured to the casting G, as and for the purpose specified. 16th. The combination with the gear-wheel y^2, spring-trip dog y^4 secured to the same, sprocket-wheel Y^0, driven as specified and provided with rollers y^6, lever Y^7 pivoted at 8, on the lever 4, and having the projection 9 designed to engage with the projection y^5, of the trip-dog y^4, roller 6, on the inner end of the lever 4, cam 2, on the knotter gear-wheel Y^3, boss 10, formed on the end of the lever Y^7, and extending into the slotted end 7, of the lever 4, rod 12, hooked into the end of the lever Y^7, and extending through the lateral projection 11, of the lever 4, and provided with a spring 13, and nut 14, link 15, arm 16, on the forward end of the rod 17, and compresser trip arm 18, on an arm at the opposite end of the rod 17, arranged as and for the purpose specified. 17th. The combination with the gear-wheel y^2, spring trip-dog y^4, secured to the same, sprocket-wheel Y^0, driven as specified, and provided with rollers y^6, lever Y^7, pivoted at 8, on the lever 4, and having the projection 9, designed to engage with the projection y^5, of the trip-dog y^4, roller 6, on the inner end of the lever 4, cam 2, on the knotter-gear-wheel y^3, boss 10, formed on the end of the lever Y^7, and extending into the slotted end 7, of the lever 4, rod 12, hooked into the end of the lever Y^7, and extending through the lateral projection 11, of the lever 4, and provided with a spring 13, and nut 14, link 15, arm 16, on the forward end of the rod 17, compresser trip arm 18, on an arm at the opposite end of the rod 17, and the spring 19, designed to press against the arm 16, as and for the purpose specified. 18th. The combination with the knotter-gear driven as specified, and connected by the rod 21, to the arm P^5, on the end of the needle shaft P^3, of the block 25, provided with a lug 27, extending under the needle P^4, held in guide-ways, and supported by a spring plunger in such guide-ways, which are attached to or form part of the frame, as and for the purpose specified. 19th. The combination with the main driving-wheel and axle W, provided with pinions w, engaging with the teeth of the elevating rack O^7, of the ratchet-wheel V^8, arm V, supported on the axle W, pivoted spring-dog V^7, engaging with the ratchet-wheel V^8, block V^3, supporting the opposite end of the arm V, held in guide-ways and supported by the spring r^3, within the loop V^1, which is secured to the angle-bar H, and side bar E^1, as and for the purpose specified. 20th. The combination with the main driving-wheel and axle W, provided with pinions w, engaging with the teeth of the elevating rack O^7, of the ratchet-wheel V^8, arm V^7, supported on the axle W, pivoted spring-dog V, engaging with the ratchet-wheel V^8, block V^3, supporting the opposite end of the arm V, held in guide-ways and supported by the spring r, within the loop V^1, which is secured to the angle-bar H, and side bar E^1, and means whereby the spring-dog V^7, is released from the ratchet-wheel V^8, as and for the purpose specified. 21st. The combination with the main driving-wheel and axle W, provided with pinions w, engaging with the teeth of the elevating rack O^7, of the ratchet-wheel V^8, arm V, supported on the axle W, pivoted spring-dog V^7, engaging with the ratchet-wheel V^8, block V^3, supporting the opposite end of the arm V, held in guide-ways and supported by the spring r^3, within the loop V^1, which is secured to the angle-bar H, and side bar E^1, and the rod V^4 connected at the inner end to the dog V^7, and at the other to the foot crank V^6, as and for the purposes specified. 22nd. The combination with the main driving-wheel and axle W, provided with pinions w, engaging with the teeth of the elevating rack O^7, of the ratchet-wheel V^8, arm V supported on the axle W, pivoted spring-dog V^7, spring supported block V^3 on which the outer end of the arm V rests, means for releasing the dog and the lever arm W^1, provided with a tooth w^1, as and for the purpose specified. 23rd. The combination with the reel standard M, supported on the legs m, m, which are journalled on the spindle l, having bearings on the bracket L, and the angle-bar H, of the rod T pivoted at its lower end and provided with a quadrant end extending through a notch t in the bar T^1, the spring plunger t^1 provided with a handle t^{11}, and arranged to be engaged with the notches of the quadrant, as and for the purpose specified. 24th. In combination the countershaft supported in bearings and driven as specified, and having a bevel pinion secured at the inner end of the bevel gear-wheel X^1, journalled in the bracket M^1, secured to the angle-bar H, and connected by the universal joint X^2 to the square rod X^4, which extends through a corresponding hole made in the pinion X^6, which is journalled in the end of the bracket X, supported on the reel shaft U^{11}, which is suitably journalled at the top of the reel stand-M, as specified, and is provided with a gear-wheel U^3, which meshes with the gear-wheel X^3, as and for the purpose specified. 25th. The combination with the bracket P^7 supported upon the pipe O^4, and rod o^6, and carrying the binding mechanism, as specified, of the square shaft Y^1 supported at the forward end in the bearing box secured to the side bar F^1, and at the rear secured in the sleeve journal having bearings at the upper end of the bracket F, and the sprocket-wheel Y^{11} having an annular groove made in the hub into which extends the fork p^{11}, forming part of the bracket P^7, as and for the purpose specified. 26th. The combination with the reel standard M journalled at the bottom, as specified, and provided with an upwardly extending M^{11}, in which is journalled one end of the frame U, and in the other end of which is journalled the reel shaft U^{11}, and means whereby the rearward end of the frame U is raised and lowered, as and for the purpose specified. 27th. The combination with the reel standard M journalled at the bottom, as specified, and provided with an upwardly extending arm M^{11}, in which is journalled one end of the frame U, and in the other end of which is journalled the reel shaft U^{11}, of the frame U having a forward extension u, upon which is secured the lever u^1, which is provided with the ratchet toothed quadrant U^4 secured to one of the arms m^{11}, as and for the purpose specified. 28th. In a binder, the combination with the frame supported at one side by the main driving-wheel, as specified, of the grain-wheel B supported upon the lever 33, the forward end of which is pivoted vertically between the bosses 28^{11}, forming part of the standard 28, which is attached and braced in position at the forward end of the grain table, as and for the purpose specified. 29th. In a binder, the combination with the frame supported at one side by the main driving-wheel, as specified, of the lever 33 pivoted between the bosses 28^{11}, forming part of the standard 28, and provided with a spring plunger 34, bar 35, having the quadrant 37 affixed thereto, and pivoted at its forward end on the bolt 36 passing through the enlarged end 32, of the lever 33, and having secured to its rear end the bearing 39, in which the grain-wheel B is journalled, as and for the purpose specified.

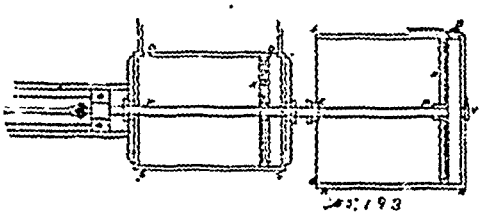
No. 45,192. Trolley-wheel. (*Roue de Trollée.*)



John W. Clark, Menands, New York, U.S.A., 30th January, 1894; 6 years.

Claim.—1st. A trolley-wheel, consisting of a hub B, a series of arms D, radiating from said hub, and each having an ice-breaking shoulder H, formed on its inner face, two annular rims E, formed on the outer extremities of said arms, and a groove G, formed at the base of said arms, said grooves being fitted to receive and form a close electrical contact with a trolley wire, and the spaces between said arms, being carried into and longitudinally across the periphery of said hub, for the purpose of forming ice-breakers at the bottom of the groove G, as herein specified.

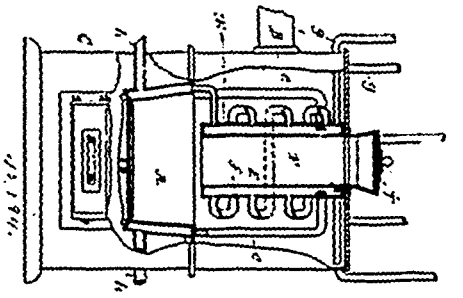
No. 45,193. Engine. (*Machine à vapeur.*)



John D. Gregory, Bertha, Manitoba, Canada, 30th January, 1894; 6 years.

Claim.—The air cylinder, in combination with the steam cylinder as hereinbefore described.

No. 45,194. Heater. (*Calorifère.*)



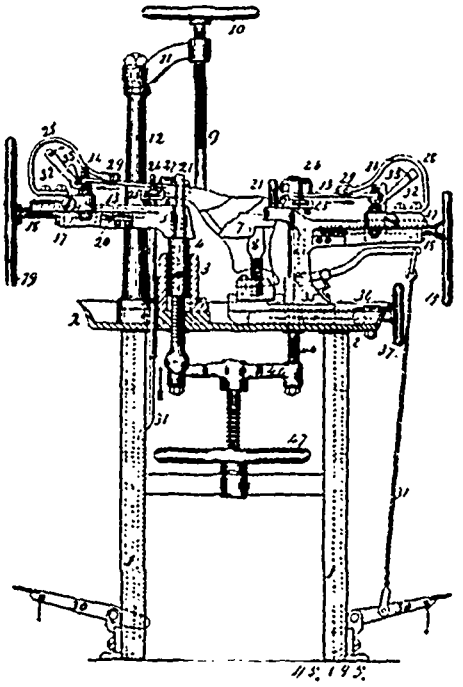
Robert Donaldson, Montreal, Quebec, Canada, 30th January, 1894; 6 years.

Claim.—1st. A hot water heater, containing water chambers and having a central self-feeding passage for fuel, for the purpose set forth. 2nd. A hot water heater, containing water chambers and having a self-feeding fuel passage extending from the top thereof to the fire-pot section, for the purpose set forth. 3rd. A hot water heater, having a self-feeding fuel passage formed by a water-jacketed section carried above the fire-pot, for the purpose set forth. 4th.

A hot water heater, having a fire-pot section, a self-feeding fuel section above such fire-pot, tubular connections and an enclosing casing, for the purposes set forth. 5th. A hot water heater, having a water-jacketed fire-pot section, a water-jacketed self-feeding fuel section, tubular connections between same, flow pipes taken from the feeder section and return pipes connected with the fire-pot section, and an enclosing shelf or casing for the purposes set forth. 6th. In a hot-water heater, the combination of the outer enclosing shell or casing, the water-jacketed fire-pot section suitably supported in same, the water-jacketed feeder section above such fire-pot section, the tubular connections between the fire-pot and feeder sections and supporting the latter, auxiliary water heating tubes or parts in connection with said feeder section, flow pipes from such section and return pipes connected with the fire-pot section. 7th. The combination of casing B, C, D, fire-pot section A, suitably supported feeder section E, provided with cover *j*, tubular connections *c*, *c*, flow pipes *g*, *g*, and return pipes *h*, *h*, as shown and described. 8th. The combination, of casing B, C, D, fire-pot section A, suitably supported, feeder section E, having auxiliary tubes *f*, *f*, and provided with cover *j*, tubular connections *c*, *c*, flow-pipes *g*, *g*, and return pipes *h*, *h*, as shown and described.

No. 45,195. Machine for Lasting Boots and Shoes.

(*Machine à enformer les chaussures.*)



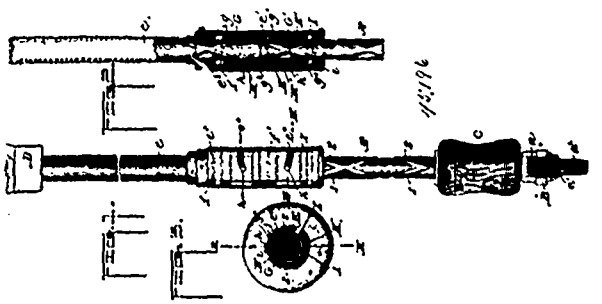
John Blakey, Lady Lane, Leeds, York, England, 31st January, 1894; 6 years.

Claim.—1st. In a boot lasting machine, the use of the operating jaws 13 for forcing the finger of the upper over the toe and heel of a boot last, such said jaws being opened and closed in the manner, substantially as herein shown and described. 2nd. In a boot lasting machine, the use of the jaws 13 perforated as at 22, for purposes specified. 3rd. In a boot lasting machine, the means of making the toe or heel mechanism to advance backwards and forwards for purposes, and in manner substantially as shown and described. 4th. In a boot lasting machine, the use of sliding jaws 13 operated as described and formed upon the finger of the upper by springs such as 25 or equivalent devices. 5th. In a boot lasting machine, the pincers 38 operated by lever arms 42 in combination with rack and holding catch or pawl 45, as shown and for purposes described. 6th. In a boot lasting machine, the pincers 38 operated by lever arms 42, such said pincers being adjustable by screws 48, for purposes and in manner described. 7th. In a boot lasting machine, the combination therewith of the treadle 30 connecting rod 31, and plate 27 for removing the pressure off the jaws 13 or for the last, substantially as described 8th. The general arrangement and combination of parts comprising a boot lasting machine, substantially as herein described and illustrated in the drawings.

No. 45,196. Screw Driver. (*Tourne-vis.*)

Thomas Edwards, jr., and John J. Edwards, both of Grand Rapids, Michigan, U.S.A., 31st January, 1894; 6 years.

Claim.—1st. The combination, with the stock having right and left hand spiral grooves, of a cylinder or case loosely fitted on said stock and provided with two set of ratchet-teeth, which are inclined in opposite directions, a pair of thimbles within said cylinder, each



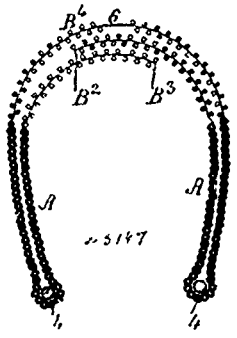
provided with a lug or lugs engaging the respective spiral grooves of the stock, and with ratchet-teeth adapted to interlock with one set of teeth on the cylinder when properly shifted, and means for shifting either thimble into engagement with the cylinder and simultaneously disengaging the other thimble, substantially as described. 2nd. The combination of the stock having right and left hand spiral grooves, a cylinder loosely fitted thereon, and a pair of thimbles loosely fitted on the stock within the cylinder having internal lugs engaging the respective grooves of the stock and adapted to be locked to the cylinder, together with the clips loosely connected to said thimbles, having projecting studs, and a sleeve enclosing said cylinder, the wall of said cylinder and the sleeve being slotted and channelled or grooved for the reception of the studs, substantially as described. 3rd. The combination of the stock having right and left hand spiral grooves, the cylinder thereon having two sets of ratchet-teeth, located the one centrally thereof and the other at one end, and a pair of thimbles loosely fitted on the stock within the cylinder, having internal lugs engaging the respective grooves of the stock, one of said thimbles being adapted to engage the inner set of ratchet-teeth, and the other thimble the outer set of teeth, together with mechanism for simultaneously shifting said thimbles, so as to engage one with and disengage the other from the ratchets of the cylinder, substantially as described. 4th. The combination of the stock having right and left hand spiral grooves, and a cylinder or case loosely fitted on said stock, having a centrally disposed ring with ratchet-teeth thereon, and a head with oppositely inclined ratchet-teeth, a pair of thimbles within said cylinder, each having ratchet-teeth on its upper end adapted to engage the opposed ratchets at the centre and end of the cylinder, and each having internal lugs respectively engaging the right and left hand spiral grooves of the stock, and mechanism for throwing either thimble into engagement with the cylinder and simultaneously disengaging the other thimble therefrom, so as to reverse the rotary movement of the stock, substantially as described. 5th. In combination with the spirally grooved stock, the reciprocating handle, the cylinder with oppositely inclined ratchet-teeth thereon, the thimbles with ratcheted ends adapted to engage or interlock with the corresponding ratchet of the cylinder, the rotatable sleeve fitting over said cylinder, and means connected therewith for effecting the engagement of one thimble and simultaneously disengaging the other, so as to cause the stock to rotate in either forward or backward direction by the reciprocating movements of the handles, substantially as described. 6th. In combination with the stock having the opposite spiral grooves, the pair of thimbles thereon having lugs which respectively engage said grooves, said thimbles being provided with ratchets on their upper ends, the cylinder having ratchets adapted to engage the ratchets of said thimbles, the clips loosely connected to said thimbles, for longitudinally shifting the same and having projecting studs thereon, the diagonal slots in said cylinder for the passage of said studs, the sleeve fitted on the cylinder and having the internal longitudinal groove to receive the ends of the studs, and the spring interposed between said thimbles and sleeve, so as to retain the same in operative position, substantially as described. 7th. In combination with the spirally grooved stock, the ratcheted cylinder and the thimbles with ratchet-teeth for engaging the ratchets of the cylinder, the sleeve fitted over said cylinder and thimbles, and means connected therewith for effecting the engagement of either one of the thimbles and the simultaneous disengagement of the other, together with the interposed spring adapted to retain the sleeve and thimbles in operative position, substantially as described. 8th. In combination with the spirally grooved stock, a pair of loose thimbles fitting thereon each having an internal lug or lugs engaging the said grooves and provided with ratchet-toothed ends, the teeth upon one end of each thimble being inclined in an opposite direction to those upon the other end thereof, a pair of non-rotating ratchet-toothed collars for each thimble each adapted to engage a correspondingly toothed interlocking end of the adjacent thimble, and means for shifting either thimble independently of the other so as to cause one or the other of said collars to interlock therewith and disengage the other collar, whereby either or both thimbles may be locked so as to cause the stock to rotate either to the right or the left continuously in the same direction, on both the forward and back reciprocatory move-

ments of the handle, or on the inward "push" or outward "pull" only, substantially as described. 9th. In combination with the spirally grooved stock the thimbles fitting loosely thereon, each having an internal lug or lugs engaging the said grooves and provided with ratchet-toothed ends, the teeth upon one end of each thimble being inclined in an opposite direction to those upon the other end thereof, the ratchet-toothed collars adapted to interlock with the adjacent toothed ends of the respective thimbles, and means for throwing one or more of said thimbles and collars into engagement with each other so as to produce the desired rotary movement of the stock by the reciprocatory movements of the handle, substantially as described.

No. 45,197. Fabric for Wheel Tires.

(*Tissu pour bandages de roues.*)

Fig. 4.

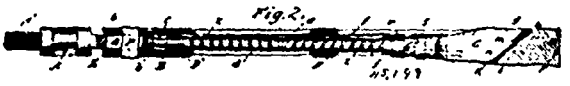


James Lyall, New York, U.S.A., 31st January, 1894; 6 years.

Claim.—1st. As a new article of manufacture, a strip of canvas or duck for elastic wheel tires, woven with weft threads, and longitudinal warp threads that are longest in the middle portion of the strip, and proportionately shorter towards and at the edges, and means for securing such strip to the elastic or other wheel tire when drawn around the same, substantially as set forth. 2nd. As a new article of manufacture, a strip of canvas or duck for elastic wheel tires, woven with longitudinal warp threads that are longer near the middle of the strip than those near the edges, and weft threads, so that the fabric is adapted to pass around a wheel and to surround the tubular or other tire, and heavier warps at or near the edge or edges of the strip held in place by the weft the threads, substantially as set forth. 3rd. As a new article of manufacture, a woven fabric for elastic wheel tires in the form of a strip, with longitudinal warp threads and transverse weft threads, some of which transverse weft threads cross only part of the entire fabric, and are doubled upon themselves in the middle portions of such fabric to increase the length of the centre of the fabric, so that such fabric is adapted to surrounding the tubular or elastic tire and to the circular form required in passing around the wheel, and longitudinal pockets woven in such fabric near the edges of the same, substantially as set forth. 4th. The herein described fabric adapted to form several strips for tubular rings for wheel tires, such fabric being woven near the edges of the strips with warp and weft threads that are nearly equally crinkled or corrugated, and with warp threads near the middle portions of such strips that are of increased length in consequence of being corrugated or crinkled to a greater extent than the weft threads, so that the fabric is adapted to lie flat while being calendered or coated with rubber or is free to assume the form of tubular rings when separated into strips and applied to elastic tires, substantially as set forth. 5th. The herein described fabric for wheel tires woven as a strip of canvas having the warp and weft threads corrugated or crinkled nearly uniformly when the same is to be folded to form the edges of the tubular wheel tire ring, and with the portions of the strip that lap upon one another, and with the central portion of the strip having longer warp threads, in consequence of the warp threads being corrugated or crinkled to a greater extent than the weft threads, the fabric however being adapted to lie flat during the calendering operation or when the rubber is applied to the surface thereof, substantially as set forth. 6th. As a new article of manufacture, a woven tubular fabric adapted to be coiled into a circular form for a wheel tire and having means woven with such tube for securing the tube in place, substantially as set forth. 7th. The canvas foundation for a tubular elastic wheel tire, woven so as to extend around the wheel and be secured in substantially a tubular form in the tire, as set forth. 8th. The canvas or duck fabric adapted to pass around a wheel tire and woven longer at one part than at another, so as to be made into a tubular or partially tubular form in the wheel, substantially as specified.

No. 45,198. Drill Bit and Reamer. (*Mèche et foret.*)

Fig. 2.

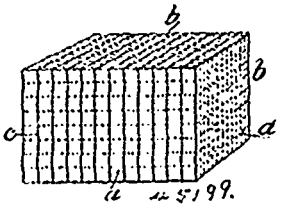


Alex. George Percy Creed, Sydney, New South Wales, Australia, 31st January, 1894; 6 years.

Claim. 1st. An improved combined drill bit and reamer for earth boring and tube well sinking, consisting essentially of an outer shell such as D, a centre pin or lifting bar such as B, taking into such shell a socketted expanding piece such as G, taking in a slot such as K, and fastened on end of said centre pin or lifting bar and a resilient connection such as springs Z, between the said centre pin or lifting bar and said shell, substantially as described and explained and as illustrated. 2nd. In a combined drill bit and reamer of the class set forth, the combination and arrangement with a shell such as D, and a centre pin or lifting bar such as B, capable of resiliently controlled longitudinal movement in such shell of a slot such as K, having an inclined face such as *h*, *i*, and an expanding point such as G (fixed to said centre pin or lifting bar such as B), having an inclined face such as *m*, *n*, substantially as herein described and explained and as illustrated. 3rd. In a combined drill bit and reamer of the class set forth, the combination and arrangement with a shell such as D, bored out to freely take therein a central pin or lifting bar such as B, with spring thereon such as Z, and having slots such as *f*, *d*, and K, of flat enlargement such as E, slot such as *a*, slot such as C, cotter such as P, and rivetted orifices or fastenings such as *b*, substantially as herein described and explained and as illustrated. 4th. The particular combination and arrangement of mechanical parts, all together forming the improved combined drill bit and reamer, substantially as herein described and explained and illustrated.

No. 45,199. Method of Forming Ice into Blocks.

(*Méthode de former la glace en blocs.*)



Henry Vander Weyde, London, England, 31st January, 1894; 6 years.

Claim.—1st. The herein described method of rendering block ice easily breakable in predetermined planes, which consists in sawing the block into slabs and reuniting the slabs by freezing them together, as specified. 2nd. The herein described method of rendering block ice easily breakable into cubes or pieces of regular form and dimensions, which consists in sawing the block in three series of planes each series intersecting the other two, and imperfectly uniting the cut surfaces by freezing, as described. 3rd. The herein described method of rendering block ice easily breakable into cubes or pieces of regular form and dimensions, which consists in sawing the block into slabs and imperfectly reuniting the slabs by freezing them together, the sawing and freezing operations being repeated three successive times in alternate order and in different series of planes, each series intersecting the other two series, as specified. 4th. In the herein described process of rendering block ice easily breakable into cubes or pieces of regular form or dimensions, the method of ensuring the retention of sufficient air or gas between the reunited surfaces, which consists in moistening said surfaces with highly charged aerated water previous to freezing them together, as specified. 5th. In the herein described process of rendering block ice easily breakable into cubes or pieces of regular form and dimensions, the method of ensuring the retention of sufficient air or gas between the reunited surfaces, which consists in blowing fine particles of ice into the joints previous to freezing them together, as specified. 6th. A block of ice having predetermined planes of weakness or easy cleavage formed in it by sawing in those planes and reuniting the sawn surfaces by freezing them together in such manner as to retain interstitial bubbles of air or gas, as specified.

ERRATA.

In the fifth line of Patent No. 44,864, read "springs" instead of "strings."

In the title of Patent No. 44,559 read "Thomas A. Knowlton" instead of "James A. Knowlton."

CERTIFICATES OF THE PAYMENT OF FEES FOR FURTHER TERMS HAVE BEEN ATTACHED TO THE FOLLOWING PATENTS.

3217. ARTHUR STAFFORD, 2nd five years of No. 30,604, from the 21st day of January, 1894. Improvements in Faucets for Regulating the Discharge of Liquids from Vats, Tanks, Cisterns, etc., 5th January, 1894.

3218. WILLIAM H. LINDSAY, 2nd and 3rd five years of No. 30,676, from the 31st day of January, 1894. Improvements in Moulding Coal Dust, or Small Coal into Solid Blocks, and Apparatus to be used for this purpose, 5th January, 1894.

3219. JAMES F. J. GUNNING, 2nd five years of No. 30,573, from the 16th day of January, 1894. Improvements in the Manufacture of Corsets, 5th January, 1894.

3220. LEVI H. YOUNG, 2nd and 3rd five years of No. 34,694, from the 12th day of July, 1895. Improvements in Locking Nuts on Bolts, used in fastening the Fish Plates on the Rails of Railroads, etc., 5th January, 1894.

3221. THE CASAMAJOR FILTER COMPANY, 2nd five years of No. 30,630, from the 24th day of January, 1894. Improvements in Apparatus for Cleaning and Recovering Saw-dust or similar Hydrate Substances from Filtrates, 5th January, 1894.

3222. JOHN FORBES, 2nd five years of No. 30,595, from the 19th day of January, 1894. Improvements in Skates, 5th January, 1894.

3223. JOHN FORBES, 2nd five years of No. 30,706, from the 5th day of February, 1894. Improvements in Skates, 5th January, 1894.

3224. JOHN M. LANDICK, 2nd five years of No. 30,554, from the 15th day of January, 1894. Improvements in Display Racks, 8th January, 1894.

3225. JOSEPH O'BRIEN, 2nd five years of No. 30,892, from the 7th day of March, 1894. Improvements in Fish Weirs, 8th January, 1894.

3226. SLATER, GEORGE T. and SONS, (assignees), 2nd five years of No. 31,357, from the 14th day of May, 1894. Improvements in Boots and Shoes, 9th January, 1894.

3227. THOMAS WALKER and JOHN F. CARTER, 3rd five years of No. 18,430, from the 15th day of January, 1894. Improvements in Ore Roasting Furnaces, 9th January, 1894.

3228. THOMAS WALKER, 3rd five years of No. 18,468, from the 16th day of January, 1894. Improvements in Gold and Silver Amalgamators, 9th January, 1891.

3229. RUDOLPH C. SMITH, 2nd five years of No. 30,601, from the 31st day of January, 1894. Improvements in Elevators, 11th January, 1894.

3230. THE CANADIAN GENERAL ELECTRIC COMPANY (assignees), 2nd five years of No. 30,543, from the 14th day of January, 1894. Electric Meter, 11th January, 1894.

3231. THE CANADIAN GENERAL ELECTRIC COMPANY (Assignees), 2nd five years of No. 30,545, from 14th day of January, 1894. Electric Meter, 11th January, 1894.

3232. ARTHUR H. BAILEY, 2nd five years of No. 30,570, from the 16th day of January, 1894. Improvements in Clam Extracts and Process of making the same, 15th January, 1894.

3233. DANIEL MACUEE, 2nd five years of No. 30,750, from the 9th day of February, 1894. Improvements in Axle Boxes for Railway Rolling Stock, 16th January, 1894.

3234. THE HYDRAULIC ELEVATOR COMPANY (assignees), 2nd five years of No. 30,805, from the 16th day of February, 1894. Improvements in Elevators, 16th January, 1894.

3235. OTIS BROTHERS & COMPANY (assignees), 2nd five years of No. 30,842, from the 20th day of February, 1894. Improvements in Elevators, 16th January, 1894.

3236. JAMES F. McELROY, 2nd five years of No. 30,865, from the 27th day of February, 1894. Improvements in Circulating Hot Water Apparatus, 17th January, 1894.

3237. A. HESS, 2nd five years of No. 30,673, from the 31st day of January, 1894. Improvements in Spark Arresters, 18th January, 1894.

3238. ROBERT H. COLEMAN, 2nd five years of No. 30,675, from the 31st day of January, 1894. Improvements relating to Spark Arresters for Coal Burning Locomotives and other Engines, 18th January, 1894.

3239. THE METALLIC ROOFING COMPANY (assignees), 2nd five years of No. 30,611, from the 23rd of January, 1894. Improvements in the Fire Proofing of Buildings, 20th January, 1894.

3240. THE REND ROCK POWER COMPANY (assignees), 3rd five years of No. 18,497, from the 21st day of January, 1894. Improvements in Explosive Compounds, 20th January, 1894.

3241. ALBERT E. COOK, 2nd five years of No. 30,638, from the 25th day of January, 1894. Improvements in Springs for Vehicles, 22nd January, 1894.

3242. JOHN S. PEARCE, 2nd five years of No. 31,069, from the 9th day of April, 1894. Improvements in Milk Purifiers, 22nd January, 1894.

3243. SIEMENS BROTHERS & CO. (assignees), 2nd five years of No. 30,732, from the 7th day of February, 1894. Improvements in Duplex Telegraphy, 27th January, 1894.

3244. SIEMENS BROTHERS & CO. (assignees), 2nd five years of No. 30,726, from the 7th day of February, 1894. Improvements in Submarine Telegraphic Cables, 27th January, 1894.

3245. JACOB N. BARR, 3rd five years of No. 19,175, from the 24th day of April, 1894. Improvement in Car Wheel Chills, 27th January, 1894.

3246. THE NATIONAL ELASTIC NUT COMPANY (assignees), 2nd five years of No. 30,690, from the 2nd day of February, 1894. Improvements in the Manufacture of Nuts, 27th January, 1894.

3247. THE DAKE ENGINE MANUFACTURING CO. (assignees), 2nd five years of No. 30,648, from the 28th day of January, 1894. Improvements in Engines, 27th January, 1894.

3248. JOHN A. COLEMAN, 2nd five years of No. 30,971, from the 20th day of March, 1894. Improvements in the Manufacture of Horse-shoe Nails, 27th January, 1894.

3249. GEORGE H. HAMLIN, 2nd five years of No. 30,693, from the 2nd day of February, 1894. Improvements in Methods of Making Ferrules for Cant Hooks, 29th January, 1894.

3250. LOUIS P. BOUVIER, 2nd five years of No. 30,660, from the 29th day of January, 1894. Improvement in Envelope Machines, 29th January, 1894.

TRADE MARKS

Registered during the month of January, 1894, at the Department of Agriculture—Copyright and Trade Mark Branch.

4835. THE BIRNEY CATARRHAL POWDER COMPANY, of Chicago, Illinois, U.S.A. Catarrhal and like remedies, 4th January, 1894.

4836. THE SNOW DRIFT COMPANY, of Brantford, Ont. Baking Powder, 9th January, 1894.

4837. JOHN H. PARKER, of Montreal, Que. Musical Instruments, 10th January, 1894.

4838. S. DAVIS & SONS, of Montreal, Que. Cigars, 12th January, 1894.

4839. JOHN DEWHURST & SONS, LIMITED, of Skipton, Yorkshire, England. Cotton Yarns, Sewing Cotton on Spools or Reels and Cotton Thread not on Spools or Reels, 12th January, 1894.

4840.
4841.
4842. THE COCKSHUTT PLOW COMPANY, LIMITED, of Brantford, Ont. Walking Plows and parts thereof, 13th January, 1894.

4843. J. L. SMITH & SON, of Montreal, Que. Flour, 17th January, 1894.

4844. OUR HOME GRANULA COMPANY, of Dansville, New York, U.S.A. Granulated Wheat and other cereal foods, 22nd January, 1894.

4845. THOMAS LEEMING & COMPANY, of Montreal, Que. Toilet Preparations, excepting Preparations for the Hair, 24th January, 1894.

4846. N. QUINTAL ET FILS, of Montreal, Que. General Trade Mark, 24th January, 1894.

4847. WILLIAM JOHNSON, of Montreal, Que. Paints, 25th January, 1894.

4848. WILLIAM BUCK, Brantford, Ont. Cooking Ranges or Stoves, 26th January, 1894.

4849. THE NORTH-WESTERN YEAST COMPANY, of Chicago, Ill., U.S.A. Yeast Compounds, 29th January, 1894.

4850. PETER POULIN, of Brockville, Ont. Cigars, 29th January, 1894.

4851. BOWMAN, THOMPSON & COMPANY, LIMITED, of 13 Harrington Street, Liverpool, England. Alkali, &c., 30th January, 1894.

4852.
4853.
4854.
4855.
4856.
4857.
4858.
4859.
4860. THE AMERICAN TOBACCO COMPANY, of Newark, N.J., U.S.A. Manufactured Tobacco, and particularly, Cigars, Cigarettes, Cheroots, Snuff and Chewing and Smoking Tobacco, 31st January, 1894.

COPYRIGHTS

Entered during the month of January, 1894, at the Department of Agriculture—Copyright and Trade Mark Branch.

7208. COURS DE CALLIGRAPHIE DES FRÈRES DES ÉCOLES CHRÉTIENNES, 1er, 2eme, 3eme, 4eme, Ordres (Quatre Cahiers) Jean Routhier, Montréal, Qué., 2 janvier, 1894.

7209. BELL TELEPHONE COMPANY OF CANADA (Ltd.), OTTAWA EXCHANGE, SUBSCRIBERS' DIRECTORY, January, 1894. The Bell Telephone Company of Canada, Ld., Montreal, Que., 3rd January, 1894.

7210. THE DESBRISAY ANALYTICAL LATIN METHOD, LESSON VIII., Charles T. DesBrisay, Toronto, Ont., 3rd January, 1894.

7211. TARANTELLE in G. For Piano, by F. J. Hatton. The Anglo-Canadian Music Publishers' Association, Ld., London, England, 4th January, 1894.

7212. REPORTS OF CASES DECIDED IN THE COURT OF APPEAL FOR ONTARIO DURING THE YEAR 1893. VOLUME XX. The Law Society of Upper Canada, Toronto, Ont., 5th January, 1894.

7213. PUBLIC SCHOOL EXERCISES IN ARITHMETIC AND MENSURATION. The Canada Publishing Company (Ld.), Toronto, Ont., 5th January, 1894.

7214. BELL TELEPHONE COMPANY OF CANADA (Ltd.), EASTERN EXCHANGES, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, November, 1893. The Bell Telephone Company of Canada, Ld., Montreal, Que., 10th January, 1894.

7215. ARMOREL POLKA. For Piano, by Ethelbert Clive. Whaley, Royce & Co., Toronto, Ont., 11th January, 1894.

7216. CORONATION WALTZ. For Piano, by M. B. Palacios. Whaley, Royce & Co., Toronto, Ont., 11th January, 1894.

7217. A VANISHED DREAM. For Piano, by F. J. Hatton. Whaley, Royce & Co., Toronto, Ont., 11th January, 1894.

7218. SURGE AND SWELL. Song for Baritone or Bass. Words by Fred. Emerson Brooks. Music by Theo. H. Northrup. Whaley, Royce & Co., Toronto, Ont., 11th January, 1894.

7219. THE WALTZ OF BROKEN LOVE. Song for Mezzo Soprano or Baritone, by Theo. H. Northrup. Whaley, Royce & Co., Toronto, Ont., 11th January, 1894.

7220. OUR OWN DEAR CANADA. National Song, by M. D. Kilburn, Coaticook, Que., 11th January, 1894.

7221. MODERATORS OF THE GENERAL ASSEMBLIES OF THE PRESBYTERIAN CHURCH IN CANADA (engraving). Thomas Robert Clougher, Toronto, Ont., 11th January, 1894.

7222. THE BOARD OF TRADE OF MONTREAL, 1893 (photographic group) Wm. Notman & Son, Montreal, Que., 11th January, 1894.

7223. LIFE AND EXPERIENCE OF MARGARET L. SHEPHERD *née* SISTER MAGDALENE ADELAIDE OF THE DOLOURS. Margaret L. Shepherd, Toronto, Ont., 11th January, 1894.

7224. WAY OBER YONDER ON DE HILL TOP. Words and Music by James Fax. Arranged by A. Blakely. Whaley, Royce & Co., Toronto, Ont., 12th January, 1894.

7225. CÆSAR'S BELLUM GALLICUM, BOOKS V. AND VI. With INTRODUCTORY NOTICES, NOTES, COMPLETE VOCABULARY, EXERCISES, &c., by John Henderson, M.A., and E. W. Hagarty, B.A. The Copp, Clark Co., Ld., Toronto, Ont., 13th January, 1894.

7226. THE ACID CURE. Coutts & Sons, Toronto, Ont., 15th January, 1894.

7227. THE WALTZ MINUET. Dance by A. R. Macdonald, jr., and F. H. Norman. Music by Cathcart Wallace. Description by F. H. Norman, Ottawa, Ont., 15th January, 1894.

7228. A BANK OR COMMERCIAL DRAFT. Charles Lewis Benedict, Toronto, Ont., 16th January, 1894.

7229. INSURANCE PLANS of Nelson and Vernon, British Columbia; Boissevain, Deloraine, Emerson, Gretna, Hartney, Melita, Souris, Virden, Wawanesa and West Selkirk, Manitoba; Edmonton, South Edmonton and Macleod, Alberta; Maple Creek, Medicine Hat, Moosejaw and Moosomin, Assiniboia; Milton, Ontario; and Drummondville, Quebec. Charles Edward Goad, Montreal, Que., 16th January, 1894.

7230. EVANS' EASY METHOD OF COLLECTING ACCOUNTS (circular). Evan. R. Lewis, Collingwood, Ont., 17th January, 1894.

7231. TOO LATE. Song for Medium Voice. Words and Music by Theo. H. Northrup. Whaley, Royce & Co., Toronto, Ont., 18th January, 1894.

7232. THE DESBRISAY ANALYTICAL LATIN METHOD. LESSON IX. Charles T. DesBrisay, Toronto, Ont., 19th January, 1894.

7233. THE BRITISH COLUMBIA ANNUAL, 1894. The Shepherd Publishing Co., Ld., Toronto, Ont., 19th January, 1894.

7234. INVENTORS' GUIDE—PATENTS, TRADE MARKS, COPYRIGHTS, DESIGNS. Ridout & Maybee, Toronto, Ont., 19th January, 1894.

7235. LA HURONNE. Paroles de Ph. Huot. Musique de C. Lavigueur. Lavigueur & Hutchison, Quebec, Que., 19th January, 1894.

7236. SACRAMENT SUNDAY. Poem, by J. M. Harper. (Book). Wm. Drysdale & Co., Montreal., Que., 20th January, 1894.

7237. THE ANGRY ELEPHANT (Cartoon). The World Newspaper Co. of Toronto (Ld.), Toronto, Ont., 20th January, 1894.

7238. THE MINER. Statue for Monument to be erected at Springhill Mines, Nova Scotia, in memory of those who lost their lives in the explosion of 1891. (Photo.) Frederick Balkwill Gullett, Toronto, Ont., 22nd January, 1894.

7239. THE STOLEN KISS. Words by T. H. Stonier. Music by Eva L. Stonier. T. H. Stonier, Toronto, Ont., 22nd January, 1894.

7240. QUEBEC CARNIVAL, 1894. (Photo.) Jules Ernest Livernois, Québec, Qué., 23 janvier, 1894.

7241. THE CRIMINAL CODE OF CANADA, by James Crankshaw, B.C.L. Whiteford & Theoret, Montreal, Que., 23rd January, 1894.

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