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INVENTIONS PATENTED.

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No. 67,948. Price Scales. *(Balance à bascule.)*

Fig. 1

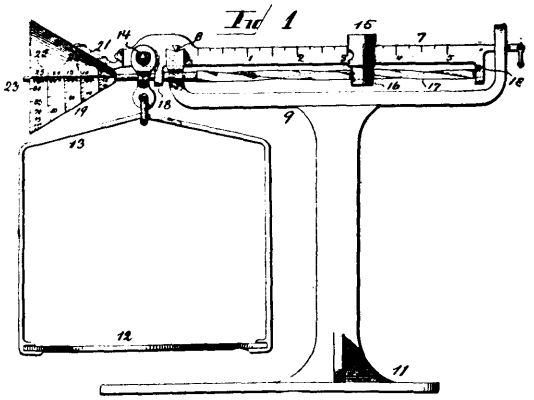
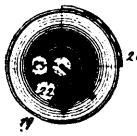


Fig. 2.



67948

John H. Schneider, Norwood, Ohio, U.S.A., 3rd July, 1900; 6 years. (Filed 2nd May, 1900.)

Claim.—1st. In a price scale, the combination of a sale beam 7 supported at 8 and comprising a longer and a shorter part, one to each side of its support, a sliding poise mounted on this longer part, which part is also graduated, a scale pan supported on the shorter part, bearings 18 depending from the scale beam, near the ends thereof, a rod 17 mounted therein and disposed parallel to the scale beam and substantially of even length with this latter, a downward extension on poise 15, which engages rod 17, the engagement, in conjunction with the formation of the engaging parts, being such that adjustment of the poise on the scale beam causes rotation of rod 17, a cone shaped value indicator 19 carried by rod 17, being secured to that end thereof, which is below the shorter part of the scale beam and sharing the rotation of said rod, a graduated scale 20, operating in conjunction with value indicator 19 and a bracket 21 securing it to the end of the shorter part of the scale beam. 2nd. In a price scale, the combination of a scale beam 7, bearings 18 projecting therefrom, a twisted rotary rod 17 supported thereon, a poise 15 adjustably mounted upon the scale beam and operatively connected to rod 17 so that its longitudinal adjustment causes the latter to rotate, a cone shaped value indicator 19 supported at one end of rod 17, with its wider part, which is open, directed outwardly, rod 17 being extended into the space surrounded by this cone, forming a screw threaded extension 23 therein, an adjusting weight 22 mounted on this extension and a graduated scale 20 showing prices, operating in conjunction with indicator 19 and supported stationary with reference thereto.

No. 67,949. Spacing Rib or Block for Armature Core.

(Membrure à espacer pour arbres d'armatures.)

FIG. 1.

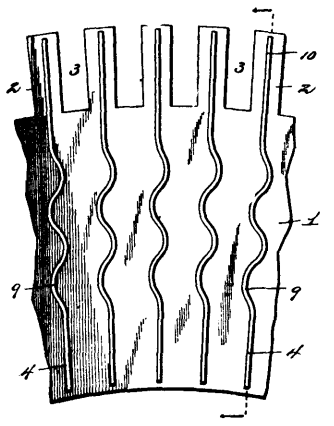
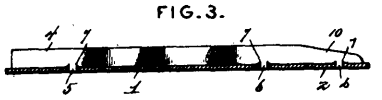


FIG. 2.

FIG. 3.



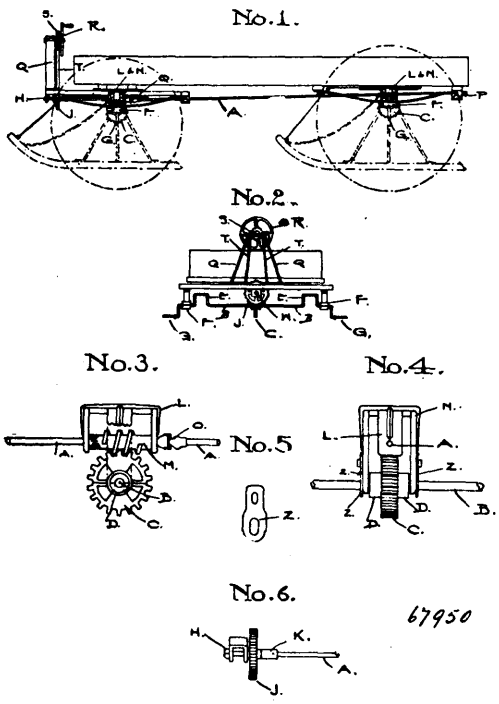
67949

John A. Foshag, Schenectady, New York, U.S.A., 3rd July, 1900; 6 years. Filed 23rd April, 1900.)

Claim.—1st. A spacing or separating rib for attachment to one of the laminations of an armature core, consisting of a narrow band of

plate metal with lugs projecting from one edge of the band, the band being notched or cut away next the base of the lug, substantially as described. 2nd. A spacing or separating rib for attachment to one of the laminations of an armature core, consisting of a narrow band of plate metal with lugs notched at their extremities projecting from one edge of the band, the band being notched or cut away next the base of the lug, substantially as described 3rd. The combination with one of the laminations of an armature core, of ribs provided with corrugations or bends between their extremities having laterally projecting lugs for securing them to the plate, substantially as described.

No. 67,950. Vehicle Gear. (*Train de voiture.*)



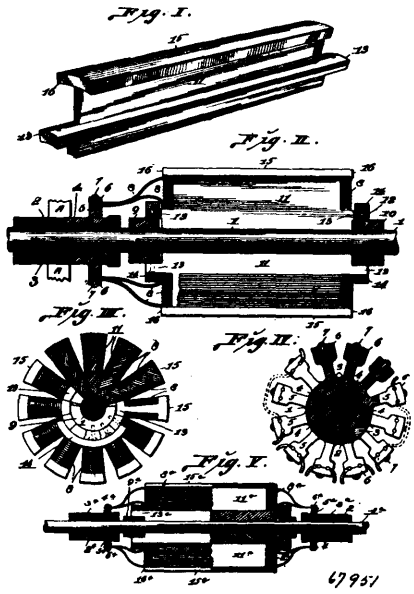
Alfred McCloy, Hesson, Ontario, Canada, 3rd July, 1900; 6 years. (Filed 15th February, 1900.)

Claim.—In a convertible vehicle of the class described the combination of the axle B, the other extremities of which are bent so as to form cranks G G provided with spindles for the wheels of said vehicle, journals F F for loosely connecting said axle with the body of the vehicle, cranks E E diametrically opposite to the first named cranks at points equidistant from the centre of the axle, sleigh runners pivotally secured on said cranks, a worm wheel C rigidly attached to the centre of the axle, a rod A revolubly mounted upon the vehicle body, above the axle, and held against longitudinal displacement, a worm wheel M on said rod, a sprocket wheel J also on said rod and rigidly held thereon, and means for turning said sprocket wheel and thereby revolving the crank carrying axle for bringing the wheels or the runners into engagement with the road, substantially as set forth.

No. 67,951. Armature for Dynamo Electric Machines.
(*Armature pour machine dynamo electrique.*)

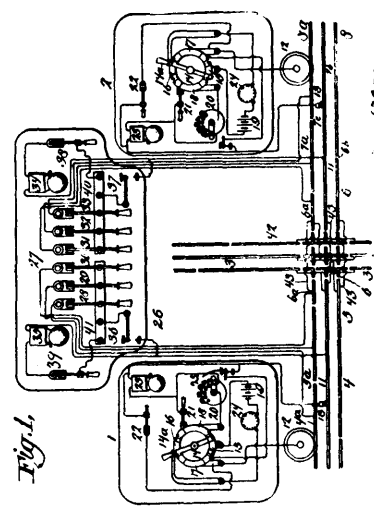
Gustavos Heidel, St, Louis, Missouri, U.S.A., 3rd July, 1900; 6 years. (Filed 5th May, 1900.)

Claim.—An armature comprising a shaft, a series of core sections, collars on said shaft to which said core sections are removably secured, rings surrounding the ends of said sections, coils wrapped on said sections, a commutator, and means whereby the terminals



of said coils are removably secured to said commutator, substantially as described.

No. 67,952. Electric Train Signalling System.
(*Systeme de signal électrique.*)

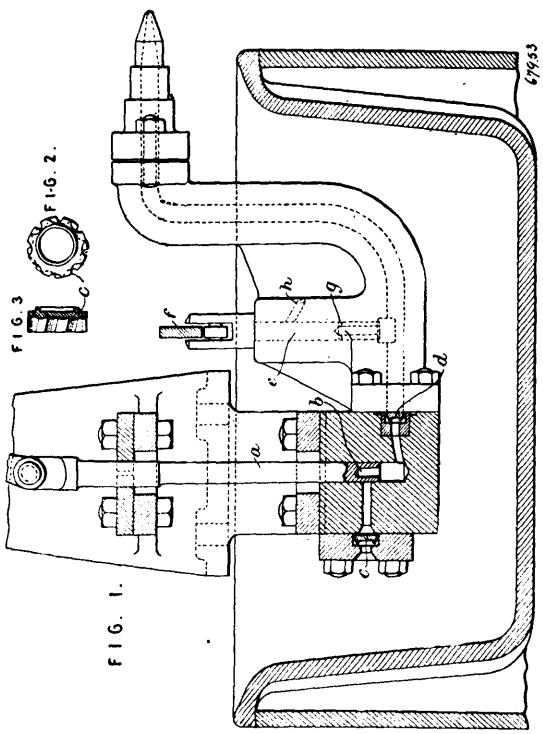


Benjamin Coplin Seaton, St. Louis, Missouri, U.S.A., 3rd July, 1900; 6 years. (Filed 6th March, 1900.)

Claim.—1st. An electric train signalling system comprising the single track rails having overlapping insulated sections and broken insulated joints, an auxiliary circuit rail and a signalling station having for each side of the signal station a switch-board provided with circuit closing switches for the several sections, a bell or annunciator, a circuit closing key for communicating a signal from the signal station to a train, a switch for throwing the bell or annunciator in or out of circuit, and a connecting bar common to all the circuit closing switches, whereby the latter are connected with the bell or annunciator, substantially as described. 2nd. An electric train signalling system comprising crossing railway tracks, one of said tracks having overlapping insulated track sections and an auxiliary circuit rail, and the other track having insulated track rail sections adjacent to the crossing, all said rails being electrically continuous but insulated from each other and from the rail sections

forming the crossing proper, a signal station having one or more switch boards provided with circuit closing switches for the several sections of the sectional track, each switch board having an annunciator, a circuit closing key for communicating a signal from the signal station to a train, a switch for throwing the annunciator in or out of circuit, and a connecting bar common to all the switches by which the latter are connected with the annunciator, and electrical connections between the auxiliary circuit rail and one of the track rails of the one railway and the two track rails respectively of the other railway, whereby the approaching sections of the crossing road are operatively connected with the signal station, substantially as described.

No. 67,953. Type Casting Apparatus.
(*Machine pour couler les caractèrs.*)



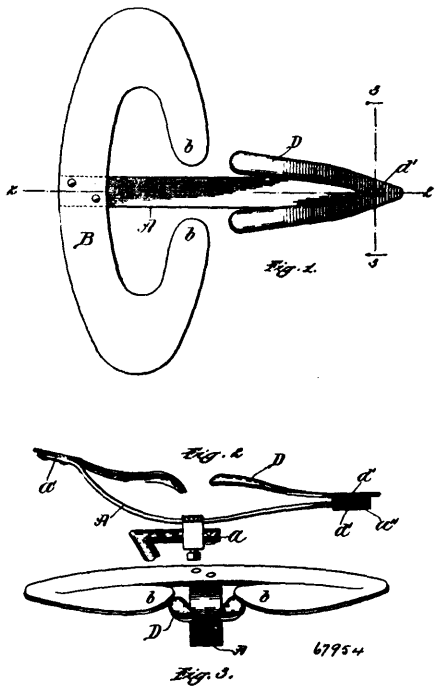
Frederick Wicks, Halfway Lodge, Esher, Surrey, England, 3rd July, 1900; 6 years. (Filed 6th December, 1899.)

Claim.—1st. In the pump for injecting molten metal into type moulds, a bore hole formed in the plunger, for the purpose specified. 2nd. For the pump for injecting molten metal into type moulds, a valve consisting of a disc with oblique notches cut in its circumference and with an eccentric rib on its face, substantially as and for the purpose set forth. 3rd. In combination with a pump for injecting molten metal into type moulds, a relief valve consisting of a loaded plunger having a longitudinal and cross bore and located in a cylindrical bore having a downwardly sloped transverse outlet, substantially as described. 4th. In a rotary type casting machine, the combination of a stationary cam adapted to cause protrusion of the types as they are carried round by the mould wheel, a revolving cutter adapted to cut the notch in the end of the type, and one or more revolving cutters for cutting nicks in the side of the type, with means of driving these cutters from the driving gear of the mould wheel, substantially as described.

No. 67,954. Bicycle Saddle. (*Selle de bicycle.*)

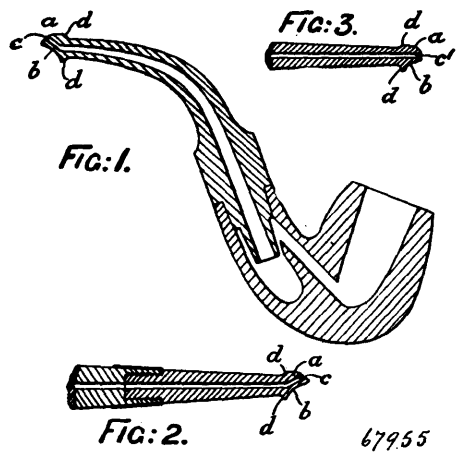
Robert P. Blake and Patrick Brodie, both of Boston, Massachusetts, U.S.A., 3rd July, 1900; 6 years. (Filed 3rd May, 1900.)

Claim.—In a saddle, the combination of a supporting spring, frame plate B secured at the rear end of said spring and curving around to the points *b b*, suitably separated from each other, and a forked neck D mounted upon the supporting spring at its forward



end and projecting backward to co-operate with the seat part of the saddle, substantially as described.

No. 67,955. Mouthpiece for Tobacco Pipes.
(*Tuyau de pipe à tabac.*)



Charles Peterson, Dublin, Ireland, 3rd July, 1900; 6 years. (Filed 18th January, 1899.)

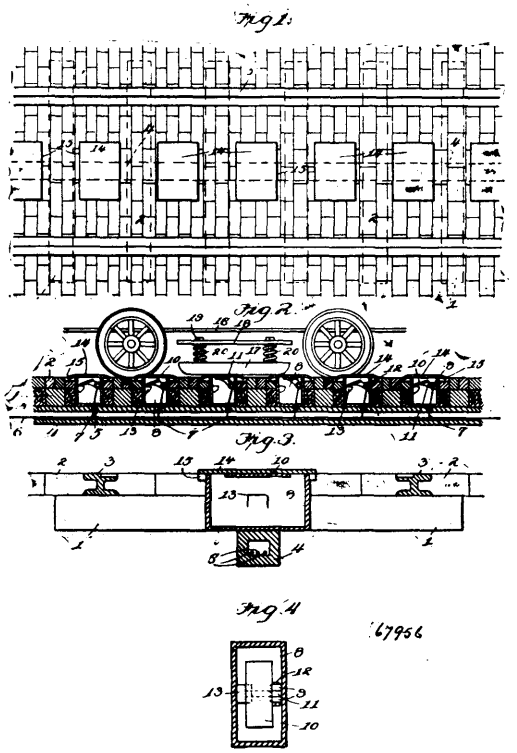
Claim.—1st. A mouthpiece for tobacco pipes, cigar holders or cigarette holders having in combination an upwardly extending bore *c*, a groove *b* and stops *d*, all for the purposes and substantially as set forth. 2nd. In a mouthpiece for tobacco pipes, cigar holders or cigarette holders, a lip *a*, having a groove *b*, substantially as set forth.

No. 67,956. Underground Electric Railway.
(*Chemin de fer électrique sonterrain.*),

Henry Emmel and George Beuke, assignee of William J. Baumer, all of Johnstown, Pennsylvania, U.S.A., 3rd July, 1900; 6 years. (Filed 5th March, 1900.)

Claim.—1st. In an electric railway, the combination with a perforated conduit, of a series of boxes, one for each perforation, the cover for which is turned down upon two of its opposite edges, one of the walls of the box being provided with lugs and the opposite

walls being provided with a stop, a switch provided with an arm pivotally secured between said lugs and being adapted to engage

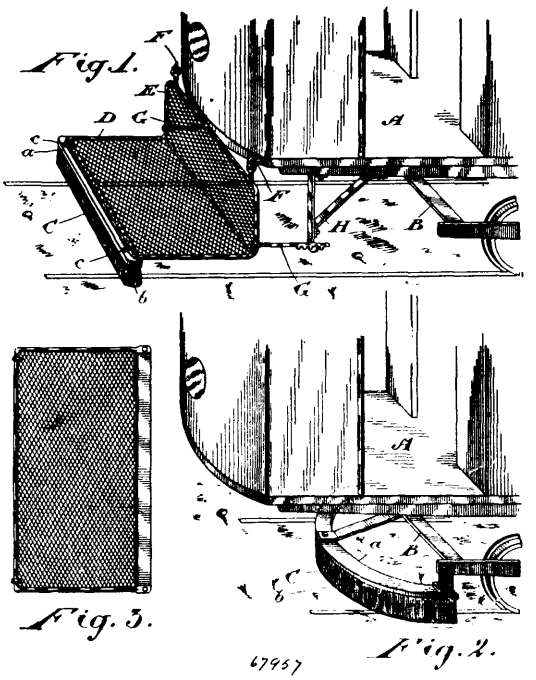


with the cover of the box when in use to engage with the stop when at rest, and a main conductor in the conduit provided with a series of feed wires one for each box leading to said switches. 2nd. In an electric railway, non-magnetic boxes, copper plates with two of their edges turned downwardly, said plates forming covers for said boxes, lugs projecting from one side of the boxes, an elongated switch having a depending arm pivoted between said lugs, a stop projecting from the side of each box immediately opposite the lugs, a conduit having openings at intervals through its top openings in the bottom of each box which register with the openings in the conduit, a main conductor in the conduit and feed wires leading from same through the openings in the conduit and boxes to the elongated switch, substantially as described.

No. 67,957. Car Fender. *(Défense de char..)*

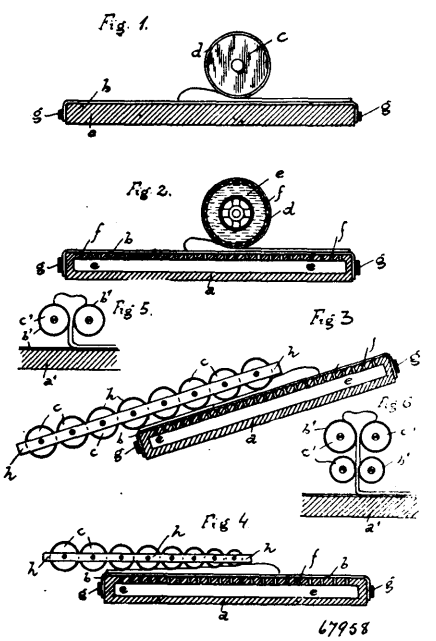
Herbert William Ross, Toronto, Ontario, Canada, 3rd July, 1900; 6 years. (Filed 1st June, 1900.)

Claim.—1st. As a car fender, a transverse brush suitably connected to the car, with its bristles extending downward within a short distance of the track, substantially as and for the purpose specified. 2nd. As a car fender a transverse U-shaped brush suitably connected to the car with its bristles extending downward within a short distance of the track and the point of the U directed forward, substantially as and for the purpose specified. 3rd. As a car fender, a suitably horizontal catcher suitably connected to the car, in combination with a transverse brush suitably connected to the forward edge to the forward edge of the catcher with its bristles extending downward within a short distance of the track, substantially as and for the purpose specified. 4th. As a car fender a substantially horizontal catcher with a U-shaped front suitably connected to the car in combination with a transverse U-shaped brush suitably conneeted to the forward edge of the catcher with its bristles extending downward within a short distance of the track and the point of the U-directed forward, substantially as and for the purpose specified. 5th. As a car fender a substantially horizontal catcher, and a substantially vertical guard suitably connected to the car in combination with a transverse brush suitably connected to the forward edge of the catcher with its bristles extending downward within a short distance of the track, substantially as and for the purpose specified 6th. As a car fender a substantially horizontal catcher, and a substantially vertical guard suitably connected to the car in combination



with a transverse Ushaped brush suitably connected to the forward edge of the catcher with its bristles extending downward within a short distance of the track and the point of the U-directed forward, substantially as and for the purpose specified.

No. 67,958. Sheet Glass Manufacture.
(Fabrication de verre en feuilles.)

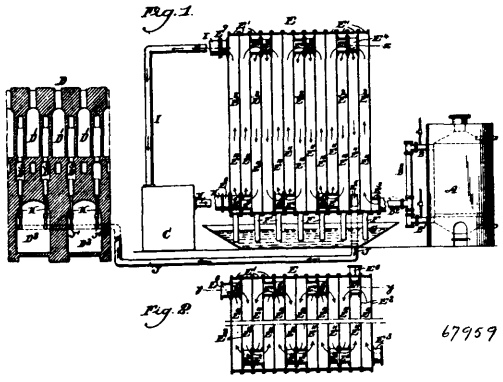


Paul Theodor Sievert, assignee of Robert Heikel, both of Deuben, near Dresden, Germany, 3rd July, 1900; 6 years. (Filed 7th January, 1899.)

Claim.—1st. The process of manufacturing glass plates by pressing or rolling glass when in plastic condition between surfaces covered with a layer of fibrous material, substantially as described. 2nd. In combination with glass rolling plates or rolls, the employment of fibrous material on the surface of the rolls and plates,

substantially as described. 3rd. Glass rolling plates or rolls, the surfaces of which are covered with fibrous material, said plates or rolls being provided with hollow spaces for the purpose of cooling the fibrous layers, substantially as described. 4th. Hollow glass rolling plates or rolls, the surfaces of which are covered with fibrous material, the arrangement of perforations or passages in the plates and rolls for admitting water or steam for moistening the fibrous material, substantially as described. 5th. The combination of solid or hollow perforated plates, covered with fibrous material with a series of rolls supported one behind another in a frame, substantially as described. 6th. The combination of perforated solid or hollow plates covered with fibrous material with a series of rolls of different diameters supported one behind another in a frame, substantially as described. 7th. The combination of perforated solid or hollow plates covered with fibrous material with a series of rolls supported one behind the other in an oblique direction in a frame, the surface of said rolls being covered with fibrous material, substantially as described. 8th. The combination of one or more pairs of solid or hollow rolls arranged side by side, and covered with fibrous material, with a solid or hollow plate the surface of which is covered with fibrous material for the purpose of producing a glass plate between the pairs of rolls and depositing it on the plate, substantially as described. 9th. The combination of plates and rolls, the surfaces of which are covered by a moistened layer of fibrous material, for the purpose of producing glass plates by pressure or rolling, substantially as described.

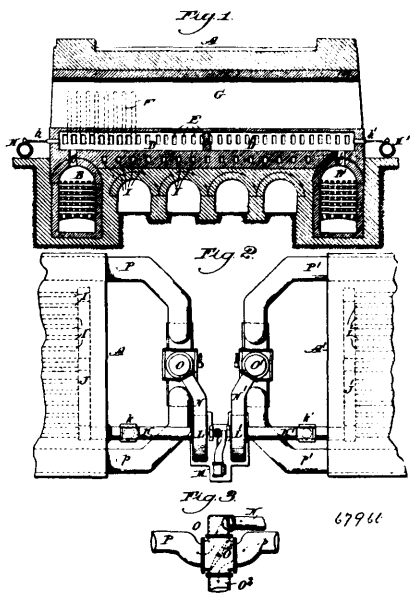
No. 67,959. Apparatus for Transferring Heat from One Fluid to Another. *(Appareil à transferer la chaleur d'un fluide à un autre.)*



The United Coke and Gas Company, Charleston, West Virginia, assignee of Frederic W. C. Schniewind, Everett, Massachusetts, both in the U.S.A., 3rd July, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. An apparatus for transferring heat from one fluid to another, having in combination a series of frames E^1, thin plates or diaphragms E^2 separate from and secured between each pair of frames to form chambers E^{10}, E^{11}, conduits E^4 connecting each alternate pair of chambers E^{10}, conduits E^5 connecting each alternate pair of chambers E^{11} and inlet and outlet conduits leading to and from each set of connected chambers E^{10} and E^{11}. 2nd. An apparatus for transferring heat from one fluid to another, having in combination a series of frames E^1 having securing flanges around the edge thereof, thin plates or diaphragms E^2 separate from and secured between each pair of frames to form chambers E^{10}, E^{11}, conduits E^4 connecting each alternate pair of chambers E^{10}, conduits E^5 connecting each alternate pair of chambers E^{11}, said conduits being situated between the plates E^2 as specified and inlet and outlet conduits leading to and from each set of connected chambers E^{10} and E^{11}. 3rd. An apparatus for cooling gas by transferring its sensible heat to another fluid, having in combination a series of frames E^1, thin plates or diaphragms E^2 secured between each adjacent pair of frames to form chambers E^{10}, E^{11}, conduits E^4 connecting each alternate pair of chambers E^{10} into a conduit for the hot gas conduits E^5 connecting each alternate pair of chambers E^{11} into a conduit for the cooling fluid, inlet and outlet conduits to and from each series of connected chambers, a water receptacle G and dust conduits F leading from the bottom of chambers E^{10} into the water receptacle. 4th. In combination with a gas generator A, a gas cleaner C, and a bank of coke ovens D, and apparatus E made up of a series of frames E^1, having thin plates E^2 separate from and secured between them to form chambers E^{10}, E^{11}, means for connecting the alternate chambers E^{11} into another conduit, the conduit comprising the chamber E^{10} connecting with the producer and the cleaner and the conduit comprising the chambers E^{10} connecting with the cleaner and the coke oven bank, as and for the purpose specified. 5th. In an apparatus for transferring heat from one fluid to another, the combination of a series of flanged plates E^1, thin plates or diaphragms co-extensive with said frames, and secured between the flanges of each pair of frames to form chambers, conduits connecting the chambers in alternate pairs, inlet and outlet conduits leading to and from each set of connected chambers, and dust conduits leading from alternate chambers.

No. 67,960. Coke Oven. *(Fourneau à coke.)*



The United Coke and Gas Company, Charleston, West Virginia, U.S.A., assignee of Frederic F. C. Schniewind, Everett, Massachusetts, U.S.A., 3rd July, 1900; 6 years. (Filed 19th March, 1900.)

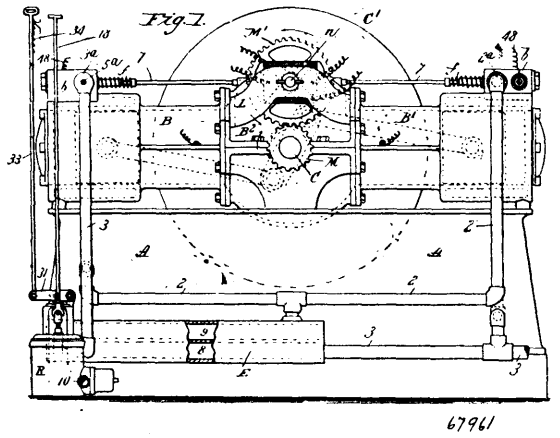
Claim.—1st. In combination with a bank of coke ovens having regenerators for preheating the air and to support combustion by the waste heat of the furnaces used for heating the ovens, air supply conduits, as P and *p*, leading to each regenerator, a system of cooling flues situated in the masonry beneath the ovens and furnaces, a conduit, as K, connecting said flues with conduit P and *p* a valve, as O, whereby the connection to either conduit can be closed at will, and means, as specified, whereby the air is drawn through the cooling flues into the supply conduit connected thereto and into the appropriate regenerator. 2nd. In combination with a bank of coke ovens having regenerators for preheating the air and to support combustion by the waste heat of the furnaces and for heating the ovens, air supply conduits, as P and *p*, leading to each regenerator, a system of cooling flues situated in the masonry beneath the ovens and furnaces, a conduit, as K, connecting said flues with conduits P and *p*, a valve as O, whereby the connection to either conduit can be closed at will, a regulable air passage independent of the cooling flues opening into the pipes or conduits connecting said flues with the regenerators, and means, as specified, whereby the air is drawn through the cooling flues and air passage into the supply conduit connected thereto and into the appropriate regenerator. 3rd. In combination with a bank of coke ovens having regenerators for preheating the air and to support combustion by the waste heat of the furnaces used for heating the ovens, a system of cooling flues situated in the masonry beneath the ovens and furnaces, a collecting fan for drawing air through said flues, and a discharge conduit from said fan connecting with the air supply pipes leading to the regenerators. 4th. In combination with a bank of coke ovens having regenerators for preheating the air and to support combustion by the waste heat of the furnaces and for heating the ovens, a system of cooling fluid situated in the masonry beneath the ovens and furnaces, a collecting fan for drawing air through said flues, a supplemental air inlet to the fan independent of the cooling flues, and a discharge conduit from said fan connecting with the air supply pipes leading to the regenerators.

No. 67,961. Gas Engine. *(Machine à gaz.)*

The Duryea Motor Wagon Company, assignee of James Frank Duryea, all of Springfield, Massachusetts, U.S.A., 3rd July, 1900; 6 years. (Filed 9th April, 1898.)

Claim.—1st. In a hydro-carbon engine, means for supplying volatilized hydro-carbon to said engine, consisting of a supply tank, a reservoir placed below the level of the bottom of said tank, a pipe connection from said tank to said reservoir, a float actuated valve for automatically maintaining a quantity of liquid hydro-carbon in said reservoir, a pipe connection from said reservoir to the cylinders of said engine, an atomizer tube in said pipe communicating with

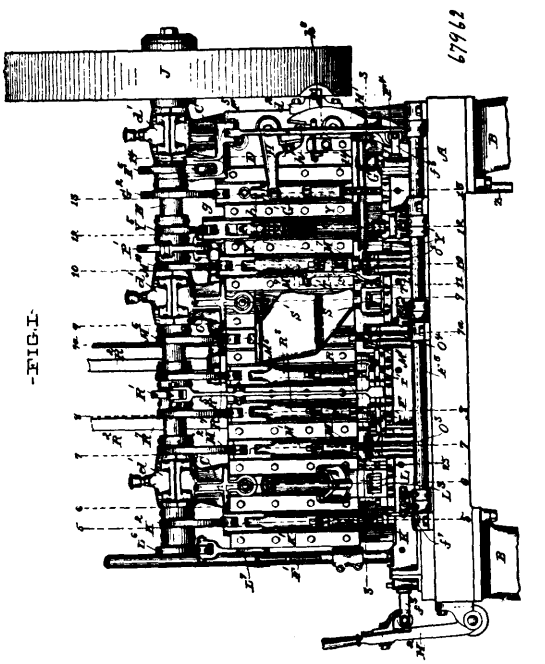
the interior of said reservoir, an opening in said pipe for the admission of air, and means for regulating the quantity of air to



admitted, a valve in said pipe for regulating the quantity of atomized hydro-carbon and air to be drawn into the said cylinders, and a heating chamber in said pipe connection for heating said atomized hydro-carbon between said reservoir and said cylinders, substantially as described. 2nd. In a hydro-carbon engine in combination, a supply tank for liquid hydrocarbon, an intermediate reservoir between said tank and said engine located on a lower level than said tank, suitable pipe connections between said engine, reservoir and tank, means in said reservoir for regulating the quantity of hydro-carbon which can be drawn therefrom by one stroke of the piston of said engine, and means for automatically controlling the quantity of hydro-carbon in said reservior, consisting of a float therein, an inlet port communicating with said tank, a suitably pivoted valve having a seat in said port, and a spring arm attached thereto by one end and whose opposite end has a free engagement with said float, substantially as described. 3rd. In a hydro-carbon engine, means for operating the exhaust valves, consisting of a rod 7 having a suitable endwise movement, a valve 6 thereon, a bevelled shoulder d^1 on said rod 7, the valve 5 closing the exhaust port, the stem of which valve is engaged by said bevelled shoulder for opening the valve, and a suitable spring 5^a on said valve stem against which said opening movement takes place, combined with a suitable cam operated rod 7 for opening said valve 6 and permitting said valve 5 to close before the closing of said first named valve, substantially as described. 4th. In a hydro-carbon engine, means for atomizing liquid hydro-carbon and regulating the quantity of air to be mixed therewith, consisting of an atomizer tube connected with a suitable reservoir containing a supply of hydro-carbon, a neck on said reservoir enclosing said tube, a plate 21 axially rotatable in said neck, a plate 24 fixed in said neck, and in contact with said plate 21, as shown, air passages 25 in said plates, a central air passage 22 through said plate 21, an opening R^1 through the side wall of said neck, and a pipe connection from said neck to the cylinder of said engine, substantially as described. 5th. In a hydro-carbon engine, means for atomizing liquid hydro-carbon and regulating the quantity of air to be mixed therewith, consisting of an atomizer tube connected with a suitable reservoir containing a supply of hydro-carbon, a neck on said reservoir enclosing said tube, a plate 21 axially rotatable in said neck, a plate 24 fixed in said neck and in contact with said plate 21, as shown, air passages 25 in said plates, a central air passage 22 through said plate 21, an opening R^1 through the side wall of said neck, and a pipe connection from said neck to the cylinder of said engine, a valve 29, and a heating chamber in said pipe connection between said atomizer and the cylinder of said engine, substantially as described. 6th. A gasolene or other hydro-carbon engine, consisting of a plurality of cylinders connected to a common crank shaft, a gasolene supply tank, one exhaust chamber common to said cylinders, pipe connections between the latter and said chamber, pipe connections between said supply tank and said cylinders, a heating chamber interposed in said last-named connection and adjoining said exhaust chamber, an atomizer in said connections between said heating chamber and said tank, means for regulating the supply and relative proportions of gasolene and air, a float valve for automatically controlling the flow of gasolene from the supply tank to said atomizer, and an electric igniting circuit having a spark gap in the cylinder, and a device outside of the cylinders and operated by the movement of the engine for making and breaking said circuit to effect the bridging of said spark gap by the electric current, at a predetermined and variable point in the stroke of the piston of said engine, substantially as described.

No. 67,962. Shell Loading Machine.

(Machine à charger les obus.)



The Austin Cartridge Company, assignee of William L. Morris, both of Cleveland, Ohio, U.S.A., 3rd July, 1900; 6 years. (Filed 4th December, 1899.)

Claim.—1st. In a shell loading machine, the combination of operating mechanism, a shell carrier, means for operating said carrier, the latter having separable engagement with its operating means whereby its position relativaly to said operating means may be changed from the normal, and means for rendering said driving means inoperative during a change of such relation between said carrier and its operating means, substantially as set forth. 2nd. In a shell loading machine, the combination of operating mechanism, a reciprocating shell carrier, means for advancing and means for returning said carrier, the latter having separable connection with said returning means whereby its position relatively to the operating mechanism may be changed from the normal during the advance of the carrier, driving means and means connected with the carrier for disconnecting said driving means from the operating mechanism during the advance of said carrier, substantially as set forth. 3rd. In a shell loading machine, the combination of operating mechanism, a shell carrier, means for reciprocating said carrier, the latter having separable engagement with its reciprocating means, driving means disconnectably engaging the operating mechanism, and resciprocating means connected with said carrier for disconnecting said driving means from said operating mechanism, the path of said reciprocating means intersecting the path of the means connecting the driving means and operating mechanism, substantially as set forth. 4th. In a shell loading machine, the combination of operating mechanism, a shell carrier, means for reciprocating said carrier, the latter capable of alteration of its position relatively to the operating mechanism, driving means connected with said operating mechanism and capable of disconnection therefrom, and reciprocating means connected with said carrier, the path of said latter reciprocating means intersecting that of the means for connecting the driving means and operating mechanism at all points excepting at the end of the advance movement of the carrier, substantially as set forth. 5th. In a shell loading machine, the combination of a drawing pulley and operating shaft, means for operatively connecting said pulley and shaft, a shell carrier, means for operating said carrier, and means connected with said carrier for disconnecting said pulley and shaft, substantially as set forth. 6th. In a shell loading machine, the combination of an operating shaft, a driving pulley loosely mounted upon said shaft, an arm secured to said shaft, means for engaging the end of said arm with said pulley, a shell carrier, suitable means for operating said carrier, and means connected with the latter for actuating said engaging means to disconnect the arm from the pulley, substantially as set forth. 7th. In a shell loading machine, the combination of an operating shaft, a driving pulley loosely mounted upon said shaft, an arm secured to the latter, means for engaging said arm and said pulley, a shell carrier, suitable means for operating said carrier, and means interposed in the path of the arm and pulley engaging means and connected with the shell carrier for engaging the latter to effect the disconnection of said arm and pulley, substan-

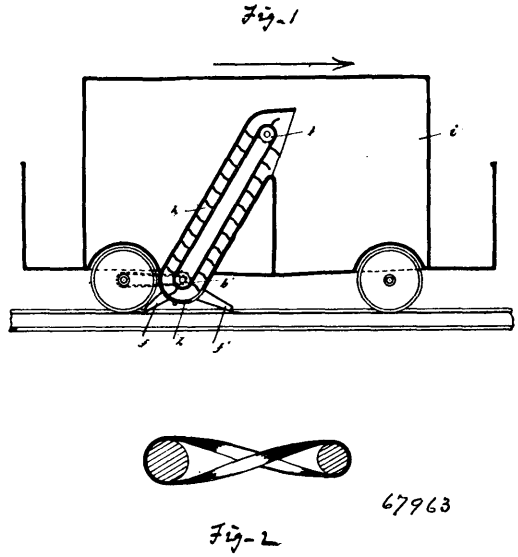
tially as set forth. 8th. In a shell loading machine, the combination of an operating shaft having an arm secured thereto, a pulley loosely mounted upon said shaft, a member pivoted upon said arm and adapted to engage the pulley, a shell carrier, means for operating same, and means connected with said carrier, and operating in unison therewith, for engaging said pivoted member and disconnecting the pulley and arm, substantially as set forth. 9th. In a shell loading machine, the combination of an operating shaft having an arm secured thereto, a pulley loosely mounted upon said shaft, a trip member pivoted upon said arm and engaging a shoulder formed on said pulley, a shell carrier, means for operating same, said carrier capable of displacement relatively to its operating means, a reciprocating trip member connected with said carrier, operating in unison therewith and normally projecting into the plane of said first trip member excepting when in the same longitudinal vertical plane on the same side of the driver center therewith, substantially as set forth. 10th. In a shell loading machine, the combination of a loading tool, mechanism for operating same, a shell carrier and shell support, and means for operating said carrier, said support provided with means for securing the end of an inverted shell, and said carrier adapted to secure the opposite end of said shell on the operation of said loading tool upon such shell, substantially as set forth. 11th. In a shell loading machine, the combination of a loading tool, mechanism for operating same, a shell carrier and shell support, and means for operating said carrier, said support provided with an aperture and means for securing the end of an inverted shell in said aperture on the operation of said loading tool upon such shell, substantially as set forth. 12th. In a shell loading machine, the combination of a loading tool, mechanism for operating same, a shell carrier and a shell support, means for operating said carrier, said support provided with an aperture, and a plug for securing the end of an inverted shell in said aperture upon the downward movement of said loading tool upon such shell, substantially as set forth. 13th. In a shell loading machine, the combination of operating mechanism, a loading tool, a shell carrier, a shell support having a conical opening for receiving the open end of a shell, and a plug for securing said end in said opening and for preventing the operation of the carrier, substantially as set forth. 14th. In a shell loading machine, the combination of driving means, a series of loading devices, a shell carrier for subjecting the shells successively to the operation of said devices, mechanism for operating the latter and the carrier, trip mechanism for disconnecting the driving means from the loading device operating mechanism, means for securing the open end of an inverted shell while held in said carrier, whereby the movement of the latter is interrupted and said trip mechanism rendered operative, substantially as set forth. 15th. In a shell loading machine, the combination with wad feeding means for feeding the wads in a column with their curved sides contiguous, of wad transferring means, said means adapted to compress the wad column, substantially as set forth. 16th. In a shell loading machine, the combination with a tube for feeding wads in a column, of a lever vibrating at the end of said tube and provided with a receiving recess and an arresting face adjacent to said recess, the latter being of a depth such that the wads in entering travel a distance greater than the wad diameter, whereby said wad column is compressed by said arresting face, substantially as set forth. 17th. In a shell loading machine, the combination of a paper punch, strip feeding means, and a printing device for automatically printing upon the strip before the operation of the punch thereon, substantially as set forth. 18th. In a shell loading machine, the combination of a paper punch, strip feeding means and a printing device for printing upon the strip before the operation of the punch thereon, said printing device adjustable longitudinally relatively to said punch, substantially as set forth. 19th. In a shell loading machine, the combination of a driven feed roll, a rocker arm and a compression roll mounted upon said arm, the latter bearing upon said driven roll, substantially as set forth. 20th. In a shell loading machine, the combination of a driven feed roll, a rocker arm and a compression roll mounted upon said arm, the latter provided with a spring pressed bolt bearing upon said driven roll and adapted to press the compression roll thereon, substantially as set forth. 21st. In a shell loading machine, the combination of a driven feed roll provided with peripheral indentations, a rocker arm, and a compression roll mounted upon one end of the said arm, the other end of the latter adapted to engage said indentation, substantially as set forth. 22nd. In a shell loading machine, the combination of a driven feed roll provided with peripheral indentations, a rocker arm, and a compression roll mounted upon one end of said arm, the other end of the latter provided with a spring pressed bolt adapted to engage said indentations, substantially as set forth. 23rd. In a shell loading machine, the combination of a shell carrier, means for operating same, means for loading shell with shot, means for inserting a wad upon such shot, a movable covering plate, and means for moving said plate to cover such shell during its transfer from said shot loading to said wad inserting means, substantially as set forth.

No. 67,963. Means of Cleaning Tramway Rails.

(*Moyen de nettoyer les rails de chemin de fer.*)

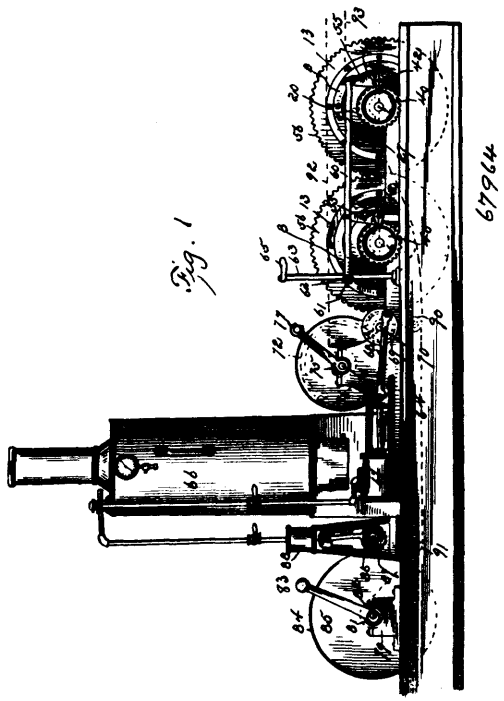
Otto Michaelis, Berlin, Germany, 4th July, 1900; 6 years. (Filed 18th June, 1900.)

Claim.—1st. A scavenger car for cleaning the grooves of tramway rails having a carrier band which runs always in the same direction and two scoops arranged in opposite directions adapted to feed the material taken from the rail grooves to the said carrier band, in the



manner and for the purpose substantially as described. 2nd. In the device covered by claim 1, the arrangement of a crossed belt to drive the carrier in the same direction when the motion of the car is reversed. 3rd. In the device covered by claim 1, the combination of a slide adapted to cover the scoop opening which is not operative when the car is running, in the manner and for the purpose substantially as described.

No. 67,964. Logging Machine. (*Machine à manier les billots.*)



Edward Turney, Portland, Oregon, U.S.A., 4th July, 1900; 6 years. (Filed 16th June, 1900.)

Claim.—1st. In a logging machine, the combination with a winding drum and a slack drum, of a cable wound upon the winding drum and fixed to the slack drum, and independent means for positively rotating the drums. 2nd. In a logging machine, the combination with a winding drum and a slack drum, said winding drum being adapted to receive a cable and pass it to the slack drum to be wound thereon, of independent means for positively rotating

said drums. 3rd. In a logging machine, the combination with a winding drum adapted to receive a cable, and a slack drum adapted to receive the slack from the winding drum, of independent means for positively operating said drums, and means for automatically varying the speed of the slack drum. 4th. In a logging machine, the combination with a winding drum adapted to receive a cable, and a slack drum adapted to receive the slack of the cable from the winding drum, of independent means for positively operating the drum, and means for varying the speed of the slack drum in proportion to the speed of delivery of slack thereto. 5th. In a logging machine, the combination with a winding drum adapted to receive a cable, and a slack drum, adapted to receive the slack from the winding drum, of means for driving the winding drum, means for positively driving the slack drum, and means for decreasing the speed of the slack drum in proportion to the increase in diameter incident to the cable wound thereon. 6th. A logging machine, comprising a winding drum adapted to receive the cable, a slack drum adapted to receive the slack from the winding drum, means for driving the winding drum, means for positively driving the slack drum, and means for automatically varying the speed of the slack drum driving means in proportion to the slack delivered. 7th. In a logging machine, the combination with a winding drum adapted to receive a cable, and a slack drum adapted to receive slack from the winding drum, of means for driving the winding drum, means for driving the slack drum, means for throwing the slack drum into and out of operative relation with respect to its driving means, and means controlled by the slack for varying the speed of the winding drum in accordance with the slack delivered. 8th. In a logging machine, the combination with a winding drum and means for driving it, said drum being adapted to receive a cable of a slack drum adapted to receive a slack from the winding drum, separate means for driving the slack drum simultaneously with the first-named drum, means for throwing the slack drum into and out of operative relation with respect to its driving means, and means for varying the speed of the slack drum in accordance with the slack delivered. 9th. In a logging machine, the combination with a winding drum adapted to receive a cable, of a slack drum adapted to receive the slack from the winding drum, a boiler, an engine connected with the winding drum and adapted to receive energy from the boiler, a throttle for said engine, a second engine adapted for connection with the slack drum and having connections with the boiler to receive energy therefrom, and a separate throttle for the last-named engine whereby said engines may simultaneously drive their respective drums, and the speed of the slack drum may be regulated by the delivery of slack thereto. 10th. In a logging machine, the combination with a winding drum adapted to receive a cable, of a slack drum adapted to receive slack from the winding drum and to rotate simultaneously therewith, a motor for the winding drum, an independent motor for the slack drum positively connected therewith, a common source of energy for the motors, and independent means for regulating the supply of energy to the motors. 11th. In a logging machine, the combination with a winding drum adapted to receive a cable, of means for driving the winding drum, a trip drum adapted for operative engagement with said operating means, a slack drum adapted to receive slack from the winding drum, separate means for driving the slack drum simultaneously with the winding drum adapted for positive engagement therewith, means for throwing the slack drum into and out of engagement with its driving means, and a common source of energy for the several driving meads. 12th. In a winding drum, the combination with a shaft having a fixed element thereon, a drum loosely mounted upon the shaft, said drum and fixed element having centering faces adapted for mutual engagement, a second element loosely mounted on the shaft, said second element and drum having adjacent centering faces, and a groove in the second element, a roller adapted to engage with the opposite faces of the groove to drive the element in opposite directions, and means for driving the roller. 13th. In a winding drum, the combination of a shaft having a fixed element thereon, a drum loosely mounted on the shaft and movable into and out of engagement with the fixed element, a centering block loosely mounted on the shaft, and adapted to engage and move the drum into engagement with the fixed element, a pulley in threaded engagement with the shaft and connected with the centering block, a groove in the second element, a roller adapted to engage the opposite faces of the groove to drive the element in opposite directions, and means for driving the roller. 14th. In a winding drum, the combination of a shaft having a fixed element thereon, a drum loosely mounted on the shaft and movable into and out of engagement with the fixed element, a centering block mounted loosely on the shaft and movable into and out of engagement with the drum, a pulley in threaded engagement with the shaft and having connections with the centering block to move it with respect to the drum, said drum being adapted to move away from the fixed element when the influence of said pulley is removed, a groove in the second element, a roller adapted to engage the opposite faces of the groove to drive the element in opposite directions, and means for driving the roller. 15th. In a winding drum, the combination of a shaft having a fixed element thereon, a drum loosely mounted on the shaft and movable into and out of engagement with the fixed element, a centering block loosely mounted on the shaft and adapted to engage the drum to move it into engagement with the fixed element, means for moving the drum from the fixed element when the influence of the centering block is removed, a pulley having threaded engagement with the shaft and connected with the centering block to move it longitudinally of the shaft, a groove in the second element, a roller adapted to engage the opposite faces of the groove to drive the element in opposite directions, and means for driving the roller. 16th. In a winding drum, the combination of a shaft having a fixed centering element thereon, a drum loosely mounted on the shaft and movable into and out of engagement with the fixed element, a centering block loosely mounted on the shaft and adapted to engage the drum to move it into engagement with the fixed element, means for moving the drum from the fixed element when the influence of the second element is removed, a pulley having threaded engagement with the shaft and connected with the centering block to move it longitudinally of the shaft, a groove in the second element, a roller adapted to engage the opposite faces of the groove to drive the element in opposite directions, and means for driving the roller. 17th. In a winding drum, the combination of a shaft having a fixed element thereon, a drum loosely mounted on the shaft and movable into and out of engagement with the fixed element, a second element mounted loosely on the shaft and movable into and out of engagement with the drum, a pulley in threaded engagement with the shaft and having connections with said second element to move it with respect to the drum, an annular groove in the pulley, a friction roller adapted to alternately engage the faces of said groove, and means connected with the shaft for rotating the roller to vary the rotation of the pulley with respect to the shaft. 18th. In a winding drum, the combination of a shaft having a fixed element thereon, a drum loosely mounted on the shaft and movable into and out of engagement with the fixed element, said drum and element having centering faces adapted for engagement, a second element loosely mounted on the shaft and adapted to engage the drum to move it into engagement with the fixed element, the engaging faces of the second element and the drum itself being self centering, means for moving the drum from the fixed element when the influence of the second element is removed, a pulley having threaded engagement with the shaft and adapted to move on said threads towards and away from the fixed element, connections between said pulley and the second element to cause simultaneous movement thereof longitudinally of the shaft, an annular groove in the pulley, a roller arranged in said groove and adapted to alternately engage the faces thereof, and means for rotating said roller from the shaft.

No. 67,965. Peat Drier. *(Seehoir à tourbe.)*

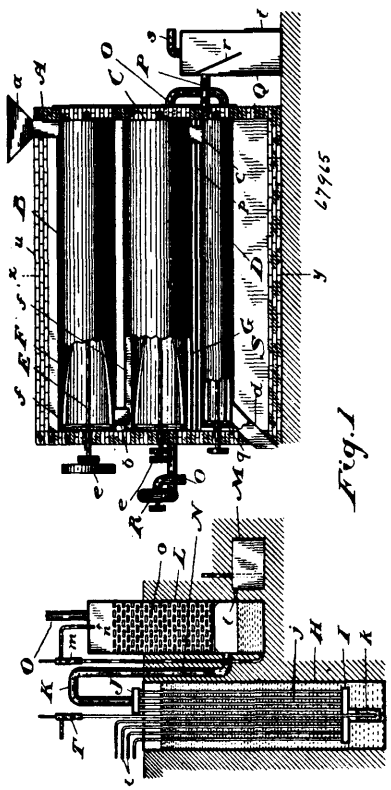


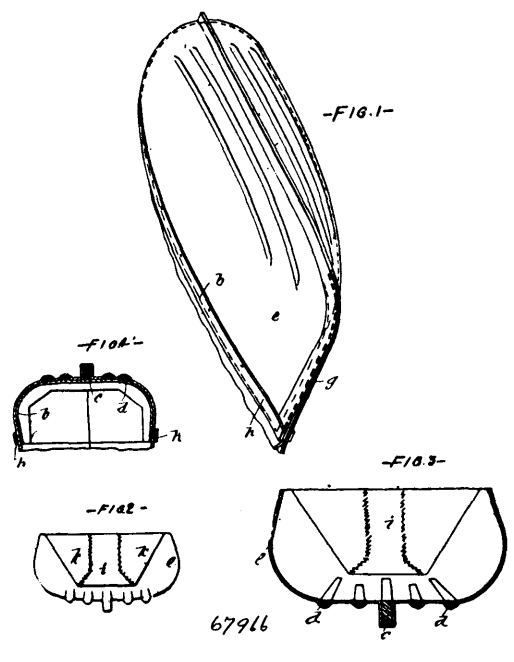
Fig. 1

George Blackburn Jones, Toronto, Ontario, Canada, 4th July, 1900; 6 years. (Filed 1st June, 1900.)

Claim.—1st. In a drier, the combination of a suitable casing, an evaporating cylinder provided at its upper side with one or more openings for the escape of steam, means for heating the said cylinder, a heating cylinder located above the evaporating cylinder so that it may be heated by the steam evaporated therefrom and provided

with one or more openings for the escape of steam from the material being heated, a cooling cylinder, means for passing a current of air through the said cylinder, and means whereby the material to be dried may be passed seriatim through the heating, evaporating and cooling cylinders, substantially as and for the purpose specified. 2nd. In a drier, the combination of a suitable casing, an evaporating cylinder provided at its upper side with one or more openings for the escape of steam, means for heating the said cylinder, a heating cylinder located above the evaporating cylinder so that it may be heated by the steam evaporated therefrom and provided with one or more openings for the escape of steam from the material being heated, a cooling cylinder, means for passing a current of air through the said cylinder, means for drying the said air before it enters the cylinder, and means whereby the material to be dried may be passed seriatim through the heating, evaporating and cooling cylinder, substantially as and for the purpose specified. 3rd. In a drier, the combination of a suitable casing, an evaporating cylinder provided at its upper side with one or more openings for the escape of steam, means for heating the said cylinder, a heating cylinder located above the evaporating cylinder so that it may be heated by the steam evaporated therefrom and provided with one or more openings for the escape of steam from the material being heated, a cooling cylinder, means for passing a current of air through the said cylinder, means for drying the said air before it is dried, and means whereby the material to be dried may be passed seriatim through the heating, evaporating and cooling cylinders, substantially as and for the purpose specified. 4th. In a drier, the combination of a suitable casing, an evaporating cylinder provided at its upper side with one or more openings for the escape of steam, means for heating the said cylinder, a heating cylinder located above the evaporating cylinder so that it may be heated by the steam evaporated therefrom and provided with one or more openings for the escape of steam from the material being heated, a cooling cylinder, means for passing a current of air through the said cylinder, means for drying the said air before it enters the cylinder, means for cooling the said air before it is dried, means for slightly re-warming the said air after it has been cooled and dried, and means whereby the material to be dried may be passed seriatim through the heating, evaporating and cooling cylinders, substantially as and for the purpose specified. 5th. In a drier, the combination of a suitable casing, an evaporating cylinder provided at its upper side with one or more openings for the escape of steam, means for heating the said cylinder, a heating cylinder located above the evaporating cylinder so that it may be heated by the steam evaporated therefrom and provided with one or more openings for the escape of steam from the material being heated, a cooling cylinder, means for passing a current of air through the said cylinder, a pipe conveying the said air from the cooling cylinder, a chamber with the side of which the said pipe communicates and which is provided with an opening at or near its upper end, a baffle plate extending downwards in front of the mouth of the said pipe and fitted to the sides of the chamber, an air passage being left below its lower end, and means whereby the material to be dried may be passed seriatim through the heating, evaporating and cooling cylinders, substantially as and for the purpose specified. 6th. In a drier, the combination of one or more drying cylinders with a cooling cylinder, means for passing the material to be dried seriatim through the drying and cooling cylinders, and means for passing a current of air through the cooling cylinder, substantially as and for the purpose specified. 7th. In a drier, the combination of one or more drying cylinders with a cooling cylinder, means for passing the material to be dried seriatim through the drying and cooling cylinders, means for passing a current of air through the cooling cylinder, and means for drying the said air before it enters the cylinder, substantially as and for the purpose specified. 8th. In a drier, the combination of one or more drying cylinders, with a cooling cylinder, means for passing the material to be dried seriatim through the drying and cooling cylinders, means for passing a current of air through the cooling cylinder, means for drying the said air before it enters the cylinders, and means for cooling the said air before it is drier, substantially as and for the purpose specified. 9th. In a dried, the combination of one or more drying cylinders with a cooling cylinder, means for passing the material to be dried seriatim through the drying and cooling cylinders, means for passing a current of air through the cooling cylinder, means for drying the said air before it enters the cylinder, means for cooling the said air before it is dried, and means for slightly re-warming the said air after it has been cooled and dried, substantially as and for the purpose specified. 10th. In a drier, a casing and an evaporating cylinder provided witn a steam jacket or other means of heating, and one or more openings at the top for the escape of steam evaporated from material passing through the cylinder, in combination with a superposed heating cylinder exposed to the action of the steam arising from the evaporating cylinder and communicating with the said cylinder at one end, and means whereby the material to be dried may be passed seriatim through the cylinders, substantially as and for the purpose specified. 11th. In a drier, a casing and an evaporating cylinder provided with a steam jacket or other means of heating, and one or more openings at the top for the escape of steam evaporated from material passing through the cylinder, in combination with a superposed heating cylinder exposed to the action of the steam arising from the evaporating cylinder and communicating with the said cylinder at one end, drip plates extending from the upper surface of the evaporating cylinder to the sides of the casing, drip plates extending out from the under surface of the heating cylinder to direct condensed water clear of the openings in the evaporating cylinder, and means whereby the material to be dried may be passed seriatim through the cylinders, substantially as and for the purpose specified. 12th. In a drier, the combination of a casing, one or more drying cylinders, a cooling cylinder, means for passing the material to be dried seriatim through the drying and cooling cylinders, an air conduit of which the cooling cylinder forms a part, means for passing a current of air through the said conduit, and drying apparatus forming a part of the said conduit and comprising a chamber, calcium chloride or other absorbent, dry or in solution, contained in the said chamber, and means for bringing the air passing through the said chamber into intimate contact with the said calcium chloride, substantially as and for the purpose specified. 13th. In a drier, the combination of a casing, one or more drying cylinders, a cooling cylinder with an opening at or near each end, means for passing the material to be dried seriatim through the drying and cooling cylinder, a partition forming with the casing an air chamber communicating with the cooling cylinder by means of the opening at or near one end of the said cylinder, an air pipe communicating with the said air chamber, an air drier with which the other end of the pipes communicate and means for passing a current of air through the conduit formed by the said cooler, pipe, chamber and cylinder, substantially as and for the purpose specified. 14th. A drier for air used in the cooling cylinder, comprising a tank, a solution of calcium chloride or other absorbent contained in the tank, means for pumping the solution from the bottom of the tank and discharging it within the top, a series of slats suitably spaced crossing said tank and arranged in rows a suitable distance apart so that the spaces of one row "break-joint" with the spaces of the adjoining rows, and means for pumping air through the said tank, substantially as and for the purpose specified. 15th. A drier for air used in the cooling cylinder, comprising a tank, a solution of calcium chloride or other absorbent contained in the tank, means for pumping the solution from the bottom of the tank and discharging it within the top, a series of slats suitably spaced crossing said tank and arranged in rows a suitable distance apart so that the spaces of one row "break-joint" with the spaces of the adjoining rows, means for pumping air through the said tank, an overflow pipe for solution, and a tank into which the said overflow pipe discharges, substantially as and for the purpose specified. 16th. In a drier, a casing and an evaporating cylinder provided with a steam jacket or other means of heating, and one or more openings at the top for the escape of steam evaporated from the material passing through the cylinder, in combination with a heating cylinder exposed to the action of the steam arising from the evaporating cylinder, and means whereby the material to be dried may be passed seriatim through the cylinders, substantially as and for the purpose specified.

No. 67,966. Boat. (*Vaisseau.*)

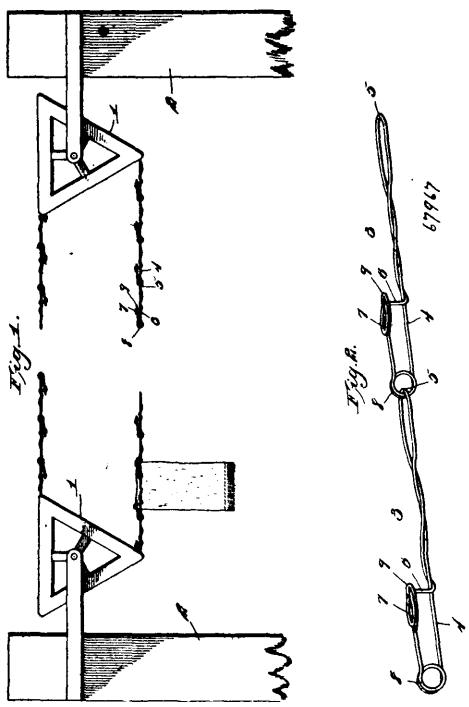


John Christopher Nichol, Montreal, Quebec, Canada, 4th July, 1900; 6 years. (Filed 2nd May, 1899.)

Claim.—1st. A moulded boat of a single layer of saturated felted fabric. 2nd. A boat moulded from a single layer of felted fabric saturated in a solution of a resinous substance and adapted to be

stitched, substantially as set forth. 2nd. A boat moulded from a single layer of felted fabric saturated in a solution of a resinous substance and adapted to be stitched, substantially as set forth. 3rd. A boat moulded from a single sheet of heavy felted fabric saturated in a solution of resinous substance and extending from end to end and side to side of the boat, substantially as set forth. 4th. A boat moulded from a single layer of heavy felted fabric saturated in a solution of shellac, substantially as described. 5th. A boat moulded from a single sheet of heavy felted fabric saturated in a solution of shellac and extending from end to end of the boat, substantially as described. 6th. In the manufacture of a boat, moulding the shell from a single layer of heavy fabric saturated with a resinous substance, substantially as described. 7th. In the manufacture of a boat, moulding without pressure the shell thereof from a single layer of felted fabric having a resinous substance applied thereto, substantially as described. 8th. In the manufacture of a boat, moulding without pressure, the shell thereof from a single layer of heavy felted fabric having a resinous substance applied thereto, substantially as described. 9th. In the manufacture of a boat, first saturating a single sheet of heavy felted fabric in a solution of shellac then applying said sheet to a mould or pattern having strips to form corrugations and a keel in the shell of the boat when completed and then joining the abutting edges of said sheet at each end, substantially as described. 10th. In the manufacture of a boat, first saturating a single sheet of felted fabric in a solution of shellac, then applying said sheet to a mould or pattern having strips to form corrugations and a keel in the shell of the boat when completed and then joining the abutting edges of said sheet at each end by stitching, substantially as described.

No. 67,967. Clothes Line. (*Corde à linge.*)



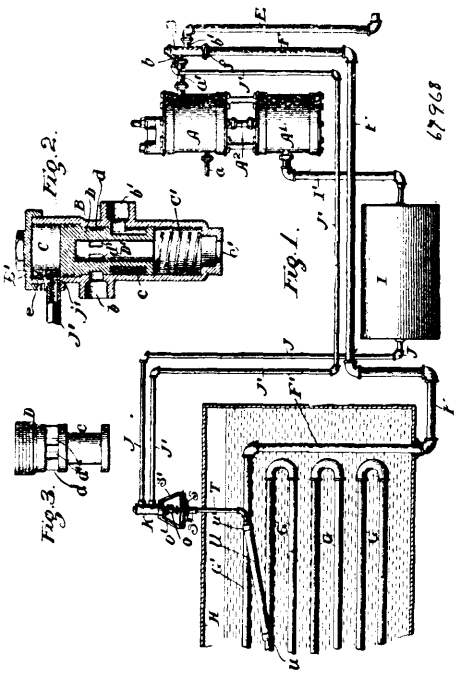
James Baptiste Bailey, Contrecœur, Quebec, Canada, 4th July, 1900; 6 years. (Filed 16th June, 1900.)

Claim.—1st. A clothes line comprising a series of similar links, and a spring clamp formed upon each link, said link and clamp formed in a single piece. 2nd. In a clothes line a combined link and clamp formed in a single piece of metal and comprising a main strip, having a loop at one end, and a coil at the opposite end thereof, a head thereto, and a spring arm normally bearing upon said head. 3rd. In a clothes line a combined link and spring clamp, formed in a single piece of metal and comprising a main strip having a loop at one end, a stem projecting from said strip, a head thereto, a coil at the opposite end of the strip, and a spring arm thereto enclosing the stem and normally bearing upon the head.

No. 67,968. Water Heater for Locomotive Tanks.
(Caloriférе à eau pour reservoirs de locomotives.)

John F. Deems, Burlington, Iowa, U.S.A., 4th July, 1900; 6 years. (Filed 18th June, 1900.)

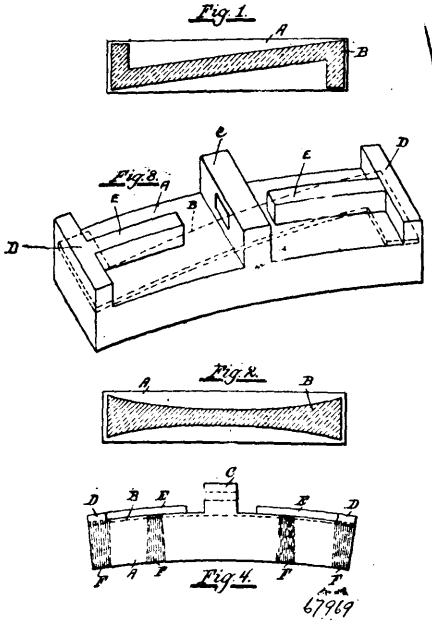
Claim.—1st. In a water heater for locomotive tanks, the combination of a valve chamber communicating with the exhaust of the steam chest of an air compressing pump, exhaust ports leading from such chamber, one for direct exhaust and the other for exhaust into a heating coil in the water tank, a valve controlling such ports and



a regulator operated by the temperature of the water in the tank for automatically moving the valve and opening and closing the ports, substantially as described. 2nd. In a water heater for locomotive tanks, the combination of a valve chamber communicating with the exhaust of the steam chest of an air compressing pump, exhaust ports leading from such chamber, one for direct exhaust and the other for exhaust into a heating coil in the water tank, a valve controlling such ports, a tube or cylinder in the water tank containing a fluid expansible under heat and a valve actuated by the expansion and contraction of the fluid from the temperature of the water in the tank for automatically moving the steam valve and opening and closing the exhaust ports, substantially as described. 3rd. In a water heater for locomotive tanks, the combination of a valve chamber communicating with the exhaust of the steam chest of an air compressing pump, exhaust ports leading from such chamber, one for direct exhaust and the other for exhaust into a heating coil in the water tank, a valve controlling such ports, a tube or cylinder in the water tank containing a fluid expansible under heat, a diaphragm moved by the expansion and contraction of the fluid from the temperature of the water in the tank, and a valve actuated by the movements of the diaphragm for automatically moving the steam valve and opening and closing the exhaust ports, substantially as described. 4th. In a water heater for locomotive tanks, the combination of a valve chamber communicating with the exhaust of the steam chest of an air compressing pump, exhaust ports leading from such chamber, one for direct exhaust and the other for exhaust into a heating coil in the water tank, a valve controlling such ports, a tube or cylinder in the water tank containing a fluid expansible under heat, a diaphragm moved by the expansion and contraction of the fluid from the temperature of the water in the tank, an adjustable stem carried by the diaphragm and a valve actuated by the movements of the diaphragm and stem for automatically moving the steam valve and opening and closing the exhaust ports, substantially as described. 5th. In a water heater for locomotive tanks, the combination of a valve chamber communicating with the exhaust of the steam chest of an air compressing pump, exhaust ports leading from such chamber, one for direct exhaust and the other for exhaust into a heating coil in the water tank, a valve controlling such ports, a tube or cylinder in the water tank containing a fluid expansible under heat, a diaphragm moved by the expansion and contraction of the fluid from the temperature of the water in the tank, a return spring for the diaphragm, an adjustable stem carried by the diaphragm, and a valve actuated by the movements of the diaphragm and stem for automatically moving the steam valve and opening and closing the exhaust ports, substantially as described. 6th. In a water heater for locomotive tanks, the combination of a valve chamber communicating with the exhaust of the steam chest of an air compressing pump, exhaust ports leading from said chamber, one for direct exhaust and the other for exhaust into a heating coil in the water tank, a valve controlling such ports, a tube or cylinder in the water tank containing a fluid expansible under heat, a diaphragm moved by the expansion and contraction of the fluid from the temperature of the water, a

valve actuated by the movements of the diaphragm and two fluid pressure chambers having a passage between them controlled by the diaphragm valve for automatically moving the steam valve and opening and closing the exhaust ports, substantially as described. 7th. In a water heater for locomotive tanks, the combination of a valve chamber communicating with the exhaust of the steam chest of an air compressing pump, exhaust ports leading from such chamber, one for direct exhaust and the other for exhaust into a heating coil in the water tank, a valve controlling such ports, a tube or cylinder in the water tank containing fluid expansible under heat, a diaphragm moved by the expansion and contraction of the fluid from the temperature of the water, a valve actuated by the movements of the diaphragm, a fluid pressure chamber having communication with a compressed air reservoir, a fluid pressure chamber having communication with the chamber of the steam valve and a passage between the two fluid pressure chambers controlled by the diaphragm valve for automatically moving the steam valve and opening and closing the ports, substantially as described. 8th. In a water heater for locomotive tanks, the combination of an air compressing pump, a valve controlling the direction of the exhaust from the steam chest of the pump, a heating coil in the water tank, a compressed air reservoir, a fluid pressure chamber communicating with the chamber of the exhaust controlling valve, a passage between the two chambers and a valve for such passage actuated by the differential pressure from the temperature of the tank water for automatically moving the steam exhaust controlling valve, substantially as described. 9th. In a water heater for locomotive tanks, the combination of an air compressing pump, a valve controlling the direction of exhaust from the steam chest of the pump, a heating coil in the water tank, a compressed air reservoir, a fluid pressure chamber, a pipe leading from the compressed air reservoir to such chamber, a second fluid pressure chamber, a pipe leading from such chamber to the valve chamber of the steam exhaust, a passage between the two fluid pressure chambers, a valve controlling such passage, and a diaphragm for actuating the valve moved by differential pressure from the temperature of the water in the tank, for automatically moving the exhaust controlling valve, substantially as described 10th. In a water heater for locomotive tanks, the combination of an air compressing pump, a valve controlling the direction of exhaust from the steam chest of such pump, a heating coil in the water tank, a compressed air reservoir, a fluid pressure chamber, a pipe leading from the compressed air reservoir to such chamber, a second fluid pressure chamber, a pipe leading from such chamber to the steam exhaust valve chamber, a passage between the two fluid pressure chambers, a valve controlling such passage, a diaphragm for actuating the valve, and a tube or cylinder containing fluid expansible under heat and contracting and expanding from the temperature of the water in the tank, to move the diaphragm and automatically move the steam exhaust controlling valve, substantially as described.

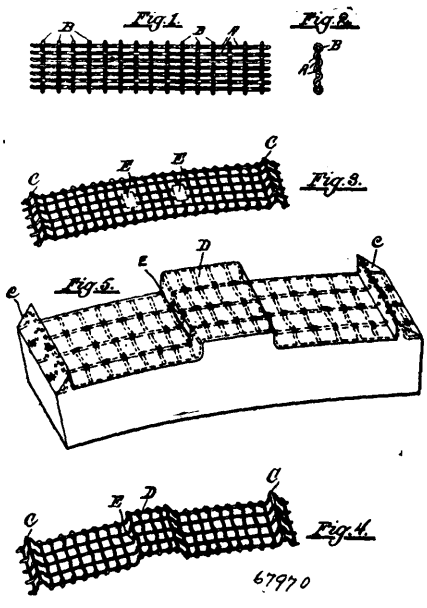
No. 67,969. Brake Shoe. (*Sabot de frein.*)



Joseph D. Gallagher, Glen Ridge, New Jersey, U.S.A., 4th July, 1900; 6 years. (Filed 8th March, 1900.)

Claim.—1st. In a brake shoe, composed of alternate soft iron and deep chilled iron sections, a binding strip of tough metal of less width than the shoe except at its extreme ends and having its ends broadened to substantially the full width of the shoe and embedded in the shoe immediately adjacent to the back thereof, substantially as described. 2nd. In a brake shoe composed of alternate soft iron and deep chilled iron sections, a Z-shaped binding strip embedded in the shoe immediately to the back thereof, substantially as described. 3rd. In a brake shoe, the binding strip embedded in the back of the shoe in combination with a rib or ribs so cast on the back of the shoe as to cover said binding strip for more than half its length, substantially af described.

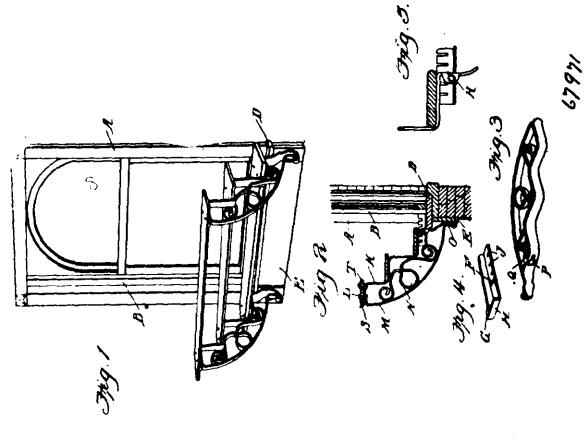
No. 67,970. Brake Shoe. (*Sabot de frein.*)



Joseph D. Gallagher, Glen Ridge, New Jersey, U.S.A., 4th July, 1900; 6 years. (Filed 8th March, 1900.)

Claim.—1st. A brake shoe having a back of wire mesh in combination with a cast iron body or wearing face, substantially as described. 2nd. A brake shoe having a back of wire mesh with lugs and fastening devices integral therewith in combination with a wearing face or body of cast iron, substantially as described. 3rd. A brake shoe having a back of wire mesh with lugs and fastening devices integral therewith and reinforced by the cast iron of the shoe and embedded in the body of cast iron immediately adjacent to the back thereof, substantially as described.

No. 67,971. Window Bracket for Displaying Flowers.
(*Console de fenêtre pour l'étalage des fleurs.*

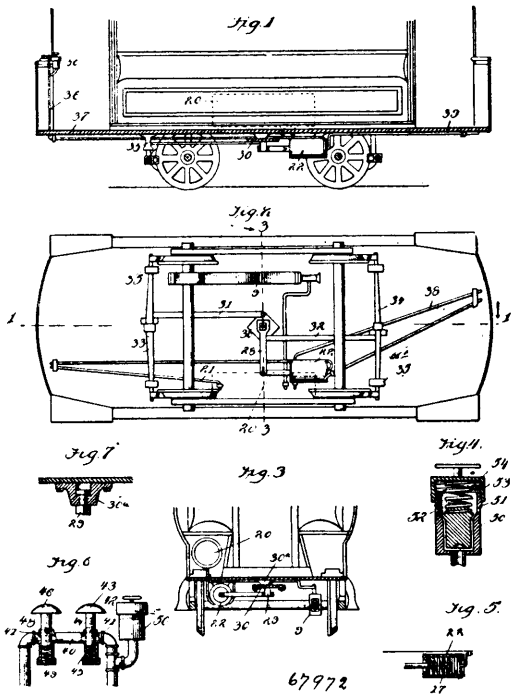


Henry M. Johnson, Gloversville, New York, U.S.A., 4th July, 1900; 6 years. (Filed 18th June, 1900.)

Claim.—1st. The bracket hanger plate herein described, consisting of a plate of metal provided with a bottom flange and an end flange, both at right angles to the main body of the plate, and a series of

notches in the top edge of the plate, substantially as set forth. 2nd. The window bracket herein described, consisting of the carriage K having its upper end turned upward, a curved back piece, and suitable braces connecting the carriage and back piece, substantially as set forth. 3rd. The window bracket herein described, provided with a carriage for shelves, the lower riser of said carriage having an inverted T-shaped notch therein, and an ear or lug at right angles thereto, having a threaded perforation for the reception of a set screw, substantially as set forth. 4th. The combination with a window frame and a bead thereof of a bracket hanger, consisting of a plate of metal having a vertical flange at one end, to engage in the rear of the bead, and a horizontal flange at the bottom to engage below the bead upon the sill of the window frame, substantially as set forth. 5th. The combination of the bracket provided in its front face with an inverted T-shaped slot, with the hanger plate provided with notches in its upper edge and the flange at its bottom edge. 6th. The combination of the bracket, provided in its front face with an inverted T-shaped notch and on the side with an ear or lug having a threaded opening, with the hanger plate having a bottom flange and engaging in the T-shaped slot, and a set screw threaded in the ear or lug and engaging the face of the hanger plate, substantially as set forth.

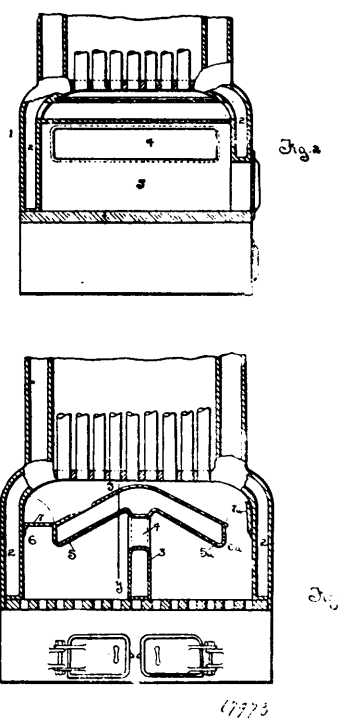
No. 67,972. Street Car Brake. *(Frein de chars de rue.)*



William Franklin Knell, Battle Creek, Michigan, U.S.A., 4th July 1900; 6 years. (Filed 18th June, 1900.)

Claim.—1st. In a car brake, the combination with a car axle of a pinion thereon, a parallel crank shaft, a gear wheel thereon meshing with the pinion, a pitman connected to said gear, a pump cylinder, a valveless piston on the free end of the pitman and adapted to reciprocate in the cylinder, the inlet check valve, the reservoir, a lock for the check valve brought into operation by the excess of pressure in the reservoir, a brake cylinder connected with the brake shafts, suitable pipes connecting the reservoir and brake cylinder valves in said pipes for controlling the passage of compressed air from the reservoir to the cylinder and suitable valves in said pipes, substantially as described. 2nd. The combination of the pump, of a gear wheel for operating the pump, a car axle, a pinion thereon meshing with the gear wheel for rotating it, the compressed air reservoir connected with said pump, the brake cylinder connected with the compressed air reservoir and suitable valves for controlling the passage of air from the reservoir to the brake cylinder located in said connections, substantially as shown and described. 3rd. The combination of the pump, a gear wheel connected to the pitman thereof, a car axle, a pinion thereon meshing with the gear wheel whereby the pump is operated, the compressed air reservoir connected with said pump, the brake cylinder, suitable pipe connections between said reservoir and brake cylinder, and the valve located in said connections for controlling the passage of air from the reservoir to the brake cylinder, said valve consisting of a plug provided with an opening adapted to register with the passage in the pipes, said plug working in a pipe cross which is fitted in the pipe connections, substantially as shown and described. 4th. The combination of the pump operated from one of the car axles, the compressed air reservoir connected therewith, a brake cylinder connected with the air reservoir, a brake leverage having a connection with one of the brake shafts, an arm on said brake leverage having a connection with the other brake shaft and connection with the piston in the brake cylinder, substantially as shown and described. 5th. The combination of a pump operated from one of the car axles, the compressed air reservoir connected therewith, a brake cylinder connected with the brake shafts and with the compressed air reservoir, and suitable controlling valves located in the connections between the compressed air reservoir, and brake cylinder, substantially as shown and described. 6th. The combination with the valveless piston, of the cylinder having discharge and inlet openings in its head, an outward opening check valve in the discharge opening, the inlet pipe secured in the inlet opening and formed as a valve seat at its inner end, a valve adapted to said seat and to open inwardly, a stem for the valve extending into the inlet pipe, a perforated piston head at the outer end of the valve stem, a governor cylinder mounted upon and communicating with the inlet pipe, a spring supported piston head and rod in the governor, the rod being adapted to project transversely into the inlet pipe outside of and in the path of the valve stem when the pressure exceeds the strength of the spring, a curve pipe communicating between the discharge opening and the governor cylinder, and a pipe leading from the curved pipe to the air reservoir, substantially as described.

No. 67,973. Furnace. (*Fournaise.*)



Charles Murry Bump, Bay City, Michigan, U.S.A., 4th July, 1900; 6 years. (Filed 16th June, 1900.)

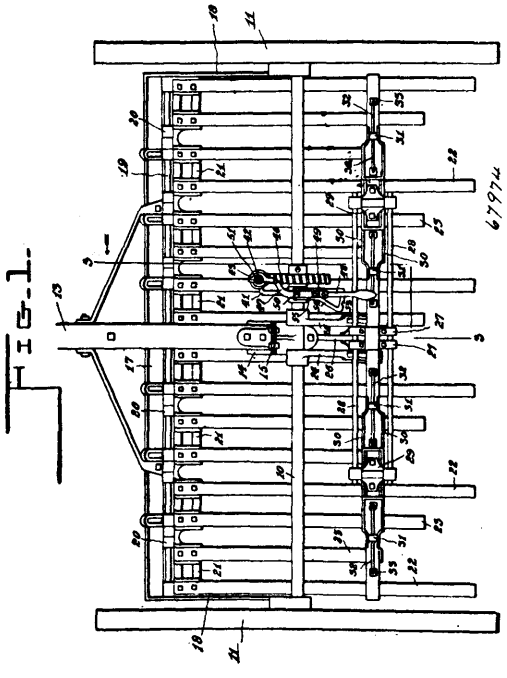
Claim.—1st. In a furnace, the combination with a grate, of a vertical partition dividing the grate surface into two parts, a gas passage through said partition, a hollow top for said partition extending laterally over the fire, and dampers for regulating the gas exit between the laterally extending top and the furnace wall, substantially as described. 2nd. In a furnace, the combination with a grate, of a vertical hollow partition dividing the grate surface into two parts and communicating with a water space surrounding the furnace, a water containing top for said partition extending laterally over a portion of the fire bed on each side of the partition, dampers for regulating the gas exit between the laterally extending top and the furnace walls, and a gas passage connecting the two parts of the grate surface, substantially as described.

No. 67,974. Wheeled Cultivator. (*Cultivateur à roues.*)

Elzéar Doré, Laprairie, Quebec, Canada, 4th July, 1900; 6 years. (Filed 18th June, 1900.)

Claim.—1st. In a wheeled cultivator, a means for adjusting the gang of teeth comprising a gear element on the machine axle, a bracket, a lever supported by the bracket, and means for locking the lever in place, substantially as and for the purposes set forth. 2nd. In a wheeled cultivator, a means for adjusting the gang of

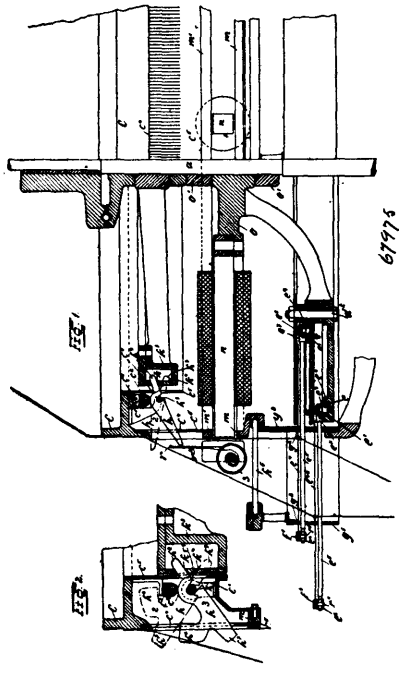
teeth, embracing worm gearing between a machine axle and an operating spindle, for the purposes described, substantially as set forth. 3rd. In a wheeled cultivator, a means for adjusting a gang of teeth, comprising a worm gear on the machine axle, a bracket also carried by the axle, and a worm spindle supported by the bracket and arranged to have intermeshing engagement with the worm gear, substantially as described. 4th. In a wheeled cultivator, a means for adjusting a gang of teeth, comprising a worm gear, a bracket, a worm spindle supported by the bracket in adjustable relation to the worm gear, and means for adjusting the spindle into and out of engagement with the worm gear, substantially as described. 5th. In a wheeled cultivator, a means for adjusting a gang of teeth, comprising a worm gear, a bracket provided with a segment, a spindle having a worm and adjustably mounted on the bracket, and a two-part treadle fulcrumed on the bracket, one member of the treadle engaging with the spindle and the other treadle member having adjustable interlocking connection with the segment, substantially as described. 6th. In a wheeled cultivator, the combination with a member of an equalizer mechanism, and a pair of cultivator teeth, of a single piece hammer pivoted to said member of the equalizer mechanism and having the integral loops which are clamped around said teeth, substantially as described.



No. 67,975. Loom. (*Métier.*)

Carl Herold and Richard Richards, both of Brunn, Austria, 4th July, 1900; 6 years. (Filed 19th June, 1899.)

Claim.—1st. In circular looms the mechanism for forming the shed comprising the wire healds e^4 accessible at the outside sliding through the guide holes in the framing g^3 a curved rod or bar f^1 to which the heald wires are attached at their outer ends, sliding wires e^6 to which the curved bars f^1 are attached, also sliding through holes in the framing and a head e^7 secured thereto carrying a swivelling plate e^9 and runners e^1 traversing the grooves of the eccentirc d for forming, the shed, substantially as described and shown. 2nd. The arrangement of apparatus for beating up the weft, comprising reeds placed near the apex of the shed swivelling on a ring h^3 and guided by the slits e^4 in the casing c^5 provided with arms h^9 engaging directly in the groove k of the grooved cam k^3 in combination with a wire r^3 for guiding the thread, fixed on the top of shuttle s with an eye r for the thread at the top and reaching nearly to the apex of the shed so that when the weft has been brought into position by the latter the passing of the arm h^9 into the bands of the groove k^4 cause the reeds h to strike from underneath by their projecting ends and press it up to the finished cloth, substantially as described. 3rd. In a circular loom, a weft heater having a curved extension on the upper side of the reeds, whereby this portion of the reed remains constantly between two particular threads or groups of threads of the warp, substantially as described.



No. 67,976. Fertilizer. (*Engrais.*)

Albert Jacob Leopold af Forselles, St. Petersburg, Russia, 4th July, 1900; 6 years. (Filed 23rd November, 1899.)

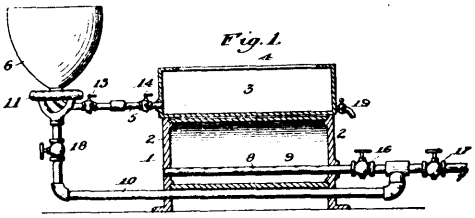
Claim.—An improved method of producing in one process a fertilizer rich in phosphoric acid, together with a phosphorus pig iron, consisting in smelting in a blast or cupola furnace a mixture of coal, iron scrap, flues, if required, and a sufficient quantity of phosphorus rock to give to the pig iron obtained a percentage of phosphor suitable for thin flowing castings, or for treatment according to the basic Bessemer or Siemens-Martin process, while the the slag at the same time obtains such a percentage of phosphor that it will be suitable as a fertilizer.

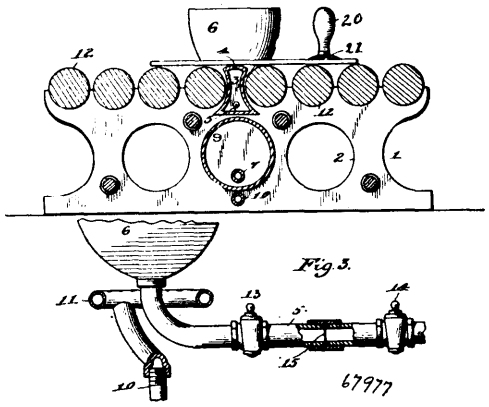
No. 67,977. Machine for Silvering Glass.
(*Machine pour argenter le verre.*)

Constant Laval, Pittsburg, Pennsylvania, U.S.A., 4th July, 1900; 6 years. (Filed 8th January, 1900.)

Claim.—1st. The combination, in a machine for silvering glass, of an amalgam box having an amalgam distributing slit, an amalgam melting pot communicating with said box and rising above the same to place the level of the amalgam in the pot above the distributing slit, two perforated gas burner pipes arranged, respectively, in juxtaposition to said pot and box, and a gas supply pipe common to both gas burner pipes, substantially as described. 2nd. The combination with a crucible or melting pot, of a distributing box or tank in communication with said crucible or melting pot and provided in its upper side with a narrow discharge slit, a perforated gas pipe surrounding said crucible or melting pot, a perforated gas pipe extending beneath the distributing box or tank, and a tubular casing surrounding said gas pipe, substantially as described. 3rd. The combination with a crucible or melting pot, of a distributing box or tank, a pipe connecting said box or tank with the crucible or melting pot, a reticulated diaphragm disposed in said pipe, and valves arranged in said pipe on opposite sides of said diaphragm, substantially as described. 4th. The combination with a crucible or melt-

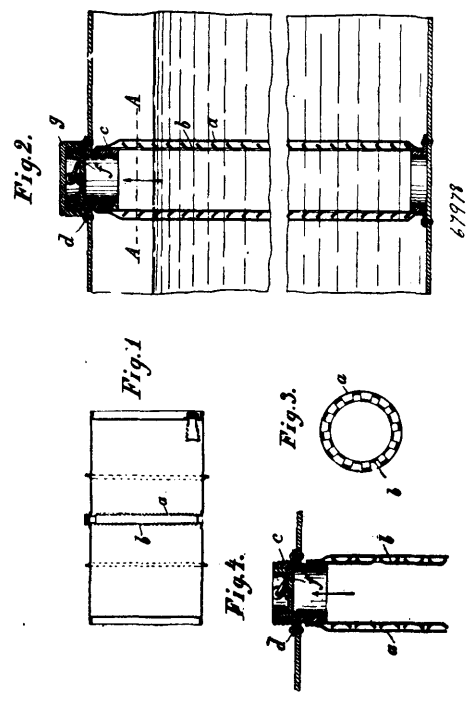
ing pot, of a distributing box or tank in communication with said crucible or melting pot and having concaved sides and a narrow





slitted opening in its upper side, and a series of rollers arranged in substantially the same plane as the upper end of the distributing box or tank, substantially as described.

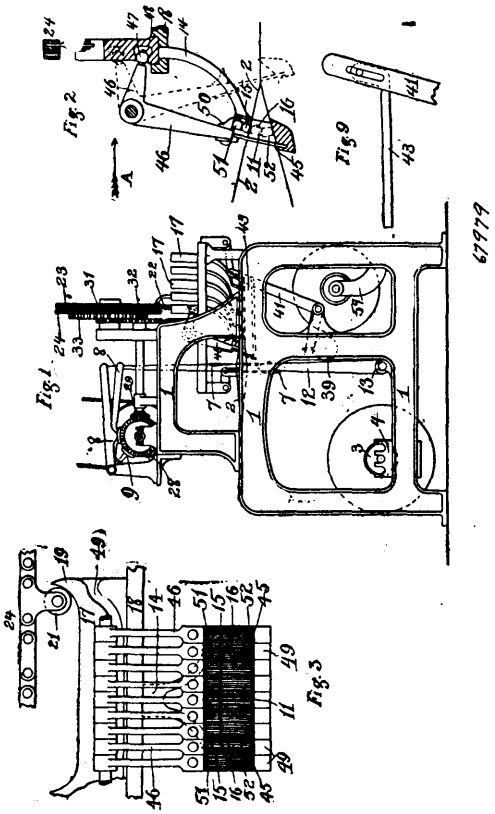
No. 67,978. Explosion Preventing Device.
(Appareil à empêcher les explosions.)



Ferdinand Henze, Salzkotten, Paderborn, Prussia, 4th July, 1900; 6 years. (Filed 13th September, 1899.)

Claim.—1st. A safety device for oil barrels, etc., consisting of a gauze wire cylinder closed at one end and provided at the other end with a valve adapted to open at a given pressure said device being adapted to be inserted in the barrel with its valved end located in the opening therein as specified. 2nd. A safety device for oil barrels, etc., consisting of a gauze wire cylinder closed at one end and provided at the other end with a valve adapted to open at a given pressure and a strengthening tube located within the gauze wire cylinder, as specified. 3rd. The combination with the cask or barrel of a gauze wire cylinder arranged therein closed at the bottom and having its upper end open and communicating with an aperture in the cask or barrel, a valve located in said open end, and a removable cap or cover over said valve, as specified. 4th. The combination with the cask or barrel, having an aperture *a*, tubular piece *c* fitted in said aperture, a valve *f* in said tubular piece, and a gauze wire cylinder *a* located within the cask or barrel, fitted to said tubular piece at its upper end and having its lower end closed, as specified. 5th. The combination with the cask or barrel, having an aperture *a*, tubular piece *c* fitted in said aperture, a valve *f* in said tubular piece, a gauze wire cylinder *a* located within the cask or barrel fitted to said tubular piece at its upper end and having its lower end closed, and a strengthening piece *b* within said gauze wire cylinder, as specified.

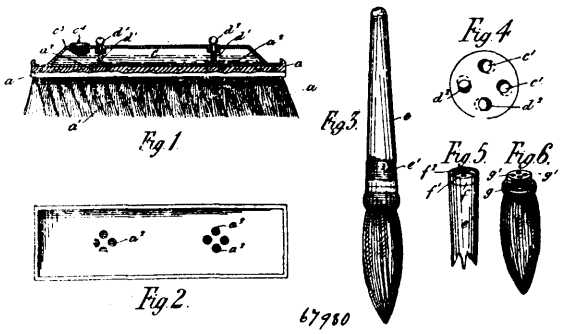
No. 67,979. Loom. *(Métier.)*



John Alexander Schofield, Bolton, Lancaster, England, 4th July, 1900; 6 years. (Filed 27th April, 1899.)

Claim.—1st. In a loom, the combination with heddle or harness operating devices and reed mechanism arranged in sections, of shuttle operating mechanism for carrying the shuttles between the divisions of warp threads successively or one after the other in the same direction, and means for operating the reed sections successively to beat up the weft immediately after each shuttle has passed each reed section. 2nd. In a loom, the combination with heddle or harness operating devices, of reed mechanism arranged in sections or divisions, means for operating said sectional reeds successively, and shuttle operating mechanism for carrying the shuttles between the divisions of warp threads successively in a direct line and in the same direction and then reversing the direction of movement of the shuttles. 3rd. In a loom, the combination with heddle operating devices and reed mechanism arranged in sections, of means for operating a series of shuttles simultaneously and in successive order one following another in one direction and then in the reverse direction, and means for operating the reed sections successively to beat up the weft immediately after each shuttle has passed each reed section. 4th. In a loom, the combination with sectional shedding mechanism, of reed devices for beating up the weft arranged in divisions or sections, mechanism for carrying a series of shuttles one following another across the warp in one direction and then in the reverse direction, and means for operating the reed sections successively to beat up the weft immediately after each shuttle has passed each reed section.

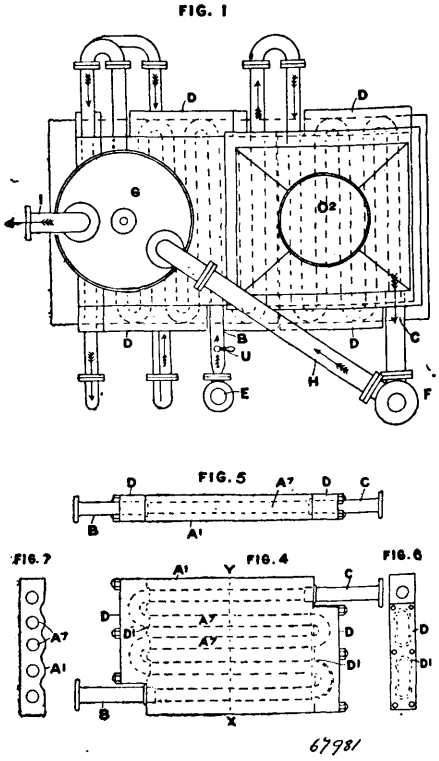
No. 67,980. Brush for Blacking, Paint, etc. *(Pinceau.)*



Alfred Walter Powell, Brierley, Harrow on the Hill, Middlesex, England, 4th July, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. The improvements in brushes for applying blacking paint and other liquids, consisting in a reservoir or container fixed to the stock of the brush and having concentrically arranged openings in its base which coincide with openings in the brush stock communicating with the bristles thereof, and regulating discs located over the openings in the bottom of the reservoir or container, said discs having perforations which normally coincide with the openings in the reservoir or container, and shanks passing through openings in the upper side of the said reservoir or container and by means of which the discs are turned to shut off or regulate the supply of liquid from the reservoir or container to the brush, said reservoir having a filling and emptying orifice, all arranged, combined and operating substantially as and for the purpose described and as illustrated by the drawings. 2nd. The modified form of liquid applying brush consisting in a hollow handle having at its open end a removable metal cap provided with perforations, said perforations normally coinciding with perforations in the end of the bristle portion of the brush, said latter perforations communicating with the bristles, substantially as and for the purpose described and as illustrated by the drawings.

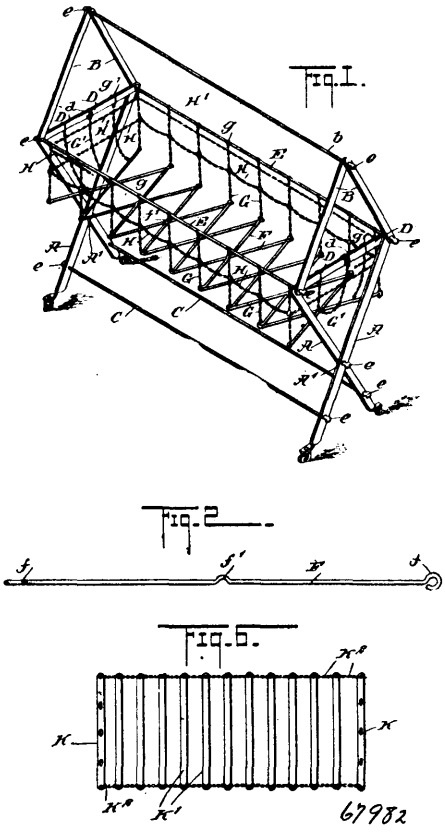
No. 67,981. Steam Generator. *(Générateur à vapeur.)*



Henry Braby, Ayr, Queensland, Australia, 4th July, 1900; 6 years. (Filed 17th February, 1900.)

Claim.—1st. In a steam generator, a plate or block of copper, gun metal, or other good heat conducting material having ways therein for the circulation of water and steam, and capable of being subjected to heat from a furnace or other source of heat, substantially as hereinbefore described. 2nd. In a steam generator, a plate or block of copper, gun metal, or other good heat conducting material, having water ways therein and provided with caps for returning the water ways and capable of being subjected to heat from a furnace or other sources, substantially as hereinbefore described. 3rd. In a steam generator, a plate or block of copper, gun metal, or other good heat conducting material, having ways therein for the circulation of the water and steam, and holes therethrough for the passage of the furnace heat, substantially as hereinbefore described. 4th. In a steam generator, the combination with one or more plates of copper, gun metal, or other good heat conducting material, having ways therein for the circulation of water and steam, of a feed pump, injector or other means whereby the forced circulation of water is maintained, substantially as hereinbefore described and explained. 5th. In a steam generator, the combination of a series of plates or blocks of good heat conducting material, having ways therein for the circulation of the water and steam, one or more of the said plates being perforated or not, an equalizer or dome such as G, inlet valve such as E, and outlet valve such as F, substantially as hereinbefore described and explained and as illustrated in the drawings. 6th. The improved generator, consisting of the combination and arrangement of the parts, substantially as hereinbefore described and explained, and as illustrated in Figs. 1 to 7 of the drawings. 7th. The improved generator, consisting of the combination and arrangement of the parts, substantially as hereinbefore described and explained and as illustrated in Figs. 8 and 9 of the drawings.

No. 67,982. Folding Crib or Cradle. *(Berceau p'iant.)*



Samuel Everett Oakes, and Helen Oakes, both of Passaic, New Jersey, U.S.A., 5th July, 1900; 6 years. (Filed 21st June, 1900.)

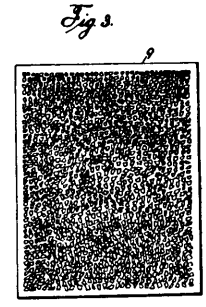
Claim.—1st. A crib or cradle, comprising end frames each consisting of crossed and pivoted legs and a transverse bar connecting the

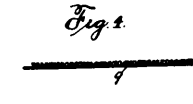
upper ends of said legs, longitudinal bars connecting the corresponding upper ends of the legs of opposite end frames, a mattress support consisting of cross bars, flexible suspending members as chains connecting the ends of said cross bars with the longitudinal rods, and means for limiting the spacing of the cross bars, substantially as described. 2nd. A crib or cradle, comprising end frames each consisting of crossed and pivoted legs, means for locking the legs in a fixed position, rods connecting the upper ends of the legs of both end frames, and a folding mattress support consisting of cross bars, flexible suspension members as chains connecting the ends of said cross bars with the longitudinal rods, and means for limiting the spacing of the cross bars, substantially as specified. 3rd. A crib or cradle, comprising end frames each consisting of pivoted legs, means for locking the legs in a fixed position, rods connecting the upper ends of the legs of both end frames, a folding mattress support suspended from said rods, and consisting of cross bars pivoted to each other to form lazy tongs, and suspension means connecting the ends of the cross bars with the longitudinal bars of the frame, substantially as described. 4th. A crib or cradle, comprising end frames each consisting of crossed and pivoted legs and a transverse bar connecting the upper ends of said legs, longitudinal bars connecting the corresponding upper ends of the legs of opposite end frames, a mattress support consisting of cross bars provided with eyes at each end, the eyes of one bar linking with the eyes of the adjacent bar and suspending members as chains connecting the ends of said cross bars with the longitudinal rods. 5th. A crib or cradle, consisting of crossed and pivoted legs, means for locking the legs in a fixed position, rods connecting the upper ends of the legs of both end frames, and a folding mattress support consisting of cross bars provided with eyes at each end, the eyes of one bar linking with the eyes of the adjacent bar, and suspension members as chains connecting the ends of said cross bars with the longitudinal rods, substantially as described. 6th. A crib or cradle, comprising a frame having longitudinal rods located one on each side, a mattress support consisting of cross bars, suspending members, as chains, connected with the ends of said cross bars, and each containing a ring which embraces one of the longitudinal rods, and means for limiting the spacing of the cross bars, substantially as described. 7th. A crib or cradle, comprising a frame having longitudinal rods, one on each side, a mattress support consisting of cross bars provided with eyes at each end, the eyes of one bar linking with the eyes of the adjacent bar, and suspending members, as chains, connecting with the ends of said cross bars and each containing a ring which embraces one of the longitudinal rods, substantially as described. 8th. A crib or cradle, comprising end frames each composed of pivoted and crossed bars forming legs, a connection between the upper ends of said legs, consisting of bars constructed of two members pivoted to each other by a rule joint, longitudinal bars connecting the end frames, a bed support or bottom, and flexible suspenders connecting the edge of the bottom with said longitudinal bars, said suspenders being not less in length than half the width of the bottom. 9th. A crib or cradle, comprising end frames each composed of pivoted and crossed bars forming legs, and a connection between the upper ends of said legs, consisting of two members pivoted to each other by a rule joint, longituninal bars, connecting the upper ends of the legs of each frame, a mattress or bed support and flexible suspenders connecting the longitudinal bars with the side edges of said bed support, said suspenders being not less in length than half the width of the bed support. 10th. A crib or cradle, comprising end frames each composed of two pivoted and crossed bars forming legs, and a connec- tion between the upper ends of said legs, consisting of two members pivoted to each other by a rule joint, longitudinal bars connecting the upper ends of the legs of each frame, a mattress or bed support and flexible suspenders connecting the longitudinal bars to the side edges of said bed support, said suspenders being not less in length than half the width of the bed support, a bar extending longitudinally above the bed and forming a canopy support, and two barsextending downwardly from each end thereof and pivoted to the upper end of the legs whereby the whole may be folded, substantially as described. 11th. A crib or cradle, comprising a supporting frame having a longitudinal bar at each side and adapted to fold to bring these two bars together, a bed bottom, and suspenders connecting the edges of the bottom with the longitudinal bars and equal in length to not less than half the width of the bottom.

No. 67,983. Packing for Bottles and the Like.
(Caisse d'embellage pour bouteilles.)

Howard A. Leak and Victorie E. Tristler, both of St. Louis, Missouri, U.S.A., 5th July, 1900; 6 years. (Filed 6th August, 1897.)

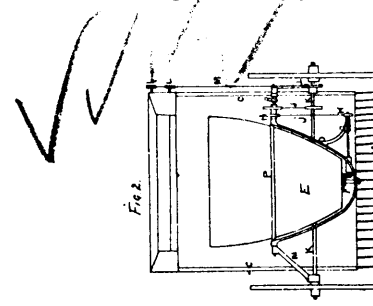
Claim.—As a new article of manufacture, a packing for bottles and the like, consisting of a sheet of flexible paper having a coating of glue thereon, and cubical pieces of cornstalk pith located upon said paper with a flat surface thereof adjacent said paper, and said cubical pieces having each a solid basic portion adjacent to and projecting above said paper, and having an elastic or cushioning portion located above said solid basic portion and integral therewith, substantially as herein specified.

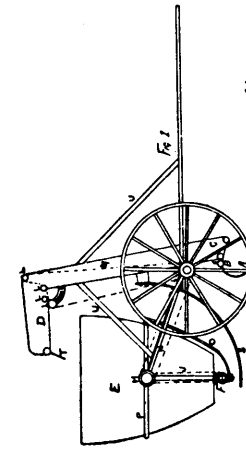




67983

No 67,984. Hay Cocking Machine.
(Machine pour mettre le foin en meule.)





67984

Dorwin Wesley Valleau, Ameilasburg, Ontario, Canada, 5th July, 1900; 6 years. (Filed 10th May, 1900.)

Claim.—1st. The method of and the machine for collecting hay, grain or other similar material from the ground by means of rake-teeth shaped collectors, and thence elevating it by means of carriers

into a receiver forming part of the machine, so shaped as to give the hay, grain or other material the form of a hay cock, and so provided with gear from the moving axle of the machine, as to enable it to dump the hay grain or other material upon the ground after being so formed into a cock. 2nd. In a machine for collecting hay, grain or other material from the ground after it has been cut or severed therefrom, the combination of rake teeth for collecting the same with an elevator and carrier which seizes the hay, grain or other material from in front of the rake teeth as fast as collected and conveys the same into a rotating receiver so shaped as to give the form of a hay cock to such hay, grain or other material, and when so formed to turn over and dump the same upon the ground, the said elevator, carrier and receiver being geared with the main axle of the machine, substantially as described in the foregoing specifications.

No. 67,985. Device for Forcing Water out of Wells.
(Appareil pour soutirer l'eau des puits)

Fig. 1.

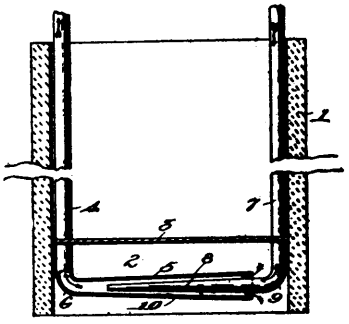
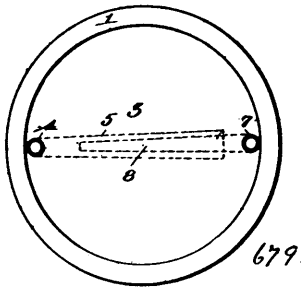


Fig. 2.



67985

August Baca, Fayetteville, Texas, U.S.A., 5th July, 1900; 6 years. (Filed 7th May, 1900.)

Claim.—A device for forcing water from a well, comprising a plate secured in said well above the water level thereof in a manner to afford an air tight compartment in the lower part of said well, a pipe extending through said plate and having an enlarged horizontal portion submerged in the water of the well and a second pipe extending through said plate and having a reduced horizontal portion projecting into the enlarged part of said first named pipe in a manner to afford an annular space between the two and adapted to have an elastic fluid forced therethrough, substantially as described.

No. 67,986. Rotary Engine. *(Machine rotatoire.)*

Andrew Dahlin, Vasa, Minnesota, U.S.A., 5th July, 1900; 6 years. (Filed 20th June, 1900.)

Claim.—In a rotary engine, the combination with the cylinder and the rotary piston having the propelling projection, of the pair of oscillating abutments temporarily engaging said piston provided with cylindrical concavities adapted to complete the cylinder bore, and provided each with a pair of exhaust ports, two independent pairs of admission ports open into said cylinder, a pair of vibrating valves operating to open and close said admission ports in reverse order, means for oscillating said abutments with a properly timed ac ion, and a series of connected valves for simultaneously opening and closing the co-operating members of said pairs of admission and

Fig. 1

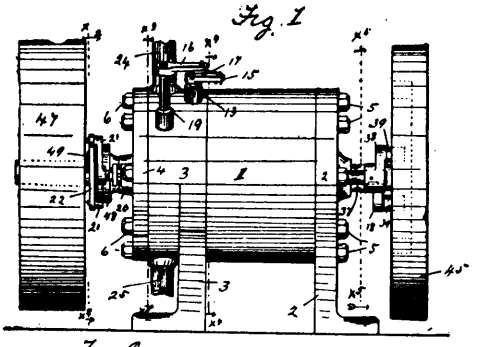
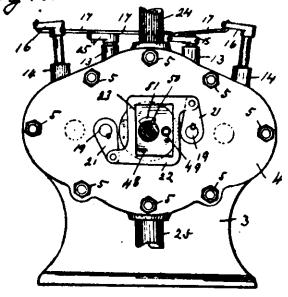


Fig. 2



67986

exhaust ports, whereby the engine may be reversed, substantially as described.

No. 67,987. Electrical Wire Insulator.
(Isolateur électrique de fil de fer.)

Fig. 1.

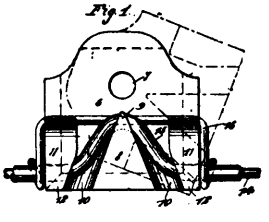


Fig. 2

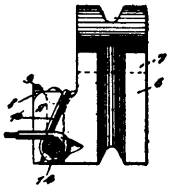


Fig. 3.

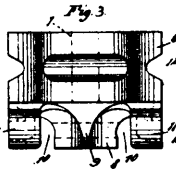


Fig. 4.

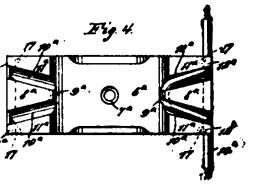
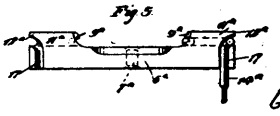


Fig. 5.



67987

Morton Harloe and George E. Shay, both of Peckville, Pensylvania, U.S.A., 5th July, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—1st. An insulator, having a body portion with means for mounting it to swing, the body portion having located eccentrically thereon three studs separated by grooves, the end studs having overhanging outer ends and the middle stud having an overhanging inner end, whereby upon swinging the insulator the wire may be bent through the grooves and beneath the several overhanging ends of the studs. 2nd. An insulator, having a body portion with an opening therein whereby to mount the insulator to swing on a supporting pin or stud fitted in the opening, the body of the insulator having three studs located eccentrically to the opening and separated from each other by grooves, the end studs having overhanging ends

extended in the same direction and the middle stud having an overhanging end extending in the opposite direction, whereby upon swinging the insulator upon said supporting pin or stud, the wire may be bent through the grooves and over the overhanging ends of the studs. 3rd. An insulator, having a body portion adapted to swing, the means formed on the body portion around which the wire may be bent to secure the wire, such means being capable of engaging the wire, to bend the same as the insulator is swung first to one side and then to the other. 4th. An insulator, having a body portion, with means for mounting it to swing, and studs formed on the body portion and between which the wire may be bent and held, the wire being engaged with the studs by swinging the insulator first to one side and then to the other.

No. 67,988. Mail Cancelling Machine.

(*Machine à maculer la malle.*)

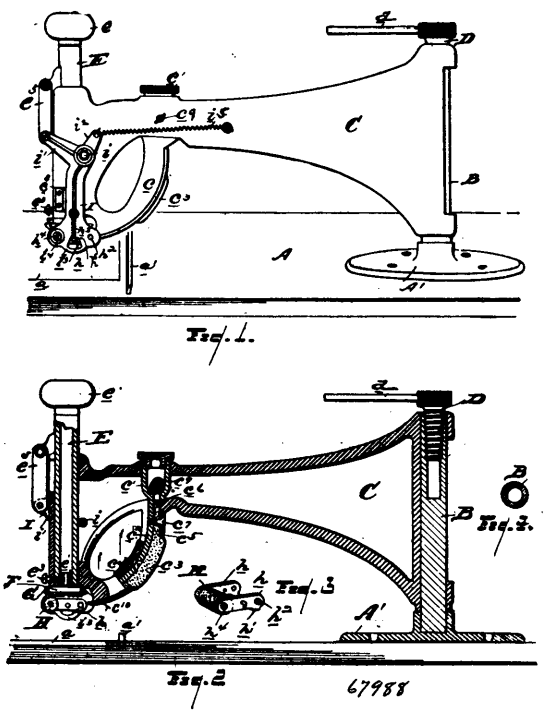


Fig. 1.

Fig. 2.

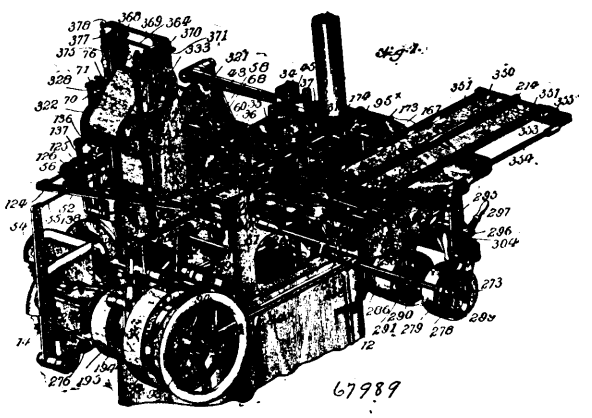
67988

The Perfection Hand Stamp Company, assignee of Francis Osborn, all of Detroit, Michigan, U.S.A., 5th July, 1900; 6 years. (Filed 1st March, 1900.)

Claim.—1st. In a cancelling stamp, the standard, the swinging arm pivoted on the standard, the plunger arranged to move up and down in a way in the free end of the arm, swinging frames I pivoted on the free end of the arm, a link connecting the plunger and the swinging frames above their pivots, and an ink roll mounted in the lower end of the frames I, substantially as described. 2nd. The plunger head and die having a dovetail connection, the cross pin, the spring and the locking lug, substantially as described. 3rd. In a cancelling stamp, the combination of the standard B, the arm C, pivoted on the standard, the hand plunger E, mounted and arranged to move in a way in the free end of the arm C, the swinging frames I, pivoted to the arm C, and provided with the arm i^1, the link e^5, the ink roll mounted between the swinging frames, the ink pad e^3, and means for inking the pad, substantially as described. 4th. In a cancelling stamp, the swinging arm pivoted on the vertical standard, the plunger and die, the travelling ink roll operated by and from the plunger, the ink well in the arm and the ink pad, substantially as described. 5th. The arm, the plunger and die, the travelling ink roll operated by and from the plunger, the ink well entered in the arm and having an arc-shaped neck over which the roll travels and the pad located in the neck, substantially as described. 6th. The arm, the plunger and die, the travelling ink roll operated by and from the plunger, the ink well having the arc-shaped neck, the pad located in the neck and the pressure plate arranged to regulate the flow of ink, substantially as described. 7th. In a cancelling stamp, the combination of the plunger, the swinging frame I, the ink rolls, the frame carrying the ink roll mounted between the swinging frames, and the removable shaft for the ink roll, substantially as described. 8th. In a cancelling stamp, the arm, the expanding standard and the tapering screw, substantially as described. 8th. In a cancelling stamp, the arm, the expanding standard and the tapering screw, substantially as described. 9th. In a cancelling stamp, the plunger, the swinging frames provided with openings i^4, the ink rolls, the frame carrying the ink roller mounted on trunnions between the swinging frames and the removable shaft for the ink roll, substantially as described. 10th. In a cancelling stamp, the supporting frame, the vertically movable plunger mounted in the frame, the die, the swinging frame I mounted on the frame, and operated by and from the plunger, the frame for the ink roll provided with trunnions h^2 on which the frame is pivoted at the rear edges of the frame I, the ink roll mounted in the forward end of the ink roll frame, the ink pad, a spring to hold the ink roll against the die and pad, and the hooks h^5 extending through an opening in the frames I to limit the vertical swing of the ink roll frame, substantially as described. 11th. In a cancelling stamp, the combination of the travelling ink roll, the die and the frame, said die and frame so interlocked as to break joints whereby the roll will run smoothly from one to the other, substantially as described.

No. 67,989. Type Casting and Composing Machine.

(*Machine pour le coulage et composition des caractères.*)



67989

The Laston Monotype Machine Company, assignee of Tolbert Lanston, all of Washington, District of Columbia, U.S.A., 5th July, 1900; 6 years. (Filed 13th December, 1898.)

Claim.—1st. In a type making machine such as described, the combination of the following elements, to wit: a series of matrices, a mould provided with an adjustable member for varying the mould cavity widthwise of the type to be formed, controlling mechanism for bringing each matrix separately in conjunction with the mould, a normal adjusting mechanism operating through the adjustable member of the mould, to vary the size of the mould cavity and proportion the latter to the dimensions of the character or space represented by each selected matrix, justifying mechanism adapted to vary the normal dimensions of the mould cavity as determined by the normal adjusting mechanism, a single perforated controlling strip, and a pneumatic controlling system governed by or from the controlling strip and operating to effect the centering of the matrices, to set the justifying mechanism, and to connect the justifying mechanism with the movable member of the mould at predetermined intervals. 2nd. In a type making machine such as described, the combination of the following elements, to wit: a series of movable matrices, a mould provided with an adjustable wall or member for varying the width of the mould cavity, controlling mechanism for shifting the matrices to bring any one of them in conjunction with the mould, normal mould adjusting mechanism operating upon the adjustable member of the mould to vary the size of the mould cavity to correspond with the selected matrix justifying mechanism operating to vary the normal adjustments of the mould, a pump and nozzle for injecting moulten metal into the mould, a perforated controlling strip, and a pneumatic system governed by the controlling strip and connecting the latter with the controlling mechanism for the matrices, the justifying mechanism and the pump operating devices. 3rd. In a type making and setting machine such as described, the combination of the following elements, to wit: a mould furnished with an adjustable member or section for varying the width of the mould cavity and a removable section opposite said adjusting section, a normal adjusting and justifying mechanism connected to the movable section of the mould for controlling the width of the types cast in the said mould, a series of matrices with controlling mechanism for bringing each matrix separately in conjunction with the mould, injecting mechanism for supplying moulten metal to the mould, a galley mechanism provided with type carrying, line forming and line transferring devices, a perforated controlling strip, and a pneumatic system governed by the controlling strip and acting upon the injecting, justifying, matrix controlling, and galley operating mechanisms, to control the delivery of moulten metal into the mould, to set the justifying mechanism for the line and connect it at predetermined intervals, to bring successive matrices into position and effect the normal adjustments of the mould, and at the completion of a line to transfer the latter to the galley, substantially as described. 4th. In a

type making machine such as described, the combination of the following elements, to wit: a mould provided with an adjustable wall or section for varying the width of the mould cavity, a series of dies or matrices each adapted to be brought into co-operative relation with the mould to form individual types, actuating mechanism for centering individual dies or matrices and affecting the normal adjustment of the mould, said actuating device being provided with a series of controllable stops or devices for determining the positions of the matrices or dies and of the adjustable section of the mould, abnormal adjusting or justifying mechanism acting through the adjustable section of the mould to vary the normal adjustments thereof and provided with a controllable member through which latter the matrix actuating mechanism may be utilized to effect the adjustment of the justifying mechanism, and further provided with a driver or operating device and a controllable member for rendering the justifying mechanism operative upon the movable section of the mould, a perforated controlling strip, and a pneumatic system governed by the controlling strip and in turn governing the controllable devices of the matrix actuating mechanism, and of the justifying mechanism. 5th. In a machine for forming justified lines of type, the combination of the following elements, to wit: a mould provided with an adjustable wall or section for varying the width of the mould cavity, a movable die case provided with actuating mechanism, including controllable stop devices for separately locating each die in conjunction with the mould, normal mould adjusting mechanism for affecting variations in the width of the mould cavity, justifying mechanism provided with controllable adjusting devices and controllable actuating or connecting devices, a metal injecting mechanism provided with controllable connections, a galley mechanism provided with a type carrier receiving the types from the mould and transferring them to a line holder, and a line transferring mechanism for moving the completed line into the galley, a perforated controlling strip, and a pneumatic system governed by the controlling strip and having separate connections with the controllable members of the die case actuating mechanism, the justifying mechanism, the injecting mechanism and the line transferring devices of the galley mechanism. 6th. In a machine for making justified lines of types, the combination with the mould and its movable section, the die case and its actuating mechanism, the normal adjusting and the justifying mechanism, the metal injecting mechanism, the resetting mechanism for the justifying mechanism, and the galley mechanism, of a perforated controlling strip and a pneumatic system governed thereby, the latter controlling the movements of the die case, the adjustments of the justifying mechanism, the application of the justifying mechanism to the movable section of the mould, the metal injecting mechanism, the galley mechanism and the resetting devices of the justifying mechanism. 7th. In a machine for making justified lines of types, the combination with an adjustable mould, a movable die case, a normal adjusting mechanism for the mould, an abnormal adjusting or justifying mechanism, and metal injecting mechanism, of a controlling strip and a controlling system governed thereby, the latter including connections operating upon the die case to centre each die opposite the mould upon the justifying mechanism to determine the amount of variations required to justify the line, and to apply said variation, and upon the injecting mechanism to suspend its action when desired. 8th. In a machine for making justified lines of types, the combination with the adjustable mould, the movable die case, the justifying mechanism, the metal injecting mechanism and the resetting devices for the justifying mechanism, of a perforated controlling strip and a controlling system governed by said strip, said system, including connections, operating upon the die case, actuating mechanism to control the position of the dies with reference to the mould, upon the justifying mechanism, to set the latter for the line and establish operative connection with the adjustable section of the mould when certain designated dies are centred upon the injecting mechanism to suspend its action, and the resetting device of the justifying mechanism to return the latter to the starting position. 9th. In a type making machine, the combination of the following elements, to wit:—a movable series of dies or matrices with actuating devices therefor deriving motion from a main driving shaft and provided with a series of stopping or limiting devices for arresting the motion of the series of dies with any one in the centred or casting position, a mould for forming the bodies of the types provided with an adjustable section for varying the width of the mould to form types of different widths, normal adjusting mechanism controlling the position of the adjustable mould section, a perforated controlling strip, and a pneumatic system governed by the controlling strip and operating the limiting or stopping devices of the dies or matrices. 10th. In a machine for making justified lines of type, the combination of the following elements, to wit:—a main driving shaft, a fixed mould with an adjustable section for varying the width of the mould cavity therein, a die case, supported to move in transverse directions, two actuating mechanisms, each controlling the movements of the die case in one direction, driven from the main shaft through flexible connections and provided with a series of controllable stops for arresting the die case during different portions of its traverse, to centre any one of the dies or matrices opposite the mould, a justifying mechanism for controlling the position of the adjustable section of the mould, said justifying mechanism being provided with an adjustable member operated from the die case actuating mechanism through a controllable member or pawl, and a driver operated from the main shaft and connected through a controllable pin or member with the adjustable section of the mould, a pump and nozzle for injecting molten metal into the mould, with actuating mechanism driven from the main shaft to connect the muzzle with the mould and operate the pump, a strip containing perforations for controlling the action of the machine, and a pneumatic system governed by the controlling strip and containing ports, passages and pistons, the latter operating the controllable stops of the die case actuating mechanism, the controllable pawl and pin of the justifying mechanism, and a disengaging device intermediate the pump and driving shaft for controlling the action of the pump. 11th. In a machine for making justified lines of types containing as its principal elements a movable die or matrix case, an adjustable mould, normal adjusting and justifying mechanisms for the mould, and a perforated controlling strip, the combination therewith of a pneumatic controlling system governed by the perforated strip and operating the controlling stops for determining the position of the die case and the adjustment and connection of the justifying mechanism. 12th. In a machine for making justified lines of types containing in its organization a movable die case containing a series of matrices, a mould adjustable as to width of the cavity, normal and abnormal or justifying mechanisms for adjusting the mould, a metal infecting mechanism, and a perforated controlling strip, the combination therewith of a pneumatic controlling system governed by the perforated strip and controlling the position of the movable die case, the adjustment and application of the justifying mechanism, and the action of the injecting apparatus. 13th. In a machine for making justified lines of type, the same being provided with a movable series of matrices, a mould having an adjustable member and metal injecting apparatus co-operating with the mould to deliver molten metal therein after the mould has been adjusted and the selected matrix brought into conjunction therewith, the combination of a normal adjusting mechanism controlled by or from the actuating devices for the matrices and acting upon the adjustable section of the mould to vary the width of the latter, an abnormal adjusting or justifying mechanism operating through or upon the normal adjusting mechanism, to vary the extent of adjustment produced thereby, a controlling strip containing perforations representing the selected matrices and justification index for the line, and a pneumatic system governed by the controlling strip and including the controllable members of the matrix actuating mechanism and of the justifying mechanism. 14th. In a machine for making justified lines of type provided with a movable series of matrices, a mould having an adjustable member, and metal injecting mechanism, the combination of normal adjusting mechanisms connected to the adjustable member of the mould and controlled by the actuating mechanism of the matrices, an abnormal adjusting or justifying mechanism acting through the adjustable member of the mould to vary the normal adjustments thereof and provided with controllable actuating devices for determining the degree of variation, controllable connecting devices for determining the time or occasion of its application to the mould and controllable resetting devices, a controlling strip provided with perforations representing the selected matrices, the degree of variation for justification and the time or occasion for the application of the justifying mechanism to the mould and the re-setting of the justifying mechanism, and a pneumatic system governed by the perforated strip and controlling the location of the matrices, the degree of adjustment of the justifying mechanism, the time or occasion of the application of the justifying mechanism and the re-setting of the justifying mechanism. 15th. In a machine for producing justified lines of types provided with a movable series of matrices, a mould having an adjustable section for varying the width of the cavity and a movable section, normal justifying mechanism acting through the adjustable section of the mould to vary its position to correspond with the selected matrix, abnormal adjusting or justifying mechanism operating to vary the position of the adjustable section of the mould, metal injecting mechanism, and a galley mechanism receiving successive types from the mould, arranging them in lines and transferring the lines to a galley, the combination therewith of the perforated controlling strip, and the pneumatic system governed by said strip and operating the controllable members of the mechanisms for locating the matrices, for setting the justifying devices, for applying the justifying devices, for controlling the injection of molten metal into the mould, for effecting the transfer of the completed line to the galley and for re-setting the justifying mechanism. 16th. In a machine for making justified lines of types adapted to be controlled by a single strip perforated to represent the individual types which are to compose the line, the types to be varied in width as compared with the normal, to effect justification, the degree or amount of variation for each of the selected types to produce justification, and the re-setting of the justification mechanism preliminary to the formation of the next line, the combination with such a controlling strip of a mould in which the body portions of the types are formed, a series of movable matrices or discs co-operating with the mould to form and determine the face of the type, with controllable devices for locating the several matrices or dies, justifying mechanism for varying the width of the mould cavity, said mechanism including controllable devices for adjusting the same to produce the desired degree of variation for resetting the adjustable member, and for rendering the adjustable member operative to effect the width of the mould, and a pneumatic system intermediate the perforated

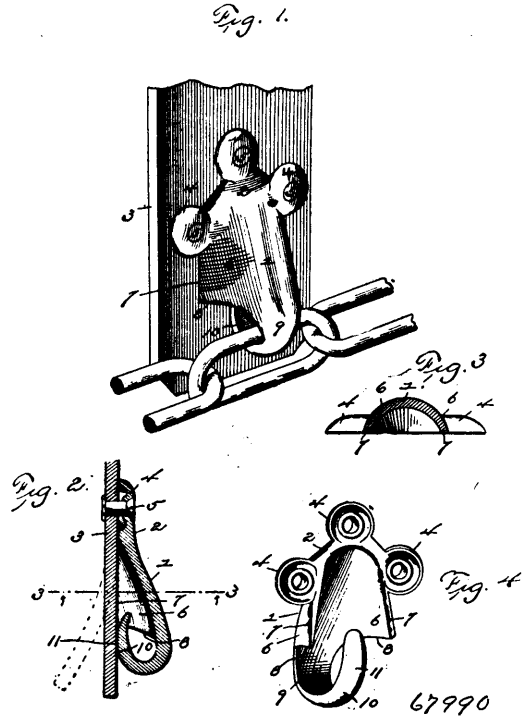
strip and each of the controllable members of the matrix adjusting and justifying mechanisms. 17th. In a machine for making justified lines of types adapted to be controlled by a single strip perforated at intervals to represent the individual types in a line, the types to be varied in width as compared with the normal to effect justification, the amount or degree of variation for each of the selected types, the suspension of the casting operation, and the resetting of the justification mechanism, preliminary to its adjustment for the next line, the combination with said controlling strip of a mould adjustable in width, a series of movable matrices or discs co-operating with the mould and provided with controllable devices for determining the location of the several matrices opposite the mould, justifying mechanism for varying the width of the mould provided with controllable devices for effecting its adjustment, for re-setting it, and for causing it to operate upon the mould, a metal injecting apparatus furnished with a controllable stop for arresting the flow of metal to the mould, and a pneumatic system governed by the perforated strip and including the controllable members of the matrix mechanism, of the justifying mechanism and of the injecting mechanism. 18th. In a machine for making justified lines of type adapted to be controlled by a single strip perforated at intervals to represent the individual types comprising the line, the degree of variation to be effected in width of some or all of the types, the stopping of the flow of molten metal, the re-settting of the justifying mechanism and the transfer of the completed line to the galley, the combination with said controlling strip of the mould, the movable series of matrices, the justifying mechanism, the metal injecting mechanism, a galley mechanism, and the pneumatic system governed by said strip and actuating the controllable members of the matrix shifting mechanism, of the justifying mechanism, of the metal injecting mechanism, and of the galley mechanism. 19th. A die case provided with an open frame and a series of independent die or matrix blocks suspended upon transverse rods, the latter supported at the ends in said frame, substantially as described. 20th. A die case, comprising an open frame, a series of die or matrix blocks arranged in parallel lines within said frame, each line of blocks supported upon a rod extending transversely through all the blocks in the line and attached at its ends to the side bars of the frame, substantially as described. 21st. A die case for use in a machine such as described, the same including an open frame, a series of die or matrix blocks each provided with a transverse perforation, a matrix cavity or die case at one end, and a conical or tapering centering recess at the opposite end, said blocks being supported in lines upon parallel rods whose opposite ends are held in bearings in the side bars of the frame. 22nd. In a machine such as described, the combination with the supporting plate sustained upon elastic supports permitting vertical movement, of the supporting frame mounted to reciprocate horizontally upon said supporting plate, and the die case carried by said supporting frame and capable of reciprocating horizontally thereon in a direction transverse to the line of movement of said supporting frame upon the supporting plate. 23rd. The combination of the die case mounted to reciprocate in transverse lines and provided with a series of independent matrix blocks each furnished with a conical centering aperture, yielding supports for said die case permitting movement of the latter in a direction transverse to its first named reciprocating motions, and a plunger provided with a tapering pin adapted to enter the conical aperture of the die block when brought opposite thereto, and, by its forward motion, to first center the die block, and then advance the die case, substantially as and for the purpose set forth. 24th. The combination with the die case, the supporting frame, the supporting plate and the plunger, of the means for guiding and sustaining the supporting plate and actuating the plunger, to center the die or matrix blocks and reciprocate the die case and its supports, the same comprising rods attached to the supporting plate, the yoke connecting said rods, the springs for retracting and holding the supporting plate and its attachments, the two collars on the plunger, the loose sleeve and spring interposed between said collars, and the actuating lever engaging the sleeve. 25th. In combination with the horizontally reciprocating and vertically movable die case provided with a series of independent matrix or die blocks, the vertically reciprocating plunger provided with a centreing device for engaging and centreing the matrix blocks, yielding supports, such as springs, for upholding the die case so that the plunger will operate to first centre the matrix block and then depress the die case. 26th. In a type making mechanism, the combination of a stationary mould, a die case provided with a series of independent matrix blocks and supported to reciprocate in a plane substantially at right angles to the axis of the mould, and to move bodily towards and from the mould, yielding devices for holding the die case normally removed from the mould, a centreing plunger reciprocating towards and from the mould and engaging the interposed matrix block, to first centre it and then advance the die case towards the mould and hold the centered matrix block tightly against the end of the mould, devices for actuating the die case to locate the matrix blocks in line with the plunger and actuating devices for the plunger. 27th. In a type making mechanism, the combination of the mould, the movable die case provided with a series of independent matrix blocks, actuating devices for shifting the die case to bring any one of the matrix blocks in line with the mould, a recipro cating plunger provided with a centreing device for centreing the matrix block, advancing the die case towards the mould, and seating the centered matrix block against the mould, and actuating mechanism for the plunger furnished with a yielding device serving to maintain the matrix block in position on the mould under elastic pressure, and permitting it to yield in case an obstacle is encountered. 28th. As a means for locating or positioning any one of a series of dies or matrices opposite a centreing point or station, the combination of a die case or carrier supported to reciprocate across the centreing point and provided with dies or matrices arranged serially in the direction of the motion of the die case, a driving member, such for example as a lever, to which a reciprocating motion of uniform extent is imparted, a yielding connection between said reciprocating driving member and the die case such as will permit the latter to be arrested while the driving member continues in motion, and a series of controllable stops located in proximity in the path traversed by the die case or some part connected and moving in unison therewith, said stops being spaced to correspond with the serial spacing of the dies or matrices, so that when any one of said stops is projected into the path of the die case or a part connected therewith, it will serve to arrest the motion of the die case with the corresponding die or matrix at the centreing point. 29th. The combination of a die case supported to reciprocate transversely of or across the centreing point or station, and provided with a plurality of dies or matrices serially arranged in the direction of the reciprocating movements of the die case, a driving member or lever to which a uniform degree of motion is imparted, a yielding connection between said driving member and the die case, causing the two to normally reciprocate in unison but permitting the die case to be arrested while the driving member continues in motion, and a plurality of stops, each adapted to be projected into the path traversed by a part connected to and reciprocating in unison with the die case, said stops being spaced to correspond with the serial spacing of the matrices or dies and operating to arrest the die case with corresponding die or matrix at the centreing point. 30th. In combination with the reciprocating die case, its reciprocating driving member or lever, and the interposed yielding connection through which the motion of the driver is communicated to the die case, a pawl mounted to reciprocate in unison with the die case, a fixed series of teeth with which said pawl is adapted to co-operate and a series of controllable stop pins adapted to be separately projected into the path traversed by the pawl, and by engaging the latter, to throw the pawl into engagement with the teeth and thus arrest the die case. 31st. The combination with the reciprocating die case, the slide connected thereto, the reciprocating driving member or lever having a uniform excursion, and a yielding connection between said driving member and the slide, of the two armed pawls carried by said slide, the ratchet plates, and the stop pins for operating upon the pawls to cause their engagement with the ratchet plates and thereby arrest the movement of the die case at any of the different points in its travels determined by the position of the stop pin employed for the purpose. 32nd. The combination of a die case mounted to reciprocate and provided with a plurality of dies or matrices, and two independent actuating mechanisms operating in intersecting planes on the die case, to control its position, each of said actuating mechanisms comprising a driving member, an intermediate yielding connection, a pawl or pawls reciprocating in unison with the die case, ratchet teeth, and a series of controllable stop pins for causing the engagement of the pawl or pawls with the ratchet teeth, to arrest the die case at different points in its movement. 33rd. The comcombination in a type making mechanism such as described, of the following elements, to wit: a stationary mould, a die case provided with a plurality of dies or matrices and supported to reciprocate across the end of the mould, two actuating mechanisms controlling the movements of the die case in intersecting planes, each of said mechanism including a driving member, a yielding connection, pawls, ratchet teeth, and controllable stop pins, and a centering plunger operating to centre the selected die or matrix opposite the mould, and press and hold it in contact with the latter while the type is being formed. 34th. The combination in a type making mechanism such as described, of the following elements, to wit: a stationary mould, metal injecting mechanism, a die case provided with independent matrix blocks arranged serially on intersecting lines, said die case being mounted to reciprocate transversely of and across the end of the mould, two actuating mechanisms for controlling the position of the die case, acting on intersecting lines and each provided with a reciprocating pawl or pawls, fixed ratchet teeth, and controllable stop pins, and a plunger provided with a centering device for engaging the selected matrix block and bring it into contact with the mould preliminary to the injection of the metal therein. 35th. In a type forming mechanism the combination of the following elements, to wit: a stationary mould, a centering plunger in line with and opposite one end of said mould, a die case arranged to reciprocate between the plunger and mould in a plane at right angles to the axis of the mould and plunger, said die case being provided with a series of independent matrices, two actuating mechanisms operating at right angles to control the movements and position of the die case, each of said mechanisms comprising a driving member having a uniform degree of motion, a yielding connection, reciprocating pawls, stationary ratchet teeth and controllable stoppings, and mechanisms for actuating the plunger, to centre the selected matrix and hold it in contact with the mould. 36th. In a type making mechanism such as described, the combination of the following parts, to wit: the stationary mould, the die case and its supports including the supporting frame and the supporting plate, and two die case actuating mechanisms, the one connected to the

die case and the other to the supporting frame, and each including a driving lever operated from a cam on the main shaft, a slide attached to the driving lever through an intermediate flexible connection, pawls mounted upon the slide, stationary ratchet teeth, and controllable stop pins for throwing the pawls into engagement with the ratchet teeth. 37th. In a die case operating mechanism such as described the combination with a reciprocating driver, a die case mounted to reciprocate, and an interposed yielding connection through which motion is transmitted from the driver to the die case, of a series of ratchet teeth, a series of stop pins, and a pawl connected to and reciprocating in unison with the die case, said pawl being arranged to be engaged by the stop pins when projected into its path and to engage the ratchet teeth corresponding to the stop pin, to arrest the movement of the die case, the angle of the engaging faces of the ratchet teeth and pawl being such as to slightly augment the throw of the pawl as produced by contact with a stop pin, whereby the shock is transferred to and borne by the ratched, and the pawl is swung from contact with the stop pin. 38th. The combination with the reciprocating driving member or lever, the slide, and the yielding connection between the driver and slide, of a series of stationary ratchet teeth, a pawl pivoted on said slide in position to engage the ratchet teeth but held normally from contact therewith, a series of stop pins each adapted to be projected into the path traversed by the pawl, and, by engaging the latter, to throw it into contact with one of the ratchet teeth, and pneumatic operating devices for controlling the positions of the stop pins. 39th. In a type forming mechanism, the combination with the mould, of the supporting plate and plunger carried by a detachable block or section of the frame, and the die case and its supporting frame, each detachably connected to its actuating mechanism. 40th. In a machine such as described, the combination of the suspended supporting plate, the supporting frame guided to reciprocate longitudinally of the supporting plate and connected by a link to its controlling slide, the die case mounted to reciprocate on the supporting frame in a direction cross wise of the supporting plate, and connected by a link to a rod on its controlling slide, said rod permitting independent movement of the die case with the supporting frame in a direction at right angles to that of the die case controlling slide. 41st. In a machine such as described, the combination with the reciprocating driving member, the die case and the yielding connection, of the slide carrying two pawls standing in opposite directions, two series of ratchet teeth, one for each pawl, and a series of stop pins for throwing either pawl into engagement with the corresponding ratchet teeth, said stop pins being arranged serially and alternately on opposite sides of the slide, so that successive stop pins will engage alternately opposite pawls. 42nd. A mould adapted for use in conjunction with detachable matrices, provided with fixed side walls 80 81, an adjustable mould blade 96 movable between the side walls, and a removable front wall 83. 43rd. In a mould adapted for use in connection with a removable matrix, the combination of the fixed side walls, the adjustable mould blade and the movable wall 83 carried by a slide containing the jet opening or recess. 44th. The combination in a mould such as described, and with the fixed blocks constituting the side walls of the mould cavity and the adjustable mould blade, of the movable front wall attached to a slide, the latter provided with a portion extending beneath the fixed blocks and containing the jet passage or opening. 45th. The combination in a mould such as described and with the fixed blocks forming the side walls and the adjustable mould blade, the reciprocating slide carrying the front wall of the mould and provided with a transverse groove or recess extending beneath the fixed blocks, the jet blade located in said groove or recess, and the fixed cam engaging said jet blade to expell the jet after the type has been formed and as the slide is moved to open the mould. 46th. In a type forming mechanism such as described, the combination of the following elements, to wit:—a movable series of matrices, with devices for bringing any one to the casting point, a stationary mould, a movable jet slide, and a reciprocating nozzle through which molten metal is projected through the jet passage into the mould, said jet slide being moved at the completion of the casting operation and before the withdrawal of the nozzle, to cut off or separate the jet from the type and cover the nozzle seat. 47th. In a type forming mechanism such as described, the combination of the following elements, to wit:—a movable series of matrices, with means for centreing any one at the casting point in contact with the mould, a stationary mould, a jet slide traversing beneath the mould and provided with a jet blade, a nozzle seat, a movable nozzle, with means for ejecting molten metal through the passage into the mould, and actuating devices controlling the movements of the nozzle and jet slide so that after the metal has been injected into the mould and while the nozzle is on its seat, the jet slide will be moved to sever the jet from the type and cover the nozzle seat. 48th. In a type forming mechanism such as described, the combination of the following elements, to wit:—a movable series of matrices, a stationary mould provided with fixed side walls, an adjustable mould blade and a movable front wall, a jet slide provided with a jet ejecting blade, a nozzle seat below the jet slide, and a metal injecting apparatus provided with a nozzle movable towards and from its seat, said jet slide being operated to cut off the jet while the nozzle remains seated substantially as described. 49th. In a type forming mechanism, the combination with the mould, the nozzle of the metal injecting apparatus, and the nozzle seat, of a movable jet slide interposed between the nozzle seat and mould, and moved to sever the jet while the nozzle remains in position and before or simultaneously with its withdrawal from its seat. 50th. In a type forming mechanism, the combination of the following elements, to wit:—a movable series of matrices provided with devices for locating and centreing any matrix of the series at the casting point, a stationary mould composed of fixed side walls, an adjustable and movable mould blade for determining the width of the mould cavity and ejecting the type therefrom, and a movable front wall for uncovering the front of the mould cavity and permitting the escape of the type therefrom, a nozzle seat, a reciprocating nozzle with means for ejecting molten metal therefrom, a jet slide intermediate the nozzle seat and mould, and a jet blade carried by the jet slide and operating to eject the jet therefrom after it has been severed from the type. 51st. In a type forming mechanism such as described and in combination with the mould provided with an adjustable section or mould blade for varying the width of the mould cavity, of actuating devices for reciprocating the mould blade and automatically operated stop mechanism for arresting the movement of the mould blade intermediate the extremes of movement of the actuating devices. 52nd. In a type forming mechanism such as described, the combination with the mould provided with a movable mould blade, of actuating devices for reciprocating the mould blade to discharge the type from the mould, and automatically adjustable controlling mechanism for arresting the mould blade during its retrograde movement after ejecting the type, to set the mould for the next succeeding type. 53rd. In a type forming mechanism, such as described, the combination of the following elements, to wit, a movable series of matrices with mechanism for locating any matrix at the casting point, a mould provided with an adjustable mould blade, actuating devices for reciprocating said mould blade and controlling devices for arresting the movement of the mould blade and thereby determine its position in the mould. 54th. In a type forming mechanism such as described the combination of the following elements, to wit, a movable series of matrices, a mould operating in conjunction with any one of said matrices and provided with an adjustable section or mould blade for varying the width of the mould cavity and ejecting the type therefrom, and a movable section for opening the mould so as to permit the escape of the type, actuating devices operating to reciprocate the mould blade, and controlling devices for limiting the movement of the mould blade as it is retracted after discharging a type, to adjust its position and the width of the mould cavity preliminary to the formation of the next succeeding type. 55th. In a type forming mechanism such as described, as a mean for adjusting the position of the mould blade in the mould, the combination with said mould blade, of the slide, the actuating lever deriving motion from the main driving shaft, the stop rod, and the normal wedge operating to vary the position of the stop rod, and, through the latter, to arrest the mould blade in adjusted position. 56th. In a type forming mechanism such as described, the combination of the following elements, to wit, a series of movable matrices with mechanism for centering any one of said matrices opposite the mould, a mould provided with a movable mould blade for varying the width of the mould cavity, actuating devices for reciprocating the mould blade, a stop rod controlled by a wedge for limiting the movement of the mould blade in one direction, and connections between the wedge and the mechanism for centering the matrices, for shifting the wedge to correspond with the selected matrix. 57th. In a type forming mechanism such as described, the combination of the die case provided with matrices graded serially according to width, controllable actuating devices for shifting the die case, a mould furnished with an adjustable mould blade and a movable member or wall opposite thereto, actuating devices for reciprocating the mould blade, to discharge the type, a stop pin for arresting the mould blade during its return motion, to adjust the width of the mould cavity, a normal wedge controlling the position of said stop, and connections for shifting said normal wedge in unison with the die case. 58th. In a type forming mechanism such as described, the combination with the die case, the mould, the actuating mechanism for reciprocating the die case in one direction, and the stop for limiting the motion of the mould blade, of the normal wedge connected to reciprocate in unison with the slide carrying the pawls, and governed, as to position, by the same stop pins which serve to govern the position of the die case. 59th. The combination with the pawl carrying slide of the die case actuating mechanism and the normal wedge of the mould blade controlling mechanism, of the connecting lever and the driving lever provided with a rod the latter bearing a spring and a pin or shoulder between which the connecting lever is received thus forming a yielding connection which will permit the wedge and slide to be arrested while the driving lever continues in motion. 60th. The combination with the die case actuating mechanism and the normal wedge for controlling the mould blade, of the connecting lever and the micrometer adjusting device for varying the position of the wedge with relation to the die case controlling devices. 61st. In a type forming mechanism such as described, the combination of the following elements, to wit, the die case and its actuating mechanisms for controlling its movements in two directions, the mould provided with a movable mould blade, mould blade actuating and controlling mechanisms including the normal wedge, the latter connected to one of the die case actuating mechanisms and moving in unison with the die case, to vary the width of the mould, and a justifying mechanism operating to shift the position of the normal

wedge laterally, to vary its effect upon the mould blade. 62nd. In a mechanism for forming justified lines of types such as described the combination of the following elements, to wit, a die case controlled, as to its movements for bringing any die or matrix to the centre point, by two actuating mechanisms operating relatively in transverse directions, said actuating mechanism each deriving motion from reciprocating drivers or levers having a uniform range of motion and provided with a yielding connection and controllable stops for arresting the motion of the die case, a mould located at the centreing point for the die case and provided with a mould blade for varying the width of the mould, controlling mechanism, including the normal wedge, for adjusting the position of the mould blade to correspond with the width of the selected or centred matrix, and a justifying mechanism acting through the normal wedge to vary the adjustment of the mould blade. 63rd. In a machine for forming justified lines of types, the combination of the following elements, to wit, the die case, the mould with movable mould blade, the normal wedge reciprocating in unison with the die case and controlling the position of the mould blade, and a justifying mechanism operating to vary the position of the mould blade said justifying mechanism receiving its movement of adjustment from the controllable actuating mechanism of the die case through a controllable member, and acting upon the mould blade only when connected to a driver through a controllable member, whereby the actuating mechanism of the die case is utilized to set the justifying mechanism, and the latter can be rendered operative upon the mould blade during the formation of any of the types which are to form the line. 64th. In a type forming machine such as described, the combination of the following elements, to wit, the die case and its two actuating mechanisms each furnished with a series of controllable stops for limiting the movements of the die case, the mould provided with a movable mould blade, the normal wedge for adjusting the mould blade, said wedge receiving motion from one of the die case actuating mechanisms and having its position determined by the controllable stop pins thereof, a justifying mechanism, furnished with an adjustable member, connections between the other die case actuating mechanism and the adjustable member of the justifying mechanism, including a controllable member, whereby the movements of the die case actuating mechanism as affected by its controllable stops may be utilized to set the adjustable member of the justifying mechanism, a reciprocating driver for actuating the justifying mechanism, to render it operative upon the mould blade, and a controllable connecting member for said driver. 65th. In a justifying mechanism for varying the position of the mould blade, the combination with the pivoted frame with which the mould blade adjusting devices are connected, of the driving slide reciprocated in said frame, the adjustable head carrying the compound slide, and the controllable pin for connecting the compound slide to the driving slide for transmitting motion to the pivoted frame and through the latter to the mould blade. 66th. In a justifying mechanism for controlling the position of the mould blade, the combination with the pivoted frame to which the mould blade controlling devices are connected, of the reciprocating driving slide, the pivoted adjustable head or member, the compound slide engaying the said adjustable head and pivoted frame, and the controllable pin for connecting the compound slide with the driving slide. 67th. In a justifying mechanism for determining the width of the mould, the combination of the pivoted frame, the pivoted adjustable head, the compound slide engaging the said frame and head, the driving slide mounted upon the pivoted frame, the controllable pin carried by the compound slide for engaging the driving slide, and the latch for retaining the pin in position. 68th. In a justifying mechanism for type making machine the combination of the normal wedge and its supporting frame, the pivoted frame connected to the normally wedge frame and controlling its position and that of the mould blade, the adjustable pivoted controlling member or head, the compound slide composed of two sections pivoted together, the one riding in ways in the adjustable controlling head and the other in ways in the pivoted frame, the driving slide reciprocating upon the pivoted frame, the controllable pin carried by the compound slide and adapted to engage the driving slide, and a latch carried by the driving slide for engaging the pin, to retain it temporarily in position. 69th. In a machine for forming justified lines of types, the combination of the following elements, to wit, a type mould provided with an adjustable mould blade, controlling devices, including the normal wedge, for adjusting the mould blade, a frame normally parallel with the normal wedge, pivoted at one end and connected to the movable support of the normal wedge, a driving slide mounted to reciprocate longitudinally of the pivoted frame, an adjustable head or guide pivotally supported beneath the pivoted frame, with its axis parallel with that of said frame, a compound slide whose sections are pivotally connected, the one riding in ways in the pivoted frame and the other in the adjustable head, a pin carried by said compound slide and adapted to enter an orifice or seat in the driving slide, and a latch carried by the driving slide for engaging the pin, said latch being operated by an obstruction on the pivoted frame, to disengage said pin at the completion of the stroke of the driving slide so as to disconnect the compound slide from its driver. 70th. In a type forming machine such as described, the combination with the adjustable head or member of the justifying mechanism which determines the variation in width of the type formed in the mould, of a driver, controlled as to the extent of its movement, by the stop pins of the die case actuating mechanism, and, as to the time or occasion of its operative connection with the devices for transmitting motion to said adjustable member, by a separate controllable member, whereby the movements of the die case actuating mechanism are utilized to determine the extent of the adjustment while the time when the adjustments to be affected is separately controlled. 71st. In a machine for forming justified lines of types, the combination substantially as described of the following elements, to wit, the die case and actuating mechanism therefor, the mould provided with an adjustable mould blade, the adjustable head or member of the justifying mechanism by means of which the degree of variation in the position of the mould blade is effected or controlled, operating devices, including a ratchet wheel for shifting the position of said adjustable head or member, a driving pawl connected to reciprocate with the die case actuating mechanism and held normally from contact with the ratchet wheel, and controllable means for throwing the pawl temporarily into engagement with the ratchet wheel. 72nd. In a justifying mechanism for type forming machines, the combination of the following elements, to wit, an adjustable head or member for controlling the degree of adjustment given the mould, a ratchet wheel operating through suitable transmitting devices upon said adjustable head or member, a reciprocating pawl held normally from engagement with the ratchet wheel and connected to controllable means for effecting engagement therewith, a holding pawl for maintaining the ratchet wheel in adjusted position, a returning spring and stop, and controllable means for withdrawing the holding pawl and permitting the return of the ratchet wheel to its initial position. 73rd. In a type forming mechanism such as described, the combination of the following elements, to wit, the reciprocating slide carrying a pawl in position to engage fixed ratchet teeth and controlled as to extent of motion by controllable stop pins, a rack connected to and moving with said slide, a gear segment engaged by the rack, pivoted on a shaft, and carrying a pawl, the latter held normally retracted and provided with controllable means for throwing it into operative relation to the part to be driven thereby, a ratchet wheel, worm and returning spring attached to the shaft upon which the said gear segment is pivoted, the holding pawl provided with controllable means for detaching it from the ratchet wheel, to permit the return of the latter under the influence of the spring, and the adjustable head or member, for controlling the degree of variation in the width of the mould, provided with a worm segment engaging the worm. 74th. In a justifying mechanism for type forming machines, such as described, the combination of the following elements, to wit, a mould provided with an adjustable section or mould blade, an adjustable head or member connected immediately to the mould blade, a controllable device for rendering the adjustable head operative upon the mould blade, to effect the prescribed adjustment of the latter, a ratchet wheel connected, through suitable transmitting devices, to the adjustable head, a driving pawl held normally from engagement with the ratchet wheel and provided with controllable means for throwing it into engagement with the ratchet wheel, a holding pawl for the ratchet wheel provided with controllable means for effecting its withdrawal or disconnection from said wheel and an actuating mechanism governing the reciprocations of the driving pawl, provided with controllable stops for determining the length of the reciprocating movements of the said pawl. 75th. In a justifying mechanism such as described the combination with the adjustable head for varying the width of the mould cavity, the pivoted frame, and the compound slide, of the reciprocating driving slide, and the controllable connecting pin, provided with a piston and cylinder, the whole carried by the compound slide in position to engage the driving slide. 76th. In a justifying mechanism such as described the combination with the ratchet wheel to and actuating the adjustable member which determins the variation in width of the mould, of the pawl mounted upon a reciprocating support, devices for controlling the extent of movement of the pawl support, and a piston and cylinder carried by said pawl support and controlling the application of the pawl to the ratchet wheel. 77th. In a justifying mechanism such as described, the combination of the adjustable head or member for controlling the extent of variation in width of the mould, a controllable member operated by a piston and cylinder for operatively connecting the movable section of the mould to said adjustable head or member, adjusting devices for said adjustable head or member provided with a piston and cylinder for controlling the connection between the transmitting and driving members thereof, and a piston and cylinder controlling the release and re-setting devices, substantially as described, whereby fluid pressure may be employed to operate the said pistons and control the setting and re-setting of the adjustable member, and the times of its application to the mould. 78th. In a type forming machine the combination substantially as described, of the mould, the fixed noxzle seat, and the reciprocating nozzle, pump and metal pot, the latter supported upon trunnions or pivots movable towards and from the nozzle seat, to compensate for expansion and contraction. 79th. In a type forming mechanism the combination substantially as described of the mould, the stationary nozzle seat, the reciprocating jet slide and a metal injecting apparatus containing nozzle, pump and melting pot pivotally supported and reciprocating in movable bearings, whereby the injecting apparatus is automatically adjusted by the engagement of its nozzle with its seat. 80th. In a type casting mechanism the combination substantially as described of the mould, the stationary conical nozzle seat, and the self adjusting and reciprocating nozzle, pump and melting pot. 81st. In a type casting mechanism the com-

bination substantially as described, of the horizontally adjustable casing, the melting pot and nozzle pivotally supported on said casing to reciprocate vertically in movable bearings, and centering or adjusting devices engaging the nozzle as it is vibrated to position and operating thereon to shift the bearing, to compensate for expansion and contraction and insure the seating of the nozzle. 82nd. In a type casting mechanism the combination substantially as described of the melting pot pivotally supported on movable bearings, the fixed conical nozzle seat, and the mechanism for oscillating the melting pot on its pivots, said mechanism being connected to the melting pot at a point remote from its pivots and comprising the link, bell crank lever and cam actuated rod provided with a compression device. 83rd. In a type casting mechanism the combination substantially as described of the mould, a reciprocating melting and injecting apparatus composed of a pivotally supported melting pot, pump and injecting nozzle, a nozzle seat, and mechanism operating the piston of the pump provided with a driving and driven members or levers, a connecting pin borne by a slide, actuating mechanism provided with a compression device for reciprocating said slide, to alternately connect and disconnect the driving and driven members, and a controllable stop for arresting the movement of the slide when it is desired to suspend the action of the pump. 84th. In a type casting mechanism, the combinaton, substantially as described, for controlling the action of the pump, of a pump lock located in the line of communication between the driving shaft and the piston, and comprising the following elements, to wit:—a driving and a driven member provided with coincident apertures, a slide carrying a pin and reciprocating in a direction to enter said apertures, to lock the driving and driven members and cause them to move in unison, actuating devices provided with a yielding member for reciprocating the slide, and a controllable pin arranged to be projected into the path of and arrest the movement of the slide and thus prevent the locking pin from connecting the driving and driven members. 85th. The combination to form a pump lock such as described, of the driving and driven levers arranged in juxtaposition and provided with coincident apertures, the pin riding in the driven lever and adapted to enter the driving lever, to lock the two levers together and cause them to move in unison, the slide supporting the stem of the locking pin, the compression link and actuating devices for reciprocating the slide, and the stop pin arranged in position to be projected into the path of the slide, to arrest the latter and prevent the engagement of the locking pin with the driving lever, said stop pin being provided with a piston and cylinder. 86th. In a metal injecting apparatus for type casting and similar machines, the combination with the melting pot provided with an arm or channel for the metal and terminating at its outer end in a nozzle, of the detachable pump cylinder located within the melting pot and provided with an arm connected to the wall of the pot and containing a passage communicating with that in the arm of the pot. 87th. The combination with the pump actuating mechanism, including the driving and driven members, and the slide carrying the locking pin, of a plurality of independent stop pins, each arranged to engage said slide and thereby suspend the action of the pump. 88th. In a machine for forming and setting up justified lines of types, the combination, substantially as described, of the mould, the reciprocating type carrier receiving the type from the mould, the line channel into which successive type are delivered by the type carrier, said line channel being provided with type sustaining devices, a vertically movable rule or blade, and a laterally movable wall or head, a galley opposite the said movable wall or head, and a line carrier operating longitudinally of the line channel to transfer the completed line opposite the movable head or wall in position to be transferred by the latter to the galley. 89th. In a machine for forming and setting up justified lines of types, the combination, substantially as described, of the mould with its adjustable mould blade and movable section, the type carrier reciprocating in the plane of the movable section of the mould and furnished with a type receiving channel and sustaining dog, a line channel, and an ejector operating on the type in the carrier to transfer it into the line channel. 90th. In a machine for producing and setting up justified lines of type, the combination of the die case, the mould provided with a movable front section and an opposite adjustable and reciprocating mould blade, the latter operating to adjust the width of the mould when casting and to discharge the type when completed, the type carrier reciprocating across the front of the mould in line with the movable front section thereof, and provided with a transverse type channel containing a yielding type support, a line channel furnished with type supports, and an ejector arranged opposite the entering end of the line channel and reciprocating through the type carrier to discharge the type therefrom and transfer it to the line channel. 91st. In a machine for forming and setting up lines of types, the combination of the mould provided with a movable wall or section and an opposite mould blade adjustable to vary the width of the mould and reciprocating to eject the finished type from the mould, a type carrier reciprocating in the same path as the movable section of the mould and provided with a type channel, a line channel, and a pusher or ejector operating through the channel of the type carrier to force the type into the line channel. 92nd. In a strip feeding mechanism such as described, the combination with the pin wheels and actuating devices therefor controlled by a reciprocating member or lever, of opposing surfaces between which the strip is conducted, one of said surfaces being movable to clamp the strip and receiving motion immediately from the reciprocating member or lever which actuates the pin wheels. 93rd. In a strip feeding mechanism such as described, the combination with the pin wheels and actuating devices therefor receiving motion from a vibrating lever, of the fixed and movable clamping members or surfaces between which the strip is fed by the pin wheels, a rock shaft connected to the feed controlling lever and provided with devices, including a yielding connection, for reciprocating the movable member of the clamp. 94th. In a strip feeding mechanism such as described the combination with the pin wheels and actuating devices therefor receiving motion from a vibrating lever, of the fixed and movable clamping members or surfaces between which the strip is fed by the pin wheels, a rock shaft connected to the feed controlling lever and provided with devices, including a yielding connection, for reciprocating the movable member of the clamp. 95th. The combination in a strip feeding mechanism such as described of the two pin wheels, the strip supporting bar, actuating devices, including a driving lever and a yielding connection, for the pin wheels, the movable clamping bar, and the rock shaft connected to the driving lever of the pin wheels and transmitting motion to the clamping bar through connections including a yielding member. 96th. The combination substantially as described of the strip feeding devices, the strip clamping devices including the supporting bar furnished with a series of ports and the movable clamping bar furnished with a corresponding series of ports communicating with a pressure supply, a pressure controlling valve, and actuating devices for the feeding and clamping mechanism, and the valve, the same including the driving lever connected to the feed actuating devices, and a connection intermediate the latter and the valve. 97th. The combination substantially as described of the pin wheels and their actuating devices, the cross bar located between the pin wheels and provided with a series of ports, the reciprocating clamping bar or cross head provided with a feeding channel and a series of ports, the valve governing the admission of fluid to the feeding channel, the driving lever connected through a yielding link to the pin wheel actuating devices, and a rock shaft receiving motion from said driving lever and provided with cams for operating the clamping bar, and an arm for operating the valve. 98th. The combination substantially as described of the stationary cross bar with its series of ports, the reciprocating cross head furnished with a corresponding series of ports and a supply chamber or passage, the valve carried by said cross head, the rock shaft provided with an arm for engaging the valve and two cams, and the bar engaged by said cams and connected to the cross head by bolts and springs.

No. 67,990. Back Band Hook. *(Crochet pour avaloirs.)*

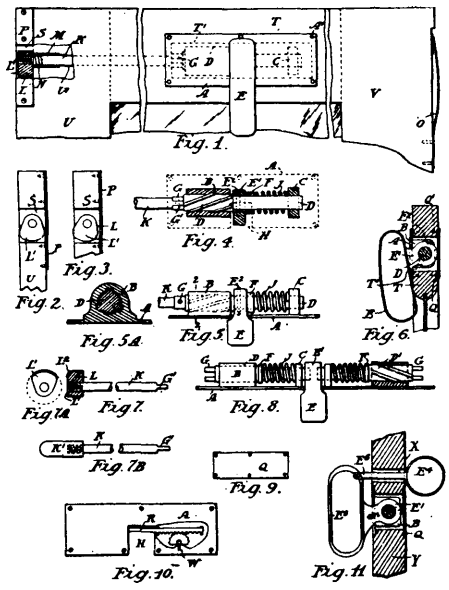


Seth Ward. Princeton, Indiana, U.S.A., 5th July, 1900; 6 years. (Filed 21st June, 1900.)

Claim.—A back band hook comprising a continuous concavo-convex body adapted to have its open side or cavity next to the back band, and provided with approximately parallel side flanges having straight edges resting flat against the neck band and lying in the plane of the attaching portion of the body, said body being

further provided with oppositely located retaining shoulders disposed at substantially right angles to the said straight edges of the flanges, and with an inturned hook point extended from its lower end between said shoulders, said hook point being adapted to lie against the back band and having its terminal lying above the plane of said straight edges and projecting within the cavity of the body to a point beyond the plane of the retaining shoulders, substantially as set forth.

No. 67,991. Window Fastening for Railway Cars, Etc. (*Arrête-fenêtre de chars de chemin de fer.*)

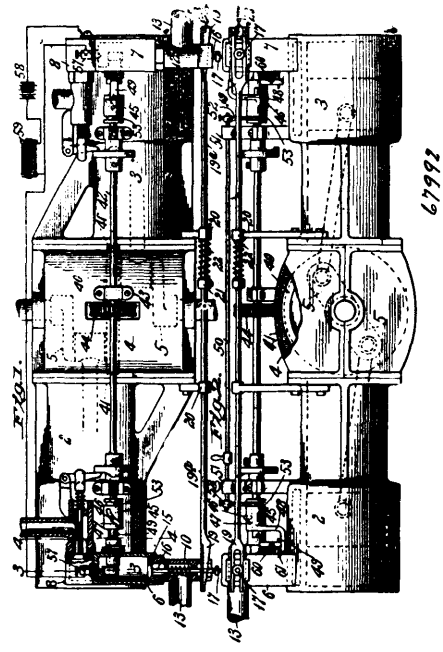


67991

George Croker Smith, 57 Odessa Street, St. Kilda, Victoria, Australia, 5th July, 1900 ; 6 years. (Filed 22nd June, 1900.)

Claim.—1st. In combination, a segmental gripper as L, a shaft on which said gripper is mounted as K, a screw-threaded shaft as D and corresponding bearing for the screw to work in, means for operating the shafts so as to partly revolve and allow them the forward and backward movement, and a pressure spring, the whole being mounted upon suitable lugged plate as A, substantially as and for the purposes set forth. 2nd. In combination, a slotted metal plate as A, upon which are mounted bearings as B and C, a multiple screw shaft as D, a handle as E, a slot in the plate A as H, means for securing the handle to the shaft D, substantially as and for the purposes set forth. 3rd. In combination, a shaft as K, bearing as M, expansion spring as N, and a segmental gripper as L, a chamber as S in which L is arranged to work mounted upon said shaft K, means for securing K to operating mechanism, substantially as and for the purposes set forth. 4th. In combination two shafts as D, D^1, placed in line, bearings as B B and C C, springs as J J, operating handle as E, a shank E^1, arranged to operate said shafts, substantially as and for the purposes set forth. 5th. In combination, a window sash having a chamber as S cut therein to permit a segmental grip as L to work in spring as N, bearing as M, and shaft as K, substantially as and for the purposes set forth. 6th. In combination, shafts as D having at one end thereof a male screw thread engaging with female screw thread bearing as B and being cylindrical and smooth and revolving in a plain parallel bearing as C at the other end, means for operating such shaft so as to cause it to partly revolve, and spring as J, the whole forming an actuating mechanism for securing or releasing the gripping or locking appliance, substantially as and for the purposes set forth. 7th. In combination, shaft as D, one end of which carries means for forming an articulation with another shaft as K, a multiple screw-thread mounted upon one portion of said shaft as D, and corresponding multiple female screw bearing as B, a slotted metal plate as A, carrying the screw bearing B, and a smooth parallel bearing as C, means for moving D backward and forward in its respective bearings, a gripper or locking shaft as K provided with a gripping device at its end, substantially as and for the purposes set forth. 8th. In combination, a slotted plate as A, an operating shank as E^1, shaft as D and locking bar as R, and means for operating the said bar R, so as to block the movement of the shank E^1, substantially as and for the purposes set forth. 9th. In combination, an exterior handle E^4, shank E^5 operating through a slot as X, interior handle E^3, shank E^1, and shaft as D and its bearings, the whole arranged to actuate a shaft as K upon or to which a gripping device is attached, substantially as and for the purposes set forth. 10th. In combination, a frame as T, having at one side a pressure plate O, and upon the other side a gripper operated by shafts as K and D, means for rotating or partially rotating said shafts so as to cause a counter pressure between said plate O and the gripper and thus cause the frame to be firmly held in position, substantially as and for the purposes set forth.

No. 67,992. Sparkling Device for Explosive Engines
(*Appareil à étincelle pour machines explosives.*)



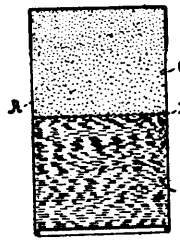
67992

The Duryea Motor Wagon Company, assignee of James Frank Duryea, all of Springfield, Massachusetts, U.S.A., 5th July, 1900 ; 6 years. (Filed 30th May, 1899.)

Claim.—1st. The combination with the inlet valves of an explosion engine, valve stems thereon, and an adjustable nut on said valve stems, of a wedge having a sliding movement transverse to said valve stems, whereby the operative movements of said valves are arrested by the contact of said nut with said wedge, a plunger rod and suitable support therefor, a spring for moving said rod in one direction, a pawl and ratchet device for holding said rod in a fixed position relative to its support, and a connection extending from one end of said plunger rod to one end of said wedge, substantially as described. 2nd. The combination with the inlet valves of a multiple cylinder explosive engine, valve stems on said valves, and an adjustable nut on said valve stems, of a movable member extending between said valves, wedges on said movable member whereby, by the contacts of the nuts on the stems of said valves with said wedges, each inlet valve of said cylinders is permitted to have the same range of operative movement, a plunger rod and suitable support therefor, a spring for moving said rod in one direction, a pawl and ratchet device for holding said rod in a fixed position relative to its support, and a connection extending from one end of said plunger rod to one end of said wedge, substantially as described. 3rd. The combination with the inlet valves of an explosive engine having oppositely located cylinders, valve stems on said valves, and an adjustable nut on said valve stems, of a suitably supported rod extending between the valves on said cylinders, wedges on said rod located under the nut on said valve stems, said rod having a sliding movement transverse to the line of movement of said valve stems, whereby the said adjustable nuts may, by coming in contact with said wedges, arrest the movements of said valves, means outside of the engine for moving said wedge bearing rod independently of the movement of any other part of the engine, in one direction, and a spring on said rod for moving it in the opposite direction, substantially as described. 4th. In a sparking device for explosive engines, a rock shaft, one end of which lies within, and the other outside of, the explosion chamber of said engine, an arm on each end of said shaft, means for oscillating the latter, consisting of a hub secured on the end of a rotatable shaft whose axis is out of coincidence with said rock shaft, an arm on said hub having a longer radius than the arm on the outer end of said rock shaft and engaging the latter, a bearing on said arm of said hub whereon the end of said rock shaft arm rests during a part of the revolution of said hub and after said arm on the inner end of said rock shaft has been moved to complete an electric circuit whose terminals are within said explosion chamber, and which circuit is broken by the passing of said hub arm from

under said rock shaft arm, combined with means for rotating said hub bearing shaft, and with means for energizing said electric circuit, substantially as described. 5th. In an explosive engine, a sparking device, consisting of a continuously rotating arm, as 48, a shaft extending through the wall of the explosion chamber, an arm on both the inner and outer ends of said shaft, said outer arm adapted to be engaged by said continuously rotating arm during a portion of one revolution of the latter, and said inner arm operated by the outer arm adapted to be moved into and out of contact with a fixed point in the explosion chamber for making and breaking an electric circuit, combined with means for varying the duration of the engagement between the said continuously rotating arm and said outer arm, substantially as set forth.

No. 67,993. Packing of Baking Powders.
(Emballage de poudre de cuisson.)

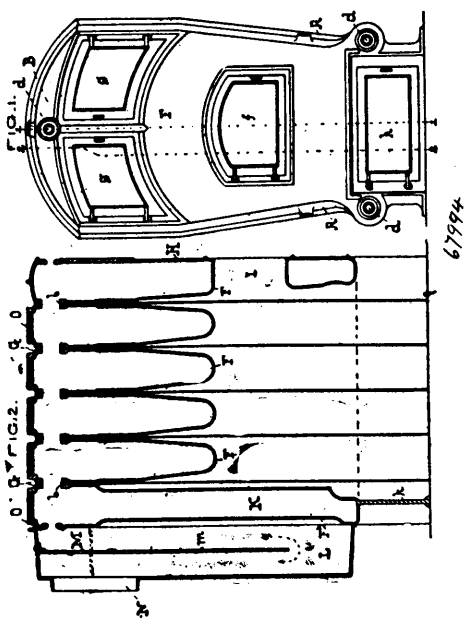


67993

William Pitt Clotworthy, Baltimore, Maryland, U.S.A., 5th July, 1900; 6 years. (Filed 22nd June, 1900.)

Claim.—1st. The improvement in the art of packing baking powders, which consists in the separation of the particles of the acid and alkaline elements thereof by an inert edible powder, and the placing of the treated chemical elements in layers or strata in a packing case, substantially as specified. 2nd. The process of packing a baking powder, which consists in mixing it with the separated acid and alkali elements thereof, powdered starch or some similar substance, to prevent their caking or lumping, as described, and then placing the two bodies in layers or strata in a packing case, substantially as specified.

No. 67,994. Hot Water Heater. *(Calorifère à eau chaude.)*

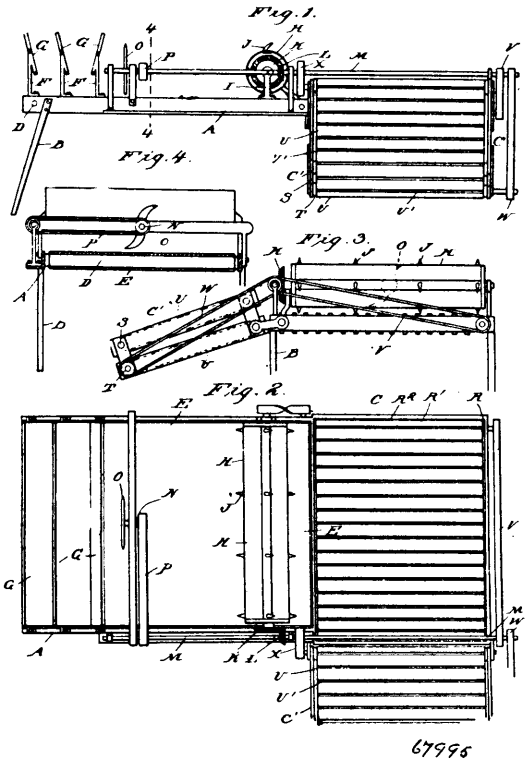


67994

Henry Milton Hoffman, Baltimore, Maryland, U.S.A., 5th July, 1900; 6 years. (Filed 22nd June, 1900.)

Claim.—1st. In a sectional boiler, an intermediate section thereof, which comprises hollow legs connected at the top by a hollow crescent shaped crown, a hollow arch which is removed a suitable distance from the crown to form a space for the passage of the products of combustion toward the rear end of the boiler, connected to the crown centrally thereof by a hollow partition, the said hollow arch having openings through which the products of combustion pass toward the front of the boiler, and a hollow curved and vertically corrugated plate forming a downward extension of the arch, the said crown and legs being provided with nozzles which serve as means of communication between the interior of the section and that of others of a similar character, when the sections are placed face to face, substantially as specified. 2nd. In combination with the front and rear sections of a sectional boiler, a series of intermediate sections, each of which comprises hollow legs united at the top by a hollow crescent shaped crown and a hollow arch which is moved a suitable distance from the crown to form a space for the passage of the products of combustion toward the rear end of the boiler, the said hollow arch having openings through which the products of combustion pass toward the front of the boiler, and a hollow curved and vertically corrugated plate forming a downward extension of the said arch, the said crown and legs of each section being provided with nozzles which serve as means of communication between the sections, substantially as specified. 3rd. In a sectional boiler, the combination with the rear section thereof, of a smoke box with a smoke pipe leading therefrom, having a partition plate extending from its top to a point removed some distance from the bottom, said partition being provided with a swinging damper therein, substantially as and for the purpose specified.

No. 67,995. Band Cutter and Feeder.
(Coupe hart et alimentateur.)



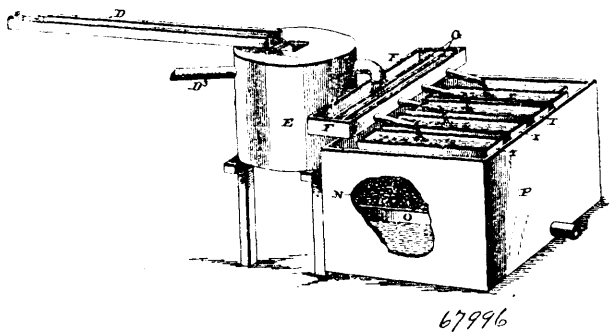
67995

Daniel Ward and William J. Shannon, both of Peoria, Illinois, U.S.A., 5th July, 1900; 6 years. (Filed 1st June, 1900.)

Claim.—In a band cutter and feeder, the combination with the frame of the machine, of a series of guide boards mounted transversely thereof to ensure the lodgment of the bundles at right angles to the length of the frame, transverse shafts and rollers mounted in the frame, afeeding carrier extending and moving longitudinally of the frame below and beyond said guide boards upon which the bundles are received in transverse positions, a longitudinal shaft mounted above the carrier, a band cutter upon said shaft, and a transverse roller at the delivery end of the carrier having curved teeth to feed and spread the bundles, a transverse frame, at the delivery end of the carrier E, a carrier moving in said frame transversely to the movement of the carrier E to receive the bundles from said carrier in line with its movement, a supplementary frame at the end of the transverse frame, pivotal arms connecting it therewith, and upper and lower carriers to receive the grain between them and carry it direct to the threshing cylinder, substantially as described.

No. 67,996. Water Filtration and Purification.
(Filtration et purification de l'eau.)

Fig. 1.



67996

Adam Schantz, Dayton, Ohio, U.S.A., 5th July, 1900; 6 years. (Filed 9th December, 1899.)

Claim.—1st. In an apparatus for the purification of water, a series of steam heated pipes over which the inflowing water is made to pass, and an open tank placed beneath the pipes, combined with piles or beds of heated rocks or boulders placed in the tank below the pipes and upon which the water is made to fall for the purpose of depositing a portion of its impurities, substantially as shown. 2nd. In an apparatus for the purification of water, a series of steam heated pipes, an open tank placed below said pipes, and pipes extending to the bottom of the tank and discharging the steam directly into the water in the tank, combined with piles or beds of heated rocks or boulders which are placed under the pipes, and over which the water is made to pass, and which stones are heated by the dropping water so as to cause the water to deposit a portion of its impurities upon them, substantially as described. 3rd. In an apparatus for the purification and filtration of water, a series of pipes adapted to be heated and over which the incoming water is made to pass, an open tank placed below the pipes, beds or piles of boulders placed below said pipes in the tank, and troughs containing boulders and gravel leading from the tank, combined with a tank into which the water from the troughs pass, and a steam pipe for heating the water in the tank, substantially as set forth. 4th. In an apparatus for the purification and filtration of water, a reservoir for the initial reception of the water, said reservoir having a perforated bottom, a plurality of steam pipes upon which the water is sprinkled and given an initial heating, a tank placed below the pipes, and beds of boulders upon which said water is discharged after leaving said pipes, combined with a steam heating tank located a remote distance from said pipes, a long gutter or gutters interposed between the bed of boulders and said heating tank, a receiving vessel provided with a dam over which the water is discharged as it issues from the said heating tank, a series of troughs into which the water is discharged from said dam, and a filtering means placed beneath the troughs, substantially as specified.

No. 67,997. Railway Car Underframe.
(Train de chars de chemin de fer.)

Fig 1

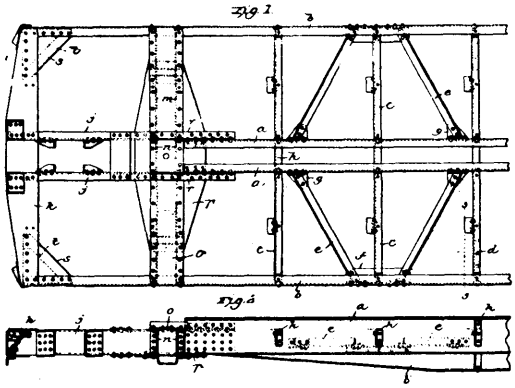


Fig 2

67997.

The Pressed Steel Car Company, Pittsburg, assignee of John Morrison Hansen, Bellevue, Pennsylvania, U.S.A., 5th July, 1900; 6 years. (Filed 4th June, 1900.)

Claim.—1st. A metallic underframe for cars, comprising bolsters, centre sills extending from bolster to bolster and rising above the same to receive the floor nailing strips and restrain or prevent sidewise movement of the car body on the underframe, and draft rigging beams or sills in length only, substantially as described. 2nd. In a metallic underframe, rolled channel draft rigging sills riveted to the centre sills, substantially as described. 3rd. In a metallic underframe, centre sills extending from bolster to bolster, draft rigging sills extending from the end sills beyond the bolsters and secured to the centre sills, and bolsters built up between the side sills and centre sills, substantially as described. 4th. In a metallic underframe, side sills and centre sills, combined with flanged plates arranged between the centre sills and riveted to them, a cover plate extending from side sill to side sill continuously and riveted to the flanged plates aforesaid, and a tie plate riveted to the lower flanges of the flanged plates and the centre sills, substantially as described. 5th. In a metallic underframe, side sills and centre sills, combined with flanged plates arranged between the said sills and riveted to them, and similar flanged plates arranged between the centre sills and riveted to them, a cover plate from side sill to side sill continuously and riveted to the flanged plates aforesaid, a tie plate riveted to the lower flanges of the flanged plates and the centre sills, and splice bars arranged above the top plate and secured to it and to the centre sills, substantially as described. 6th. In a metallic underframe, having side sills and end sills, the double gusset plates interposed between the top and bottom flanges of the side sills and end sills and riveted to both at the corners, to reinforce such corners against deformation by use of push poles, substantially as described. 7th. In a metallic underframe, the combination with side sills bellied midway between their ends, centre sills and transoms and truss brackets interposed between the said transoms and the bellied portions of the side sills and secured to both, substantially as described. 8th. A steel underframe for cars, comprising side sills and end sills connected together, interposed gusset plates at their junctures, centre sills rising above the side sills and extending only from bolster to bolster, transoms and braces connecting the side sills and centre sills, draft rigging sills secured to the centre sills below their top levels, and built up bolsters connecting the various sills and including a top cover plate extending continuously across the underframe from side sill to side sill, and a bottom tie plate, substantially as described.

No. 67,998. Velocipede. *(Vélocipede.)*

Fig 1

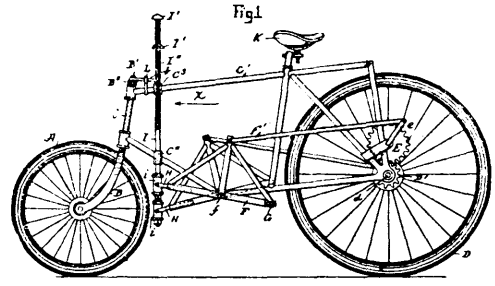


Fig 2.

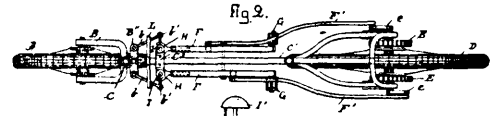
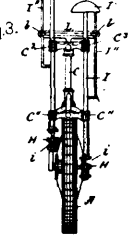


Fig 3.



67998

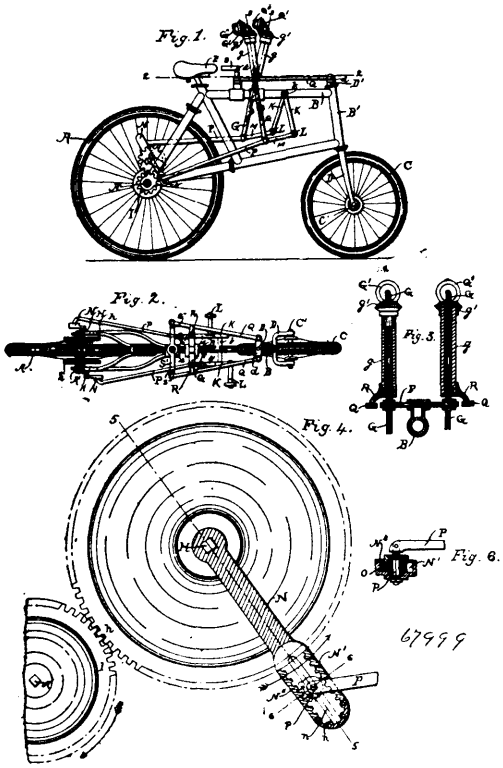
Thomas Tolson, Boston, Massachusetts U.S.A., 5th July, 1900; 6 years. (Filed 7th May, 1900.)

Claim.—1st. In a velocipede, the combination of a pair of reciprocating handle rods guided in bearings attached to the frame of the machine and having their lower ends universally connected to bell crank or triangular rocking levers, pivotally connected to the frame and mounted on a fixed pivot on the driving mechanism of the rear wheel, and pedals connected to said rocking levers, substantially as and for the purpose set forth. 2nd. In a velocipede, the combination of a pair of reciprocating handle rods guided in bearings attached to

the frame of the machine and having their lower ends universally connected to bell crank or triangular rocking levers pivotally connected to the frame and connected to the driving mechanism of the rear wheel, steering rods attached to the handle rods, and links pivotally connected to said steering rods at their rear ends and pivotally connected at their forward ends to a cross bar on the fork spindle of the forward or steering wheel, substantially as and for the purpose set forth. 3rd. In a velocipede the herein described steering device consisting in the combination of a pair of reciprocating handle rods, steering rods attached to said handle rods, links pivotally connected to said steering rods and to a cross bar on the fork spindle of the forward or steering wheel, and a slotted guide secured to the frame of the machine in which said links are guided and held from vertical movement, substantially as and for the purpose set forth. 4th. In a velocipede in combination a pair of reciprocating handle rods, sleeves *i i*, journalled on the same and held from longitudinal motion thereon, forks pivotally connected to said sleeves and having their rear ends guided in rocking pedal levers, pivoted to the frame and suitable connected to the driving mechanism of the rear wheel, substantially as and for the purpose set forth.

No. 67,999. Bicycle and Velocipede.

(Bicycle et vélocipède.)



Thomas Tolson, Boston, Massachusetts, U.S.A., 5th July, 1900; 6 years. (Filed 9th May, 1900.)

Claim.—1st. In a velocipede, in combination, a pair of rocking hand levers GG, sleeves *gg* journalled on said levers, bevel gears g^1g^1 secured to said sleeves, bevel gears G^1G^1 journalled on the upper ends of the levers GG and intermeshing with the gears g^1g^1 and having handles $G^{11}G^{11}$, and links QQ pivotally connected by means of projections RR to the sleeves *gg*, and a projection or lever on the fork spindle of the forward wheel, substantially as and for the purpose set forth. 2nd. In a velocipede, the combination of a driving wheel, a pinion secured thereto, a crank actuated gear wheel wheel meshing in said pinion, two pivoted hand levers, connecting mechanism between said hand levers and crank gear wheels, a cross bar fixed on the steering fork, sleeves loosely fitted on the upper ends of the hand levers, intermediate connections between each sleeve and one end of the said cross bar, and means for turning the sleeve to oscillate the cross bar, substantially as described and for the purpose specified. 3rd. In a velocipede, the herein described driving mechanism, consisting of a driving wheel, pinions secured thereto, gears meshing with said pinions cranks secured to said gears and provided with internal racks at their outer ends, mutilated pinions meshing with said racks and movable radially relatively to said gears, link driving mechanism connected to said mutilated pinions, and end caps removable fitted on the ends of said racks to permit the ready insertion and removal of the pinions, substantially as and for the purpose specified. 4th. In a velocipede, the combination with two pivoted hand levers, and driving mechanism actuated thereby, of sleeves rotatably fitted on the upper ends of said levers, a cross bar rigid on the steering fork, links pivotally connected to the opposite ends of the cross bar, projections on the sleeves engaging said links, means for turning the sleeves to oscillate the cross bar, and an auxiliary steering device consisting of a spindle journalled in the velocipede frame and having a handle S, and a cross bar S^1 rigid on said spindle and slotted at its opposite ends, the rear ends of the said links being pivoted in the slotted ends of the cross bar S^1, substantially as described and for the purpose specified.

No. 68,000. Treatment of Leather.

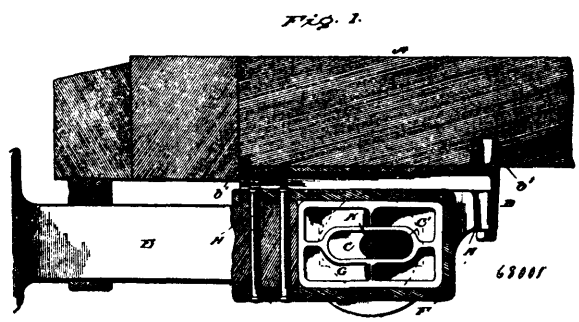
(Procédé pour le traitement du cuire.)

Richard Buck Arthur, Ballarat, Grenville, Victoria, Australia, 6th July, 1900; 6 years. (Filed 1st September, 1899.)

Claim.—1st. An improved process for treating leather and similar substances consisting of tanning the material in the ordinary way, then placing it in a rotating chamber with a solution and subsequently with another solution (heated) into the said chamber (also heated), all as and for the purposes hereinbefore described. 2nd. An improved process for treating leather and similar substances consisting of tanning the leather or similar substances in the ordinary way and then for the hereinbefore mentioned or other time placing it in a rotating chamber containing a solution of alum, chalk, glue and water in the approximate proportions specified, then draining and almost drying out, then placing it for the hereinbefore mentioned or other time in a rotating chamber heated to about 130 degrees Fahrenheit, with a solution also heated as before described consisting of asphaltum, india rubber dissolved in turpentine or other solvent to which is added parafine wax, beeswax and sugar of lead dissolved in oil and of the approximate proportions given, then finishing in the ordinary way, all as and for the purposes hereinbefore specified.

No. 68,001. Draft Rigging for Railway Cars.

(Appareil de tirage pour chars de chemin de fer.)



The Standard Coupler Company, New York City, New York, assignee of Henry Howard Sessions, Chicago, Illinois, U.S.A., 6th July, 1900; 6 years. (Filed 21st June, 1900.)

Claim.—1st. In a draft rigging for railway cars, the combination with a draw bar, wedge blocks having working faces inclined in opposite directions to the line of draft and connected to move in both directions in unison with said draft bar, of oppositely located transversely movable wedge blocks, having working faces corresponding to the working faces of the wedge blocks moving with the draft bar, and adapted to co-operate therewith on opposite sides and independent springs for said transversely movable wedge blocks for moving them toward each other, substantially as described. 2nd. In a draft rigging, the combination with a draft bar, wedge blocks having working faces inclined in opposite directions to the line of draft and mounted to move in unison with said draft bar in both directions, transversely movable wedge blocks having correspondingly inclined working faces, springs for advancing said transversely movable wedge blocks and a through bolt passing centrally through all of said wedge blocks for confining the springs, substantially as described. 3rd. In a draft rigging, the combination with a draft bar, wedge blocks having operative faces inclined oppositely to each other on each side of the line of draft, transversely movable wedge blocks having correspondingly inclined operative faces, springs for advancing said transversely movable wedge blocks and a through bolt arranged transversely of the line of draft for confining the springs and holding the transversely movable wedge blocks in operative position, substantially as described. 4th. In a draft rigging, the combination with a housing having means for attachment to the car frame and transversely extending guides, of a draft bar, wedge blocks mounted to move in unison with said draft bar and having oppositely inclined working faces on each side of the line of draft, transversely movable wedge blocks mounted in said transverse guides and having correspondingly inclined working faces, independently removable caps for the outer ends of the trans-

verse guides and springs interposed between said caps and transversely movable wedge blocks, substantially as described. 5th. In a draft rigging, the combination with a housing having transversely extending guides, transversely movable wedge blocks supported in said guides, caps on the outer sides of said transversely movable wedge blocks, springs interposed between said caps and wedge blocks, and a through bolt passing through said caps and wedge blocks for retaining the parts in their operative positions, of a draft bar and wedge faces moving in unison therewith for co-operating with the transversely movable wedge blocks, substantially as described. 6th. In a draft rigging, the combination with the housing having transversely extending guides and a central longitudinal extending channel way for the draft bar with stops at opposite ends of said channel way, of transversely movable wedge blocks mounted in said guides, springs for advancing said wedge blocks toward each other, a draft bar, wedge blocks moving in both directions in unison with said draft bar and having oppositely inclined operative faces on each side of the line of draft for co-operating with the transversely movable wedge blocks and stop surfaces adapted to co-operate with the stops on the housing for limiting the longitudinal movement of the draft bar, substantially as described. 7th. In a draft rigging for railways cars, the combination with a housing formed of a single casting having transversely extending guides and a central channel way with stop projections in said channel way, of transversely movable wedge blocks mounted in said guides and having friction bearings therein and springs for advancing said wedge blocks, of a draft bar having wedge blocks connected for moving in unison therewith in both directions and provided with working faces inclined in opposite directions on both sides of the line of draft and stop surfaces adapted to contact with the stop surfaces in said channel way for limiting the movement of the draft bar, substantially as described. 8th. In a draft rigging for railway cars the combination with the draft bar, wedge blocks moving in unison therewith in both directions and having working faces inclined in opposite directions on each side of the line of draft, of transversely movable wedge blocks, springs for advancing said wedge blocks and guides for said wedge blocks having frictional bearing surfaces for retardin g the transverse movement of the wedge blocks, substantially as described. 9th. In a draft rigging, the combination with a longitudinally movable draft bar and transversely movable blocks moved transversely by the longitudinal movement of said draft bar, of fixed guides for said transversely movable blocks having friction surfaces for retarding such movement and springs for advancing the blocks, substantially as described. 10th. In a draft rigging for railway cars the combination with the draft bar having wedge blocks connected therewith for unitary movement in both directions and oppositely inclined working faces on said wedge blocks, said inclined working faces meeting at a central point, of transversely movable wedge blocks having oppositely inclined working faces extending from the side approximately to a central point whereby the tendency to tilt said transversely movable wedge blocks by the longitudinal movement of the draft bar is reduced, and springs for advancing the transversely movable wedge blocks to resist the longitudinal movement of the draft bar, substantially as described. 11th. In a draft rigging the combination with the housing having the transversely extending guides with the substantially plane guiding surfaces on front and rear sides, of a longitudinally movable draft bar, wedge blocks movable in unison therewith and having oppositely inclined working faces, transversely movable wedge blocks co-operating with the longitudinally movable wedge blocks and having oppositely located plane friction surfaces at front and rear for co-operating with the plane surfaces in the guides and springs for advancing the transversely movable wedge blocks, substantially as described. 12th. In a draft rigging the combination with the longitudinally movable draft bar, the wedge block mounted to move in unison therewith and having centrally arranged elongated opening, of a transversely movable wedge block, a spring for advancing siad wedge block and a through bolt for compressing said spring passing through said elongated opening in the longitudinal movable wedge block, substantially as described. 13th. In a draft rigging for railway cars the combination with a draft car, a yoke carried by said draft bar, independent wedge blocks mounted in said yoke on opposite sides of its longitudinal centre and having recesses therein with oppositely inclined wedging surfaces, of transversely movable spring pressed wedge blocks having projecting oppositely inclined surfaces co-operating with the corresponding surfaces of the wedge blocks mounted in the yoke, substantially as described. 14th. In a draft rigging the combination with the draft bar, the yoke connected therewith, oppositely arranged wedge blocks mounted in said yoke and each having a projecting bearing point for co-operation with the bearing point on the other block for permitting of a limited rocking movement in the yoke of oppositely arranged transversely movable wedge blocks and springs for advancing the same, substantially as described. 15th. In a draft rigging the combination with an integral housing having a central channel way for the draft bar, transversely extending guides and a series of vertically extending apertures for the supporting bolts whereby the housing may be applied to car frames of different builds, transversely movable wedge blocks in said guides and springs for advancing said wedge blocks, of a longitudinally movable draft bar mounted in said channel way and wedge blocks moving in unison with said draft bar for co-operating with the transversely movable wedge blocks, substantially as described. 16th. In a draft rigging for railway cars the combination with an integral housing having a central draft bar channel way and transversely extending guides as described, of transversely movable wedge blocks mounted in said guides and having inclined wedging faces at front and rear projecting into said channel way with substantially horizontal top and bottom faces, of a longitudinally movable draft bar, wedge blocks connected with said draft bar and having webs overlying the substantially horizontal surfaces of the transversely movable wedge blocks, whereby the rear end of the draft bar is held against vertical movement, substantially as described. 17th. In a draft rigging the combination with the housing having the transversely extending guides and the draft bar having wedge blocks connected therewith, of the transversely movable wedge blocks co-operating with the wedge blocks moving with the draft bar, spings for advancing said transversely movable wedge blocks, reversible caps for the ends of the guides beneath which the springs are confined, said caps having projections on one side for reducing the size of the spring box when turned inwardly, substantially as described. 18th. A wedge block for draft rigging of railway cars having a projection at one side for entering the draft bar yoke, a shoulder N and a recess at the opposite side having plane oppositely inclined wedge surfaces, substantially as described. 19th. A wedge block for draft rigging of railway cars having a projection at one side for entering the yoke of a draft bar, a shoulder N, a recess in the opposite side having plane inclined wedging surfaces at front and rear and a web at top and bottom of said recsss, substantially as described. 20th. A transversely movable wedge block for draft rigging of railway cars having substantially cylindrical outwardly extending portion constituting a spring box and an inwardly extending projection having oppositely inclined plane wedging surfaces with substantially horizontal top and bottom surfaces, substantially as described.

No. 68,002. Machine for Cutting Leather or Other Materials. (*Machine à tailler le cuire, etc.*)

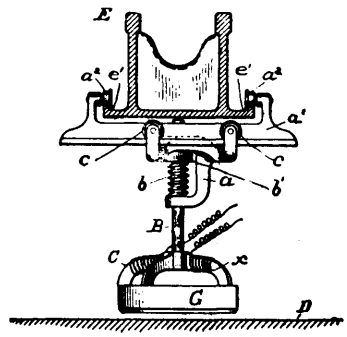


Fig. 1

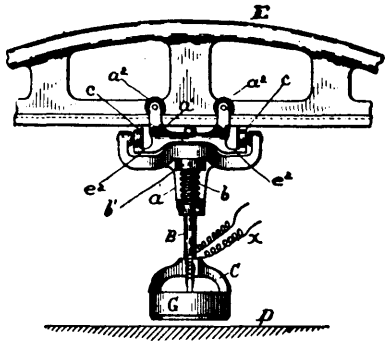


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Fig. 2

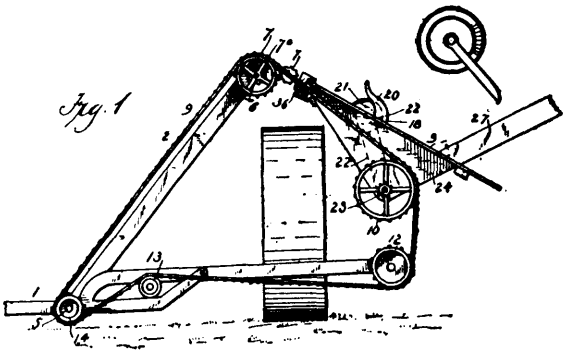
Henry Parsons, Marlborough, Massachusetts, U.S.A., 6th July, 1900; 6 years. (Filed 22nd September, 1899.)

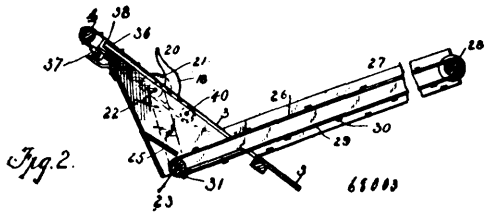
Claim.—1st. In a machine for cutting leather or other materials, a vertically movable spindle suitably supported and adapted to move longitudinally and laterally in relation to the beam, substantially as and for the purposes herein set forth. 2nd. In a machine for cutting leather or other materials, a vertically movable spindle suitably supported and adapted to move both longitudinally and laterally in relation to the beam, a die holder secured to the lower

end of said spindle and adapted to be suitably magnetized, substantially as and for the purpose herein set forth. 3rd. In a machine for cutting leather or other materials, a movable spindle suitably supported and having a die holder suitably adapted for seizing and holding a die, substantially as and for the purpose herein set forth. 4th. In a machine for cutting leather or other materials, a vertically movable beam, carriers adapted to move lengthwise and crosswise of said beam, a movable spindle supported by said carriers, combined substantially as and for the purpose herein set forth. 5th. The beam E, the carrier a^1 suitably secured to said beam and adapted to move lengthwise thereof, the supplemental carrier a suitably secured to said carrier a^1, and adapted to move crosswise of said beam, the spindle B suitably supported by said carrier a and adapted to move vertically, longitudinally and laterally in relation to the bed D, substantially as and for the purpose herein set forth. 6th. In a machine for cutting leather or other materials, the combination of a vertical movable spindle, a holder secured to the lower end of said spindle, said holder adapted to be suitably magnetized, substantially as and for the purpose herein set forth. 7th. In a machine for cutting leather or other materials, the combination of a vertically movable beam, an adjustable bed, a horizontally movable arm suitably supported by said beam and adapted to move lengthwise thereof, a spindle suitably journalled in the outer end of said arm, a holder secured to the lower end of the spindle and adapted to seize and hold a die, substantially as and for the purpose herein set forth. 8th. In a machine for cutting leather or other materials, the movable spindle B, the spring b, the collar b^1, the holder C, the wire x, and the switch H, all arranged to be suitably supported from the beam of the machine and adapted to operate, substantially as and for the purpose herein forth. 9th. The beam E, the bed D, the carrier a^1 having the rolls a^2, a^2, the the swinging arm A, the spindle B suitably journalled and supported in the free end of said arm, the holder C secured to the lower end of the spindle and adapted to seize and hold a die, combined and adapted to operate, substantially as and for the purpose herein set forth.

No. 68,003. Heading Device for Harvesters and Binders.

(Appareil à étêter pour moissonneuses et lieuses.)

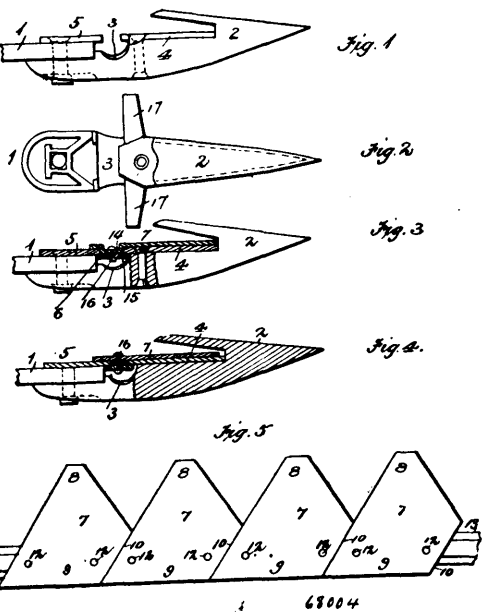




The Massey Harris Company Limited, assignee of Thomas A. McBride, all of Toronto, Ontario, Canada, 6th July, 1900; 6 years. (Filed 21st June, 1900.)

Claim.—1st. In a harvesting machine, the combination with the inclined table or platform, of the grain stop comprising the base secured to said table and two curved arms inclining upwardly and pointing in the direction from which the cut grain comes, and one of said arms formed with a sharpened edge, and the knife located between said arms, substantially as described. 2nd. In a harvesting machine, the combination with the inclined table or platform, of the grain stop comprising the base secured thereto and the two curved arms inclining upwardly and pointing in the direction from which the grain comes and contracted from the base to the ends, and one of said arms formed with a cutting edge, and the heading knife located between said arms, substantially as described. 3rd. In a harvesting machine, the combination with the inclined table or platform, of the grain stop secured thereto comprising the base and the curved contracted arms, the knife located between said arms, the trough at one side of said grain stop, aud the conveyer, substantially as described. 4th. In a harvesting machine, the combination with the binder table or platform, the packers, the needle and means for operating the same, of the grain stop, the knife, the trough or hopper, the conveyer and means for operating the knife and conveyer, substantially as described. 5th. In a harvesting machine, the combination with the binder table or platform, the needle and means for operating the same, of the trough or hopper, the conveyer and the grain stop comprising the two curved arms inclining upwardly and pointing in the direction from which the grain comes and contracted from the base to the ends and one of the said arms formed with a cutting edge and the heading knife located between said arms, substantially as described.

No. 68,004. Harvesting Machine. *(Moissonneuse.)*



The Massey Harris Company Limited, assignee of Thomas J. McBride, bothof Toronto, Ontario, Canada, 6th July, 1900; 6 years. (Filed 21st June, 1900.)

Claim.—In a mowing, harvesting or similar machine, the combination with the finger bar having fingers provided with puds projecting sidewise therefrom and said fingers provided with transverse slots, of the ledger plates and wear plates projecting over said slots, the cutter bar located in said slots but not contacting with the fingers, and the cutters working on said wear and ledger plates having a transverse depression and secured to the cutter bar, substantially as described.

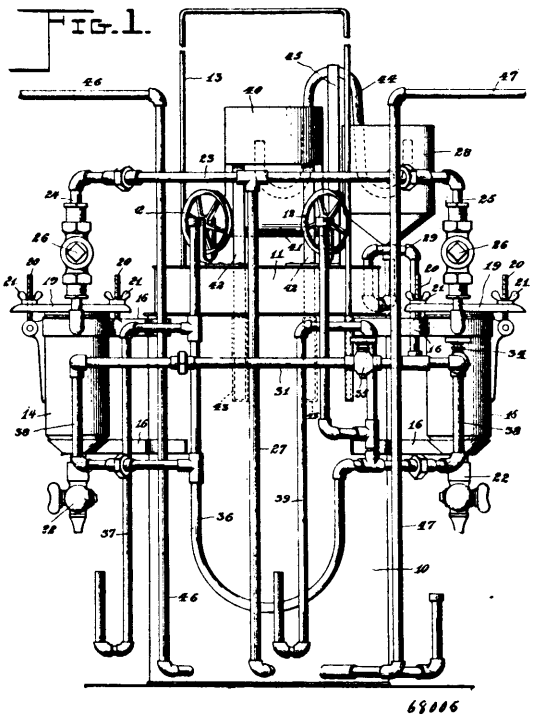
No. 68,005. Acetylene Gas Generator.

(Générateur de gaz acétylène.)

Jean Baptiste Giroux, St. Esprit, Quebec, Canada, 6th July, 1900; 6 years. (Filed 18th June, 1900.)

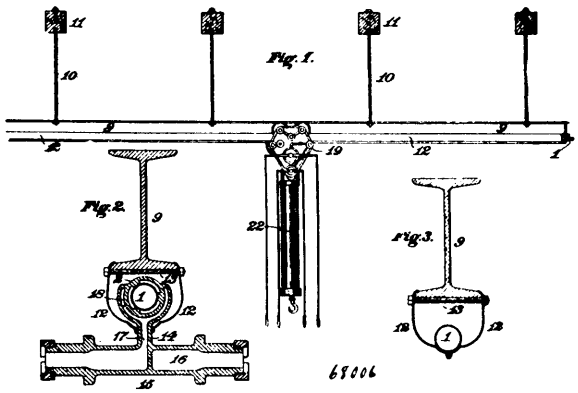
Claim.—1st. In an acetylene gas apparatus, the combination with a series of generators, and valved pipes connected therewith, of an elevated magazine tank, a supply tank in communication with said valved pipes, a siphon arranged to play in the magazine tank and and the supply tank, a bell actuated arm connected to the siphon and adapted to move the latter into said tank, substantially as described. 2nd. In an acetylene gas apparatus, the combination with the generators, of a cross gas pipe having valved connections with said generators and leading to a source of supply, a cross water pipe having connections with the generators, a supply tank, a pipe leading from said tank to the cross water pipe, valves in the cross water pipe on opposite sides of the tank pipe, and means for supplying water in regulated volumes to the supply tank, substantially as described. 3rd. In an acetylene gas apparatus, the combination with a pair of generators, and means for conveying gas therefrom, of a cross water pipe connected with said generators

a U-shaped pipe connected with a cross water pipe, the traps in communication with the members of the U-shaped pipe, and means



for supplying water in regulated volumes to the cross water pipe, substantially as described.

No. 68,006. Means for Transmitting Fluids Under Pressure. *(Moyen de transmittre les fluides sous pression.)*



William Smiley Halsey, Pittsburg, Pennsylvania, U.S.A., 6th July, 1900; 6 years. (Filed 1st September, 1899.)

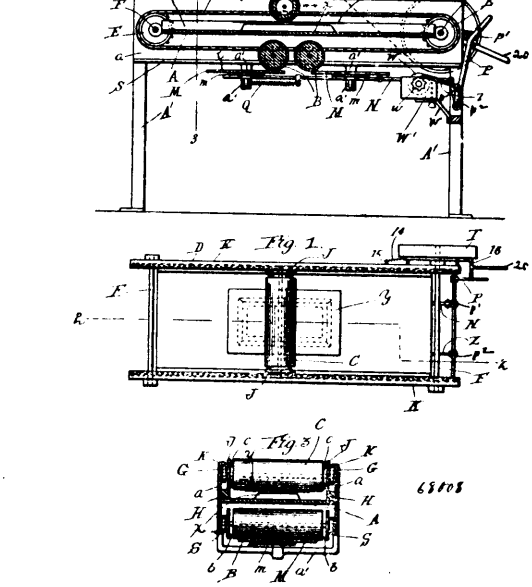
Claim.—1st. The combination of a fluid pressure reservoir, a receiver surrounding and movable longitudinally on said reservoir, a fixed support, a longitudinally divided casing surrounding and suspending the reservoir and connected to the fixed support, means for utilizing fluid pressure supplied from the reservoir, and a fluid pressure exhaust pipe or passage leading from said means in to the casing. 2nd. The combination of a fluid pressure reservoir, a receiver surrounding and movable longitudinally on said reservoir, a fixed support, a casing composed of opposite plates of flexible metal sprung together so as to abut in a longitudinal line of division below the reservoir and connected at top to the fixed support, means for utilizing fluid pressure supplied from the reservoir, and a fluid pressure exhaust pipe or passage leading from said means into the casing. 3rd. The combination of a fluid pressure reservoir, a receiver surrounding and movable longitudinally on said reservoir, a fluid pressure exhaust pipe or passage extending from said means through said arm and opening into the casing. 4th. The combination of a fluid pressure reservoir, a receiver surrounding and movable longitudinally on said reservoir, means for delivering fluid from the reservoir to the receiver, a fixed support, a casing composed of opposite plates of flexible metal sprung together so as to abut on a longitudinal line of division below the reservoir and connected at top to the fixed support, an arm fixed to the receiver and passing between the opposite plates of the casing, a fluid pressure motor connected to said arm, and fluid pressure supply and exhaust pipes or passages extending through the arm, from the receiver to the motor and from the motor to a point of discharge within the casing, respectively. 5th. The combination of a fluid pressure reservoir, a receiver surrounding and movable longitudinally on said reservoir, means for delivering fluid from the reservoir to the receiver, a fixed support, a casing composed of opposite plates of flexible metal sprung together so as to abut on a longitudinal line of division below the reservoir and connected at top to the fixed support, an arm fixed to the receiver and passing between the opposite plates of the casing, a fluid pressure motor connected to said arm, a fluid pressure supply pipe or passage extending through the arm, from the receiver to the motor, and a fluid pressure exhaust pipe or passage extending through the arm, from the motor to outlets adapted to discharge fluid in opposite directions in the casing. 6th. The combination of a fixed metal beam runway, a casing composed of opposite plates of flexible metal, connected at top to the runway and sprung together so as to abut at bottom on a longitudinal line of division, a fluid pressure reservoir supported in and suspended by the casing, a receiver surrounding and movable longitudinally on the reservoir, means for delivering fluid from the reservoir to the receiver, a trolley adapted to traverse on the runway, a fluid pressure motor mounted on the trolley, an arm connecting the receiver and the trolley and passing between the opposite plates of the casing, and fluid pressure supply and exhaust pipes or passages extending through the arm, from the receiver to the motor and from the motor to a point of discharge within the casing, respectively.

No. 68,007. Baking Powder. *(Poudre de cuisson.)*

Joseph A. Evenden, London, Ontario, Canada, 6th July, 1900; years. (Filed 11th August, 1899.)

Claim.—1st. The hereindescribed composition of matter consisting of bicarbonate of soda, cream of tartar, tartaric acid and flour or corn starch, subtantially as described and for the purpose specified. 2nd. The hereindescribed composition of matter consisting of bicarbonate of soda, one hundred parts, cream of tartar, one hundred parts, tartaric acid, twenty five parts and flour or corn starch, two hundred parts, substantially as described.

No. 68,008. Printing Press. *(Presse à imprimer.)*

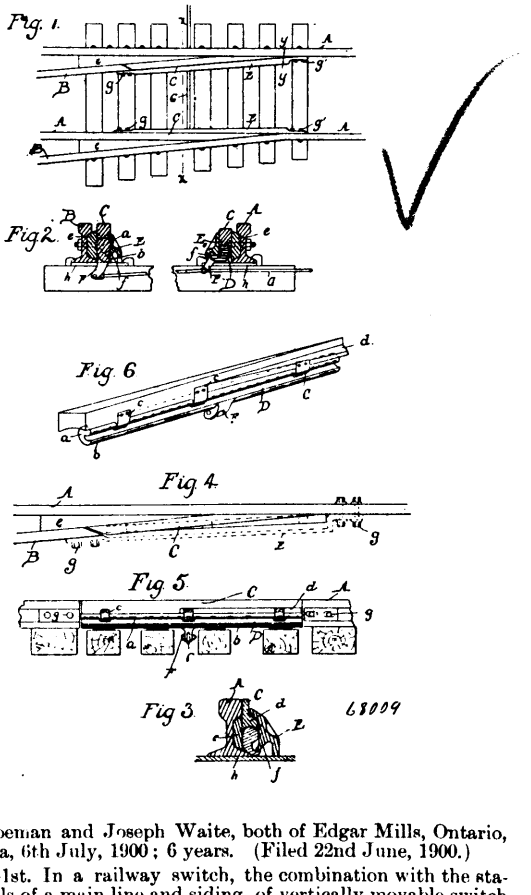


Allison R. Stone, Chicago, Illinois, U.S.A., 6th July, 1900; 6 years. (Filed 6th November, 1899.)

Claim.—1st. In a press, the combination of a bed or table upon which the form can be arranged, a couple of flexible endless carriers

arranged to travel along the sides of the bed or table, and provided with inking and impression rollers, wheels for the endless carriers, mounted at the ends of the bed or table, tracks upon which the said rollers can roll while passing over the bed or table, an inking surface arranged below the bed or table guides associated with the bed or table, and tracks associated with the inking surfaces, and bearings or journals for the inking and impression rolls, said bearings or journals having connections with the endless carriers adapted to permit the latter to travel about their carrying wheels, and the impression roller bearing journal being constructed so as to engage the guides associated with the bed or table in a way to prevent the impression roller from rising in passing over the form, an l also so as to engage the tracks associated with the inking surface and thereby prevent said roller from making contact with the latter, and the inking roller bearings or journals being constructed so as to allow the inking rollers to travel upon the inking surface. 2nd. In a press, the combination with the bed or table, the shiftable inking surface, and mechanism for shifting same, of the endless carrier carrying inking and impression devices, one of which is adapted to actuate the inking surface shifting mechanism, while the other or others is or are not so adapted. 3rd. In a press, the combination with the bed or table, a swinging lever, and mechanism operated by said lever, of the endless carrier carrying inking and impression rollers, whereof the impression roller is constructed so as to strike said lever and thereby automatically actuate said mechanism, while the inking rollers are constructed with grooves or recesses which permit them to pass the lever without actuating it. 4th. In a press, the combination with the bed or table, the endless carrier provided with inking and impression devices, wheels for said carriers, and with means for stopping the press, of a device carried by the endless carrier and adapted to automatically actuate the stopping mechanism. 5th. A press comprising a bed or table upon which the form can be arranged, sprocket wheels mounted at the opposite ends of the bed or table, sprocket chains carried by said sprocket wheels and arranged to advance over the bed or table and to return under it, inking discs supported below the bed or table, inking and impression rollers carried by the sprocket chains and connected therewith in such a way as to cause the inking rollers to travel over and in contact the inking discs, and to allow the impression roller to pass over without coming in contact therewith, and means for automatically rotating the inking discs. 6th. A press, comprising a bed or table upon which the form can be arranged, rotating wheels arranged at the opposite ends of the bed or table, chains or the like carried by said wheels and arranged to advance over the bed and to return under it, an inking surface arranged below the bed or table, inking and impression rollers carried by the chains or like devices, tracks upon which the rollers can travel in passing over the bed or table, journals or bearings by which the inking and impression rollers are attached to the endless chains, whereof those of the inking rollers are shorter vertically than that of the impression roller, guides under which the journals or bearings pass as the rollers advance over the bed or table, for holding the impression roller against rising in passing over the form, tracks upon which the roller journals can travel in passing below the bed or table, said tracks being positioned so as to allow the inking rollers to rest upon the inking surface in passing over it, and to support the impression roller above and out of contact therewith, and means for shifting the inking surface upon each revolution of the inking and impression roller. 7th. In a press, the combination with the bed or table, the endless carrier provided with inking and impression devices, wheels for said carrier, the shiftable inking surface, and mechanism for shifting the latter, of a device carried by the endless carrier and adapted to automatically actuate said shifting mechanism so as to cause the same to automatically shift the inking surface. 8th. In a press, the combination of a swinging lever, means for actuating the same after the taking of each impression, a clutch for automatically stopping stopping the press, a longitudinally and laterally shiftable link, arranged to operate the clutch when shifted longitudinally and adapted to be automatically engaged and shifted longitudinally by said lever, and also to be moved laterally so as to prevent its being engaged by the lever, and a spring for holding the link normally in position to be engaged by the lever. 9th. In a press, the combination with the bed or table, the inking and impression devices, and with mechanism for operating the latter, of a shiftable inking surface, mechanism for automatically shifting the inking surface after the taking of each impression, and also for either automatically stopping the press or allowing the same to run continuously at will, and means for simultaneously actuating both the ink surface shifting mechanism and the stopping mechanism. 10th. In a press, the combination with the endless chain or the like, the inking rollers carried thereby, and the wheels for the chains, of an inking surface capable of shifting movement, a ratchet wheel connected with such surface so that when turned it will shift the same, a pawl acting upon said ratchet wheel, a reciprocating rod actuating the pawl, a bell crank lever having one of its arms pivotally connected with the reciprocating rod, and the other extended in a way to cause it to be struck and actuated by the impression roller, and a spring for automatically returning the bell crank lever to its original position, and thereby actuating the ratchet wheel so as to shift the inking surface. 11th. In a press, the combination with the bed or table, the inking and impression rollers, and means for advancing such rollers over the bed or table, of tracks upon which the rollers can travel, vertically adjustable guides suspended above the path of travel of the impression roller bearings or journals, and means for subjecting said guides to tension tending to force them normally downward upon said impression roller bearings or journals. 12th. In a press, means for automatically stopping the same, comprising a pulley loose on the driving shaft, rotating arms fast on the same; sliding arms carried by said rotating arms and provided at their outer ends with friction shoes adapted to engage the pulley rims, a friction device, such as the friction wheel 7 mounted loosely on the driving shaft, and engaged by its inner ends of the sliding arms, so that when turned in one direction relatively to the fixed arms, it will throw the former outward into position to cause their friction shoes to engage the pulley rim, and when turned in the other direction, it will retract the same so as to to withdraw their friction shoes from the pulley rim, spring means for holding the friction device in position to cause the engagement of the friction shoes with the pulley rim, and mechanism for automatically applying friction to the loose friction shoes so as to cause it to retract the sliding arms and thereby withdraw the friction shoes thereon from the pulley rim. 13th. In a press, means for automatically stopping the press, comprising a pulley loose on the driving shaft, rotating arms fixed therein, sliding arms carried by the fixed arms and provided at their outer ends with friction shoes adapted to engage the pulley rims, a friction wheel 7 mounted loosely on the driving shaft, and engaged by the inner ends of the sliding arms, a spring for holding said loose friction device in position to retain the friction shoes on the sliding arms normally in engagement with the pulley rim, a sliding link provided with a friction block adapted to engage the rim of the friction wheel 7, a lever arranged and adapted to engage and operate the sliding link, and mechanism for automatically actuating said lever. 14th. In a press, the combination with the shiftable inking surface, and with mechanism for shifting the same and also the device for stopping the press, of mechanism for automatically and simultaneously actuating both the mechanism for shifting the inking surface, and the device for stopping the press.

No. 68,009. Railway Switch. *(Aiguille de chemin de fer.)*

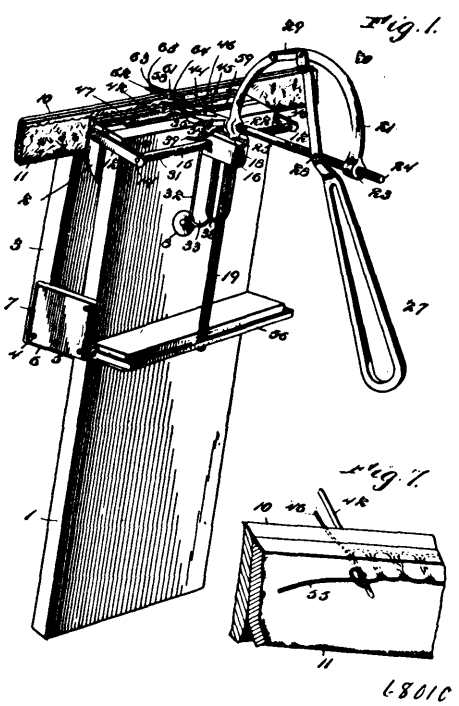


Thorn Copeman and Joseph Waite, both of Edgar Mills, Ontario, Canada, 6th July, 1900; 6 years. (Filed 22nd June, 1900.)

Claim.—1st. In a railway switch, the combination with the stationary rails of a main line and siding, of vertically movable switch point rails held in vertical guide bearings in line with the inner rails at their junction with the outer rails, cam rollers interposed between the same and the ties in alternate positions to support said switch point rails, one at the level of the stationary rails and one below, and means for simultaneously revolving said cam rollers,

each cam roller being co-extensive with the switch point rail and seated against a continuous bearing formed on the underside of the switch point rail free to be revolved on said bearing from one position into an alternate position. 2nd. In a railway switch, the combination with the stationary rails of a main line and siding, of vertically movable switch point rails held in vertical guide bearings in line with the inner rails at their junction with the outer rails, cam rollers interposed between the same and the ties and forming continuous for the switch point rails, one beneath one switch point rail in position to support the same at the level of the stationary rails and the other in alternate position beneath the other switch point rail and supporting the same at a lower level, each cam roller having a circular roller portion and each switch point rail having a continuous seat formed on the underside for said roller portion on which the cam roller is adapted to be rotated, both cam rollers being connected for simultaneous operation by the switch rod. 3rd. In a railway switch, the combination with the stationary rails of a main line and siding, of the vertically movable switch point rails C, held in vertical guide bearings in line with the inner rails, one at the level of the stationary rails and one at a lower level, the cam rollers D eccentrically journalled to the underside of said switch point rails and supporting the same directly upon the ties, in alternate positions of said cam rollers, the arms F on the cam rollers connected to the switch operating rod, and the housing plates E having the ribs *f* adapted to operate as a fulcrum for the cam rollers, all substantially as described. 4th. In a railway switch, the combination with the stationary rails A, B, of the vertically movable switch point rails C, the cam rollers D upon which said switch point rails are mounted free to rotate said cam rollers to support the switch point rails upon the ties in alternate positions of said cam rollers, one level with the stationary rails and the other below said level, the arms F on said cam rollers, the switch rod to which they are connected, and the housings E provided with the ribs *f*, the aforesaid cam rollers composed of the roller portions *a* and cam portions *b* forming between them a longitudinal groove into which said ribs *f* project to operate as a fulcrum in rotating the cam rollers.

No. 68,010. Harness Machine. (*Machine à harnais.*)



Jacob G. Eicholtz and Siegmund Simon, both of Ida Grove, Iowa, U.S.A., 6th July, 1900; 6 years. (Filed 22nd June, 1900.)

Claim.—1st. In a harness machine, the combination of a vise, and means for varying the relative positions of the jaws thereof, one of the vise jaws being provided parallel with its face with a guide slot, of a carriage supported by one of the vise jaws for movement parallel with the faces thereof, and a reciprocatory needle bar and operating devices mounted upon the carriage, the said slot in one of the vise jaws forming a guide for the thread in its passage to the needle carried by the needle bar, substantially as specified. 2nd. In a harness machine, the combination of a vise having fixed and movable jaws, a thread box located between and supported by the jaws, means for varying the relative positions of the jaws, a carriage supported by one of the vise jaws for movement parallel with the vise jaw faces, and a needle bar and operating devices mounted upon said carriage, substantially as specified. 3rd. In a harness machine, the combination of a vise having a fixed jaw, a forwardly extending hollow bracket supported by the fixed jaw and having side and bottom walls, and a movable jaw pivotally mounted between the side walls of said bracket to form a thread box, means for relatively adjusting the vise jaws, a carriage supported by one of the vise jaws for movement parallel with the vise jaw faces, and a needle bar and operating devices mounted upon said carriage, substantially as specified. 4th. In a harness machine, the combination with a supporting frame, a feed bar having ratchet teeth, a carriage mounted upon said feed bar for movement parallel therewith, a feed pawl on the carriage for engaging the teeth of the feed bar, and provided with a trip arm, a holding pawl also supported by the carriage for engagement with the teeth of the feed bar, and a needle bar mounted for reciprocation and provided with a cam face in the path of which said trip arm is arranged, substantially as specified. 5th. In a harness machine, the combination with a supporting frame, of a feed bar having ratchet teeth, a carriage mounted upon said feed bar for movement parallel therewith, a feed pawl on the carriage for engaging the teeth of the feed bar, and provided with a trip arm, a holding pawl also mounted upon the carriage for engagement with the teeth of the feed bar, and having a releasing arm in the path of which said strip arm is arranged, and a reciprocatory needle bar having a cam face in the path of which said trip arm is arranged, substantially as specified. 6th. In a harness machine, the combination with a supporting frame, of a feed bar having a plurality of feed racks, a carriage mounted upon said feed bar and provided with a feed pawl for engagement with the teeth of one of said racks, said feed bar being adjustable to arrange different feed racks in operative relation with said pawl, means for securing the feed bar at the desired adjustment, and a needle bar reciprocably mounted upon the carriage and provided with means for actuating the feed pawl, substantially as specified. 7th. In a harness machine, the combination with a supporting frame, of a terminally swivelled feed bar provided with a plurality of feed racks, securing keys for locking said feed bar at the desired adjustment, a carriage reciprocably mounted upon the feed bar and carrying a feed pawl for engagement with one of the feed racks thereof, and a reciprocatory needle bar mounted upon the carriage and provided with means for actuating said feed pawl, substantially as specified. 8th. In a harness machine, the combination with a supporting frame, of a feed bar having ratchet teeth, a carriage mounted upon the feed bar and provided with a feed pawl for engagement with said ratchet teeth, a needle bar carrier swivelled upon said carriage for swinging movement in a plane parallel with the feed bar, to dispose the needle obliquely thereto, and a needle bar mounted in said carrier and provided with means for actuating said feed pawl, substantially as specified. 9th. In a harness machine, the combination with a feed bar having ratchet teeth, a carriage mounted upon said feed bar and provided with a feed pawl, a needle bar carrier swivelled upon the carriage with its axis perpendicular to the feed bar, a needle bar reciprocably mounted upon the carrier, and provided with means for actuating the feed pawl, and means for securing the carrier in an adjusted position with relation to the carriage, substantially as specified. 10th. In a harness machine, the combination with a feed bar having ratchet teeth, a carriage mounted upon said feed bar and provided with a feed pawl, a needle bar carrier swivelled upon the carriage with its axis perpendicular to the feed bar, a needle bar reciprocably mounted upon the carrier, and provided with means for actuating the feed pawl, a cross-head or pin carried by the carrier for engagement with a seat in the carriage, and means for securing the carrier in an adjusted position with relation to the carriage, substantially as specified. 11th. In a harness machine, the combination of a feed bar having rack teeth, a carriage mounted upon the feed bar and provided with a feed pawl for engagement with said rack teeth, a needle bar carrier having a spindle mounted in a guide in the carriage, a keeper arranged parallel with the feed bar to receive said spindle at a point remote from the feed bar and a needle bar mounted upon the carrier and provided with means for actuating said feed pawl, substantially as specified. 12th. In a harness machine, the combination of a carriage and means for imparting a step-by-step feeding movement thereto, of a needle bar carrier swivelled upon the carriage, a needle bar reciprocably mounted in guides in said carrier, and an operating lever connected with the needle bar for operating the same, substantially as specified. 13th. In a harness machine, the combination of a carriage and means for imparting a step-by-step feeding movement thereto, of a needle bar carrier swivelled upon the carriage, a needle bar reciprocably mounted in guides in said carrier, and an operating lever loosely connected at its extremity with the carrier and pivotally connected at an intermediate point with said needle bar, substantially as specified. 14th. In a harness machine, the combination of a carriage and means for imparting a step-by-step feeding movement thereto, of a needle bar carrier swivelled upon the carriage, a needle bar reciprocably mounted in guides in said carrier, an operating lever pivotally connected at an intermediate point with said needle bar, and a link connecting the extremity of said lever with the carrier, substantially as specified. 15th. In a harness machine, the combination with a carriage and feeding mechanism for imparting a step-by-step movement thereto, of a needle bar carrier having a yoke terminally provided with aligned guides, and being extended at one end to form a spindle mounted in said carriage, a needle bar reciprocably mounted in said guides, and an operating lever pivot-

ally connected with the needle bar and loosely connected at its extremity with the yoke, substantially as specified. 16th. In a harness machine, the combination with a carriage, and feeding mechanism for communicating step-by-step forward movement thereto, of a reciprocatory needle bar having a thread guide, a tension spring for normally clamping the thread to prevent movement thereof through said thread guide, and a movable trip, adapted for engagement with either of a plurality of seats, and arranged in the path of said tension spring, for actuating the same to release the thread, substantially as specified. 17th. In a harness machine, the combination with a carriage and feeding mechanism for communicating a step-by-step forward movement threeto, of a reciprocatory needle bar having a thread guide, a tension spring for normally clamping the thread to prevent movement thereof through said thread guide, and a pivotal trip adapted for engagement at its free end with either of a plurality of seats, to actuate said tension spring to release the thread, substantially as specified. 18th. In a harness machine, a carriage, step-by-step feed mechanism for said carriage, a reciprocatory needle bar, a yoke swivelled upon the carriage and having the needle bar mounted thereon, whereby the needle bar may be arranged in a position which is oblique with relation to the path of the carriage, and a retaining device for securing the yoke in a fixed position with relation to the carriage, substantially as specified. 19th. In a harness machine, a traveller carriage, step-by-step mechanism for said carriage, a yoke swivelled in the carriage, a retaining pin for normally connecting said yoke and carriage, a needle bar mounted for reciprocation in the yoke, and a tension spring on the needle bar, substantially as specified. 20th. In a harness machine, the combination of a slotted vise jaw, a needle bar arranged for movement in a direction transverse to said slotted vise jaw and carrying a needle, and means whereby thread may be fed through the slot of the vise jaw, and through said needle bar and needle, substantially as specified. 21st. In a harness machine, the combination of a vise having a slotted jaw, a thread box carried by the vise, and a needle bar mounted for movements respectively transverse to and parallel with the slot in the face of the jaw, thread being fed from the thread box, through said slot in the vise jaw to a needle carried by said needle bar, substantially as specified. 22nd. In a harness machine, the combination with a vise, of a carriage mounted for feeding movement parallel with the jaws of the vise, a needle bar carrier vertically and rotatably adjustable in said carriage, means for holding said carrier against rotatable adjustment when at one limit of its vertical movement, a needle bar slidably connected with the carrier, and means for reciprocating the needle bar.

No. 68,011. Controller for Electric Compressors.

(Contrôleur pour compresseurs électrique.)

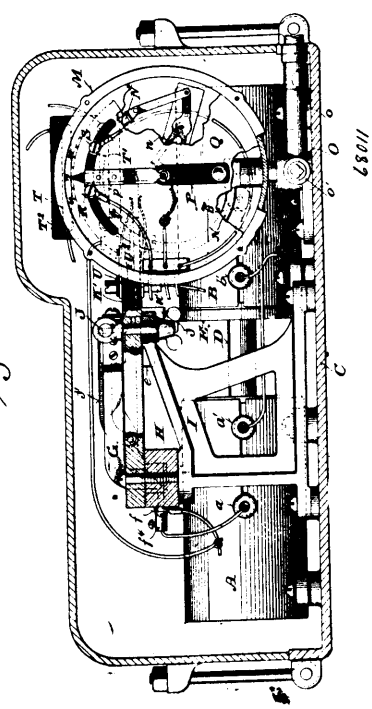


Fig. 1.

Niels Anton Christensen, Milwaukee, Wisconsin, U.S.A., 6th July, 1900; 6 years. (Filed 27th February, 1900.)

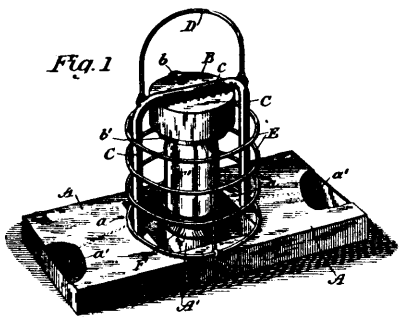
Claim.—1st. In an automatic controller for electric compressors, the combination of a movable contact having a fluid pressure actuating connection, maximum aud minimum pressure contacts arranged to co-operate with said movable contact, a switch in the compressor motor circuit, two magnets having circuit connections so arranged that when said movable contact engages the maximum pressure contact the switch will be opened and the compressor stopped, and when it engages the minimum pressure contact the switch will be closed and the compressor started, and a spark arrester arranged to be thrust between the contacts of said switch as soon as they are separated, substantially as and for the purposes set forth. 2nd. In an automatic controller for electric compressors, the combination of a movable contact having a fluid pressure actuating connection, maximum and minimum pressure contacts arranged to co-operate with said movable contact a switch in the compressor motor circuit, two magnets connected in series with each other and with said switch and arranged to open and close the same, the coil of one of said magnets being connected at one end with the ground or return, and at the other end with said movable contact, the maximum pressure contact being connected with the ground or return and the minimum pressure contact with the source of current, and a circuit controller in the circuit connection of the minimum pressure contact arranged to be closed when the main switch is opened and vice versa, substantially as and for the purposes set forth. 3rd. In an automatic controller for electric compresso.s, the combination of a movable contact, a spring tube having a fluid pressure actuating connection and connected with and arranged to actuate said movable contact, maximum and minimum pressure contacts arranged to co-operate with said movable contact, a switch in the compressor motor circuit, and two magnets having circuit connections so arranged that when said movable contact engages the maximum pressure contact the switch will be opened and the compressor stopped, and when it engages the minimum pressure contact the switch will be closed and the compressor started, substantially as and for the purposes set forth. 4th. In an automatic controller for electric compressors, the combination of a hand or index carrying an electrical contact, a spring tube having a fluid actuating connection and an actuating connection with said hand or index, a plate or dial having a curved slot, maximum and minimum pressure contacts adjustably secured in said slot on opposite sides of and in the path of the movable contact carried by said hand or index, a switch in the compressor motor circuit, and two magnets having circuit connections so arranged that when said movable contact engages the maximum pressure contact the switch will be opened and the compressor stopped, and when it engages the minimum pressure contact the switch will be closed and the compressor started, substantially as and for the purposes set forth. 5th. In an automatic controller for electric compressors, the combination of a movable contact having a fluid pressure actuating connection, maximum and minimum pressure contacts arranged to co-operate with said movable contact, a switch in the compressor motor circuit comprising fixed insulated contacts and a series of pivoted spring contact arms adapted to be turned into and out of engagement with said fixed contacts, two magnets adapted to open and close said switch, and a spark arrester arranged to be thrust by said magnets between the contacts of said switch as soon as they are separated, said magnets having circuit connections so arranged that the switch will be opened and the compressor stopped when the maximum pressure contact is engaged by the movable contact and said switch will be closed and the compressor started when the minimum pressure contact is engaged by said movable contact, substantially as and for the purposes set forth. 6th. In an automatic controller for electric compressors, the combination of a movable contact having a fluid pressure actuating connection, maximum and minimum pressure contacts arranged to co-operate with said movable contact, a switch in the compressor motor circuit comprising a number of fixed insulated contacts, a rocking bar having a series of spring contact arms mounted thereon and adapted to be turned into and out of engagement with said fixed contacts, two magnets, the armature of which is adapted to close said switch, an incline carried by said armature in position by engagement with an arm of said rocking bar to open said switch, and a spark arresting plate carried by said armature in position to be thrust between the contacts of the switch as soon as they are separated by said incline, substantially as and for the purposes set forth. 7th. In an automatic controller for electric compressors, the combination of a movable contact having a fluid pressure actuating connection, maximum and minimum pressure contacts arranged to co-operate with said movable contact, a main switch in the compressor motor circuit, two magnets for operating said switch connected in series with each other and with said switch, the coil of one of said magnets being connected at one end with the ground or return and at the other end with said movable contact, the maximum pressure contact being connected with the ground and the minimum pressure contact having a shunt connection with the source of current, a circuit controller in said shunt connection consisting of two normally engaging springs or contacts, and an insulating strip operated by said magnets to separate said springs when the main switch is closed and to release them and permit them to come together when the main switch is opened, substantially as and for the purpose set forth. 8th. In an automatic circuit controller for electric compressors the combination of a movable contact having a fluid pressure actuating connection, maximum and minimum pressure contacts arranged to co-operate with said movable contact, a switch in the compressor motor circuit

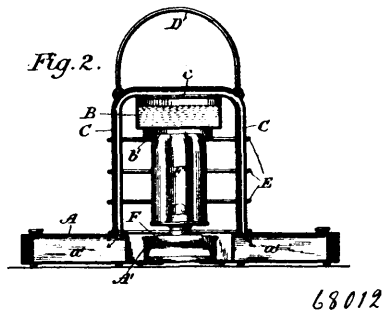
two magnets arranged to open and close said switch and connected in series with each other, the coil of one of said magnets being connected at one end with the ground or return and at the other with said movable contact, the maximum pressure contact being connected with the ground or return and the minimum pressure contact having a shunt connection with the source of current, a circuit controller in said shunt connection consisting of two normally engaging contacts, an insulating strip operated by said magnets to separate the contacts of said shunt circuit controller when the main switch is closed, and a spark arrester also operated by said magnets and adapted to be thrust between the contacts of said switch when they are separated, substantially as and for the purposes set forth. 9th. In an automatic circuit controller for electric compressors, the combination of a movable contact having a fluid pressure actuating connection, maximum and minimum pressure contacts arranged to co-operate with said movable contact, a switch in the compressor motor circuit consisting of fixed insulated contacts and of a number of spring contact arms carried by a rocking bar, two solenoid magnets having a common core adapted by engagement with an arm on said rocking bar to close said switch, an incline carried by said core and adapted by engagement with an arm of said rocking bar to open said switch, said magnets being connected in series with each other, the coil of one magnet being connected at one end with the ground or return and at the other end with said movable contact, the maximum pressure contact being connected with the ground or return and the minimum pressure contact having a shunt connection with the source of current, a circuit controller in said shunt connection consisting of two normally engaging springs or contacts, an insulating strip carried by the core of said magnets and adapted to separate the contacts of the shunt circuit controller when said switch is closed and vice versa, and a spark arrester also carried by said core and arranged to be thrust between the contacts of said switch when they are separated, substantially as and for the purpose set forth. 10th. In an automatic controller for electric compressors, the combination with a movable contact having a fluid pressure actuating connection, maximum and minimum pressure contacts arranged to co-operate with said movable contact, a main switch in the compressor motor circuit, two magnets for operating said switch, and a circuit controller operated by said magnets and arranged to be opened when the main switch is closed and vice versa, said circuit controller being arranged in a shunt connected with one of the aforesaid contacts and controlling the current supply through said shunt to one of said magnets, substantially as and for the purposes set forth. 11th. In an automatic controller for electric compressors, the combination with a movable contact having a fluid pressure actuating connection and maximum and minimum pressure contacts adapted to co-operate with said movable contact, of two magnets adapted to control the compressor motor circuit, two stitches or circuit breakers operated by said magnets and controlling the circuits including said magnets, each switch or circuit breaker being arranged to open when the other closes and vice versa, said magnets having circuit connections so arranged that when said movable contact engages the maximum pressure contact the compressor will be stopped and when said movable contact engages the minimum pressure contact the compressor will be started, substantially as and for the purpose set forth. 12th. In an automatic controller for electric compressors, the combination with a movable contact having a fluid pressure actuating connection and maximum and minimum pressure contacts adapted to co-operate with said movable contact, of two magnets adapted to control the compressor motor circuit, two switches or circuit breakers operated by said magnets and controlling the circuits including said magnets, each switch or circuit breaker being arranged to open when the other closes and vice versa, and insulating strips arranged to be thrust by said magnets between the contacts of said switches or circuit breakers when they are separated, said magnets having circuit connections so arranged that when said movable contact engages the maximum pressure contact the compressor will be stopped and when it engages the minimum pressure contact the compressor will be started, substantially as and for the purpose set forth. 13th. In an automatic controller for electric compressors the combination with a switch controlling the compressor motor circuit and two magnets arranged to open and close said switch, of a pressure gauge comprising a movable part arranged to be actuated by fluid pressure and a contact conducted with said movable part by multiplying gearing, and insulated maximum and minimum pressure contacts arranged on opposite sides and in the path of said movable contact, said magnets having circuit connections with said pressure gauge so arranged that when said movable contact engages the maximum pressure contact the switch will be open and the compressor stopped, and when said movable contact engages the minimum pressure contact the switch will be closed and the compressor started, substantially as and for the purposes set forth.

No. 68,012. Foot Warmer. (*Chaufferette.*)

Charles H. Whitaker, Bordentown, New Jersey, U.S.A., 6th July, 1900; 6 years. (Filed 23rd June, 1900.)

Claim.—1st. A portable foot warmer, comprising a hollow base, a tank supported over and from the middle of the base, the end portions of said base projecting beyond the heater and forming supports for the user's feet, a pipe connecting the interiors of the base and tank, and a heater resting upon the middle of the base and under the tank. 2nd. A foot warmer, comprising a flat, hollow foot warming base, a tank supported centrally by the base, the end portions of the base projecting beyond the tank and serving to support





68012

the user's feet, and a pipe connecting the tank with the base, the tank and base being spaced apart to receive a central heater between them. 3rd. A foot warmer, comprising a hollow base having a central cup or depression to receive a heater, the ends of the base projecting beyond said depression and serving to support the user's feet, a tank supported above the said central depression, and a pipe connecting the tank with the base, substantially as described. 4th. A foot warmer comprising a hollow foot warming base, a tank supported centrally above the base to allow of a heater being placed under it upon the base and the projecting ends of the base forming supports for the user's feet, a pipe connecting the top of the tank with the base, and a valve pipe connecting the bottom of the tank with the base, substantially as described. 5th. A foot warmer comprising a hollow base, a tank supported by the base centrally thereabove to allow of the placing of a heater therebelow upon the middle of the base, an air chamber at the top of the tank and provided with a safety valve, and a pipe connecting the tank with the base, the ends of the base extending far enough beyond the tank and heater to form supports for the user's feet, substantially as described. 6th. A foot warmer comprising a hollow base provided with a central cup or depression, a heater supported in said depression and the ends of the base beyond said depression forming supports for the user's feet, a tank supported above the central depression and heater, a pipe connecting the base ends with the top of the tank and a valve pipe connecting the bottom of the tank with the base, substantially as described.

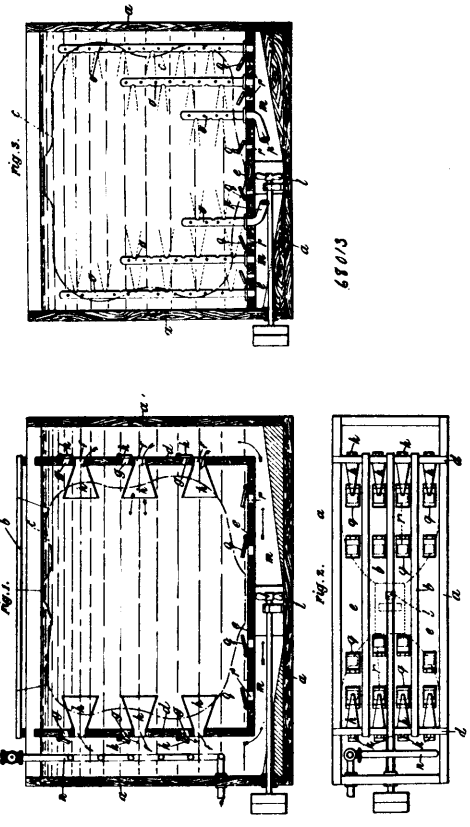
No. 68,013. Apparatus for Preparing Hides and Skins.

(*Appareil pour la préparation des peaux.*)

John Frederick Jones, 59 Haldon Road, Surrey, and Edward Seymour Clegg, 35 Drayton Gardens, South Kensington, Middlesex, both in England, 6th July, 1900; 6 years. (Filed 24th October, 1899.)

Claim.—1st. A method of treating hides and skins, consisting in suspending the hides in the liquid with which they are to be treated and projecting said liquid against the adjacent surfaces of contiguous hides so that the liquid flows in a constant stream over the whole surfaces of the hides, substantially as and for the purposes specified. 2nd. In apparatus for the treatment of hides and skins, the combination with a receptacle for the hides and the liquid with which said hides are to be treated, and means for circulating said liquid comprising channels and a liquid propelling device, of means such as nozzles for directing the liquid between adjacent hides, substantially as described. 3rd. Apparatus for the treatment of hides and skins, comprising a receptacle for the liquid with which said hides are to be treated, means for suspending the hides therein from the upper part of said receptacle, channels connected with said receptacle through which liquid may be drawn or propelled, nozzles projecting interiorly from the walls of the receptacle and communicating with the said channels, and means for causing the liquid to pass through said channels and nozzles, substantially as described. 4th. Apparatus for the treatment of hides and skins, comprising a receptacle for the hides and the liquid with which said hides are to

be treated, channels communicating with said receptacles at each of their extremities, a valve at that end of each channel through which

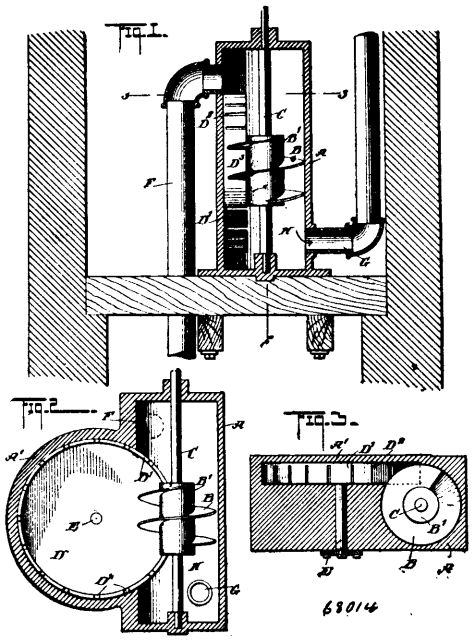


the liquid enters the channel, a nozzle at that end of each channel through which the liquid passes therefrom back to the receptacle, and means for propelling the liquid through said channels so as to circulate the same, substantially as described. 5th. Apparatus for the treatment of hides and skins, comprising a receptacle for the hides and the liquid with which said hides are to be treated, a channel adjacent to such receptacle, a device in such channel for propelling liquid therethrough in either direction, passages communicating with said channel, apertures affording communication between said passages and the receptacle, nozzles attached to said apertures having elongated mouths and arranged to project the liquid passing therethrough between adjacent hides suspended in the receptacle, and valves for controlling the flow of liquid through the apertures, substantially as described.

No. 68,014. Pump. *(Pompe.)*

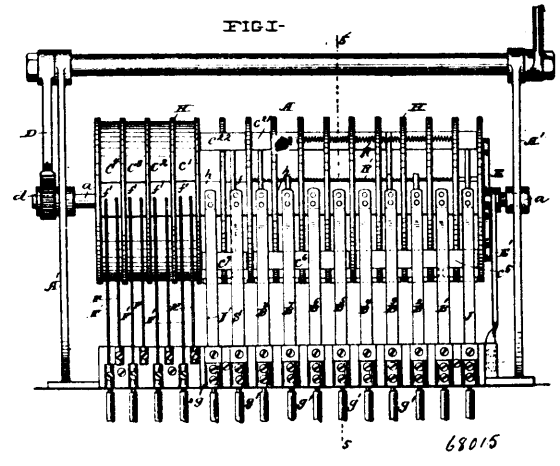
Juan Landerreche, San Luis Potosi, Mexico, 6th July, 1900; 6 years. (Filed 3rd May, 1900.)

Claim.—1st. A pump comprising a casing, a conveying screw mounted to turn therein, and a wheel having at its periphery notches adapted to receive the turns of the conveying screw. 2nd. A pump comprising a casing, a conveying screw mounted to turn therein, and a wheel held to turn about an axis extending transversely of the screw's axis, the wheel having an annular flange projecting toward the screw and provided with notches adapted to receive the turns of the conveying screw. 3rd. A pump comprising a casing, a conveying screw mounted to turn therein and provided with a core, and a wheel held to turn about an axis extending transversely of the screw's axis, the wheel having an annular flange projecting toward the screw and adapted to engage the core thereof, said flange being provided with notches adapted to receive the turns of the conveying screw. 4th. A pump comprising a casing, a conveying screw mounted to turn therein and provided with a core, and a series of connected projections or teeth movable lengthwise of the screw shaft and arranged to engage the screw core and adjacent



turns of the screw, to prevent a backward movement of the sub stance propelled.

No. 68,015. Electric Controller. *(Contrôleur électrique.)*



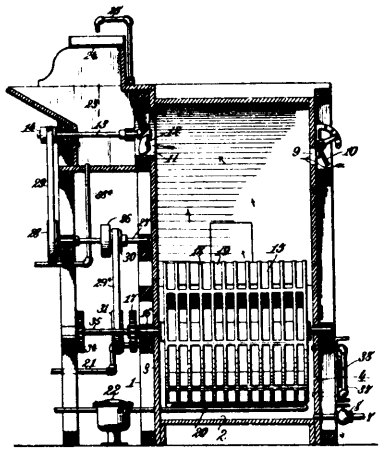
John Cromwell Lincoln, Cleveland, Ohio, U.S.A., 6th July, 1900; 6 years. (Filed 6th April, 1900.)

Claim.—1st. The combination with two or more battery cells and a motor having its field provided with a series coil and a shunt coil, of means for supplying a varying voltage from said cells to the armature and series coil and a constant voltage to the shunt coil of said motor, substantially as described. 2nd. The combination with a plurality of terminals electrically connected with two or more battery cells and a motor having a field provided with two or more shunt coils, of a controller provided with two or more contacts arranged to successively connect with the terminals of said battery cells to vary the connection between said cells, and with contacts arranged to continuously connect each of said cells with one of said shunt coils in the controller's operative position, substantially as described. 3rd. The combination with two or more battery cells and a motor having its field provided with a series coil and a shunt coil, of a controller electrically connected with said cells and a motor, said controller being provided with means for supplying a varying voltage to said motor and series coils, and providing a constant voltage to said shunt coil, substantially as described. 4th. The combination with a plurality of terminals electrically connected with two or more battery cells and with a motor having its field provided with a series coil and one or more shunt coils, each of said shun

coils being connected with one of said batteries, of a controller provided with two or more contacts, arranged to engage successively with the the terminals of said batteries to vary the voltage supplied to the armature of said motor and to said series coil, and with contacts continuously engaging the terminals of said shunt coils in the controller's operative position to provide a constant voltage through each of said shunt coils, substantially as described.

No. 68,016. Process of and Apparatus for Purifying and Condensing Tannin Liquor. *(Procédé et appareil pour purifier et condenser les acide tannique.)*

Fig 1.

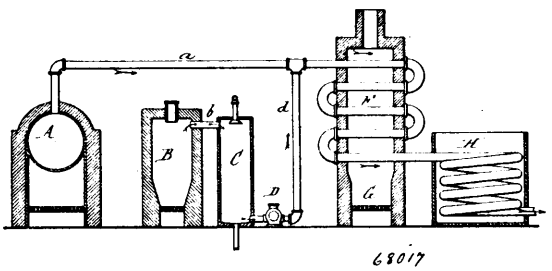


68016

Alexander Dunbar, Woodstock, and Howard Wilmot Shaw, Hawkshaw, both in New Brunswick, Canada, 6th July, 1900; 6 years. (Filed 9th October, 1899.)

Claim.—1st. The process of purifying tannin liquor containing deleterious acids and of concentrating tannin liquor containing a low percentage of tannin, which consists in evaporating the more volatile portions thereof. 2nd. The process of purifying tannin liquor containing a low percentage of tannin, which consists in increasing the evaporating surface thereof and causing a suction of air above the same. 3rd. The process of purifying tannin liquor containing deleterious acids and of concentrating tannin liquor containing a low percentage of tannin, which consists in heating the same, increasing the evaporating surface thereof and creating a suction of air above the same. 4th. The process of purifying tannin liquor containing deleterious acids and of concentrating tannin liquor containing a low percentage of tannin, which consists in heating and agitating the same in an inclosed space, increasing the evaporating surface thereof and creating a suction of air through the inclosed space above the same. 5th. The process of purifying tannin liquor containing deleterious acids, of concentrating tannin liquor containing a low percentage of tannin, and of recovering the by-products, which consists in heating and agitating the liquor in an inclosed space, increasing the evaporating surface thereof, creating a suction of air across the inclosed space above the liquor, condensing the vapors carried off and collecting the condensed vapors. 6th. In an apparatus of the character described, the combination of a tank containing the liquid to be treated, an inclosing casing above said tank having an inlet opening in one wall thereof, and an exhaust opening in another wall, means for controlling the passage through said inlet opening, means for increasing the evaporating surface of the liquid in said tank, and means for carrying off the vapors through said exhaust opening, as and for the purpose set forth. 7th. In an apparatus of the character described, the combination of a tank containing the liquid to be treated, an inclosing casing above the tank having an air inlet opening in one wall thereof and an exhaust opening in another wall, a compartment with which said exhaust opening communicates, evaporating means in the tank, a suction fan in said exhaust opening, and means for condensing the vapors drawn off by said fan. 8th. In an apparatus of the character described, the combination of a tank containing the liquid to be treated, an inclosing casing above said tank having an air inlet opening in one wall thereof and an exhaust opening in another wall, a compartment with which said exhaust opening communicates, a sprayer in the upper part of said compartment, a water pipe communicating with said sprayer, an evaporating wheel partially submerged by the liquid in the tank, and a suction fan in said exhaust opening, as and for the purpose set forth. 9th. In an apparatus of the character described, the combination of a tank containing the liquid to be treated, an inclosing casing above said tank having an air inlet opening in one wall thereof, provided with controlling means, and an exhaust opening in another wall thereof, an open compartment with which said exhaust opening communicates, a perforated pan constituting the top or cover of said compartment, a water pipe discharging into said pan, a rotary evaporating wheel partially submerged in the liquid in said tank, heating coils in said tank between said wheel and the inner walls thereof, a suction fan in said exhaust opening, and means for operating said wheel and fan, as and for the purpose set forth.

No. 68,017. Method of Refining Petroleum. *(Méthode de purifier le pétrole.)*



68017

Adolph Kayser, Buffalo, New York, U.S.A., 6th July, 1900; 6 years. (Filed 6th April, 1900.)

Claim.—1st. In a method of refining ill-smelling or sulphur bearing petroleum, or petroleum derivatives, the herein described step which consists in distilling the same by the application of heat to the still, mixing carbon monoxid with the oil vapour, and heating the mixture of oil vapour and carbon monoxid to the temperature necessary for causing the carbon monoxid to re-act upon the objectionable compounds in the oil vapour, substantially as set forth. 2nd. The method of refining ill-smelling or sulphur bearing petroleum, or petroleum derivatives, the herein described step which consists in distilling the same by the application of heat to the still, mixing carbon monoxid with the oil vapour, and passing the mixture of oil vapour and carbon monoxid through a heating coil, substantially as set forth.

No. 68,018. Machinery for Coating Sweetmeats, Etc. *(Machine pour enduire des bonbons, fruits, etc.)*

FIG. 1.

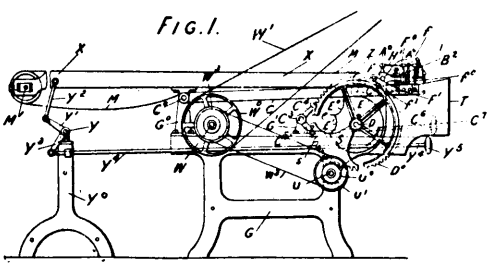
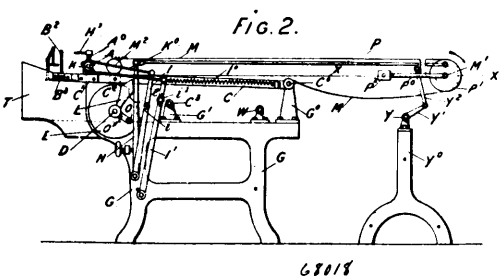


FIG. 2.



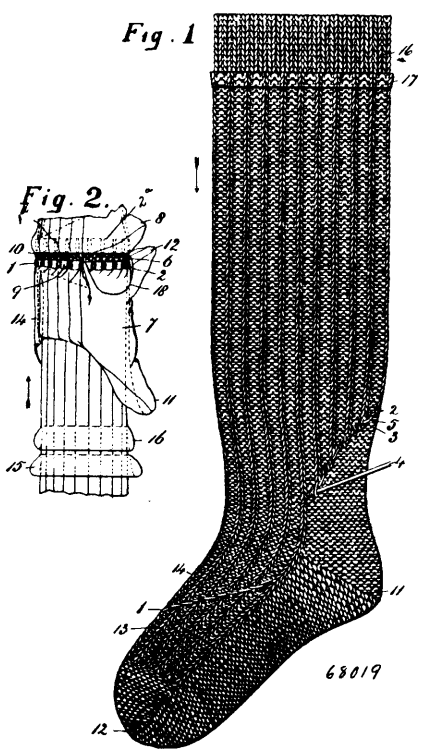
68018

George Samuel Baker, London, England, and Nicolaus Frings, Hanover, Germany, 6th July, 1900; 6 years. (Filed 28th June, 1899.)

Claim.—1st. In a machine for coating bonbons, sweetmeats and the like, the combination of a tank, a holder, levers or arms carrying the said holder, a rocking axle to which said arms are connected, a manually operated upper holder to prevent the escape of goods, means operated by the aforesaid axle to jar the holder after the goods have been dipped, and a carrier cloth or conveyer to which the goods are brought by the turning of the axle, substantially as and for the purpose specified. 2nd. In a machine for coating bonbons, sweetmeats and the like, the combination of a tank, a holder, levers or arms carrying the said holder, a rocking axle to which said arms are connected, a manually operated upper holder to prevent the escape of goods, means to jar the holder after the goods have been dipped, and a carrier cloth or conveyer to which the goods are

brought by the turning of said axle, substantially as and for the purpose specified. 3rd. In a machine for coating bonbons, sweetmeats and the like, the combination of a tank, a holder, levers or arms carrying said holder, a rocking axle to which said arms are connected, a manually operated upper holder to prevent the escape of goods, means to jar the holder after the goods have been dipped, a carrier cloth or conveyer to which the goods are brought by the turning of the said axle, and a cooling apparatus through which the goods are passed by the carrier cloth, substantially as and for the purpose specified. 4th. In a machine for coating bonbon, sweetmeats and the like, an interchangeable holder comprising bonbon netting, and a series of wires or bars stretched beneath the holes of the netting, in combination with arms carrying the holder, hollow cones on the said arms, an axle, and conical projections on the axle over which the said hollow cones may be fitted, substantially as and for the purpose specified. 5th. In a machine for coating bonbons, sweetmeats and the like, a holder, in combination with arms carrying the holder, hollow cones on the said arms, an axle, and conical projections on the axle over which the said hollow cones may be fitted, substantially as and for the purpose specified. 6th. In a machine for coating bonbons, sweetmeats and the like, a tank, a holder, and means for dipping the holder in the tank, in combination with a grating frame B^2, levers C, and clamp plates B^3, by means of which the frame is connected to the levers, substantially as and for the purpose specified. 7th. In a machine for coating bonbons, sweetmeats and the like, a tank, a holder, and means for dipping the holder in the tank, in combination with a grating frame B^2, levers C, clamp plates B^3, by means of which the frame is connected to the levers, a cam wheel E engaging the said levers, and an adjustable stop C^4 to limit the downward movement of the levers, substantially as and for the purpose specified. 8th. In a machine for coating bonbons, sweetmeats and the like, a shaking contrivance for expediting the removal of superfluous chocolate or coating material from the goods, consisting in the combination of a tooth segment S, a weight f on the arm F^o, a lever F^1 on the arm F and the pin f^1 of which is raised by the teeth s of the segment S, and the adjusting pin f^o an the arm F^o, substantially as and for the purpose specified. 9th. In a machine for coating bonbons, sweetmeats and the like, the holder H in combination with means for imparting movement to the holder for the purpose of placing the bonbons Z on the carrier cloth M, comprising a chain wheel K fixed an the axle A, the chain K^o the levers I and I^1 connected with it, the spring l^o, and the cam L on the axle D by the action of which on the levers I and I^1 the holder is removed and returned, substantially as and for the purpose specified. 10th. In a machine for coating bonbons, sweetmeats and the like, a holder in combination with an upper holder operated by hand for securing the goods during dipping, consisting of a frame R provided with wires R^1 and connected by means of the plates R^o with pillars Q, of the grating frame B by means of joints Q^o connected with bars Q^1, substantially as and for the purpose specified. 11th. In a machine for coating bonbons, sweetmeats and the like, a carrier cloth or conveyer band, and suitable rollers or drums therefor, in combination with a raising or adjusting arrangement for the carrier cloth or conveyer band, comprising the supports X for the axles M^1 and M^2 of the said rollers or drums, the axle C^o on which the supports are journalled, rod Y^2, arm Y^1, and an axle Y which is worked by a rod Y^4 and a lever Y^3, substantially as and for the purpose specified. 12th. In a machine for coating bonbons, sweetmeats and the like, the combination of a tank, a holder, an upper holder to prevent the goods from escaping, an axle, arms connecting the holder and axle, means for dipping the holder beneath the surface of the liquid in the tank, means for shaking the holder to free the goods from superfluous liquid, a conveyer band, and means to rock the aforesaid axle to deposit the goods on the conveyer band, substantially as and for the purpose specified. 13th. In a machine for coating bonbons, sweetmeats and the like, a jacketed holder in combination with a removable tank or container for the coating material, substantially as and for the purpose specified. 14th. In a machine for coating bonbons, sweetmeats and the like, a jacketed holder and a jacketed hinged flap, in combination with a removable tank or container for the coating material, substantially as and for the purpose specified. 15th. In a machine for coating bonbons, sweetmeats and the like, a jacketed holder and jacketed cover, in with a removable tank or container for the coating material, substantially as and for the purpose specified. 16th. In a machine for coating bonbons, sweetmeats and the like, a tank in combination with a scraper arranged in contact with the sides and bottom of the tank, and means for reciprocating the said scraper, substantially as and for the purpose specified. 17th. In a machine for coating bonbons, sweetmeats and the like, a tank in combination with a scraper and stirrer located therein, links connected to the scraper, levers to which the said links are pivoted so that they may be swung upward to remove the scraper and stirrer from the tank, and means for moving the said levers to reciprocate the scraper and stirrer in the tank, substantially as and for the purpose specified. 18th. In a machine for coating bonbons, sweetmets and the like, a tank in combination with a scraper and stirrer located therein, links connected to the scraper, levers to which the said links are pivoted so that they may be swung upward to remove the scraper and stirrer from the tank, cams engaging the said levers and one or more springs adapted to maintain the levers in contact with the cams, substantially as and for the purpose specified.

No. 68,019. Knit Fabric and the Process of Knitting the Same. *(Tricot et procédé de tricoter.)*



George Frederick Sturgess, Inglenook, Leicester, England, 9th July, 1900; 6 years. (Filed 17th February, 1899.)

Claim.—1st. The method of knitting a patterned knit fabric, consisting of withholding the end patterning loops during the progress of adjoining or adjacent fabric, elongating and projecting the said loops from the body of the fabric, allowing of their fibrous adhesion to the fabric, and fastening them by independent looping across the fabric (when such attachment is necessary in addition to the fibrous attachment of the said loops as in the case of short staple cotton yarns), whereby the said end patterning loops are prevented loosing their shape and forming holes in the fabric, substantially as and for the purposes set forth. 2nd. In a patterned fabric, the method of holding the end patterning loops in shape to prevent them unroving into holes, consisting of elongating and projecting the said loops from the body across the fabric and adhering them to the fabric in the process of finishing, thereby securing them from unroving in wear, substantially as and for the purposes set forth. 3rd. The patterned knit fabric described and formed by the said process of varying the number and relation of the patterning loop lines by withholding or suppressing the formation of some lines, elongating and projecting their end loops from the body of the fabric for subsequent attachment to the fabric, substantially as and for the purposes set forth.

No. 68,020. Process of Treating Paper.
(Procédé pour le traitement du papier.)

Charles Cornelius Paltridge, Cheltenham Street, Malvern, South Australia, 9th July, 1900; 6 years. (Filed 21st November, 1899.)

Claim.—The herein specified improved process for treating paper consisting in the application thereto of turpentine and glycerine or equivalents thereof substantially as herein before described whereby the paper is rendered fit for receiving press copy impressions without necessitating the subsequent application of water thereto.

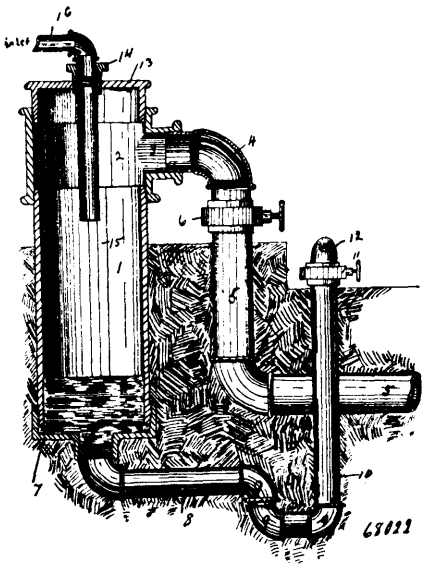
No. 68,021. Leather Dressing Composition.
(Composition pour apprêter le cuire.)

Samuel M. Neill, 14 Eastbourne Terrace, Hyde Park, London, England, 9th July, 1900; 6 years. (Filed 30th October, 1899.)

Claim.—The improved composition for dressing harness and the like, consisting in mixing together, bees wax, white wax, drop black powder, gold size, shellac, indigo blue powder, spirits of turpentine and spirits of wine, in or about the proportions and in the manner substantially as hereinbefore specified.

No. 68,022. Gas and Oil Separator.

(Séparateur à gaz et huile.)



Claybourn C. Brown, Pendleton, Indiana, U.S.A., 9th July 1900; 6 years. (Filed 4th October, 1899.)

Claim.—In a device of the class described, the combination with the separating cylinder 1, the coupling 2 having outlet 3, pipes 5 connected therewith cap 13, pipe 15, pipes 8 and 10 and L's 9, leading from the bottom of the cylinder, all combined and arranged to co-operate, substantially as described.

No. 68,023. Sheaf Carrier for Harvesting Machines.

(Poste gerbe pour moissonneuses.)

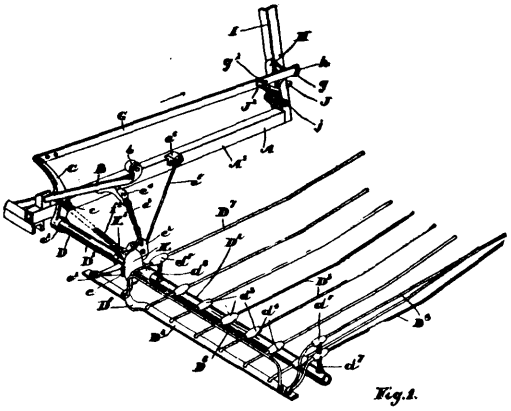


Fig. 1.

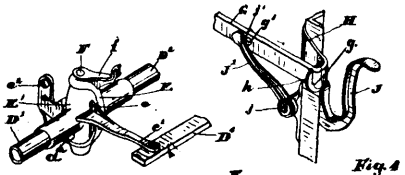


Fig. 2.

Fig. 4

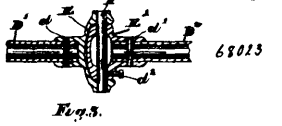


Fig. 3.

David Maxwell and Sons, assignee of David Maxwell, all of St Mary's Ontario, Canada, 9th July, 1900; 6 years. (Filed 23rd June, 1900.)

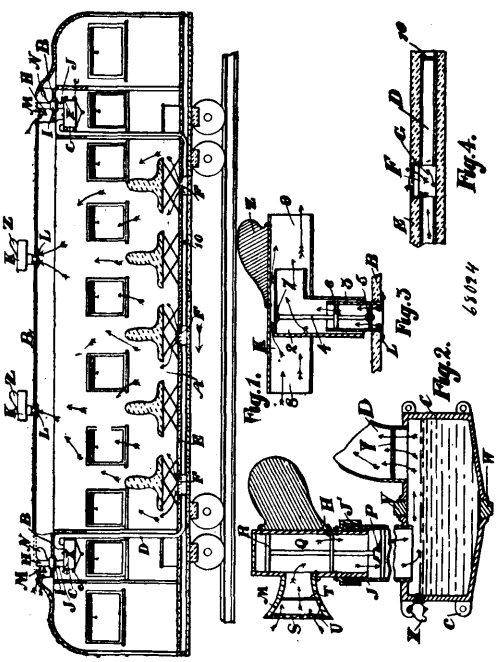
Claim.—1st. In a sheaf carrier for harvesting machines, the combination with the fingers, of the main support supporting such fingers divided into two portions intermediate of its length and a suitable pivotal connection or hinge between such portions as and for the purpose specified. 2nd. In a sheaf carrier for harvesting machines, the combination with the main support divided into two sections and one section being supported on the frame of the harvester, of the pivotal connection between the two portions or sections and means for normally holding such portions in alignment, as and for the purpose specified. 3rd. In a sheaf carrier for harvesting machines, the combination with the main support divided into two sections and means for supporting the inner section upon the frame, of the single jaw on one section fitting between the double jaw on the opposing section, the pivot pin extending through both the jaws and means for holding the sections normally in alignment, as and for the purpose specified 4th. In a sheaf carrier for harvesting machines, the combination with the main support divided into two sections and means for supporting the inner section upon the frame, of the single jaw on one section fitting between the double jaw on the opposing section, the pivot pin extending through both the jaws, and the stop on one jaw abutting the arm on the other jaw, as and for the purpose specified. 5th. In a sheaf carrier for harvesting machines, the combination with the main support divided into two sections and means for supporting the inner section upon the frame, of the single jaw on one section fitting between the double jaw on the opposing section, the pivot pin extending through both the jaws, means for holding the sections normally in alignment, the arm on one end of the pivot pin and the spiral spring connected to such arm and to the frame, as and for the purpose specified. 6th. In a sheaf carrier for harvesting machines, the combination with the main support divided into two sections and means for supporting the inner section upon the frame, of the single jaw on one section fitting between the double jaw on the opposing section, the pivot pin extending through both the jaws, the stop on the jaw abutting the arm on the other jaw, the bar to which the fingers are connected suitably attached to the arm abutting the stop and provided with a curved portion adapted to fit close to the jaw when the fingers are collapsed, as and for the purpose specified. 7th. The combination with the main support and means for attaching it to the frame and the pivotal connection between the two portions of the support, of a lug attached to one of the portions at or near the pivotal connection, the bracket on the brace secured to the frame and a chain connecting such bracket with the lug behind the tube, as and for the purpose specified. 8th. The combination with the tubular support and means for attaching it to the frame and the pivotal connection between the two portions of the support, of a lug attached to one of the portions at or near the pivotal connection, the bracket on the brace secured to the frame, a chain connecting such bracket with the lug behind the tube and the brace connecting such lug to a suitable portion of the frame of the harvester, as and for the purpose specified. 9th. The combination with the tubular portion and the sheaf carrier suitably attached to the same, of a lever suitably pivoted on the frame and provided at the lower end with a receiving socket for the inner end of the tubular portion and means for tilting such lever, as and for the purpose specified. 10th. The combination with the tubular portion of the sheaf carrier suitably attached to the same, of a lever suitably pivoted on the frame and provided at the lower end with a receiving socket for the inner end of the tubular portion, the rod connected at one end to the lever and provided with a notch at the opposite end or rear end, the bracket suitably secured to one of the standards of the frame and provided with a jaw which the notch in the bar straddles, the stud suitably journalled in the bracket, the foot crank secured to one end of the stud and the arm secured to the opposite end and having the end thereof extending through a slot in the bar, as and for the purpose specified. 11th. The combination with the main support and means for attaching it to the frame and the pivotal connection between the two portions of the support, of a lug attached to one of the portions at or near the pivotal connection and a chain connecting such lug with a suitable portion of the frame, as and for the purpose specified. 12th. In a sheaf carrier for harvesting machines, the combination with the main support divided into two sections and means for supporting the inner section upon the frame, of the single jaw on one section fitting between the double jaw of the opposing section, the pivot pin extending through both of the jaws, the stop on one jaw abutting the arm on the other jaw and the bar to which the fingers are connected suitably attached to the arm abutting the stop, as and for the purpose specified. 13th. The combination with the main support and the sheaf carried suitably attached to the same, of a lever pivoted on the frame and suitably connected at the lower end to the main support and means for tilting such lever, as and for the purpose specified.

No. 68,024. Ventilating System. (*Système de ventilation.*)

Thomas Bennett, Charles Hudson and Frank Denton, Toronto, Ontario, Canada, 9th July, 1900; 6 years. (Filed 18th January, 1900.)

Claim.—1st. In a ventilated car, the combination with the bottom provided with registers, of fresh air pipes leading from the top of suitable water tanks, said water tanks being situated within said car and near the top thereof, said fresh air pipes opening into said registers, suitable cowls rotatably held in the roof of said car, a pipe leading from said cowls to said water tanks and opening into the top thereof, and suitable rotatable ventilators in the top of the car for carrying off the fowl air, as set forth and for the purpose specified. 2nd. In a ventilated car, the combination with the bottom provided with longitudinal timbers forming longitudinal passageways therebetween, and registers in said bottom opening

into said longitudinal passageways, of fresh air pipes leading from the top of suitable water tank, said water tanks being situated

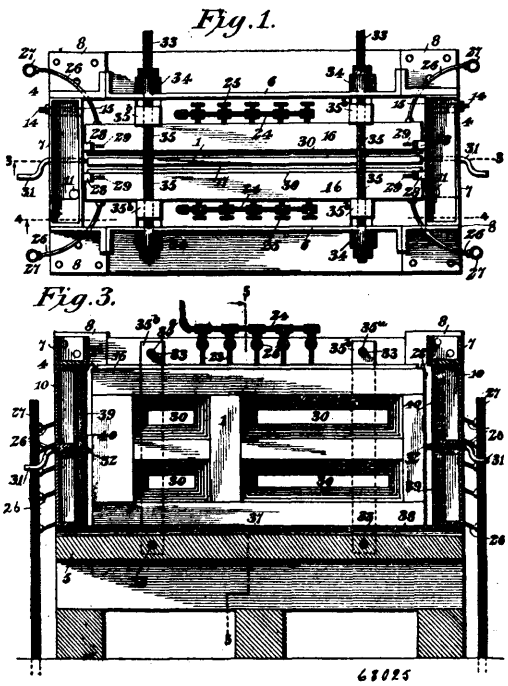


within said car and near the top thereof, said fresh air pipes opening into said longitudinal passageways, suitable cowls rotatably held in the roof of said car, a pipe leading from said cowls to said water tanks and opening into the top thereof, and suitable rotatable ventilators in the top of the car for carrying off the foul air, as set forth and for the purpose specified. 3rd. The combination of the cowls H, pipe J, water tank C, containing water, fresh air pipe D, screens S and T, and holes U in the intake M, and screen Y, in said fresh air pipe, all arranged as set forth and for the purpose specified.

No. 68,025. Apparatus for Manufacturing Articles from Pulp Materials. (*Appareil pour la fabrication d'articles de pulpe.*)

Lewis A. Hall and Robert H. Munson, assignee of James M. Leaver, all of Bay Mills, Michigan, U.S.A., 9th July, 1900; 6 years. (Filed 11th December, 1899.)

Claim.—1st. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of platens arranged within the box and carrying dies upon their opposing faces, and means for moving said platens toward and away from each other. 2nd. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of movable platens arranged in parallelism within the box and carrying dies upon their opposing faces, and means for moving said platens toward and away from each other. 3rd. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of movable platens arranged in parallelism within the box and carrying dies upon their opposing faces, and means for applying heat to the platens, substantially as specified. 4th. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of upright movable platens arranged in parallelism within the box and carrying dies upon their opposing faces, and means for supporting a core in the working space between the platens, substantially as specified. 5th. In an apparatus for manufacturing articles from pulp materials, a mould box having an interior working space designed to receive a core and pulp material, movable dies arranged to work at opposite sides of the core toward and away from the same, and means for applying heat to the platens, substantially as specified. 6th. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of parallel platens arranged within the mould box and having interior heating chambers and carrying dies upon their opposing faces, and means for moving said platens toward and away from each other, substantially as specified. 7th. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of upright movable platens arranged inside of the box and confining therebetween a working space to receive the core of the article and the pulp material, said platens carrying upon their opposing faces dies working respectively at opposite sides of the core, and core centering screws mounted in the end wall of the box and projecting into the working space for engagement with the core, substantially as specified. 8th. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of platens arranged within the box and carrying dies, each of said platens having a plurality of independent heating chambers, means for supplying each of the heating chambers with the heating agent independent of the other chambers, and means for



moving said platens toward and away from each other, substantially as specified. 9th. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of movable platens arranged within the box, each of said platens being provided with a plurality of separate and independent heating chambers, means for supplying each heating chamber with the heating agent independently of the other chambers, and means for moving said platens toward and away from each other, substantially as specified. 10th. In an apparatus for manufacturing articles from pulp materials, a mould box, a pair of platens arranged within the box and carrying dies upon their opposing faces, each of said platens being provided with a plurality of separate and independent heating chambers, and separate supply and drain pipe connections with each heating chamber of each platen, and means for moving the said platens toward and away from each other, substantially as specified. 11th. In an apparatus for manufacturing articles from pulp materials, a mould box having door enclosed openings at its ends, a pair of platens arranged within the box and carrying dies upon their opposing faces, and means for moving said platens toward and away from each other, substantially as specified. 12th. In an apparatus for manufacturing articles from pulp materials, a mould box having end doors, fasteners for said doors, a pair of platens arranged within the box and carrying dies upon their opposing faces, and means for moving said platens toward and away from each other, substantially as specified. 13th. In an apparatus for manufacturing articles from pulp materials, a mould box having end access openings, swinging doors arranged to cover and uncover said openings, rock shafts fitted to the ends of the box and carrying a plurality of swing bolts engaging with the doors, a pair of platens arranged within the box and carrying dies, and means for moving the platens toward and away from each other, substantially as specified 14th. In an apparatus for manufacturing articles from pulp materials, a mould box having an interior working space designed to receive a core and pulp material, said box also having waste channels at the bottom and ends of said working space, and the movable platens arranged to work within the box at opposite sides of the core, toward and away from the same, substantially as specified. 15th. In an apparatus for manufacturing articles from pulp materials, a mould box having in the bottom and ends thereof communicating waste channels or gutters, perforated cover plates for said channels or gutters, and a pair of platens movable toward and away from each other, and carrying at their ends yielding packing contacting with the ends of the box, substantially as specified. 16th. In an apparatus for manufacturing articles from pulp ma erials, a mould box, a pair of platens arranged within the box, and carrying dies, carrier bars attached to the platens, and provided in their ends with threaded openings, and suitably operated screws mounted within the mould box and and having right and left threaded portions engaging with said threaded openings of the carrier bars, substantially as specified.

No. 68,026. Art of Manufacturing Articles from Pulp Materials. *(Arc de fabriquer des articles de matiers de pulpe.)*

Fig. 1.

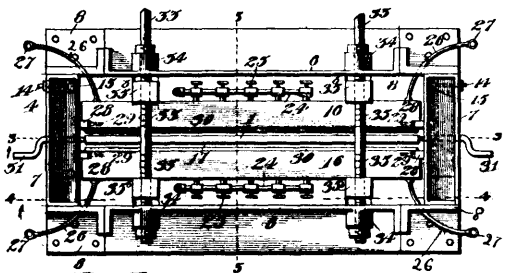
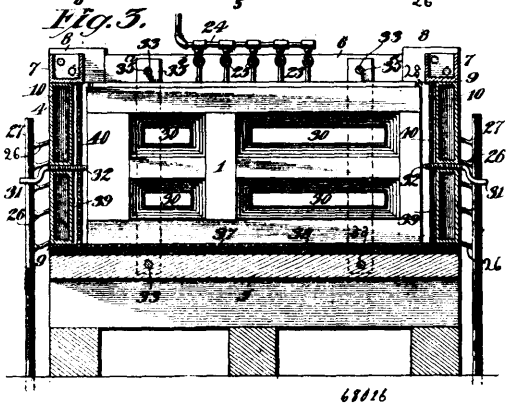


Fig. 3.



68016

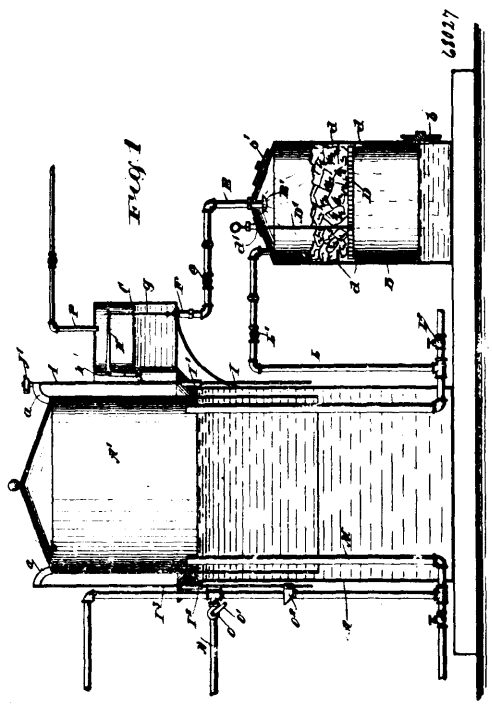
Lewis A. Hall and Robert H. Munson, assignee of James M. Leaver, all of Bay Mills, Michigan, U.S.A., 9th July 1900; 6 years. (Filed 11th December, 1899.)

Claim.—1st. An improvement in the art of manufacturing articles from pulp materials which consists in first enveloping a core with pulp material, and then moulding and pressing the material into a homogeneous mass upon said core at one operation. 2nd. An improvement in the art of manufacturing articles from pulp materials which consists in enveloping a core with pulp material, subjecting the material to heat to eliminate vapor and waste products and to bake the same, and moulding and pressing the material into a homogeneous mass upon the core. 3rd. An improvement in the art of manufacturing articles from pulp materials which consists in enveloping a core with pulp material, subjecting the material to the action of heat to eliminate vapor and waste products and to bake the same, and moulding and pressing the material into a homogeneous mass upon the core at one operation and during the application of the heat. 4th. An improvement in the art of manufacturing articles from pulp materials which consists in enveloping a core with pulp material, and then simultaneously fusing, baking, and moulding and pressing the pulp materials upon the core. 5th. An improvement in the art of manufacturing articles from pulp materials which consists in enveloping a skeleton core having panel openings with pulp material, subjecting the material to the action of heat, and moulding and pressing the material during the application of heat upon the core and into a solid homogeneous mass through the panel openings thereof. 6th. An improvement in the art of manufacturing articles from pulp materials which consists in enveloping a core with pulp materials, progressively applying heat to the material at different points, and moulding and pressing the material upon the core during the application of the heat. 7th. An improvement in the art of manufacturing articles from pulp materials which consists in first enveloping a core with pulp material, progressively applying heat from the denser to the thinner portions of the material, and moulding and pressing the material upon the core during the progressive application of the heat thereto.

No. 68,027. Acetylene Generator. *(Générateur acétylène.)*

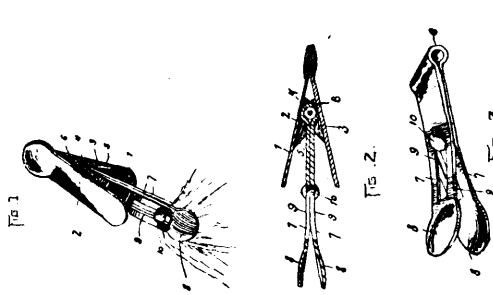
Richard Burpee Anderson, Cumberland, British Columbia, Canada, 9th July, 1900; 6 years. (Filed 20th July, 1899.)

Claim.—1st. A water controlled valve for acetylene generators, comprising a cylinder having a head at one end provided with a central guide hole and surrounding fluid conveying holes and also having a valve seat at its opposite end, and a conical valve adapted to fit said seat and having a stem passing through the guide hole in the head, substantially as described. 2nd. An acetylene generator, having a valve controlling the admission of water to the carbide, a lever connected therewith to open it, a rising and falling gasometer bell, and a horizontally slidable arm carried by the bell and adapted to engage said lever to open the valve, substantially as described. 3rd. An acetylene generator, having a valve controlling the admis



sion of water to the carbide, a lever connected therewith to open it a rising and falling gasometer bell, a vertical guide rod carried by the gasometer bell, a fixed guide for said rod, and a contact bar slidable horizontally on the guide rod and adapted to engage the lever to open the valve, substantially as described. 4th. An acetylene generator, having a valve controlling the admission of water to the carbide, a lever connected therewith to open it, a rising and falling gasometer bell, a vertical guide rod carried by the gasometer bell, a fixed guide for said rod, a plate vertically adjustable on the guide rod and having horizontally extending guides, and a bar adjustable in said guides and adapted to engage the lever to open the valve, substantially as described. 5th. A blow-off mechanism for acetylene generators, comprising a valve having a normally acting closing means attached, and connected with the gas spaces of the generat r, and with a blow-off pipe, and an arm movable by the rise and fall of the gasometer and adapted to engage and open said valve when the gasometer nears its uppermost position, substantially as described. 6th. In acetylene generators, a blow-off pipe connected with the gas storage spaces, a spring closed valve therein, a rising and falling gasometer, and an arm carried by the gasometer and engaging said valve to open it when the gasometer nears the upper limit of its travel, substantially as described. 7th. An acety-acetylene generating apparatus, comprising a generating chamber having a grate supported above its bottom and adapted to receive the carbide, a rod passing through a stuffing box in the wall of the chamber and connected with the grate to shake it, an elevated water supply tank, a pipe connecting the pipe with the generating chamber above the grate and terminating in a rose or sprinkling head, a valve in the tank controlling the supply to said pipe, a lever connected with the valve to open it, a rising and falling gasometer bell, and an arm carried by said bell and adapted to engage said lever to open the valve, substantially as described.

No. 68,028. Napkin Holder. *(Porte serviette.)*



Washington I. Schryver, Prophetstown, Illinois, U.S.A., 9th July, 1900 6 years. (Filed 26th June, 1900.)

Claim.—A device of the class described, comprising a pair of independent clasp members having a common pivotal connection, one of the clasps extending at one side only of the pivotal connection, and located between the thumb pieces of the other clasp and in the same plane therewith, the first mentioned clasp having its jaws located beyond the free ends of the thumb pieces of the other clasp, substantially as and for the purpose set forth.

No. 68,029. Leather Pressing Machine.
(Machine à presser le cuir.)

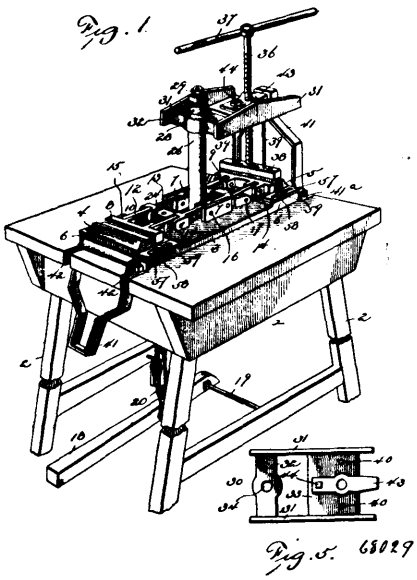


Fig. 1

Fig. 5. 68029

Sylvester B. Beasecker, Grand Rapids, Michigan, U.S.A., 9th July, 1900. (Filed 7th May, 1900.)

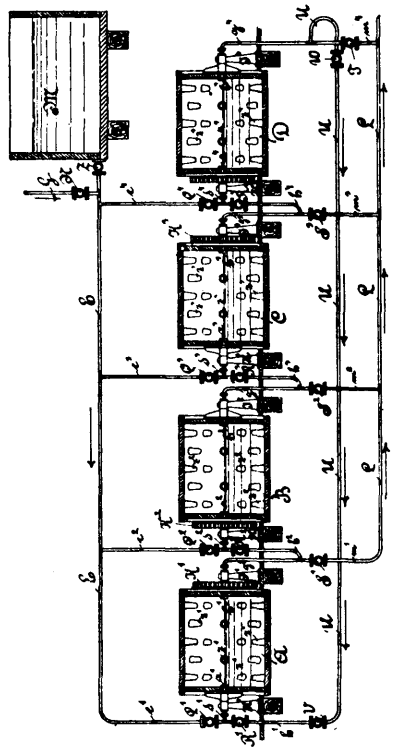
Claim.—1st. In a harness press, the combination of a stationary bed, a series of formers or moulds arranged in the same plane on said bed, each having its members arranged to exert pressure horizontally on the work, and said members spaced to expose the upper side of the work, a shiftable carrier arranged above the bed, and a pressure mechanism supported by the carrier and having a vertically movable pressure head which conforms to the open space between the members of each former or mould, said pressure head adapted to be presented in operative relation to the work in either of the formers or moulds, substantially as described. 2nd. In a harness press, the combination of a stationary bed, a series of formers supported by said bed in the same horizontal plane thereon and each former having its members arranged to exert pressure horizontally on the work, and said parts spaced to expose the upper side of the work therebetween, a horizontally adjustally carrier supported over the bed and shiftable over either of the formers, a vertically movable pressure head slidably connected with the carrier and shiftable therewith over the formers, said pressure head conforming to the space between the members of the former and a pressure screw having a threaded engagement with said carrier and connected with the pressure head to actuate the latter, said pressure head and the screw being supported wholly by the carrier, substantially as described. 3rd. In a harness press, the combination of a stationary bed, a series of formers supported on the bed, and each having a fixed jaw and a slidable pressure head each former having its members arranged to exert pressure horizontally on the interposed work, and said members spaced to expose the upper side of the work, a shiftable carrier supported above the bed and adjustable over either former, a vertically adjustable pressure head connected slidably with and supported wholly by said carrier, said pressure head conforming to the space between the members of the former, and a pressure screw having threaded engagement with the carrier and connected operatively with the pressure head, substantially as described. 4th. In a harness press, the combination of a stationary bed, a series of formers supported thereon, each former having its members spaced to expose the upper side of the work, a carrier pivotally supported at a point equi-distant from said formers and arranged to swing in a horizontal plane over the bed and the formers thereon, a vertically acting pressure head conforming to the space between the members of each former and mounted on the carrier for presentation thereby to either of said formers, and locking yokes pivoted to the bed for adjustment into engagement with the carrier, substantially as described. 5th. In a harness press, the combination of a stationary bed plate, a series of formers having fixed and movable members on said bed plate, each former having its members arranged to exert pressure horizontally on the work and spaced to expose the upper side thereof, means for applying pressure horizontally to the movable members of said formers, a fixed column or post situated equi-distant from the formers, a horizontally swinging carrier pivoted on said post and adapted to be adjusted over either of the former, and a vertically actuated pressure head supported by the carrier and shiftable therewith for presentation to either of the formers, said pressure head conforming to the opening or space between the members of the former and actuated independently of the movable member of either former, substantially as described. 6th. In a harness press, the combination of a stationary bed, a series of formers supported thereby for exerting pressures horizontally on the work and each having its members arranged to expose the upper side thereof, a carrier adjustable over either former, a vertically movable pressure head corresponding to the space between the former members and provided with the guide pins or stems, said head being supported wholly by the carrier to lie parallel with the former to which said pressure head may be presented by the carrier, and a pressure screw mounted in the carrier and connected with the pressure head, substantially as described. 7th. In a harness press, the combination of a bed plate, a former thereon having spaced members, a carrier having a pressure device, and a clamping yoke pivoted on the bed plate and arranged to engage with the carrier to confine the latter firmly in place whereby the carrier is held by the yoke to present the pressure device in the vertical plane of the space between the members of the former and is shiftable with the carrier out of operative relation to the former, substantially as described. 8th. In a harness press, the combination of a bed, a series of spaced formers thereon, each having jaws forming an intermediate upwardly opening mould cavity, a carrier shiftable over the formers, a vertically shiftable pressure mechanism supported by said carrier and having a pressure head which is presentable to the mould cavity of either of said formers by shiftable adjustment of the carrier, and means for locking the carrier in the adjusted position thereof over either of said formers, substantially as described. 9th. In a harness press, the combination of a bed, a series of spaced formers thereon, each having jaws forming an intermediate upwardly opening mould cavity, a carrier shiftable over the formers, a vertically shiftable pressure mechanism supported by said carrier and having a pressure head which is presentable to the mould cavity of either of said formers by shiftable adjustment of the carrier, a series of yokes pivoted to the bed at points adjacent to the formers thereon and movable individually on horizontal axes upward toward the carrier, and a toe piece fast with said carrier in position for engagement by either of the yokes, substantially as described. 10th. In a harness press, the combination of a bed, a series of spaced formers thereon, each having jaws forming an intermediate upwardly opening mould cavity, a column or post, a shaft extending therethrough, a shiftable carrier mounted on the post and capable of turning thereon to occupy a position over either of said formers, a vertically acting pressure mechanism supported by the carrier and having a pressure head presentable to the mould cavity of either former, a screw engaging with said pressure head, and another shaft journalled on the carrier to be shiftable therewith and geared to the first named shaft and the screw, substantially as described. 11th. In a harness press, the combination of a bed, a series of spaced formers thereon, each having jaws forming an intermediate upwardly opening mould cavity, a carrier shiftable over the formers, a vertically shiftable pressure mechanism supported by said carrier and having a pressure head which is presentable to the mould cavity of either of said formers by shiftable adjustment of the carrier, a screw connected to the pressure head, a shaft geared to said screw and capable of moving the latter and actuating the pressure head in either of the adjusted positions of the carrier, and means for locking the carrier in either of its adjusted positions over said formers, substantially as described. 12th. In a harness press, the combination of a stationary bed, a series of formers, a hollow column or post, a horizontally adjustable carrier pivotally mounted on the column or post and adapted to be moved over either of said formers, a pressure head connected with said carrier, a vertical screw mounted in the carrier and a driving shaft journalled on said carrier and having gear connections with said screw, substantially as described. 13th. In a harness press, the combination of a stationary bed, a series of formers, a tubular column, a driving shaft passing through said column, a carrier mounted loosely on the column and movable in a horizontal plane over either of said formers, a vertical pressure screw mounted in the carrier, a horizontal shaft journalled on the carrier and geared to the driving shaft and the screw, and a vertically movable pressure head connected operatively with said screw and supported wholly by the carrier, substantially as described.

No. 68,030. Tanning Process. *(Procédé de tannage.)*

The Gerberei Gesellschaft mit Beschrankter Haftung, assignee of August Hermann Schmidt, all of Hamburg, Germany, 9th July, 1900; 6 years. (Filed 25th September, 1899.)

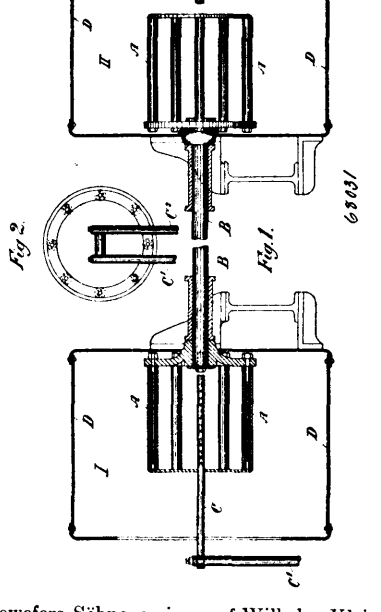
Claim.—The process of continuous tanning of hides or skins in closed rotary drums which consists in subjecting the hides treated in the single drums seriatim with tanning liquors of successively higher percentage or increasing strength, first to the action of air rich in oxygen and then to the action of air of gradually decreasing content

of oxgyen, so that the formation of anhydrides of the tannic acid, depending upon the oxygen in action, decreases with the increasing



concentration of the tanning liquor, substantially as and for the purpose set forth.

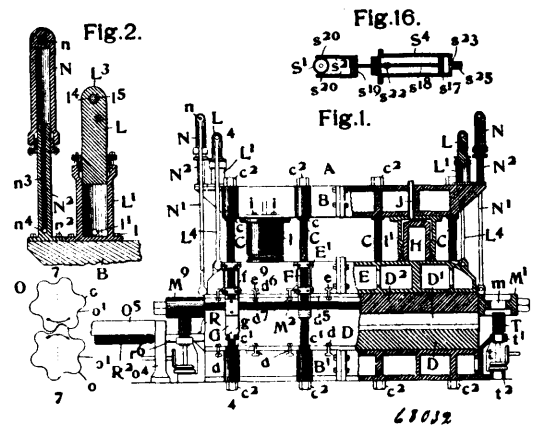
No. 68,031. Process and Apparatus for Mercerising Cotton in Form of Hanks. *(Appareil et procédé pour le mercerage du coton en forme d'écheveaux.)*



Joh. Kleinewefers Söhne, assignee of Wilhelm Kleinewefers, all of Crefeld, Kingdom of Prussia, German Empire, 9th July, 1900; 6 years. (Filed 29th December, 1897.)

Claim.—1st. A process for mercerising cotton fibres in the form of hanks, consisting of the application of the centrifugal action for forcing the liquor used in the mercerising process by means of the centrifugal action through the hanks put in revolution in a non-stretched condition, substantially as set forth. 2nd. For mercerising cotton in hanks, a horizontally or vertically arranged centrifugal apparatus having a casing allowing the liquor to pass through uniformly, the cotton hanks being placed round the said casing loosely in tight layers, while the centrifugal apparatus, when supported on both sides is provided with a hollow shaft B having numerous perforations for introducing the lye or rinsing liquor into the centrifugal apparatus during the revolution of the latter, while, when the centrifugal machine is supported only on one side, special feeding pipes C are led from the free side into the casing, substantially as set forth.

No. 68,032. Apparatus for Working Metals.
(Appareil à travailler les métaux.)



The Merrill Process Steel Company, of St. Louis, Missouri, assignee of George Spencer Merrill, Beloit, Wisconsin, all in the U.S.A., 9th July, 1900; 6 years. (Filed 19th December, 1899.)

Claim.—1st. The combination in a press, for increasing the cross sectional area, throughout its length, of a metal rail or analogous article, of means for subjecting the crimped rail or article to a transverse pressure in the plane of its crimps, whereby the entire rail or article is lengthened, means for limiting the movement of the arcicle at an angle to said plane, and means against which the extreme ends of the article abut, for limiting its longitudinal movement, while it is being subjected to pressure, substantially as and for the purpose described. 2nd. In an apparatus for increasing the cross sectional area of metal rails or analogous articles, the combination of crimping rolls for crimping the article and passing it into a press having means for subjecting the article to transverse pressure in the plane of its crimps, whereby the entire rail or article is lengthened, and with means for limiting the movement of the article at an angle to said plane, and means, against which the extreme ends of the article abut, for limiting its longitudinal movement, while it is being subjected to pressure, substantially as and for the purpose described. 3rd. The combination, in a press of the character described, of a platen, means for operating it, an end gate having an opening for the reception of feed rolls, and feed rolls whose ends pass into said opening when the gate is closed, substantially as and for the purpose described. 4th. The combination, in a press of the character described, of a platen, means for operating it, an end gate having an opening for the reception of feed rolls, feed rolls whose ends pass into said opening when the gate is closed, and rolls for withdrawing the compressed article from the press, substantially as and for the purpose described. 5th. The combination, in a press of the character described, of rolls for feeding the press, a pusher foot adapted to pass between the rolls, a cross head, means pivotally connecting said pusher foot to said cross head, guides between which the cross head reciprocates, and means for causing said cross head and the pusher foot thereby carried, to reciprocate, and in their outward stroke to pass between and beyond said feed rolls, substantially as and for the purpose described. 6th. The combination, of a pair of fluted crimping rolls, each having projections which enter the interdental spaces of the other, and each containing an encircling groove following the contour thereof, and said grooves coming opposite each other and forming a cavity adapted to receive the end of a rail or analogous article, substantially as and for the purpose described. 7th. In an apparatus for increasing the cross sectional area of metal rails or analogous articles, a platen for subjecting the article to transverse pressure, a die having means to limit the longitudinal and sectional movements of the article, means for separating the platen and die far enough to leave a lateral opening, an arm having an end adapted to enter said opening and moving it longitudinally of the die, substantially as and for the purpose described. 8th. The combination of a cylinder S^1, provided with trunions s and s^1, bearing s^2, a piston head s^3 reciprocating in the cylinder S^1, a piston rod, s^4 attached to said head, and having a finger s^5, means

for introducing water at each end of the cylinder S^4, a piston head s^{17}, reciprocating in said cylinder, and means connecting said piston head to the cylinder S^1, substantially as and for the purpose described. 9th. In an apparatus for increasing the cross sectional area of metal rails or analogous articles, means for subjecting a crimped article to transverse pressure, means for limiting the longitudinal and sectional movements of the article, and means for removing the pressed article from the apparatus, substantially as and for the purpose described. 10th. In an apparatus for increasing the cross sectional area of metal rails or analogous articles, means for feeding a crimped article into a press, a press having means for subjecting the article to transverse pressure, means for limiting the longitudinal and sectional movements of the article, and means for removing the pressed article from the apparatus, substantially as and for the purpose described. 11th. In an apparatus for increasing the cross sectional area of metal rails or analogous articles, means for crimping an article and passing it into a press, a press having means for subjecting the article to transverse pressure and means for limiting the longitudinal and sectional movements of the article, and means for removing the pressed article from the apparatus, substantially as and for the purpose described.

No. 68,033. Conductor and Cable Terminals.
(Conducteur et terminus de cable.)

Fig. 1.

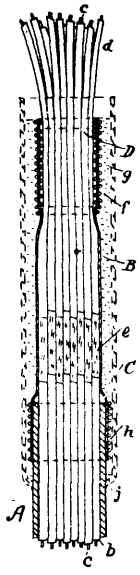
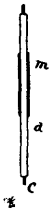


Fig. 3.

Fig. 2.



68033

Henry Granville Grush, Boston, Massachusetts, U.S.A., 9th July, 1900; 6 years. (Filed 7th May, 1900.)

Claim.—1st. A terminal for an electric cable, consisting of an impermeable sheath inclosing a plurality of conductors insulated with fibrous material for the principal part of the cable's length and with flexible waterproof insulation at their terminals which extend beyond the end of the sheath, a section of the waterproofed insulation being tightly compressed by a winding or band and the sheath hermetically sealed thereto, as set forth. 2nd. An electric cable, consisting of a plurality of conductors insulated with fibrous material in an impermeable sheath, the conductors extending beyond the end of the sheath and insulated for such extension with flexible waterproof insulation, a section of which are tightly compressed together by an external winding or band, the sheath being hermetically sealed with the compressed section, as set forth. 3rd. An electric cable, consisting of a plurality of conductors insulated with fibrous material, in an impermeable sheath, the conductors at the cable ends being covered with a flexible waterproof insulation, a section of which are tightly compressed together by an external winding or band, with means for hermetically sealing the cable end which consists of an extension of the said sheath inclosing and tightly embracing the said compressed section. 4th. In a terminal for a cable, an impermeable sheath inclosing a plurality of conductors which project beyond the end of the same, the conductors being protected with fibrous insulation within the sheath and with water insulation outside the sheath, with means for sealing the sheath with a compressed section of the outer or water insulation of the conductors, which consists of an impermeable elastic tube, as set forth. 5th. In a terminal for a cable, an impermeable sheath inclosing a plurality of conductors which extend beyond the end of the same, the conductors within the sheath being protected with fibrous insulation, and with water insulation at their outer ends, each conductor of a section having the latter insulation being surrounded by a tube of flexible insulation, and all the tubes and conductors of said section being tightly compressed by a winding or band, with means for sealing the sheath with the said compressed section, consisting of an impermeable elastic tube, as set forth. 6th. An electric cable, the conductors of which are insulated for the principal part of their length with fibrous material, inclosed in an impermeable sheath, the conductors at the cable ends being covered with a flexible waterproof insulation, and with a suitable wrapping on each conductor at the juncture of the two kinds of insulation, a section of the said waterproof insulated conductors being tightly compressed together by an external winding or band, with means for hermetically sealing the cable end which consists of an extension of the said sheath inclosing and tightly embracing the said compressed section. 7th. An electric cable, consisting of a plurality of conductors insulated with fibrous material, in an impermeable sheath, the conductors at the cable end being covered with a flexible waterproof insulation, a section of which are tightly compressed together by an external winding or band, with means for hermetically sealing the cable end which consists of an extension of the said sheath inclosing and tightly embracing the said compressed section, the said extension being surrounded by a shell, one end of which is soldered to the said sheath, and the space between the extension and the shell being filled with a preservative compound.

No. 68,034. Incandescent Gas Lamp.
(Lampe à gaz incandescent.)

Fig 1.

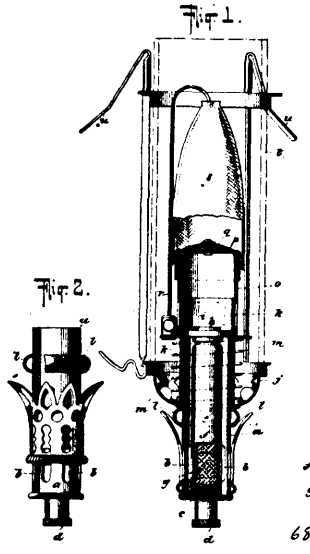


Fig 2.

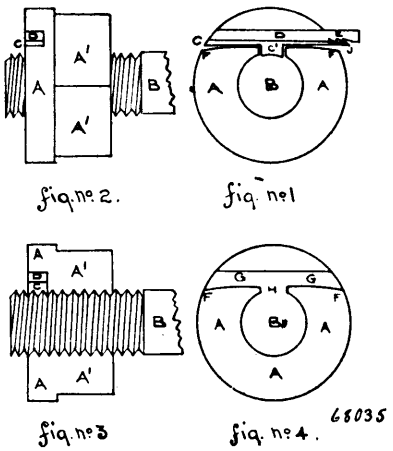
Fig 3

68034

The Diamond Light Company, assignee of Charles William Dickel, all of New York City, New York, U.S.A., 10th July, 1900; 6 years. (Filed 30th April, 1900.)

Claim.—1st. In an incandescent gas lamp, the combination with an air chamber of a mixing chamber apertured at its lower end and provided with a foraminous casing *g* covering the apertures and adapted to finely sub-divide the air and a suitable spreader and mantle. 2nd. In an incandescent gas lamp, the combination with an air chamber of a mixing chamber apertured at its lower end and provided with a foraminous casing *g* covering the apertures and adapted to finely sub-divide the air, said mixing chamber being contracted or reduced at its upper end to produce an injector action and a suitable spreader. 3rd. In an incandescent gas lamp, the combination with an air chamber of a mixing chamber apertured at its lower end and provided with a foraminous casing *g* covering the apertures and adapted to finely sub-divide the air, said mixing chamber being contracted or reduced at its upper end to produce an injector action and a suitable spreader provided with a spreader disc *q*. 4th. The combination in an incandescent gas lamp of a casing, means for mixing the air and gas, an air shutter and a regulating ring *l* adapted to regulate the position of the air shutter. 5th. In an incandescent gas lamp, the combination of air and gas mixing apparatus, of an air shutter, an inverted cap *o* forming a chamber for the reception of the air and gas mixture, and a ring *l* adjustable on one of the casings of the burner and adapted to adjust the position both of the air shutter and of the inverted cap.

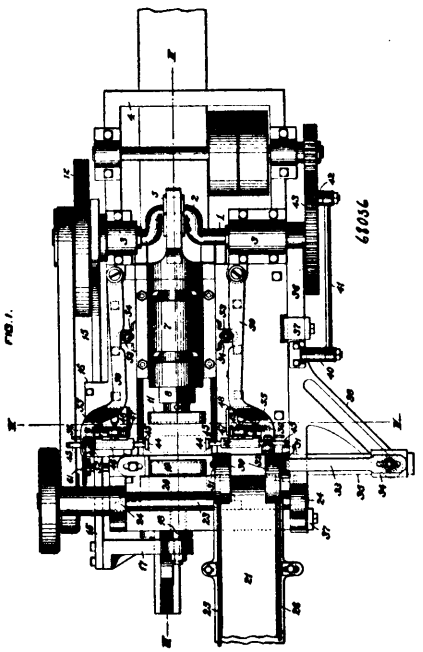
No. 68,035. Nut Lock. (*Arrete-écrou.*)



Richard Forest and Frederic Charles Mount, both of Rat Portage, Ontario, Canada, 10th July, 1900; 12 years. (Filed 22nd June, 1900.)

Claim.—1st. The nut A, A^1, with circular flange in which the channel G is cut. 2nd. The key C, C^1, pressing on bolt B, in slot H, having a stop at one end J. 3rd. The wedge D D, having teeth E at one end. 4th. The rounded corners F F, in the channel G, as well as the slot H.

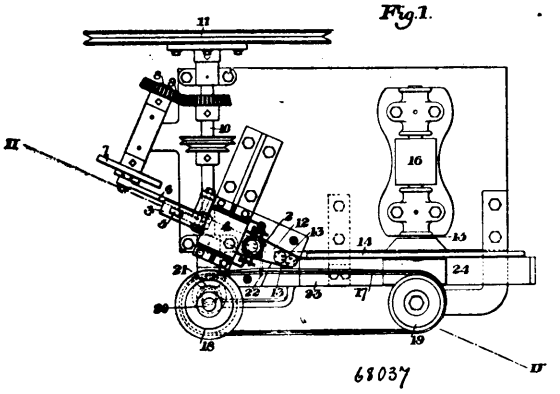
No. 68,036. Soap Press. (*Presse à savon.*)



John James Forster and Robert Lucius Murdock, both of Avalon, Pennsylvania, U.S.A., 10th July, 1900; 6 years. (Filed 3rd November, 1899.)

Claim.—1st. In a soap press, the combination of a mould or matrix, a positively driven plunger for compressing the soap, a plunger for forcing the compressed cake out of the mould or matrix and mechanism for causing the second plunger to move with the compressing plunger during a portion of the return movement of the latter and then returning the second plunger to normal position within the mould or matrix, substantially as set forth. 2nd. In a soap press, the combination of a mould or matrix, a plunger for compressing the soap within the mould or matrix, a plunger for forcing the compressed cake out of the mould or matrix and grippers controlled by the main plunger for holding the cake during the return movements of both plungers, substantially as set forth. 3rd. In a soap press, the combination of a mould or matrix, a compressing plunger, a delivery plunger, a chute for the cakes to be pressed, a pusher for forcing the cakes from the chute and a travelling apron for receiving the compressed cakes, substantially as set forth. 4th. In a soap press, the combination of a trough having one of its sides adjustable, a feeding belt travelling between the sides of the trough and inwardly projecting retaining plates adjustably mounted on the sides of the trough, substantially as set forth. 5th. In a soap press, the combination of a removable mould box, movable heads for compressing a cake of soap within the box, a supporting ledge or shaft arranged in front of the mould box, means for adjusting such ledge or shelf, and a pusher for shifting a cake of soap along the ledge to position in front of the mould box, substantially as set forth. 6th. In a soap press, the combination of a mould box, movable heads for compressing a cake of soap with the box, a supporting ledge or shelf arranged in front of the mould box, a pusher adjustably connected to a movable block, a reciprocating slide provided with a slotted arm arranged at an angle to the direction of movement of the slide, and engaging a pin on the movable block, substantially as set forth. 7th. In a soap press, the combination of movable compressing heads, vertically and horizontally adjustable grippers, levers pivotally mounted on the frame of the machine, and having their free ends connected to the grippers, springs for shifting the levers inwardly, and adjustably mounted pins movable with the main compressing head and adapted to move the levers outwardly, substantially as set forth. 8th. In a soap press, the combination of cake feeding mechanism, a mould box, compressing heads operative within the box to compress a cake of soap, and a spring actuated striking arm to insure the movement of a cake to position in front of the mould box, substantially as set forth.

No. 68,037. Cork Finishing Machine. (*Machine à finir les bouchons de liège.*)



Thomas Thompson, Pittsburg, Pennsylvania, U.S.A., 10th July, 1900; 6 years. (Filed 27th December, 1899.)

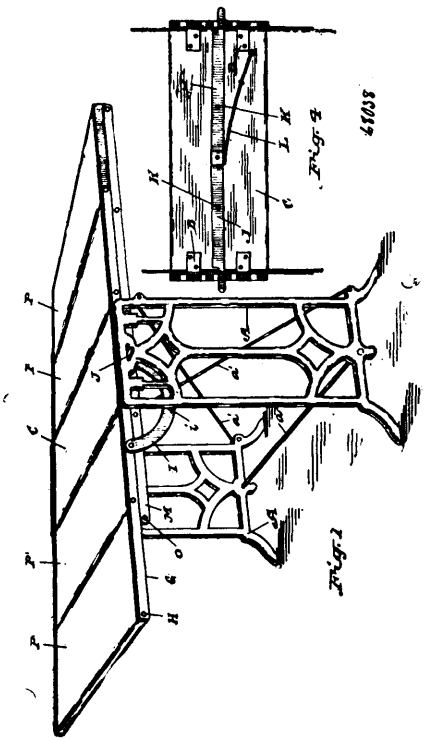
Claim.—1st. In a cork finishing machine, a polishing disc, a supporting plate, and a belt carried on rotary supports mounted in stationary bearings and arranged to move the cork along the plate and across the face of the disc, substantially as described. 2nd. In a cork finishing machine, a polishing disc, a belt carried on rotary supports mounted in stationary bearings and arranged to rotate the corks in contact therewith, and a deflector arranged to force the belt into an inclined position before engaging the corks, substantially as described. 3rd. In a cork finishing machine, a vertical rotating polishing disc, a horizontally extending support, a feeder arranged to force corks one by one upon the support, and a belt carried on rotary supports mounted in stationary bearings and arranged to move the corks along the support and in contact with the face of the polishing disc, substantially as described. 4th. In a cork finishing machine, a vertical chute, spring fingers extending from its lower end, a plunger arranged to force the corks one by one into the fingers and forwardly therefrom, a polishing disc, and a belt arranged to engage the corks forced forwardly from the clips, and rotate them in contact with the face of the disc, substantially as described.

No. 67,038. Combined Table and Case.
(*Table et vitrine combinées.*)

Emil Carl Boeckh, Toronto, Ontario, Canada, 10th July, 1900; 6 years. (Filed 16th January, 1899.)

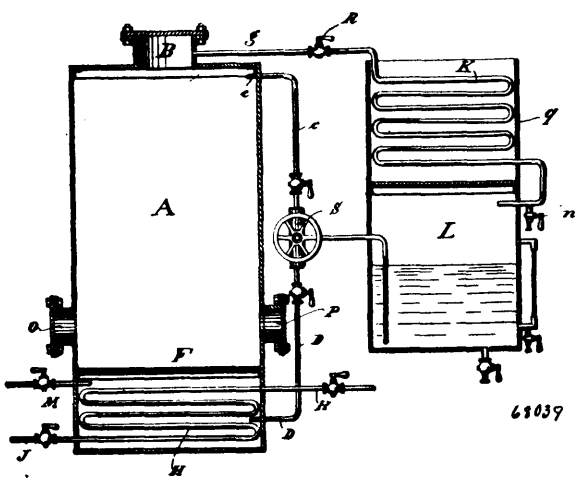
Claim.—1st. A combined display table and case embracing in its construction a supporting base or stand, a leaf or section rigidly connected to the supporting base or stand, links pivotally connected to the ends of the rigid leaf or section, a series of movable leaves carried and adapted to be held horizontally in any adjusted position by the links, means for locking the links and leaves rigidly in their adjusted position, consisting of notched quadrants connected to the links, and spring controlled levers pivotally connected to the under side of the rigid leaf and to each other, and adapted to engage the notches of the quadrants, substantially as specified. 2nd. A combined display table and case embracing in its construction a supporting base or stand, a series of leaves or sections, the middle

one of which is rigidly connected to the supporting base or stand, each end of each leaf bound by a strap having a depending lug at



its rear end, links pivotally connected to the front ends of the straps, and links pivotally connected to the lugs, a notched quadrant rigidly connected to each of the front links, spring controlled locking levers pivotally connected to each other and to the under side of the rigid leaf, to engage the notched quadrants, substantially as specified. 3rd. A combined display table and case embracing in its construction a supporting stand, a stationary leaf rigidly connected to the supporting stand, links pivotally connected to each end of the stationary leaf, a series of movable leaves connected to the links above and below the stationary leaf, and adapted to be held horizontally by the links in any adjusted position, a notched quadrant connected to one link at each end of the stationary leaf, and two spring controlled levers pivoted to the under side of the stationary leaf, and at their inner ends pivoted to each other, the outer end of each lever is adapted to engage its respective quadrant to hold the leaves to their adjusted positions, substantially as specified.

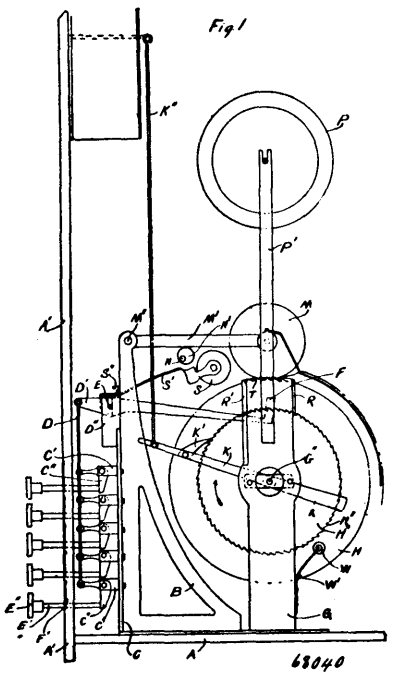
No. 68,039. Process of and Means for the Utilization of Household and Similar Waste. (*Procédé et moyen d'utilise les rebuts de cuisines.*)



Robert Schleicher, Cologne-on-the-Rhine, German Empire, 10th July, 1900; 6 years. (Filed 5th July, 1899.)

Claim.—A process to render suitable waste, such as house refuse, a product free from germs permanently devoid of smell and suitable for manuring purposes by preliminary treatment with benzine, ether or similar vapours under pressure and subsequent treatment by superheated or other steam under pressure, substantially as described.

No. 68,040. Time Record. (*Registre horaire.*)



George Edward Figg, Montreal, Quebec, Canada, 10th July, 1900; 6 years. (Filed 4th March, 1899.)

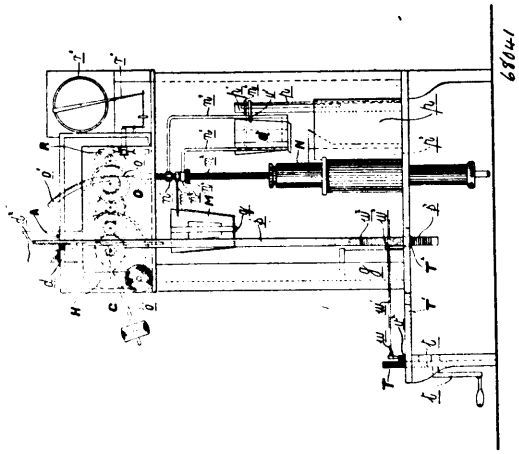
Claim.—1st. In a time recorder, the combination with a recording mechanism, of a rotating disc H, actuated by a clock work having a rachet wheel L on the minute hand spindle and by a lever and connecting rod K^{11} with the pawl K^1 engaging the ratchet wheel H^1, substantially as described. 2nd. In a time recorder, the combination with a recording mechanism, of a rotating disc H having on its periphery the numerals corresponding to the divisions of time and having a spindle carrying the ratchet wheel H^1 actuated by the pawl K^1, substantially as described. 3rd. In a time recorder, the combination with a recording mechanism, of a numerated rotating disc, a ratchet wheel H^1 rigidly connected thereto, actuated by the pawl K^1 on the lever K and the connecting rod K^{11} which is actuated by the ratchet on the minute hand spindle, substantially as described. 4th. In a time recorder, the combination with a recording mechanism of a numerated rotating disc, a ratchet wheel H^1 actuated by the pawl K^1, the lever K, the connecting rod K^{11}, the ratchet L on the minute hand spindle, and a roller M fixed in suitable bearings in the pieces M^1 and adapted to be raised or lowered by means of the cam N^1, substantially as described. 5th. In a time recorder, the combination with the recording mechanism, of the roller M adapted to be raised or lowered by means of the cam N^1, the numerated rotating disc, and the storage roll P supported in the vertical pieces P^1, substantially as described. 6th. In a time recorder, the combination with the recording mechanism, of a numerated disc, a lever K, a pawl K^1, a connecting rod K^{11} actuated by the ratchet L on the minute hand spindle, a roller M under which the registering impression paper passes, a storage roller P, and an ink roller S, substantially as described. 7th. In a time recorder, the combination with the automatically actuated rotating disc H, of the roller M under which the registering paper passes, the storage roller P, the ink roller S, the impression levers D^{11}, and the key levers C^{11}, substantially as described. 8th. In a time recorder, the combination with the automatically actuated rotating disc H, of the roller M under which the registering paper passes, and the recording mechanism consisting of the keys E^{11}, the rods E^1, the levers C^{11}, the rods D and the impression levers D^1, substantially as described.

No. 68,041. Coin Freed Machine for the Taking and Delivery of Photographic Impressions. (*Machine actionnée pour une pièce de monnaie pour la distribution des impressions photographiques.*)

Robert Willoughby Vining, of 49 Grange Park, Ealing, Middlesex, England, 10th July, 1900; 6 years. (Filed 4th May, 1899.)

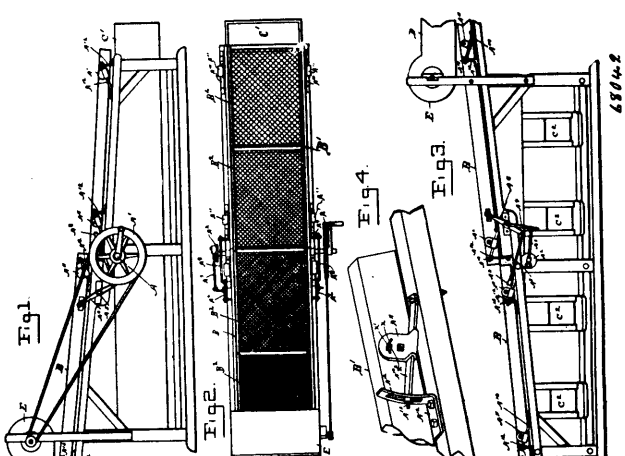
Claim.—1st. In an automatic photographic machine, the combination with the tanks adapted to contain the developing and fixing solutions, carrier mechanism for immersing the negative successively in the solutions, suitable motor mechanism for operating said carrier

mechanism, and a thermostat for controlling the speed of the motor mechanism. 2nd. In an automatic photographic machine,



the combination with the tanks adapted to contain the developing and fixing solutions, heating means adapted to heat the solutions in the tanks, a thermostat adapted to control the supply of heat to maintain said solutions at a constantly even temperature, carrier mechanism for immersing the negative in said solutions, substantially as described. 3rd. In an automatic photographic machine, the combination with the tanks for the developing and fixing solutions, carrier mechanism for immersing the negatives successively in said solutions, the motor mechanism for operating said carrier mechanism, the flier for governing the speed of said motor mechanism and having adjustable wings, a thermostat and connections therefrom to the adjustable wings for regulating the speed of the motor according to the temperature, substantially as described. 4th. In an automatic photographic apparatus, the combination with the tanks for the developing and fixing solutions arranged upon different levels, of the carrier mechanism, comprising an upper carrier adapted to immerse the negative in the upper developing tank, a lower carrier adapted to immerse the negative in the fixing solution, and means for effecting the transfer of the negative from one carrier to the other, substantially as described. 5th. In an automatic photographic machine, in combination, a lens and shutter, a holder for the sensitive sufaces in rear of said lens, tanks for containing the developing and fixing solutions, the carrier mechanism in duplicate for receiving the exposed negative and immersing it in the solution, the clock mechanism, the timing disc operated by said clock mechanism, and connections from said timing disc to the shutter and carrier mechanism, whereby the operation of said parts and the transfer of the negative are effected by the clock mechanism, substantially as described.

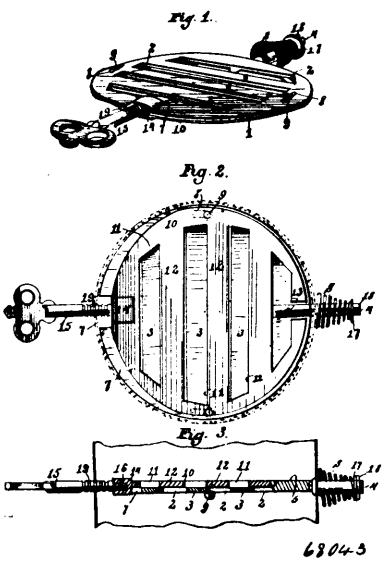
No. 68,042. Fruit Grader. (*Appareil à assortir les fruits.*)



Robert M. Pratt, St. Helena, California, U.S.A., 10th July, 1900; 6 years. (Filed 23rd June, 1900.)

Claim.—1st. In a device of the nature indicated, a frame, a tray carrying a screen or the like and having reciprocation on the frame, a guide rod pivotally mounted upon the frame, a slotted extension plate upon said frame, a threaded portion of the guide rod extending through said slot and receiving a nut whereby said guide rod is clamped in adjusted positions, and a sleeve upon the tray engaging the guide rod, substantially as described. 2nd. In a device of the nature indicated, a frame, a tray carrying a screen or the like and having reciprocation upon the frame, a guide rod upon the frame, means for adjusting the guide rod to vary its inclination, a bracketed sleeve upon the tray, said sleeve engaging the guide rod and said bracket being pivoted upon the tray and having a segmental slot, and a bolt upon the tray and projecting through said slot to receive a member, as a nut, for clamping the bracket to the tray and thus locking the same in adjusted positions, substantially as described.

No. 68,043. Stove Pipe Damper.
(*Régistre de tuyau de poêle.*)



Daniel B. Tibbetts, Brockton, Massachusetts, U.S.A., 10th July, 1900; 6 years. (Filed 19th June, 1900.)

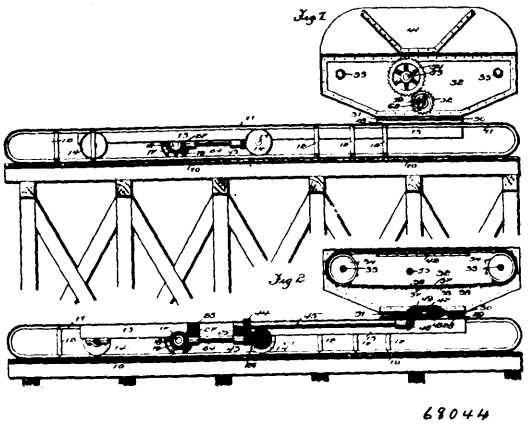
Claim.—1st. A damper consisting of a perforated plate formed with a journal stud projecting from the periphery thereof and the axis of which is in line with the face of the plate, the base of said stud rising from the face of the plate and constituting a guide rib, said plate provided in its periphery at a point opposite the journal stud with a raceway, and a relatively movable perforated plate resting upon the first named plate, and having pin and slot connection therewith, said movable plate provided with a guide recess fitting the guide rib of the journal stud of the first named plate, and provided also with a lug moving in the raceway of the first named plate, and an operating finger piece is in line with the face of the plate to which it is secured, said finger piece having a series of annular grooves formed thereon and adapted to engage the stovepipe for locking said plate in its relative position of adjustment, substantially as described. 2nd. A damper consisting of a perforated plate formed with a journal stud projecting from the periphery thereof and the axis of which is in line with the face of the plate, the base of said stud rising from the face of the plate and constituting a guide rib, said stud having a collar to bear against the stovepipe and a spring mounted thereon outside of said collar, said plate provided at a point opposite the journal stud with a raceway in its periphery, and a relatively movable perforated plate resting upon the first named plate and having pin and slot connection therewith, said movable plate provided with a guide recess fitting the guide rib of the journal stud in the first named plate and provided also with a lug moving in the race of the first named plate, and an operating finger piece carried by said lug so that the axis of said finger piece is in line with the face of the plate to which it is secured, said finger piece having a series of annular grooves formed the reon and adapted to engage the stovepipe for locking said plate in its relative position of adjustment, substantially as described.

No. 68,044. Box Car Loader. (*Appareil à charger les chars.*)

Joseph M. Christy, Des Moines, Iowa, U.S.A., 10th July, 1900; 6 years. (Filed 15th June, 1900.)

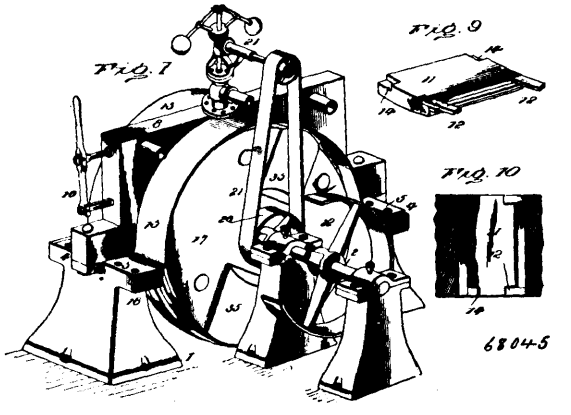
Claim.—1st. A box car loader, comprising in combination, a device capable of movement into or out of a box car, a frame on said device pivotally mounted to be capable of turning in a horizontal plane, an endless conveyer on the frame provided with suitable cross pieces to thereby form a platform for receiving coal and carrying it to either end of the frame, and means for driving said conveyer in either direction, so that coal may be thrown to any desirable distance within the car. 2nd. A box car loader, comprising a device capable of movement into or out of a box car, a frame on said device pivotally

mounted to swing in a horizontal plane, one or more endless chains on said frame, a platform on the chain or chains extending to the



ends of the frame and in position to receive coal from a chute introduced in the opposite side of a box car, and means for driving the platform in either direction, for the purposes stated. 3rd. A box car loading apparatus, comprising in combination, a track to be arranged at right angles to a railway track, a truck mounted on the track and capable of movement so that its one end may enter a car on the track, a plate on one end of the truck, a second plate mounted on the first and capable of turning in a horizontal plane, a frame fixed to the upper plate, a shaft passed centrally through said plate, a bevel gear wheel on each end of said shaft, a shaft carried by said truck, a bevel gear wheel thereon meshed with the lower one of the aforesaid bevel gear wheels, an endless conveyer on the frame, a short shaft in the frame, a bevel gear wheel on its lower end meshed with the upper one of the aforesaid bevel gear wheels, a cogwheel on the outer end of this shaft, a clutch device whereby said cogwheel may be thrown in or out of engagement with its shaft, a second shaft above the first, a cog wheel thereon meshing with the first cog wheel, and means for driving the conveyer from this upper shaft, for the purposes stated. 4th. In a box car loading apparatus, the combination, of a truck designed to be run into or out of a box car, a frame mounted thereon and capable of turning in a horizontal plane, an auxiliary frame within the said frame, rollers for supporting the auxiliary frame and permitting its longitudinal movement with said frame, an endless conveyer carried by said auxiliary frame, and having the ends of its shafts projected laterally through the main frame, sprocket wheels on said shafts, a sprocket wheel at side of the main frame, means for driving it, a sprocket chain connected with the sprocket wheel of the conveyer and also with the said latter sprocket wheel, and means for holding the auxiliary frame in its extended position, substantially as and for the purposes stated.

No. 68,045. Rotary Engine. (*Machine rotatoire.*)



Joseph Hendric Jackson, Buffalo, Alabama, U.S.A., 10th July, 1900; 6 years. (Filed 18th June, 1900.)

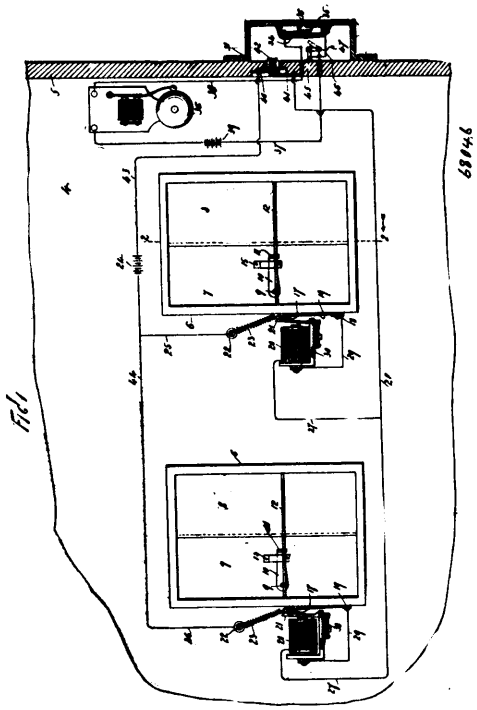
Claim.—1st. A rotary engine comprising an open ended cylinder, a drum eccentrically disposed with reference to the cyliuder, heads secured directly to the ends of the drum and rotatable therewith and overlapping the ends of the cylinder and closing the latter, the engine shaft being made fast to one of said heads, a piston slidably mounted in the drum, and a second shaft out of line with the first-mentioned shaft and passing through the other head and having slidable connection with the piston and serving to direct the same in its reciprocating movements, substantially as set forth. 2nd. In a rotary engine, an open ended cylinder, a drum having eccentric relation with reference to the cylinder, heads secured directly to the ends of the drum and rotatable therewith and overlapping and closing the ends of the cylinder, one of said heads being a disc and having the engine shaft applied thereto, and the other head being an annulus, a piston slidably mounted in the said drum and comprising a central portion having a transverse slot, and heads, and a second shaft out of line with the first mentioned shaft and secured at its outer end and having its inner end passing through the central opening of the annular head and slidably connected with the central portion of the piston by entering the transverse slot thereof, substantially as set forth. 3rd. In an engine of the type described, the combination with the slidably mounted piston having a groove in its outer end and the terminal portions of the wall bordering upon the groove cut away, of a packing strip seated in said groove and having oppositely disposed terminal extensions to fit into the aforesaid cut away portions of the walls thereof, substantially as set forth. 4th. In an engine of the type described, the combination with a cylinder and an eccentrically disposed drum provided with a movable piston, of an abutment applied to the inner wall of the cylinder and adapted to press upon the outer wall of the drum and having its corner portions cut away, and packing rings applied to cylinder and having terminal portions entering the cut away corner portions of the said abutment, substantially as set forth. 5th. In an engine of the type described, the combination with the cylinder, and an eccentrically disposed drum having a movable piston, of an abutment seated in the inner wall of the cylinder and normally bearing against the outer wall of the drum and having its corner portions cut away, packing strips let into grooves in the walls of the recess in which the abutment is seated, and packing rings applied to the ends of the cylinder and having their end portions underlapping the terminals of the aforesaid packing strips and entering the cut away corner portions of the abutment, substantially as specified. 6th. In an engine of the character described, the combination with the cylinder, and an eccentrically disposed drum provided with a movable piston, of a spring plate applied to the outer wall of the drum and adapted to co-operate with the abutment of the cylinder to maintain a stem tight joint, substantially as set forth. 7th. The combination with a cylinder, an eccentrically disposed drum having openings in opposite points and a piston slidably mounted in the drum, of segment plates applied to the outer wall of the drum and secured to the side walls of the openings in which the piston is slidably mounted, substantially as set forth. 8th. The combination with an open ended cylinder and the eccentrically disposed drum provided with a movable piston and heads, the latter overlapping the ends of the cylinder and closing the latter, of curved plates overlapping the joints formed between the said heads and ends of the cylinder and secured to the latter, substantially as set forth. 9th. A rotary engine comprising a hollow base or stand, an open ended cylinder secured to the said base and having its upper portion gradually thickened and provided with inlet and exhaust ports, a drum eccentrically disposed with reference to the cylinder and having diametrically disposed openings, a head at one end of the drum and adapted to close one end of the cylinder and provided with the engine shaft, a second head adapted to be secured to the opposite end of the drum and closing the other end of the cylinder and having its central portion removed, a piston comprising a central portion formed with a transverse slot, and heads slidably mounted in the drum and in radial grooves or depressions formed in the said heads, and a second shaft secured to the aforesaid base out of line with the first-mentioned shaft and having slidable connection with the piston, substantially as set forth.

No. 68,046. Electric Releasing Device for Shutters.
(*Appareil électrique pour ouvrir les persiennes.*)

James Hueston, Brooklyn, New York, U.S.A., 10th July, 1900; 6 years. (Filed 21st May, 1900.)

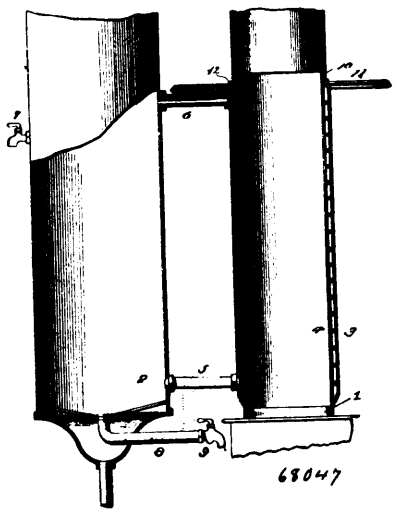
Claim.—1st. In an apparatus of the class described, a building provided with a movable window shutter, electrically operated devices for locking said shutters a box or casing suitably arranged, means mounted in said box or casing for closing an electrical circuit through said electrically operated devices, an electrically operated alarm device, means mounted in said casing for operating the same, and a closure for said box or casing, the relative arrangement and construction being such that when said closure is operated to allow access to said box or casing, said alarm device will be operated, substantially as shown and described. 2nd. In an apparatus of the class described, a building provided with window shutters, electrically operated devices for locking said shutter, a box or casing secured to the wall of the building and provided with a hinged door, and a push button located in said box or casing and adapted to be operated to close an electric circuit in which said electrically operated devices are placed, said building being also provided with an electrical alarm devices, which is operated by the opening of the door of said box or casing, substantially as shown and described. 3rd. In an apparatus of the class described, a building provided with a movable window shutter, locking devices for said shutter, tensionally retracted lever for maintaining said locking device in operative position, an electro-magnet provided with a movable armature arranged to maintain said lever in position to maintain said locking devices in operative

position and means for closing an electric circuit, through said electro-magnet, substantially as shown and described. 4th. In an



apparatus of the class described, a building provided with shutters, devices for locking said shutters, a lever for operating said locking devices, a spring connected with said lever and adapted to operate it to unlock the shutters, and electro-magnet provided with a pivoted armature for holding said lever in position to lock said shutters, said magnet being in an open electric circuit, and a box or casing secured to a wall of the building and provided with a hinged door, said box or casing being provided with a push button for closing said circuit, substantially as shown and described. 6th. In an apparatus of the class described, a building provided with shutters, devices for locking said shutters, a lever for operating said locking devices a spring connected with said lever and adapted to operate it to unlock the shutters, an electro-magnet provided with a pivoted armature for holding said lever in position to lock said shutters, said magnet being in an open electric circuit, and a box or casing secured to a wall in the building and provided with a hinged door, said box or casing being provided with a push button for closing said circuit, and said building being also provided with an electric alarm device which is operated by the opening of said door, substantially as shown and described. 6th. A building provided with hinged shutters, electrically operated devices for operating said shutters a box casing secured to the wall of a building and provided with a hinged door, an electrical alarm device operated by the opening of said door, and a push button located in said box or casing and adapted to close an open circuit in which said electrically operated devices are located, substantially as shown and described. 7th. The herein described apparatus for releasing shutters, comprising a pivoted bar arranged transversely of the the closed shutters, the free edge of one of which overlaps the free edge of the other of which, a latch pivoted to one shutter and arranged to engage said bar, a pivoted spring retracted lever arranged to support said bar in elevated position, an electro-magnet provided with a movable armature which operates in connection with said lever to maintain the same in engagement with said bar, and means for closing an electrical current through said electro-magnet to release said lever, substantially as shown and described. 8th. The herein described shutter releasing apparatus and alarm device arranged to operate in connection therewith, comprising electrically operated locking devices which operate in connection with said shutter, an electrical alarm, a first electric circuit in which said electrically operated locking devices are included, a second electrical circuit in which said electrical alarm is inclined a circuit maker for said first electrical circuit, and a circuit maker for said second electrical circuit, said circuit makers being so relatively arranged that said circuit maker for said second electrical circuit must be operated before said circuit maker for said first electrical circuit. substantially as shown and described.

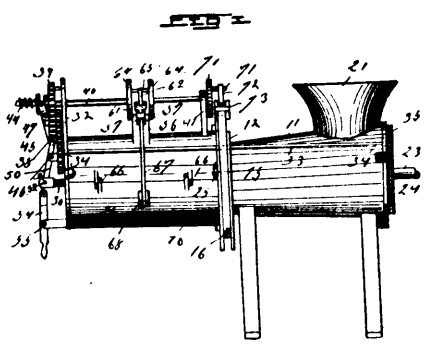
No. 68,047. Water Heater. (*Calorifère.*)



Thomas Pattison and Charles Averill Barlow, both of San Louis Obispo, California, U.S.A., 10th July, 1900; 6 years. (Filed 25th May, 1900.)

Claim.—1st. A water heating attchment for stoves, comprising an inner cylinder, the ends of which are adapted to fit the stove collar of sections of stove pipe, an outer cylinder spaced from the inner cylinder, and a spiral partition between said cylinder, by which a spiral passage is formed, said attachment being provided with suitable inlet and outlet openings. 2nd. In a water heater, the combination with a boiler, of a water heating attachment comprising an inner cylinder, the ends of which are adapted to fit the stove collar or sections of stove pipe, an outer cylinder spaced from the inner cylinder, and a spiral partition between said cylinder, by which a spiral passage is formed, said attachment being provided with suitable inlet and outlet openings. 3rd. In a water heater, the combination with a boiler, of a spirally passaged cylinder constructed to cause the water to flow therethrough in a ribbon-like form, connections between said boiler and cylinder, and a shelf or plate situated at the upper end of the cylinder to check or retard the upward flow of the air. 4th. In a water heater, the combination with the stove collar and pipe of a stove, of a spirally passaged cylinder forming a section of the stove pipe, a stand boiler connected with the cylinder by suitable feed and return pipes, and a shelf or plate situated between said cylinder and the lower stove pipe section, whereby the ascending air is checked or retarded.

No. 68,048. Butter Printing and Gauging Machine.
(Moule à beurre.)



Jesse Schaeffer, Berlinsville, Pennsylvania, U.S.A., 10th July, 1900; 6 years. (Filed 13th June, 1900.)

Claim.—1st. A machine for printing, measuring or gauging butter, comprising a main casing, the bottom portion of which consists of pins, doors, and the top portion of which is provided with a vertically movable plunger, another casing at one end thereof provided with a conveyer mounted on a shaft, a hopper above the conveyer, and devices in operative connection with the shaft of the conveyer for opening said doors, and forming said plunger, substantially as shown and described. 2nd. A machine of the class described, comprising a main casing provided with bottom doors, and in the top thereof with a vertically movable plunger, and an other plunger in

one end of said casing, a conveyer casing connected with the opposite end thereof, a conveyer mounted on the shaft therein for forming the butter into the main casing, a hopper above the conveyer and devices in operative connection with the shaft of the conveyer and with both of said plungers, and said doors whereby when the main casing is filled, the door will be opened and the vertically movable plunger operated, substantially as shown and described. 3rd. A machine of the class described, comprising a main casing cylindrical in form, and the bottom of which consists of hinged doors, said casing being also provided in one end thereof with a longitudinally movable plunger, the stem of which projects through the end of the casing, and in the top thereof with a vertically movable plunger and a conveyer casing secured to the end of the main casing opposite the plunger mounted therein and provided with a conveyer which is mounted on a shaft and adapted to force butter into the main casing and devices in operative connection with the shaft of the conveyer and with the door and plungers of the main casing for operating said doors and plungers, substantially as shown and described. 4th. A machine of the class described, comprising a main casing the bottom of which is composed of hinged doors, and the top of which is provided with a vertically movable plunger, a plunger mounted in one end of said casing and provided with a stem which passes through said end, a conveyer casing at the opposite end of said main casing and in communication therewith, a conveyer mounted on a shaft in said conveyer casing, vertically movable knives mounted between the main casing and the conveyer casing, and devices in operative connection with the shaft of the conveyer, and with the doors and plungers of the main casing. and the knives between the main and the conveyer casings for operating said parts, substantially as shown and described. 5th. A machine of the class described, comprising a main cylindrical casing, the bottom portion of which is composed of hinged doors and the top portion of which is provided with a vertically movable plunger, said casing being also provided in one end thereof with a longitudinally movable plunger, the stem of which passes through said end, and at the opposite end with a conveyer casing in communication therewith, and provided with a conveyer mounted on a shaft, the hopper above the conveyer, vertically movable knives mounted between the main casing and the conveyer casing, a shaft outside of said main casing, and geared to the conveyer shaft, a crank shaft mounted above the main casing, and connected with the plunger in the top thereof, and also, with said knives, said shaft being provided with a longitudinally movable gear wheel splined thereon, and said first-named shaft being geared therewith, substantially as shown and described. 6th. A machine of the class described, comprising a main cylindrical casing, the bottom portion of which is composed of hinged doors, and the top portion of which is provided with a vertically movable plunger, said casing being also provided in one end thereof with a longitudinally movable plunger, the stem of which passes through said end, and the opposite end with a conveyer casing in communication therewith, and provided with a conveyer mounted on a shaft, a hopper thereover, vertically movable knives mounted between the main casing and the conveyer casing, a shaft outside of said main casing and geared with the conveyer shaft, a crank shaft mounted above the main casing, and geared with the plunger in the top thereof, and also with said knives, said shaft being provided with a longitudinally movable gear wheel and said first-named shaft being geared therewith, and the stem of the plunger in the end of the main casing being connected with the longitudinally movable gear wheel on the crank shaft by pivoted levers, substantially as shown and described. 7th. A machine of the class described, a main casing 10, the bottom portion of which is composed of hinged doors, said casing being also provided at one end thereof with a longitudinally movable plunger 29, and in the top thereof with a vertically movable plunger 28, said longitudinally movable plunger being provided with a stem 30 which passes through the end of the casing, said main casing being also provided at one end with a conveyer casing 11 in communication therewith, the conveyer 22 mounted on the shaft in said conveyer casing, vertically movable doors 13 mounted between the main casing and the conveyer casing, a shaft 33 geared with the shaft of the conveyer, and with the longitudinally movable gear wheel 29 mounted on the shaft 40, supported above the main casing, said shaft 40 being in operative connection with said knives, and with the doors of the main casing, and the wheel 39 being in operative connection with the stem 30 of the plunger 29, and a lever 54 which is also in operative connection with said wheel, substantially as shown and described. 8th. In a machine of the class described, a main casing or drum, the bottom portion of which is composed of hinged doors which open outwardly and downwardly, and the top of which is provided with a vertically movable plunger, means for forcing butter into one end of the casing, a longitudinally movable plunger in the opposite end thereof, and means connected to the plunger in the top of said casing and to said doors for operating the same, and a clutch connection between said means and a longitudinally movable plunger, substantially as shown and described. 9th. In a machine of the class described, a casing or drum the bottom portion of which is composed of hinged doors and the top of which is provided with a vertically movable plunger, a longitudinally movable plunger mounted in one end of said casing or drum and provided with a stem which passes through said end, means for feeding butter into the opposite end of said drum or casing, and devices for operating said doors and vertically movable plunger and a clutch connection between the said means and the longitudinally movable plunger, substantially as shown and described. 10th. A machine of the class described, comprising a drum or casing, the bottom of which is composed of hinged doors, and the top portion of which is provided with a vertically movable plunger, a longitudinally movable plunger mounted in one end of said drum or casing and provided with a stem which passes through said end, means for forcing butter into the opposite end of said drum or casing, vertically movable knives mounted in said end of said drum or casing, means connected to the plunger and to said doors and knives for operating the same, and a clutch connection between said means and the longitudinally movable plunger, substantially as shown and described.

No. 68,049. Treatment of Flue Dust or Fumes from Metallurgical Furnaces. (*Traitement de noir de fumée, etc.*)

Francis Ellershausen of Broad Street House, London, England, 10th July, 1900; 6 years. (Filed 29th August, 1899.)

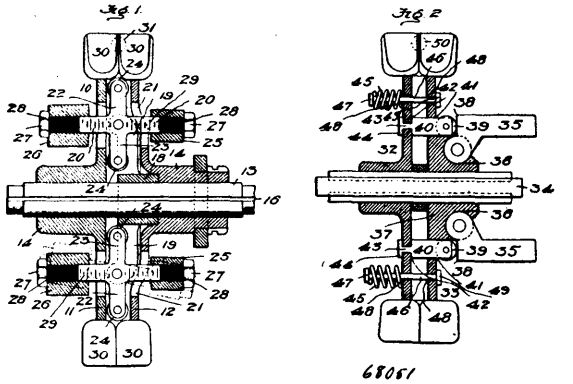
Claim.—1st. The method of treating flue dust or fumes containing lead compounds consisting in combining with the flue dust sodium carbonate as a flux and a salt containing sulphurous acid as a reducing agent, substantially as described. 2nd. The method of treating flue dust or fumes containing lead and zinc compounds consisting in combining with the flue dust sodium carbonate as a flux with or without the addition of a salt containing sulphurous acid, substantially as described.

No. 68,050. Treatment of Nitro-Cellulose. (*Traitement de nitro-cellulose.*)

Alfred Luck, Brentcote, Dartford, Kent, and Charles Frederick Cross, of 4 New Court, London, England, 10th July, 1900; 6 years. (Filed 4th August, 1899.)

Claim.—In the treatment of nitro-cellulose, the improved process for increasing the stability of the nitro-cellulose, which consists in feeding the nitro-cellulose from the nitrating acid and treating it with a solution of a salt of a heavy metal such as lead acetate or zinc chloride, substantially as described.

No. 68,051. Hydraulic Motor. (*Moteur hydraulique.*)



Elmer Francis Cassel, Seattle, Washington, U.S.A., 11th July, 1900; 6 years. (Filed 19th April, 1900.)

Claim.—1st. A hydraulic motor comprising a motor body carrying buckets, and means for moving said buckets out of line of impact, as set forth. 2nd. A hydraulic motor comprising a shaft, a motor body mounted thereon and carrying buckets, and means for moving said buckets out of the line of impact, as set forth. 3rd. A hydraulic motor comprising a body formed in sections and carrying buckets, weighted levers arranged to separate said buckets, and means for holding said buckets normally against said separation, as set forth. 4th. A hydraulic motor comprising a body formed in sections and carrying buckets, weighted levers extending between said sections, and means for holding said sections normally together, as set forth. 5th. A hydraulic motor comprising a body formed in sections, levers mounted between said sections, and having differentially weighted ends, and means for holding said sections normally together, as set forth. 6th. A hydraulic motor comprising a shaft, a motor body formed in sections and mounted on said shaft, a hub keyed to said shaft, levers mounted in said hub and engaging said sections, levers having differentially weighted ends, and means for holding said sections normally together, as set forth. 7th. A hydraulic motor comprising a shaft, a motor body formed in sections and mounted on said shaft, a hub keyed to said shaft, levers mounted on said hub and having differentially weighted ends, arms or members extending from said levers between said sections, and means for holding said sections normally together, as set forth. 8th. A hydraulic motor comprising a shaft, a motor body formed in sections and mounted on said shaft, a hub keyed to said shaft and having brackets, levers mounted in said brackets and having differentially weighted ends

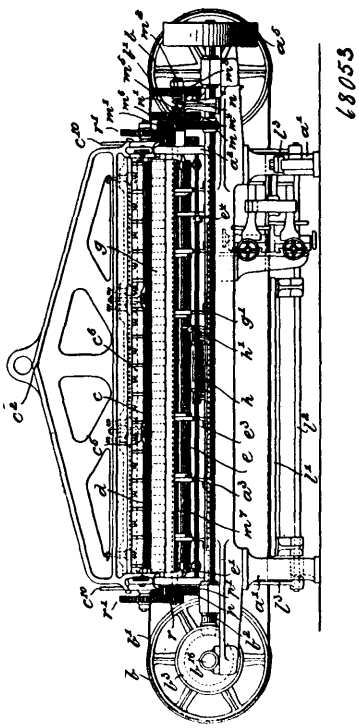
arms or members formed with said levers and extending between said sections, anti-friction rollers mounted in the ends of said arms or members, and means for holding said sections normally together, substantially as set forth. 9th. A hydraulic motor comprising a shaft, a motor body formed in sections and mounted on said shaft, a hub keyed to said shaft, levers mounted in said hub and engaging said sections, weights adjustably secured on said levers, and means for holding said sections normally together, substantially as set forth. 10th. A hydraulic motor comprising a shaft, a motor body formed in sections and mounted on said shaft, a hub keyed to said shaft, levers mounted in said hub and engaging said sections, weights arranged to slide upon said levers, means for holding said weights in any adjusted position, and means for holding said sections normally together, substantially as set forth. 11th. A hydraulic motor comprising a shaft, a motor body formed in sections and mounted on said shaft, a hub keyed to said shaft, levers mounted in said hub and having opposite threaded ends, said levers engaging said sections, weights arranged to slide on said levers, nuts working on said threaded ends, and means for holding said sections normally together, substantially as set forth. 12th. A hydraulic motor comprising a shaft, a motor body mounted on said shaft and formed in sections, each of said sections being provided with opposite coincident slots, a hub keyed to said shaft, levers mounted in said hub and extended through said slots, said levers having arms or extensions engaging said sections, differential weights mounted on the ends of said levers, and means for holding said sections normally together, substantially as set forth.

No. 68,052. Photographic Printing Fabric.
(Tissu à imprimer les photograhics.)

James Arthur Harvey, Toronto, Ontario, Canada, 11th July, 1900; 6 years. (Filed 2nd March, 1899.)

Claim.—1st. As a new article of manufacture, a photograph print fabric composed of woven fabric of fine texture or mesh having a pliable waterproof coating on one side, substantially as and for the purpose set forth. 2nd. As a new article of manufacture a photograph print fabric composed of a woven fabric of fine and uniform texture having a combination, one surface of side thereof coated with a pliable waterproof material or composition, and the opposite or reverse surface sensitized with a photographic solution, substantially as and for the purpose set forth.

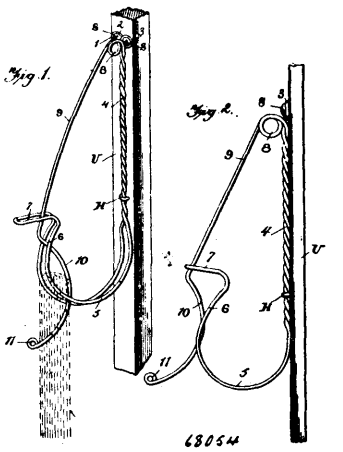
No. 68,053. Machines for Splitting Hides, Skins, Leather and the Like. *(Machine à fendre les peaux, le cuir, etc.)*



Joseph Hall, Leeds, England, 11th July, 1900; 6 years. (Filed 2nd March, 1899.)

Claim.—1st. In a machine of the character described, a sectional roller consisting of a square or oblong shaft, a series of runners or collars provided with slots to permit of movement on said shaft in one plane, and a series of sections adapted to move in said plane with said collars and to turn upon the runners or collars but having no longitudinal movement thereon, substantially as and for the purposes described. 2nd. In a machine of the character described, a sectional roll consisting of a square or oblong shaft, a series of runners or collars in slotted engagement with said shaft and free to move thereon in only one plane, a series of sections moving with said runner or runners in said plane and adapted to rotate thereon but fixed against longitudinal movement on said collars or runners, brackets supporting the shaft and means for turning said brackets to turn the shaft into varying angular positions, substantially as and for the purposes described. 3rd. In a machine of the character described, a gauge or tension roller, an adjustable sectional roll having a non-rotatable shaft and located adjacent to the gauge roller, a feeding table having one edge adjacent to the sectional roll, supporting brackets for said sectional roll shaft and to which the edge of the table is secured, and means for moving the table, brackets and shaft to correspond in movement to the adjustment of the sectional roll, substantially as and for the purposes described. 4th. In a machine of the character described, e sectional roll and a feeding table located adjacent thereto, said table being arranged in two sections hinged together, and one of said sections being secured to and carried by the supports for the sectional roll and movable therewith, substantially as and for the purposes described. 5th. In a machine of the character described, a sectional roll, a feeding table adjacent thereto, a friction roll supporting the sectional roll and adapted to rotate the same, and a gripping roll adapted to be presented against the sectional roll to grip the work thereto, substantially as and for the purposes described. 6th. In a machine of the character described, a fixed frame, a sectional roller rotating therein, a splitting knife adjacent to said roller, an oscillating head pivoted to the fixed frame, a tension or gauge roller carried by said head and means for elevating and depressing said head to bring the tension or gauge roller away from or towards the sectional roller and knife, substantially as and for the purposes described. 7th. In a machine of the character described, a fixed frame, a sectional roller rotating therein, a splitting knife adjacent to said roller, an oscillating head pivoted to the fixed frame, a tension or gauge roller carried by said head, means for elevating and depressing said head to bring the tension or gauge roller away from or towards the sectional roller and knife, and means for locking the head to the fixed frame when said head is depressed, substantially as and for the purposes described. 8th. In a machine of the character described, an adjustable tension or gauge roller, a stationary clip arranged at one edge of said roller, and a movable plate arranged at the other edge of said roller and adapted when moved in one direction to release the roller from said clip, substantially as and for the purposes described.

No. 68,054. String Exhibitor. *(Porte-lacets, etc.)*



Anton T. Peffer, St. Cloud, Minnesota, U.S.A., 11th July, 1900; 6 years. (Filed 5th January, 1900.)

Claim.—1st. The herein described string exhibitor, the same comprising one substantially rigid and one yielding arm whose bodies are shaped to clamp the strings between them, and a body piece connected with the inner ends of said arms and attached to a suitable support, substantially as and for the purpose set forth. 2nd. The herein described string exhibitor, the same comprising one arm 9, having an inwardly curved clamping member 10, and a second arm curving forwardly at 5, then upwardly at 6, and outwardly at 7 so as to co-operate with the first arm and its clamping member, and a body piece connected with the inner ends of said arms and attached to a suitable support, as and for the purpose set forth. 3rd. The herein described string exhibitor, the same comprising one rigid and one yielding arm whose bodies are shaped to receive the strings between them, and a base plate with its ends bent over into lips, the ends of the arms entering the bends between the body and lips and being riveted through the rear member thereof, as and for the purpose set forth. 4th. The herein described string exhibitor, the same comprising one rigid and one yielding arm whose bodies

are shaped to receive strings between them, and a base plate having its ends bent over into lips, the latter and the body of the plate being pierced with registering holes, the ends of the arms entering the bends and standing between the lips and body, and screws passing through said holes onto an upright support, as and for the purpose set forth. 5th. The herein described string exhibitor, the same comprising one rigid and one yielding arm whose bodies are shaped to receive the strings between them, and a base plate having its upper and lower ends bent over into lips standing forward of its body, said lips and body being pierced with registering holes, the ends of the arms passing through the bends and being riveted onto the body at their extremities, and fastening screws passing through the holes for clamping the ends of arms between the lips and body, substantially as described. 6th. The herein described string exhibitor, the same consisting of an upright body suitably supported, a single rigid hook-shaped arm attached to its lower end, a double yielding arm whereof the two members stand astride the single arm and have an elbow normally projected beyond the hooked body of said single arm, said members being coiled into springs and having their ends attached to the upper end of said body, all as and for the purpose set forth.

No. 68,055. Process of Manufacture of Derivatives of Psuedo Ionone. (*Procédé de manufacture de pseudo d'ionone.*)

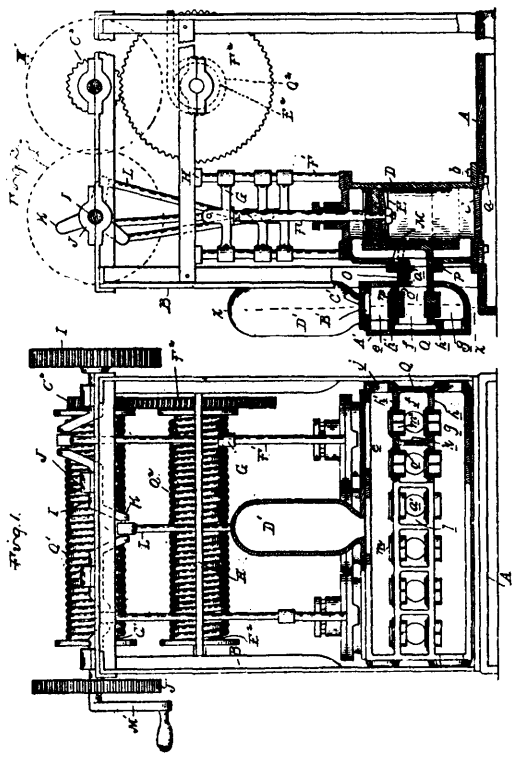
Haarmann and Reimer, of Holzminden, assignee of Johann Carl Wilhelm Ferdinand Tiemann, Berlin, German Empire, 11th July, 1900; 6 years. (Filed 26th May, 1900.)

Claim.—1st. A method of preparing aliphatic ethyl citralidene acete-acetate (ethylic ether of pseudo ionone carbonic acid), which method consists in isolating this compound by fractional distillation in a current of steam from the condensation products resulting from the heating of citral ethyl acetate, acetic acid, anhydrous sodium acetate and acetic anhydride under avoidance of too high a temperature, substantially as described. 2nd. A method of preparing ethylic ether of ionone carbonic acid and the corresponding ionone carbonic acid, which method consists in inverting the aliphatic ethyl citralidene aceto acetate by means of acids and more especially of concentrated sulphuric acid, and saponifying the ethylic ether of ionone carbonic acid thus produced and isolated therefrom by fractional distillation to obtain the corresponding ionone carbonic acid, substantially as described. 3rd. A method of preparing B-ionone (iso-ionone) which method consists in isolating same from the oily product rich in B-ionone, said product being obtained by the splitting off of carbonic acid from the ionone carbonic acid, substantially as described. 4th. As a new industrial intermediate product for preparing B-ionone *a*, the ethylic ether of ionone carbonic acid boiling under a pressure of 100 mm. at about 215° C, under a pressure of 11 mm. at about 160° C. which solidifies in a frigorific mixture in a well defined crystal melting at about 49° C. and *b*, the ionone carbonic acid obtained therefrom by saponifying, which separates its solution in ether, alcohol or benzol as a well defined crystal melting at about 208° C.

No. 68,056. Pump. (*Pompe.*)

William A. Whitting and George W. Willebrands, both of Detroit, Michigan, U.S.A., 11th July, 1900; 6 years. (Filed 21st March, 1900.)

Claim.—1st. In a pump, the combination with the valve chest provided with removable section plates at one of its sides and having inlet and discharge ports, valves within the chest adjacent to the section plates, the cylinders having ports leading into the chest, the pistons, and means for operating the pistons. 2nd. In a pump, the combination with the valve chest having removable front and top sections and provided with inlet and discharge ports, valves within the chest adjacent to the removable sections, the cylinders having ports leading into the chest, the pistons, and means for operating the pistons. 3rd. In a pump, the combination with a multiple of cylinders arranged in alignment, each having a bearing face formed thereon and provided with ports extending through said face, a valve chest extending transversely of the cylinders and secured to the bearing faces upon the latter, the chest being provided with ports registering with the cylinder ports, and inlet and discharge ports, detachable section plates forming part of the enclosing wall of the chest, the valves within the chest adjacent to the detachable plates, the pistons, and means for operating the pistons. 4th. In a pump, the combination with the valve chest, comprising a casing having partitions therein dividing the interior of the chest into three longitudinal compartments, the end compartment of the series being provided with ports, a series of valves within the middle compartment and a like series of valves within one of the immediately adjacent compartments, the valves comprising the two series being arranged in aligning pairs, a series of partitions within the middle compartment arranged one intermediate each adjoining pair of valves, the cylinders having ports leading into the middle compartment, the pistons, and means for operating the pistons. 5th. In a pump, the combination with the valve chest, comprising a casing having an upper and a lower partition therein dividing the interior of the chest into an upper, a middle and a lower compartment, the upper and lower compartments being provided with ports, a series of gravity valves seated in each partition, the valves in the two series being arranged in vertical pairs, a vertical partition intermediate each adjoining pair of valves in the lower



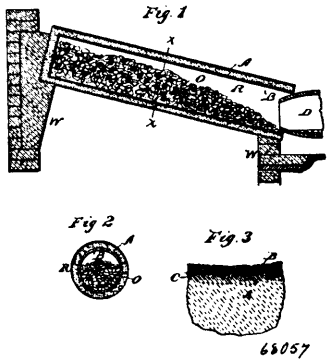
series, the cylinders having ports leading into the middle compartment, the pistons, and means for operating the pistons. 6th. In an apparatus for pumping water, the combination of an upright supporting frame, the cylinders supported upon the frame in alignment, the valve chest extending transversely of the cylinders and secured thereto, the pistons, a drive shaft mounted in the frame above the cylinders, connections between the pistons and said shaft, a drum journalled in the frame, and a gear connection between the drum and shaft. 7th. In an apparatus for pumping water, the combination of a support, a series of cylinders thereon, a valve chest for the cylinders, the pistons, a drive shaft having a series of cranks thereon, connections between the cranks and the pistons, a drum having a weighted cable wound thereon, a drive connection between the drum and the drive shaft, and means for rotating the drum in one direction independently of the drive shaft. 8th. In a pumping apparatus, the combination of a series of cylinders, the pistons therefor, a drive shaft having a series of cranks thereon, connections between the cranks and the pistons, a drum having a drive connection with said shaft, and means for operating the drum to actuate the pistons, substantially as described. 9th. In a pumping apparatus, the combination with the cylinders, of the pistons, a drive shaft connected to the pistons, two drums mounted for rotation in either direction, a drive connection between the drum, a similar connection between one of the drums and the drive shaft, and means for rotating one of the drums to actuate the pistons.

No. 68,057. Retort. (*Cornue.*)

Albert Gardner Clark, Cincinnati, Ohio, assignee of Benjamin Sadtler, Denver, Colorado, all in U.S.A., 11th July, 1900; 6 years. (Filed 30th January, 1900.)

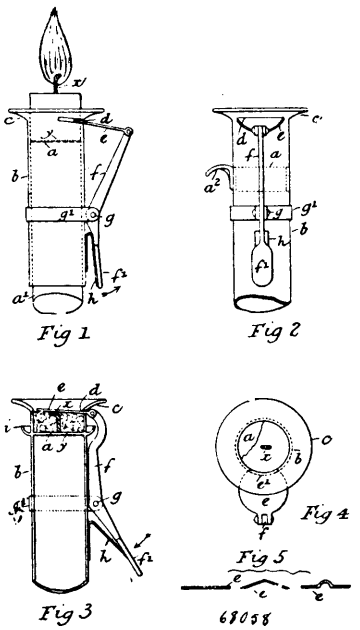
Claim.—1st. The herein described process of manufacturing retorts, consisting of applying to the surface of the fire clay body a sintering material capable of forming under heat a chemical bond with the adjacent fire clay and also with a basic material, applying to such sintering material a coating or lining of refractory and infusible basic material capable of forming under heat a chemical bond therewith, and thereupon subjecting the composite resultant to heat sufficient to effect a chemical union between such sintering material and adjacent portions of the clay body and between the sintering material and particles of the basic lining respectively, substantially as and for the purpose described. 2nd. The herein described process of manufacturing refractory articles, consisting of applying to the surface of the fire clay body a coating of sintering material, and then a coating of refractory and infusible basic material and subjecting the whole to heat sufficient to fuse such sintering material into said body and into the basic lining, whereby said body and lining are secured together by a chemical bond, substantially as described. 3rd. The herein described process of manufacturing refractory articles, consisting of applying to the

surface of the fire clay body a coating of silicate of soda, then a coating of refractory and infusible basic material, and subjecting



the whole to a heat sufficient to fuse said silicate of soda into said body and into said basic lining, whereby body and lining are secured together, substantially as described. 4th. A retort for reducing ore and analogous purposes having a body of fire clay, a lining or coating of refractory and infusible basic material and a sintering material between said body and coating chemically united to each, subsantially as described. 5th. A retort for the purposes set forth, having a body of fire clay with its interior and upper outer surface coated with a refractory and infusible basic material, and a coating of sintering material between the body of said retort and said basic material, chemically united to each, substantially as described. 6th. A retort for reducing ores and analogous purposes having a body of fire clay, a lining of refractory and infusible basic material, and a coating of silicate of soda between said body and lining chemically united to each, substantially as described.

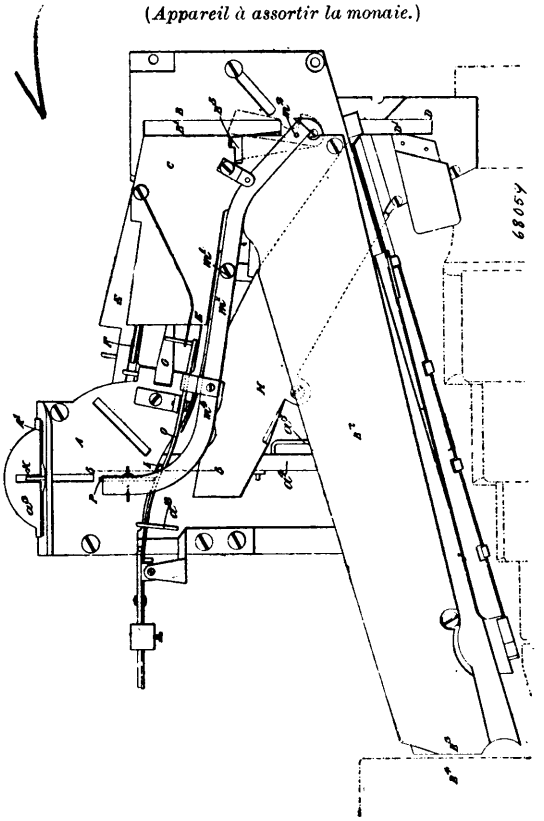
No. 68,058. Light Extinguishing Candlestick.
(*Eteignoir pour chandeliers.*)



James Murdoch, Bradshaw's Creek, Tasmania, 11th July, 1900; 6 years. (Filed 30th January, 1900.)

Claim.—1st. In a light extinguishing candlestick, a candlestick pillar, a slot in the upper part thereof, a light extinguishing plate having its edge set within said slot, and a spring actuated lever connected to said plate and to said pillar, substantially as and for the purposes set forth. 2nd. In a light extinguishing candlestick, the combination of pillar *b*, gallery *c*, slot *d*, extinguishing plate *e*, lever *f*, pivot *g*, thumb rest f^1 and spring *h*, all substantially as and for the purposes set forth. 2rd. In a light extinguishing candlestick, a pillar having a slot, and mechanism fixed to said pillar, as set forth, for advancing an extinguishing plate through the said slot automatically when the candle is to be extinguished, the candle socket within the pillar being adjustable so as to enable the amount of candle left after extinguishment to be regulated, all substantially as set forth. 4th. In a light extinguishing candlestick, an extinguishing plate adapted to work through a slot in the pillar, and having a bent or curved form (raised in the middle), substantially as and for the purposes set forth.

No. 68,059. Apparatus for Sorting Coins.
(*Appareil à assortir la monaie.*)



Edward Moriarty, of 180 North End Road, Fulham, Middlesex, England, 11th July, 1900; 6 years. (Filed 9th March, 1900.)

Claim.—1st. A hinged finger or similar device adapted to operate in conjunction with a coin and with movable stops forming part of the mechanism controlling the coin deflectors for the purpose specified. 2nd. The combination with the coin deflectors of levers which are normally held locked by a hinged or pivoted frame under the control of one of the aforesaid movable stops, for the purpose specified. 3rd. The combination with the coin deflectors and their levers, of a balanced arm arranged beneath an opening in the slot chamber, and of shoulders or other stop pieces on said balanced arm, adapted to lie in the path of one or other of said levers according to the position of the balanced arm for the purpose specified. 4th. The combination with the balanced arm of an auxiliary balanced arm or auxiliary balanced arms which are adapted to be shifted by lever mechanism when a movable stop or stops are actuated by the aforesaid hinged finger, for the purpose specified. 5th. The combination with the sliding plate and its hinged arm, of a stop piece or support for the balanced arm, substantially as and for the purpose specified 6th. The combination with the slot chamber of a shutter capable of being shifted by the sliding plate, substantially as and for the purpose specified. 7th. The combination with the balanced arm of a stop for retarding the return of the said balanced arm to its normal position, substantially as and for the purpose specified 8th. A hinged piece for acting as a substitute for the pennies, substantially as and for the purpose specified.

No. 68,060. Gas Engine. (*Machine à gaz.*)

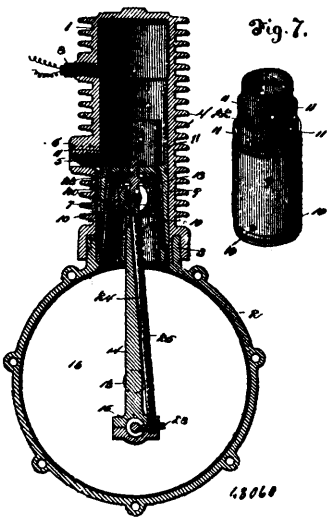
George A. Whitcomb, Framingham, Massachusetts, U.S.A., 11th July, 1900; 6 years. (Filed 24th October, 1899.)

Claim.—1st. In a gas engine, the combination of cylinder having feed and exhaust ports, and an oblique or spirally disposed exhaust passage in communication with said exhaust port, a reciprocatory piston having cut-offs for controlling said ports and also provided with relief channels communicating at one end with the explosion chamber of the cylinder and adapted at the other end for communication alternately and at times with said exhaust passage continuously of the inward movement of the piston, and means for turning the piston to cause said cut-offs to move in a direction transverse to the reciprocatory path of the piston and establish intermittent engagement of the relief channels and exhaust passage, substantially as specified. 2nd. In a gas engine, the combination with a cylinder having feed and exhaust ports of a reciprocatory piston having cut-

offs for controlling said ports, and provided with a pocket in communication with the explosion chamber of the cylinder, and adapted

Fig. 1

Fig. 7.



to receive directly the explosive mixture in its passage to the cylinder proper, an igniter adapted to enter said pocket when the piston is in position to receive the initial impulse of the explosive charge and ignite the charge therein, and means for moving said cut-offs in a direction transverse to the path of reciprocatory movement of the piston, substantially as specified. 3rd. In a gas engine, the combination with a cylinder having feed ports and an exhaust port and an exhaust passage leading to the latter of a piston provided with spaced cut-off valves for controlling said ports, a relief channel in the piston adapted to register at times with the exhaust passage throughout the movement of the piston in one direction, and means for turning the piston to cause movement of the valves in a direction transversely to the path of the piston and cause intermittent registration of said relief channels with the exhaust passage, substantially as specified. 4th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston having a pocket adapted to receive directly the charge of explosive mixture, and an igniter, adapted to enter said pocket when in its passage to the cyl nder proper the piston is in position to receive the initial impulse of the explosive charge and ignite the charge therein, substantially as specified. 5th. In a gas engine, the combination with a cylinder having feed and exhaust ports and an igniter, and a piston having an annular flange upon its upper end disposed inwardly from the periphery thereof to form a pocket, where, when the piston is at one end of its stroke, said pocket is in communication with the ports, and when at the other end of its stroke the igniter is arranged in said pocket, said piston being subject to direct pressure within the closure of said flange, substantially as specified. 6th. In a gas engine, the combination with a cylinder having feed ports and an exhaust port and a spirally disposed passage leading to said exhaust port, of a reciprocatory piston, a driven crank, a pitman with which said piston has a swivel connection, cut-off devices carried by the piston for controlling said ports, means for imparting rotary movement to the piston, and relief channels adapted to register at times with the exhaust passage as the cylinder is rotated, substantially as specified. 7th. In a gas engine, the ombination with a cylinder having feed ports and an exhaust port, f a spirally disposed passage leading to said exhaust port, of a reciprocatory piston, a driven crank, a pitman with which said piston has a swivel connection, cut-off devices carried by the piston for controlling said ports, relief channels in the piston adapted to register at times with the exhaust passage, and means, including a gearing, actuated by the crank shaft, for imparting rotary motion to the piston to cause registration of the exhaust passage and relief channels, substantially as specified. 8th. In a gas engine, the combination with a cylinder having feed and exhaust ports of a reciprocatory piston, a driven crank, a pitman with which said piston has a swivel connection, cut-off devices carried by the piston for controlling said ports, and means consisting of a worm on said shaft and a worm gear meshing with the worm and having a spindle disposed at an angle to the axis of the pitman and connected with the piston at the point of intersection of the axis of the pitman and spindle for imparting rotary motion to the piston, substantially as specified. 9th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston carrying cut-off devices for controlling said ports, a crank, a pitman between said crank and the piston, and having a ball-and-socket connection with the latter, and means, consisting of a worm, actuated by said crank, and a worm gear, meshing with the worm and having a spindle disposed at an angle to the axis of the pitman and connected with the piston at the point of intersection of the axis of the pitman and spindle for communicating rotary motion to the piston, substantially as specified. 10th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston provided with cut-off devices for controlling said ports, a crank, a pitman connected with the crank and having a ball-and-socket connection with the piston, the same consisting of a ball on the pitman, and a ball socket mounted upon the piston with its shell spaced from the upper wall, of the piston, to form an interventing air space, and means for communicating rotary motion to the piston, substantially as specified. 11th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston provided with cut-off devices for controlling said ports, a crank, a pitman connected with the crank, and having a ball-and-socket connection with the piston, the same consisting of a ball on the pitman, and a ball socket on the piston, consisting of a bearing sleeve, a bearing cap detachably secured to the bearing sleeve, and antifriction balls or rollers arranged in the bearing socket for contact with said ball, and means for communicating rotary motion to the piston, substantially as specified. 12th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston provided with cut-off devices for controlling said ports, a crank, a pitman connected with the crank and having a swiveled connection with the piston, consisting of interlocked male and female members, one of which is provided with a stem or shank passed through and engaged with the piston, and the other of which is loosely connected with the pitman, and means connected with the element of the swivel connection carried by the piston for communicating rotary motion to the piston, substantially as specified. 13th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston provided with cut-off devices for controlling said ports, a crank, a pitman connected with the crank and having a swivel connection with the piston, consisting of interlocked male and female members, one of which is provided with a stem or shank fitted in the opening in the shell of the piston and engaged by a fastening nut, and the other of which is carried by the pitman, and means connected with the element of the swivel connection carried by the piston for communicating rotary motion to the piston, substantially as specified. 14th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston provided with cut-off devices for controlling said ports, a crank, a pitman connected with the crank and having a swivel connection with the piston, consisting of interlocked male and female members, one of which is provided with a stem or shank detachably engaged with the shell of the piston, and the other of which is carried by the pitman, means for holding the piston carried member of the connection out of contact with shell of the piston, and means connected with the element of the swivel connection carried by the piston for communicating rotary motion to the piston, substantially as specified. 15th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston provided with cut-off devices for controlling said ports, a driven shaft, crank discs carried by terminally separated members of the shaft, a wrist pin connecting said discs, and provided with a worm, a channeled pitman mounted at its inner end upon said wrist pin with its axis intersecting the axis of said pin and having a swivel connection at its outer end with said piston, and a worm gear, meshing with said worm, and a spindle for said gear arranged in the channel of the pitman and at an angle to the axis thereof and terminally connected with the piston at its intersection with the axis thereof, substantially as specified. 16th. In a gas engine, the combination with a cylinder having feed and exhaust ports, of a reciprocatory piston provided with cut-off devices for controlling said ports, a driven shaft, crank discs carried by terminally separated members of the shaft, a wrist pin connecting said discs, and provided with a worm, a channel pitman mounted at its inner end upon said wrist pin and having a swivel connection at its outer end with said piston, a spindle arranged in the channel of the pitman, and pivotally connected at its outer end to an axial hanger on the piston, at its point of intersection with the pitman, said spindle lying at an angle to the pitman and a worm gear upon the spindle engaging said worm and forming a direct connection between the spindle and wrist pin, substantially as specified.

No. 68,061. Anti-slipping Device for Boots and Shoes.

(Grapin pour chaussures.)

Dominick Alexander McDonald, Boston, Massachusetts, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. An anti-slipping device comprising a securing plate having a plurality of pin receiving holes, and a plurality of anchor holes disposed intermediate the pin receiving holes, a plurality of pins having diametrically reduced ends secured in the pin receiving holes and having shoulders bearing against the face of the securing plate, and an elasting covering wholly embedding said plate and extending through the anchor holes thereof, and also surrounding those end portions of the pins adjacent to said plate. 2nd. An anti-slipping device comprising a metallic disc or plate having a plurality of anchor holes, a plurality of pins secured to said disc intermediate said anchor holes, and projecting outward from one face of said disc with their axes substantially equi-distant with respect to each other and with respect to a common centre, and a unitary elastic covering

wholly embedding said disc, and extending through the anchor holes thereof, and also surrounding those end portions of the pins adjacent

Fig. 1.

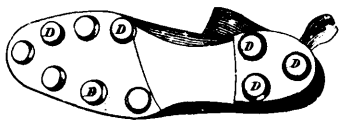


Fig. 2.

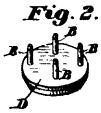


Fig. 3.

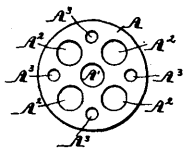


Fig. 4.

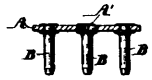


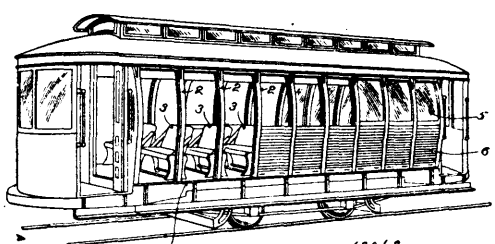
Fig. 5

Fig. 6.

68061

said disc, substantially as described. 3rd. An anti-slipping device comprising a securing plate having a plurality of pin receiving holes and a plurality of intermediate anchor holes, a plurality of pins having diametrically reduced ends secured in the pin receiving holes and having shouldered bearings against the upper face of the securing plate, an electro-plating surrounding the pins and plate, and an elastic covering wholly embedding said plate and extending through the anchor openings in said plate and surrounding the shouldered end portion of the pins.

No. 68,062. Street Railway Cars. *(Chars de rues.)*

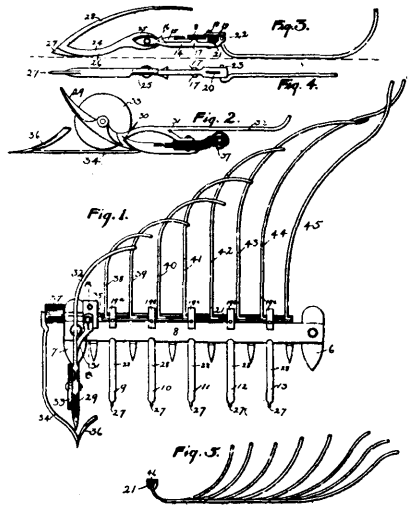


68062

George Moore, Boston, Massachusetts, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. A railway car or the like vehicle having the grooved upright frames or ribs, the movable side section comprising the window sash having its edges fitted to the grooves of the said frames or ribs, the panel also movable in the said grooves, the catch to connect the said sash and panel in a separable manner, the locking devices carried by the sash and panel, the fixed stop piece which is engaged by the said locking devices respectively, and the disengaging finger carried by the panel. 2nd The flexible panel comprising the top and bottom rails and intermediate slats or strips with their convex edges and concave fitting together and having the recesses in the said convex edges, the links passing through the said rails and slats or strips, and the wires passed through holes in the overlapping ends of the links and occupying said recesses.

No. 68,063. Attachment for the Finger Bars of Mowers and Harvesters. *(Attache de lames pour faucheuses et moissonneuses.)*



68063

William Gaterman, Newton, Wisconsin, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. An attachment for the finger bars of mowers and harvesters consisting of the forwardly extending vine lifting shoes provided with a vertical blade 27 at their forward point, said shoes connected to the finger bar and provided with the joint 25 adapted to permit the forward point of the said shoe to adapt itself to the physical character ef the ground, the said point and the bearing surface of the shoe, when at its upper extremity, being retained on a line a little below the common finger bar guards, substantially as and for the purposes set forth. 2nd. An attachment for the finger bars of mowers and harvesters consisting of the bar 34, hinged in the rear outer end of the finger bar terminating in a point at its front end and provided with the upwardly and inwardly projecting knife 36, substantially as and for the purposes set forth. 3rd. An attachment for the finger bars of mowers and harvesters consisting of the wheel 33, connected to the outer shoe of the finger bar by means of the casting 32 adapted to engage the forward point of the said outer shoe at 30, the lower periphery of said wheel being adapted to conduct vines, or other entangled mass being mowed, below the point of the said shoe, substantially as and for the purposes set forth.

No. 68,064. Match. *(Allumettes.)*

William Percy Jones, St. Martins, County of Cornwall, and Henry Montague Bates, Bayswater, County of London, England, 11th July, 1900; 6 years. (Filed 13th November, 1899.)

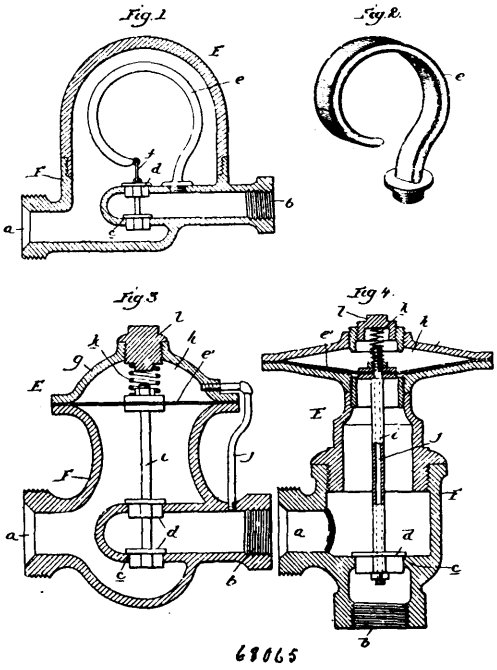
Claim.—1st. In a non-phosphorous non-poisonous strike anywhere match the combination of chlorate of potash, sulphide antimony, thiosulphates of heavy metals oxide manganese, bichromate potash, glass powder or the like, red prussiate of potash gelatine, glue or the like, substantially in the proportions herein set forth. 2nd. A paste for the manufacture of non-phosphorous non-poisonous match capable of being struck and ignited on any ordinary striking surface, substantially as set forth.

No. 68,065. Steam Heating Apparatus.
(Appareil de chauffage à vapeur.)

James Alfred Donnelly, New York City, State of New York, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. In an automatic device for steam heating apparatus, the combination of a valve body having a thoroughfare, a valve piece to control said thoroughfare, and a pressure motor for controlling said valve piece communicating with the valve body on the outlet side beyond the thoroughfare and controlled by the pressure on said outlet side. 2nd. In an automatic valve device for steam heating apparatus, the combination with the valve piece of a pressure actuated diaphragm for operating said valve piece, and a duct leading to said diaphragm from the outlet side of the valve device, whereby the operation of said diaphragm and valve piece is controlled by the pressure on the outlet side. 3rd. In an automatic valve device for steam heating apparatus, the combination of a valve body having a thoroughfare, a valve piece controlling said thoroughfare, a pressure actuated diaphragm for controlling said valve piece, and a tube connecting said diaphragm and valve piece and forming a communication between the inner side of said diaphragm and the outlet side of the valve body, substantially as and

for the purpose described. 4th. In an automatic valve device for steam heating apparatus, the combination with the valve piece, of



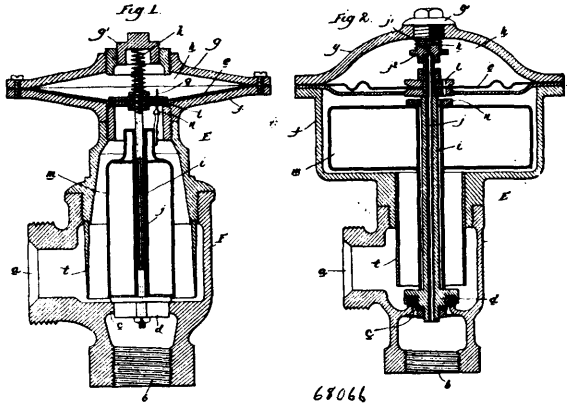
the pressure motor for operating it, when arranged with one side in communication with the inlet side of the valve body and the other side in communication with the outlet side thereof, so that said pressure motor will automatically operate said valve piece under the variations in the relative pressures on the inlet and outlet sides. 5th. In an automatic valve device for steam heating apparatus, the combination with the valve piece, of the pressure motor for operating it, when arranged with one side in communication with the inlet side of the valve body and the other side in communication with the outlet side thereof, so that said pressure motor will automatically operate said valve piece under the variations in the relative pressures on the inlet and outlet sides, and means acting on said pressure motor to control its movements under the action of said relative pressures. 6th. In a steam heating apparatus, the combination of a radiating device, a return communicating therewith, an outlet valve interposed between said radiating device and the return, a pressure motor for operating said valve having one side subjected to the pressure on the inlet side of said valve or in the radiating device and the other side subjected to the pressure on the outlet side or in the return, whereby said valve will be automatically operated by the variations in the relative pressures in the radiating device and in the return. 7th. In a steam heating apparatus, the combination of a radiating device, a return communicating therewith, an outlet valve interposed between said radiating device and the return, a pressure motor for operating said valve having one side subjected to the pressure on the inlet side of said valve, or in the radiating device and the other side subjected to pressure on the outlet side or in the return, whereby said valve will be automatically operated by the variations in the relative pressures in the radiating device and in the return, and means to create a partial vacuum or lower pressure in the return.

No. 68,066. Steam Heating Apparatus.

(Appareil de chauffage à vapeur.)

James Alfred Donnelly, New York City, State of New York, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. In steam heating apparatus, the combination with a radiating device, a return for the air and water of condensation leading therefrom, a valve interposed between the outlet of the radiating device and the return, means to operate said valve, controlled by the pressure in the return, and means controlled by the conditions on the outlet side of said valve to control the operation of the means to operate the valve under the action of the pressure in the return. 2nd. In a steam heating apparatus, the combination with a radiating device, a return for the air and water of condensation leading therefrom, a valve between the outlet of the radiating device and the return, a pressure motor for controlling said valve operated by the pressure in the return, and means controlled by the conditions on the outlet side of said valve to control the operation of said pressure motor under the action of the pressure in return. 3rd. In a steam heating apparatus, the combination with a radiating device, a return for the air and water of condensation leading therefrom, a valve between the outlet of the radiating device and the return, a pressure motor for controlling said valve operated



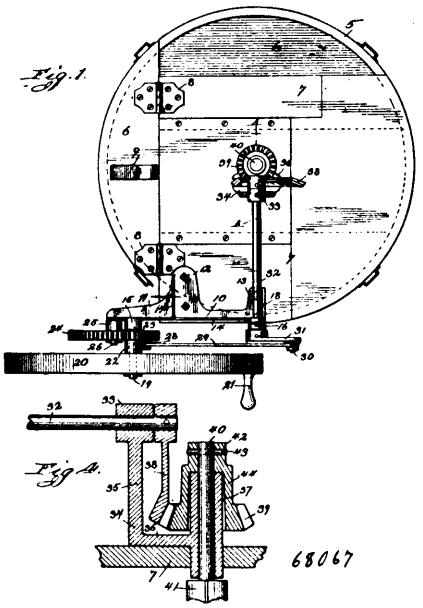
by the pressure in the return, and a float controlled by the water of condensation on the outlet side of said valve to control the operation of said pressure motor under the action of the pressure in the return. 4th. In a steam heating apparatus, the combination with a radiating device, a return for air and water of condensation leading therefrom, a valve between the outlet of the radiating device and the return, a pressure motor for controlling said valve operated by the pressure in the return, and provided with a controlling vent communicating with the inlet side of said valve, and means controlled by the conditions on the inlet side of said valve to control said vent and the operation of the pressure motor controlled thereby. 5th. An automatic valve device, for the steam heating apparatus, consisting of a valve body having a thoroughfare, a pressure motor for controlling said valve piece communicating with the valve body on the outlet side beyond the thoroughfare and controlled by the pressure on the outlet side, and means controlled by the conditions on the inlet side of the said valve body to control the operation of the pressure motor under the pressure on the outlet side. 6th. An automatic valve device for steam heating systems, consisting of a valve body having a thoroughfare, a valve piece to control said thoroughfare, a pressure motor for controlling said valve piece communicating with the valve body on the outlet side beyond the thoroughfare and controlled by the pressure on said outlet side, provided with a vent communicating with the inlet side of said valve body, and a float located on the inlet side and adapted to control said vent. 7th. In an automatic valve device for steam heating apparatus, the combination with the valve piece, of a pressure actuated diaphragm for operating said valve pipe, a duct leading to said diaphragm from the outlet side of the valve device, a vent in said diaphragm communicating with the inlet side of the valve device, and a float on the inlet side to control said vent. 8th. In an automatic valve device for steam heating apparatus, the combination with the valve piece, of a pressure motor for operating said valve piece, a duct leading to said pressure motor from the outlet side of the valve device, and a thermostat for controlling said duct. 9th. In an automatic valve device for steam heating apparatus, the combination of a valve body having thoroughfare, a valve piece controlling said thoroughfare, a pressure actuated diaphragm for controlling said valve piece, a tube connecting said diaphragm and valve piece and forming a communication between the outlet side of the valve device and the space adjacent to the diaphragm, a vent in said diaphragm communicating with the inlet side of the valve device, and a float on the inlet side for controlling said vent.

No. 68,067. Washing Machine. *(Machine à laver.)*

William Ruthven, Chicago, Illinois, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. In a washing machine, the combination with the bracket 10 upon the lid at the edge of the tub, of the stirring shaft 40 journalled in said lid, a driving wheel 20 journalled on said bracket, and connections for transforming a rapid rotary movement of said wheel 20 to the slower rotary reciprocating movement of said stirring shaft 40, said connections comprising the gear wheel 24 journalled on said frame and meshing with the gear pinion 23 connected to said driving wheel, a bevel gear pinion 39 secured upon said shaft 40, the rock shaft 32 journalled in said frame 10 and having the bevel gear 36 at one end meshing with said bevel gear pinion 39, and a crank arm 31 at the other end, crank pins 28 and 30 upon the wheel 34 and the crank arm 31, respectively, and the link 29 connecting said crank pins. 2nd. In a washing machine, the combination with the bracket 10 mounted upon the lid at the edge of the tub, of the stirring shaft 40 journalled in a bracket 34 mounted upon said lid, said bracket 34 having the vertical bearing 37 for the shaft 40, a driving wheel 20 mounted on said bracket 10, a gear wheel 24 journalled on said frame 10 and meshing with the gear pinion 23 connected to said driving wheel, a bevel gear pinion 39 secured upon said shaft 40, a shaft 32 journalled in said frame 10 and in the bearing 33 on the bracket 34 and having the bevel gear 38 at its inner

end meshing with said bevel gear pinion 39 and a crank arm 31 at its outer end, crank pins 38 and 40 upon the wheel 24 and the crank



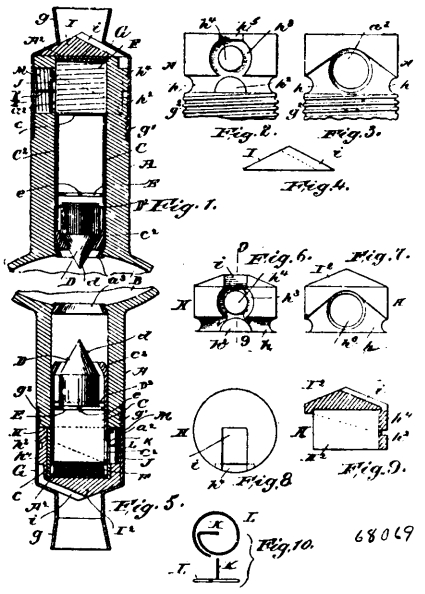
arm 31, respectively, and a links 29 connecting said crank pins, all operating, substantially as and for the purpose described. 3rd. In a washing machine, the combination of the lid 7 carrying the bracket 34 consisting of the vertical flange 35 having the bearing 33 therein, and the horizontal flange 36 having the elongated vertical bearing 37 secured thereto, with the rock shaft 32 mounted in the bearing 33, and terminating in the gear segment 38, the stirring shaft 40 mounted to rotate in the bearing 37 and having the gear pinion 39 thereon meshing with the gear segment 36 secured thereto by the collar 42 resting upon the upper end of the bearing 37, substantially as and for the purpose described. 4th. In a washing machine, the combination of the tub having the lid pivoted thereto and a stirring shaft rotatably mounted in said lid, a framework secured to said lid, a drive wheel mounted in said framework, and connections between said driving wheel and the stirring shaft for transforming the continuous rotary movement of said drive wheel to a reciprocating rotary movement of said stirring shaft, said connections being so arranged and adjusted that a considerable portion of the weight thereof is beyond the pivotal edge of the lid. 5th. In a washing machine, the combination of the tub having the lid pivoted thereto and a stirring shaft rotatably mounted in said lid, a framework secured to said lid, a heavy drive wheel journalled in said framework beyond the pivotal edge of the lid, and connections between said drive wheel and the stirring shaft for transforming the continuous rotary movement of said drive wheel to a reciprocating and rotary movement of said stirring shaft. 6th. In a washing machine, the combination of the tub having a lid pivoted thereto and a stirring shaft rotatably mounted in said lid, a framework secured to said lid and extending beyond the pivotal edge thereof, a heavy drive wheel mounted in said framework and having the gear pinion 23 connected thereto, a gear wheel 24 mounted in said framework beyond the pivotal edge of the lid and beneath the gear pinion 23 with which it meshes, and connections between said gear wheel 24 and the stirring shaft for transforming the continuous rotary movement of said gear wheel into a reciprocating rotary movement of the stirring shaft. 7th. In a washing machine, the combination of the tub having a lid pivoted thereto and a stirring shaft rotatably mounted in said lid, a framework secured to said lid and extending beyond the pivotal edge thereof, a heavy drive wheel mounted in said framework and having the gear pinion 23 connected thereto, a gear wheel 24 mounted in said framework beyond the pivotal edge of the lid and beneath the gear pinion 23 with which it meshes, and connections between said gear wheel 24 and the stirring shaft for transforming the continuous rotary movement of said gear wheel into a reciprocating rotary movement of the stirring shaft, said connections comprising the link 29 connected to an eccentric pin on the wheel 24 and to a crank pin 30 on the crank arm 31 secured to the shaft 32 journalled in the frame 10 and having the gear segment 38 on its outer end meshing with the bevel gear pinion 39 secured to the upper end of the stirring shaft, substantially as and for the purpose described. 8th. In a washing machine, the combination of a tub having a lid pivoted thereto, and a stirring shaft rotatably mounted in said lid, a framework having the horizontal web 11 secured to the edge of the lid, the vertical web 14 carrying the stub shafts 19 and 26 upon which are mounted the driving wheel 20 and the gear wheel 24 respectively and the bearing 16, and driving connections between said drive shaft and the stirring shaft comprising the gear pinion 23 secured to the drive wheel 20 and meshing with the gear pinion 24, the link 29 connected to the eccentric pin upon the wheel 24 and to a crank pin upon the crank arm 31 secured to the horizontal rock shaft 32 journalled in the bearing 16 and having its inner end with the gear segment 38 secured thereto meshing with the gear pinion 39 secured to the upper end of the stirring shaft. 9th. In a washing machine, the combination of a tub having a lid pivoted thereto, and a stirring shaft rotatably mounted in said lid, a framework having the horizontal web 11 with the projections 12 and 13 by which it is secured to the edge of the lid, the vertical web 14 carrying the stub shafts 19 and 26, the bearing 16, and the webs 17 and 18 connecting said horizontal and vertical webs, a drive wheel 20 mounted in said framework beyond the pivotal edge of the lid, a gear pinion 23 connected to the hub of said wheel 20 which is mounted upon the stub shaft 19, the gear wheel 24 mounted in the stub shaft 26 meshing with the pinion 23, a link 29 connecting the crank pin 28 upon the gear wheel 24 with a crank pin 30 upon the crank arm 31 secured to the horizontal rock shaft 32 journalled in the bearing 16 and having the bevel segment 38 secured to its inner end and meshing with the bevel gear pinion 39 secured upon the upper end of the stirring shaft 40, substantially as and for the purpose described.

No. 68,068. Manufacture of Filaments for Incandescent Electric Lights. (*Fabrication de filaments luminières électriques incandescents.*)

Samuel Bismark Husselman, Worcester, Massachusetts, U.S.A., 11th July, 1900; 6 years. (Filed 25th May, 1900.)

Claim.—1st. A filament for incandescent electric lights, consisting of a base of asbestos or similar indestructible material to which is fused a coating of iodine and aluminum, substantially as and for the purposes described. 2nd. The method of making filaments for incandescent electric lights, which consists in first, heating iodine, aluminium in divided form and alcohol in suitable proportions and in an air tight retort, to a temperature sufficient to reduce the mixture to a pasty, semi-metallic mass; second, coating a string or thread of asbestos or similar material with the mass thus formed and permitting the string or thread to dry; third, subjecting the string thus coated to successive coatings until the string is thoroughly saturated; fourth, giving the thread or string its required shape and density while still moist and after the last coating operation, and finally, heating the thread or string in an air tight retort, to a temperature sufficiently high to fuse the coating to the thread, substantially as and for the purposes described.

No. 68,069. Non-refillable Bottle.
(*Bouteille non-réemplissable.*)



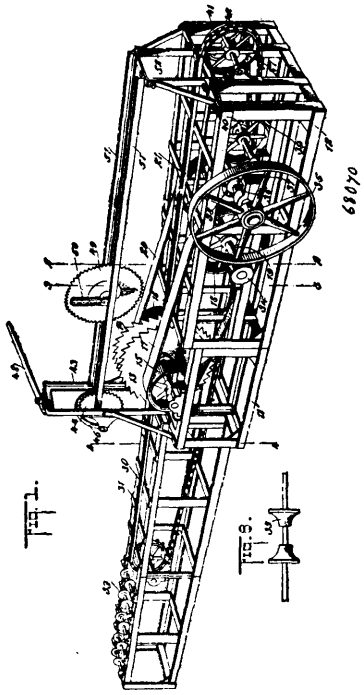
Frederick J. Gottlieb, New York City, New York, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. The combination of a bottle neck or outlet, a tube adapted to slide therein, said neck and tube each having an outlet to co-act, the tube having an inlet passage, a float adapted to close the same, and a hood or cover on the neck and communicating with the outlet of the latter, substantially as described. 2nd. The combination of a bottle neck, a tube adapted to slide therein, said neck and tube having an outlet, the neck being provided with an inner seat to receive the sliding tube, a float within the tube adapted to close the passage into said tube and to cause the tube to slide when pres-

sure of liquid is applied to said float, and a hood or cover on the neck communicating with its outlet, substantially as described. 3rd. The combination of a bottle neck or outlet, a tube, each having an outlet, the tube being adapted to slide inwardly to close the inward passage through the neck, a valve to prevent the flow of liquid into the neck, a hood or cover connected with the neck and communicating with its outlet, and a float within the tube adapted to close the passage into said tube and to cause the tube to slide when pressure of liquid is applied to said float, substantially as described. 4th. The combination of a bottle neck having the outer end closed and an outlet in one side, and having a seat at its inner end, a cover over the end of the neck and provided with an outlet neck, a circuitous channel being provided between the neck and cover, a sliding tube within the neck having its outer end closed and provided with an outlet in one side, and a float within the tube adapted to close its inlet passage, said tube being adapted to fit the inner seat in the neck, substantially as described. 5th. The combination of a bottle neck provided with an outlet and a groove leading therefrom around the neck to a protuberance and leading upwardly along another protuberance, a hood or cover over the neck and encircling the grooves, a tube within the neck having an outlet, a valve within the tube to close its inlet end, and a seat within the neck to receive said tube, sustantially as described. 5th. The combination of a bottle neck being provided with a side outlet, a stopper at its outer end, a cap, a hood or cover fitting over the neck and cap, the neck being provided with peripherial grooves forming a circuitous channel, the neck having an inner seat, a sliding tube in said neck adapted to engage said seat, and a float within said tube to close its inlet end, substantially as described.

No. 68,070. Tie Sawing Machine.

(Machine à scier les traverses de chemin de fer.)

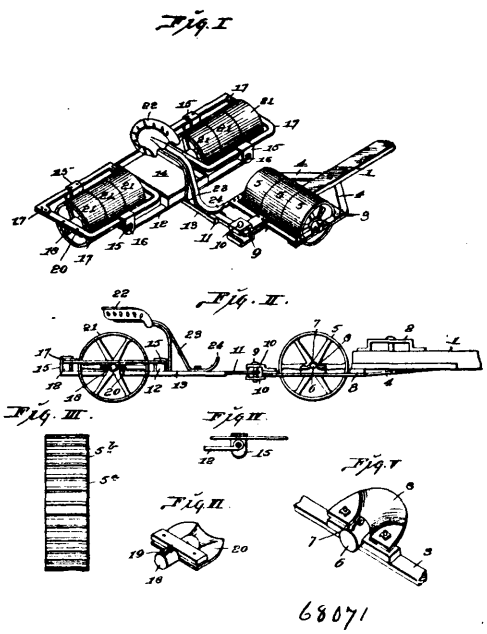


Cornelius Van Ness Kittredge, Buffalo, New York, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. In a sawing machine, saws spaced apart, means for operating said saws, an endless carrier movable between the saws, and centering rollers forward of the carrier, substantially as specified. 2nd. In a sawing machine, comprising two saws spaced apart and on independent adjustable arbors, a track extended between the saws, an endless carrier movable on said track, a section of the track directly between the saws being removable, and centering rollers at the feed end of the machine, substantially as specified. 3rd. A sawing machine, comprising two circular saws spaced apart and on independent adjustable arbors, means for operating said saws, an endless carrier chain movable between the saws, and a toothed presser roller mounted for automatic vertical adjustment forward of the saws, substantially as described. 4th. In a sawing machine, two saws, an endless carrier movable between the saws, a toothed presser roller vertically adjustable forward of the saws, and a toothed presser roller vertically adjustable rearward of the same, substantially as specified. 5th. In a sawing machine, a plurality of saws, an endless carrier movable between the saws, and centreing rollers forward of the carrier, the said centreing rollers being longitudinally concaved, substantially as specified. 6th. In a sawing machine, a frame, two saws mounted in said frame, means for driving said saws, a carrier comprising a sprocket chain movable between the saws, sprocket wheels mounted in the frame and around which said chain passes, and a track for guiding the upper stretch of the chain, substantially as specified. 7th. In a sewing machine, a frame, saws mounted in said frame, a carrier chain consisting of sprocket links, and gripping devices attached to the chain consisting of plates having upwardly extended spurs at the ends, substantially as specified. 8th. In a sawing machine, a frame, two saws mounted in said frame, means for operating the saws, a carrier chain having spurs and a trough-shaped track on the frame and on which the upper stretch of the chain moves, substantially as specified. 9th. A sawing machine, comprising a frame, two saws mounted in said frame, a driving shaft for operating the saws, a sprocket wheel arranged at the outlet end of the frame, connections for rotating said sprocket wheel from the driving shaft, another wheel arranged when near the feed end of the frame, and an endless carrier engaging with the said sprocket wheels, substantially as specified.

No. 68,071. Tricycle Land Rollers.

(Roulcau d'agriculture.)



Henry Frederick Deterding, Commerce, Missouri, U.S.A., 11th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. A tricycle land roller comprising a rear frame consisting of a pair of parallel cross bars, having pivot bearings at their ends on the upper side thereof, rocking frames, shackles straddling the side bars of the rocking frames, pivot bolts connecting the shackles with the pivot bearings of the cross bars of the rear frame, the pendent journal boxes secured to the end bars of the rocking frames, the rollers having axles mounted in the journal boxes of the rocking frames, the forward frame, the journal boxes surmounting the end bars of the forward frame, the roller having an axle mounted in the journal boxes of the forward frame, a reach extending from beneath the cross bars of the rear frame, and means whereby the outer end of the reach is loosely connected with the rear cross bar of the forward frame, substantially as described. 2nd. A tricycle land roller comprising a rear frame consisting of a pair of parallel cross bars, having pivot bearings at their ends on the upper side thereof, rocking frames pivoted to the pivot bearings of the cross bars, the pendent journal boxes secured to the end bars of the rocking frames, the rollers having axles mounted in the journal boxes of the rocking frame, the forward frame, journal boxes surmounting the end bars of the forward frame, the roller having an axle mounted in the journal boxes of the forward frame, a reach extending from beneath the cross bars of the rear frame, a pair of clip jaws secured to the rear cross bar of the forward frame and a pivot bolt whereby the outer end of the reach is loosely connected with the clip jaws, substantially as described. 3rd. A tricycle land roller comprising a rear frame consisting of a pair of parallel cross bars, having pivot bearings at their ends on the upper side thereof, rocking frames pivoted to the pivot bearings of the cross bars, the pendent journal boxes secured to the end bars of the rocking frames, the rollers having axles mounted in the journal boxes of the rocking frames, the forward frame, the journal boxes surmounting the end bars of the forward frame, the rollers having an axle mounted in the journal boxes of the forward frame, a reach

extending beneath the cross bars of the rear frame, a channel bar extending beneath and bracing the reach, and means whereby the outer end of the reach is loosely connected with the rear cross bar of the forward frame, substantially as described. 4th. A tricycle land roller comprising a rear frame consisting of a pair of parallel cross bars, having pivot bearings at their ends on the upper side thereof, rocking frames pivoted to the pivot bearings of the cross bars, the pendent journal boxes secured to the end bars of the rocking frames, the rollers having axles mounted in the journal boxes of the rocking frames, the forward frame, the journal boxes surmounting the end bars of the forward frame, the roller having an axle mounted in the journal boxes of the forward frame, a reach extending from beneath the cross bars of the rear frame, means whereby the outer end of the reach is loosely connected with the rear cross bar of the forward frame, and a weight tray, mounted on, and secured to, the cross bars of the rear frame between the rocking frames, substantially as described. 5th. A tricycle land roller comprising a rear frame consisting of a pair of parallel cross bars, having pivot bearings at their ends on the upper side thereof, rocking frames pivoted to the pivot bearings of the cross bars, the pendent journal boxes secured to the end bars of the rocking frames, the rollers having axles mounted in the journal boxes of the rocking frames, the forward frame, the journal boxes surmounting the end bars of the forward frame, the roller having an axle mounted in the journal boxes of the forward frame, a reach extending from beneath the cross bars of the rear frame, means whereby the outer end of the reach is loosely connected with the rear cross bar of the forward frame, and a seat, located over the cross bars of the rear frame, between the rocking frames, having a support secured to the reach adjacent to the front cross bar of the rear frame, substantially as described. 6th. A tricycle land roller comprising a rear frame consisting of a pair of parallel cross bars having pivot bearings at their ends on the upper side thereof, rocking frames pivoted to the pivot bearings of the cross bars, the pendent journal boxes secured to the end bars of the rocking frames, the rollers having axles mounted in the journal boxes of the rocking frames, the forward frame, the journal boxes surmounting the end bars of the forward frame, the roller having an axle mounted in the journal boxes of the forward frame, a reach extending from beneath the cross bars of the rear frame, means whereby the outer end of the reach is loosely connected with the rear cross bar of the forward frame, a weight tray mounted on and secured to the cross bars of the rear frame, between the rocking frames, and a seat located over the tray having a support secured to the reach adjacent to the front cross bar of the rear frame, substantially as described. 7th. A tricycle land roller comprising a rear frame consisting of a pair of parallel cross bars having pivot bearings at their ends on the upper side thereof, rocking frames pivoted to the pivot bearings of the cross bars, the pendent journal boxes secured to the end bars of the rocking frames, the rollers having axles mounted in the journal boxes of the rocking frames, the forward frames having converging brace bars, the front and rear cross bars located on forward frame, the journal boxes surmounting the end bars of the forward frame, the roller having an axle mounted in the journal boxes of the forward frame, a reach extending from beneath the cross bars of the rear frame, means whereby the outer end of the reach is loosely connected to the rear cross bar of the forward frame, a channel plate mounted on and secured to the front cross bar and brace bars of the forward frame, a tongue having a clip and fitted in the channel plate, and a double tree pivot bolt secured to the clip and to the tongue, substantially as described. 8th. A land roller comprising a roller, an axle on which the roller is mounted, the journal boxes in which the axle is seated, said journal boxes being closed at their outer ends and provided with oil holes located at the extreme outer ends thereof, substantially as described.

No. 68,072. Composition of Matter Consisting of Sulphate of Ammonia and Carbonate of Soda or Caustic Soda. (*Composition de sulfate d'ammoniaque et carbonate de soda.*)

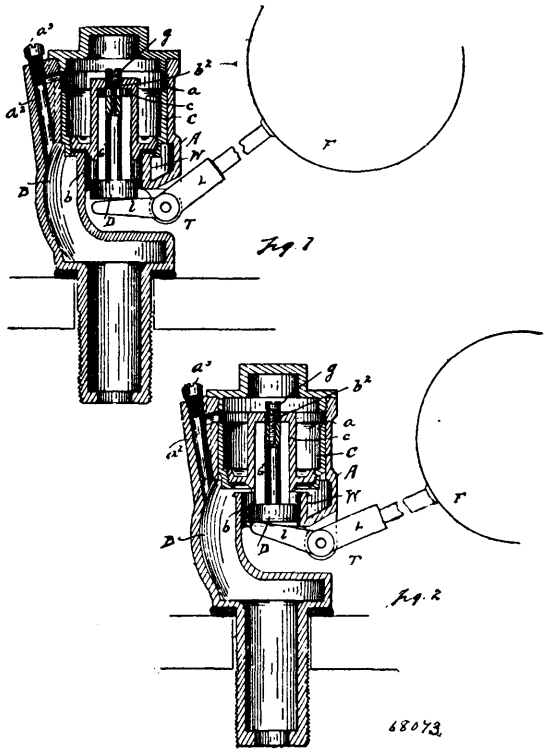
Purvis M. Laurason and Amanda Laurason, both of London, Ontario, Canada, 12th July, 1900; 6 years. (Filed 19th January, 1900.)

Claim.—The above described composition of matter consisting of sulphate of ammonia, (or its chemical equivalent muriate of ammonia), and carbonate of soda, (or its chemical equivalent carbonate of potash), in proportion of their molecular weights, or with an excess of carbonate of soda or carbonate of potash over the sulphate or muriate of ammonia, the composition being then in the form of a powder, substantially as described and for the purposes specified.

No. 68,073. Supply Valve. (*Tiroir d'admission.*)

Hiram T. Bush, assignee of Elon A. Marsh, both of Detroit, Michigan, U.S.A., 12th July, 1900; 6 years. (Filed 18th June, 1900.)

Claim.—1st. In a supply valve for water tanks, in combination with a casing, a piston and piston chamber adapted to be actuated by differ ential pressure therein, a valve upon said piston, passages of variable relative area leading from the high pressure side into said piston chamber, and from said piston chamber to the low pressure side of the piston, a retarding mechanism in the outlet passage, a float mechanism arranged to actuate the retarding mechanism, and a valve in the passage from the piston chamber to the low pressure

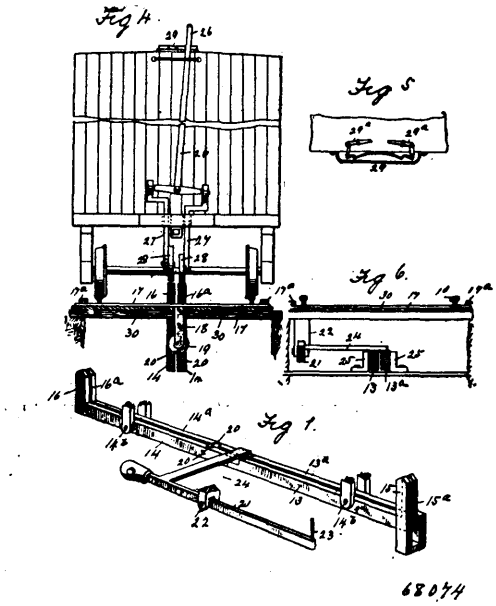


side of the piston, the stem of said valve being connected to the retarding mechanism, and the valve and the retarding mechanism being regulated to limit the pressure of the water passing the retarding mechanism, substantially as described. 2nd. In a supply valve operating to regulate the flow of water into a tank by a valve attached to a piston, the combination of a cylinder, and a piston arranged to be reciprocated therein by differential pressure, a valve upon said piston, passages of differential area leading from the high pressure side into the piston chamber, and from the piston chamber to the low pressure side, and means actuated by a float and by the passage of the water to regulate the relative area of said passages, substantially as described. 3rd. In a supply valve, in combination with a casing inclosing a high pressure chamber, a low pressure chamber, and an intermediate chamber, and provided with a passage between the high pressure chamber, and the low pressure chamber, a passage between the high pressure chamber and the intermediate chamber, and a passage between the intermediate chamber and the low pressure chamber, a piston valve arranged to be actuated by differential pressure and control the main passage, a disc partially closing the outlet from the low pressure chamber, a valve arranged to be actuated simultaneously with said disc and arranged to control the passagway leading from the intermediate chamber to the low pressure chamber, substantially as described. 4th. In a supply valve for water tanks, in combination with a casing, a piston and a piston chamber adapted to be actuated by differential pressure therein, a valve upon said piston, passage of variable relative area leading from the high pressure side into said piston chamber, and from said piston chamber to the low pressure side of the piston, a retarding mechanism in the outlet passage, a float mechanism arranged to actuate the retarding mechanism, and a valve in the passage from the piston chamber to the low pressure side of the piston, the stem of said valve being connected to the retarding mechanism, and the valve and the retarding mechanism being regulated to limit the pressure of the water passing the retarding mechanism, substantially as described. 5th. In a supply valve, in combination with a casing inclosing a high pressure chamber, an intermediate chamber and a low pressure chamber, and provided with a passage between the high pressure chamber and the low pressure chamber, and with a passage between the intermediate chamber and the low pressure chamber, a piston valve arranged to be actuated by differential pressure, and to control the main passage, a disc partially closing the outlet from the low pressure chamber, a valve arranged to be actuated simultaneously with said-disc, and arranged to control the passageway leading from the intermediate chamber to the low pressure chamber, and a float adapted to actuate said disc, substantially as described. 6th. In a supply valve for water tanks, in combination with a casing provided with an inlet orifice, and a high pressure chamber at the inlet orifice, an outlet orifice, and a low pressure chamber at the outlet orifice, a retarding

mechanism in the outlet orifice an intermediate chamber of variable capacity formed by a piston chamber and a piston arranged to be reciprocated therein by differential pressure, a valve connected with said piston arranged to open and close the direct passage between the high pressure chamber and the low pressure chamber, a passage from the high pressure chamber into the intermediate chamber, and a valve closed passage from the intermediate chamber into the low pressure chamber, a valve closing said passage adapted to be operated by said retarding mechanism, and a float arranged to actuate the valve in the passage leading from the intermediate chamber to the low pressure chamber, substantially as described.

No. 68,074. Railway Switch.

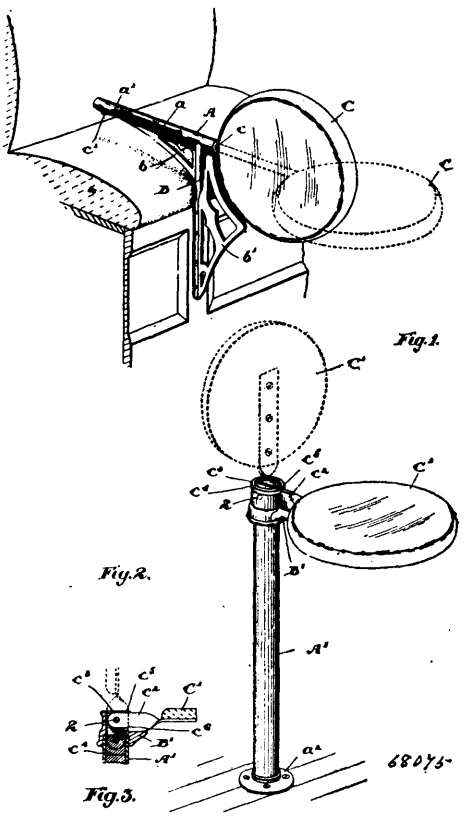
(Aiguille de chemin de fer.)



Paul O. E. Boudreaux, Florence F. Theriot and Anastasie Watkins, all of Theriot, Louisiana, U.S.A., 10th July, 1900; 6 years. (Filed 20th June, 1900.)

Claim.—1st. In a railway switch, the combination with the latterally movable switch rails, of two sets of parallel rocking levers connected with said switch rails to move the same, the said levers having their meeting ends lapping and having upright posts at their opposite ends, the post of one of said levers extending up along the opposite side of the adjacent post, as and for the purpose set forth. 2nd. In a railway switch, the combination with the laterally movable switch rails, of the levers mounted to rock in a vertical plane and arranged to throw the switch rails when rocked and a tilting lever pivoted alongside a switch rail and having a finger arranged to rest on one end of said levers and a locking pin adjacent the end of such switch rail, whereby the said rail will lie first one on side and then on the other of said pin as the switch is thrown by said rocking levers, as set forth. 3rd. In a railway switch, the combination with the main track section, the siding and the movable switch rails connected at one end to said main track section, of the two sets of parallel levers mounted to rock between the rails and having their meeting ends lapping and their outer ends extending beyond the switch rails, means whereby to move said rails when the levers are rocked, posts secured to the outer ends of the levers and arranged to be depressed by a car or the like, the post of one lever adjacent the siding extending up along the opposite side of the adjacent post, whereby when depressed it will rock the diagonally opposite lever, as and for the purpose set forth. 4th. In a railway switch the combination with the movable switch rails, of the parallel levers mounted to rock between said rails and having their adjacent edges bevelled, an arm depending between and carried by the said switch rails, the said arm having a wheel mounted thereon and adapted to ride on said bevelled edges whereby to throw the switch means for rocking said levers from a car or the like, and a tilting counterweighted lever pivoted alongside a switch rail and having a locking pin at one end and a lateral finger at the other, the latter normally resting upon the ends of the switch levers, as set forth. 5th. In a railway switch, the combination with the switch rails and the rocking levers connected with said rails to throw the same, of a rocking lever mounted to tilt in a vertical plane and having a connection with the rocking levers whereby it will be tilted when any one of the said levers is rocked, and a locking pin carried by said lever and normally extending up alongside a switch rail, whereby the said rail will lie first on one side and then on the other as the switch is thrown, as set forth.

No. 68,075. Adjustable Seat. *(Siège.)*



Edward Thomas Adams and Nathanial A. Pratt, both of Toronto, assignees of Addison Norman, Davisville, all in Ontario, Canada, 12th July, 1900; 6 years. (Filed 23rd June, 1900.)

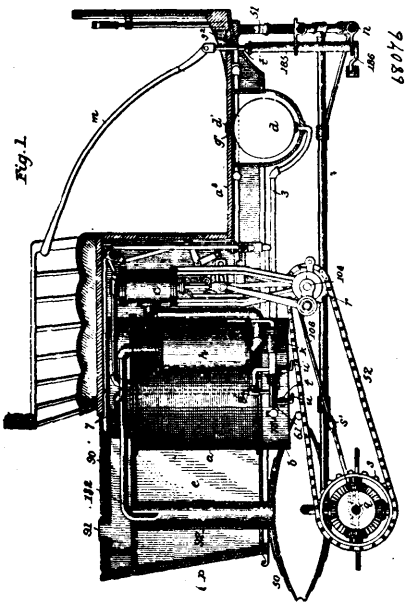
Claim.—1st. An adjustable seat, comprising the seat, the stem attached to or forming part of the same and the socket adapted to receive the stem and means for permitting the stem being swung in whole or in part to throw the seat to the horizontal position, as and for the purpose specified. 2nd. An adjustable seat, comprising the seat, the stem attached to or forming part of the same, and the socket adapted to receive the stem, means for permitting the stem being swung in whole or in part to throw the seat to the horizontal position and a suitable standard for supporting the socket and brace connected to the standard or socket to rigidly support the same, as and for the purpose specified. 3rd. An adjustable seat, comprising the seat, the stem attached to or forming part of the same and the socket adapted to receive the stem, a longitudinal slot in the socket provided with a curved end and a pin extending through such slot into the stem, as and for the purpose specified. 4th. An adjustable seat, comprising the seat, the stem attached to or forming part of the same and the socket adapted to receive the stem, means for permitting the stem being swung in whole or in part to throw the seat to the horizontal position, a bracket secured to the side of the seat having a brace extending rearwardly for strengthening the socket and a brace extending forwardly from the same and having the upper end following the contour of the seat when raised, as and for the purpose specified. 5th. An adjustable seat, comprising the seat, the stem attached to or forming part of the same and the socket adapted to receive the stem and provided with a slot and means for controlling the movement of the stem in relation to the slot, as and for the purpose specified.

No. 68,076. Motor Vehicle. *(Véhicle moteur.)*

Francis Edgar Stanley and Freelam Oscar Stanley, both of Newton, Massachusetts, U.S.A., 12th July, 1900; 6 years. (Filed 5th February, 1900.)

Claim.—1st. The combination with the body of a self propelling vehicle, of a boiler, burner, an oil tank, an air tank communicating with the oil tank, means for storing the air tank with air under pressure, and means for regulating and cutting off the flow of air from the air tank to the oil tank, substantially as set forth. 2nd. The combination with the body of a vehicle, of an engine, boiler, burner below the boiler, and hood above the boiler, discharge flues arranged at the rear of the seat to discharge gases upward and downward from the hood, and means for discharging the exhaust from the engine through the downward flue toward the road bed and create a down draft through the upper flue, substantially as set forth. 3rd

The combination with the body of a vehicle, of a boiler, engine, burner, and water tank having a flue extending downwardly through



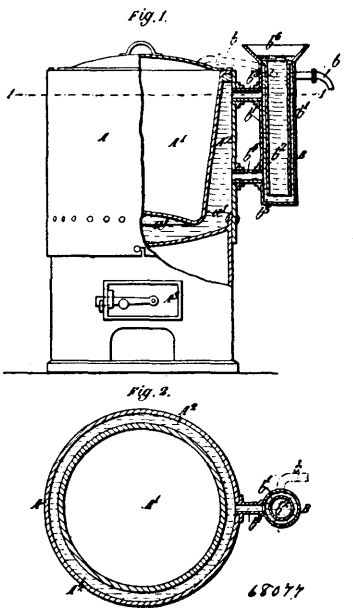
it to receive the gases passing from the boiler, substantially as set forth. 4th. The combination with the body of a vehicle, of a boiler, engine, burner, a water tank having a flue extending downwardly through it to receive the gases passing from the boiler, and an exhaust pipe arranged to direct the exhaust steam into said downwardly extending flue, substantially as set forth. 5th. The combination with body, burner and boiler of a motor vehicle, of a hood extended beyond the seat to the rear of the body, and discharge flues opening upward and downward from said hood at the rear of the seat, substantially as set forth. 6th. The combination of the body of a vehicle, boiler and burner and oil tank arranged below the platform, and provided with a filling opening and a plug, and an opening in the platform for receiving said plug, substantially as set forth. 7th. The combination with the body of a vehicle, of the boiler, burner, and oil tank and independent air tank communicating with the oil tank, and a nipple 16 communicating with the air tank for connection with an air pump, substantially as set forth. 8th. The combination with a boiler and burner of a continuous oil supply pipe leading to the burner and a heater for the pipe, independent of the burner consisting of a substance that will absorb and retain the heat and adapted to maintain the fluid in a vaporized condition in the oil pipe after the cooling of the steam and the parts of the apparatus other than said heater, and a valve in said pipe between the heater and the burner, substantially as described. 9th. The combination with a steam generator, of a burner for heating the same having a chamber to receive a mixture of vapour and air, a continuous oil supply pipe leading to the burner and passing through the water space of the generator, and a valve in said pipe between the generator and burner, substantially as described. 10th. The combination with a steam generator and with a burner for heating the same having a chamber to receive a mixture of air and vapour, and with a nozzle for supplying vapour to the chamber, of a continuous oil supply pipe communicating with said nozzle and extending through the water space of the boiler, and a valve in said pipe between the generator and burner, substantially as described. 11th. The combination with a steam generator and with a burner for burning a mixture of air and vapour having a chamber to receive said mixture, of a nozzle arranged to inject the vapour into an air pipe leading to the burner, and an oil supply pipe communicating with the nozzle and extending through the water space of the generator in direct contact with the water thereof, substantially as described.

No. 68,077. Steam apparatus for Cooking, Heating, etc.

(Appariel à vapeur pour cuire, chauffer, etc.)

Edward William Parish, South Knighton Leicester, England, 12th July, 1900; 6 years. (Filed 28th June, 1900.)

Claim.—1st. In apparatus for cooking, heating and similar purposes and for simultaneously supplying hot liquid, the combination with the portion of the apparatus for effecting the cooking, heating and similar purpose, of a liquid feed chamber comprising two concentrically disposed compartments, the outer one closed at its upper end and the inner one open at its upper end and both communicating at their lower ends, of lateral conduits communicating with the upper and lower parts of said outer concentric compartment and with the upper and lower parts of the liquid space of the cooker, heater or the like and of an outlet pipe leading from the upper part of the said outer concentric compartment, substantially as and for the purpose described. 2nd. In apparatus for cooking, heating and



similar purposes and for simultaneously supplying hot liquid, the combination with the portion of the apparatus for effecting the cooking or similar purpose, of a liquid feed chamber comprising a U-shaped vessel, one limb being of larger capacity than the other and open at its upper end. of a closed upper end to the smaller limb, of a lateral conduit communicating with the upper and lower parts of said smaller limb and with the upper and lower parts of the liquid space of the cooker, heater or the like, and of an outlet pipe leading from the upper part of the smaller limb, substantially as and for the purpose described. 3rd. In apparatus for cooking, heating and similar purposes for simultaneously supplying hot liquid, the combination with the portion of the apparatus for effecting the cooking heating or similar purpose, of a liquid feed chamber comprising an annular chamber surrounding the liquid space of the cooker, heater or the like and communicating therewith, of lateral conduits connecting the said annular chamber and the said intermediate chamber near their lower ends, and of an external compartment which is open at the top and communicates with the said annular chamber through an opening near the bottom thereof, substantially as and for the purpose described.

No. 68,078. Shoe Sole Vulcanizing and Applying Apparatus. *(Appareil pour vulcaniser les semelles de chaussure.)*

George Franklin Butterfield, Framingham, Massachusettes, U.S.A., 12th July, 1900; 6 years. (Filed 27th June, 1900.)

Claim.—1st. In a shoe sole vulcanizing and applying apparatus, the closed steam chamber G and the independent mould plate H *h* adjustable and adapted to be secured thereon, in combination with a suitable frame and means for pressing the leather shoe upon the rubber contained in the mould formed in said mould plate, substantially set forth. 2nd. In a shoe sole vulcanizing and applying apparatus, the steam chamber, the adjustable, independent mould plate thereon and suitable means applied within the shoe for pressing and firmly holding the shoe upon the rubber contained in the mold during vulcanization, in combination with swinging, marginal clamps adapted to apply downward pressure upon the upper surface of the sole edge and welt to resist the escape of rubber from the mould along such edge, substantially set forth. 3rd. In a shoe sole vulcanizing and applying apparatus, the steam chamber, the mould plate thereon, and means applied within the shoe for pressing it upon the rubber contained in the mould during vulcanization, in combination with swinging, lateral clamps fitting marginally along the inseam of the shoe and bearing downwardly upon the sole edge and welt and with suitable pressure devices, substantially set forth. 4th. In a shoe sole vulcanizing and applying apparatus, the steam chamber, the mould plate thereon and suitable shoe holding devices, in combination with swinging marginal clamps pivoted and actuated at a point below the steam chamber and with lateral adjusting devices, substantially set forth. 5th. In a shoe sole vulcanizing and applying apparatus, the frame having a chambered head, a piston therein with protruding piston rod, and pipes for conveying the elastic fluid to and from said chamber, in combination with the steam chamber and mould plate thereon, and with shoe holding devices connected to the piston rod adapted to present the shoe over and upon the rubber contained in the mould, and

thereby to firmly affix the rubber sole to the leather shoe bottom, substantially set forth. 6th. In a shoe sole vulcanizing and applying apparatus, the frame having a recessed head, an adjustable chamber in said head and a piston in said chamber with downwardly protruding piston rod, in combination with the steam chamber and mould plate thereon, located beneath said piston, a shoe holding device connected to the piston rod and an adjustable stop limiting the downward movement of the piston, substantially as set forth. 7th. In a shoe sole vulcanizing and applying apparatus, the shoe holder J, connected to the foot of the plunger by a transverse pivot K and provided with adjusting screws adapted to elevate or depress the toe portion of the shoe upon said pivot, as required, substantially set forth. 8th. In a shoe sole vulcanizing and applying apparatus, a shoe holder connected to the shaft of the pressure device and consisting of a rigid body having a sole shaped bottom serving to press the shoe sole upon the rubber in the mould, in combination with an inflatable, upwardly, tapering annular bag surrounding said body, between it and the upper leather of the shoe, and adapted to hold such upper leather distended, cooled and free from contact with the mould and with said body, substantially set forth. 9th. In a shoe sole vulcanizing and applying apparatus, the steam chamber and mould plate and means for pressing the leather shoe bottom upon the rubber in the mould, in combination with marginal plates held firmly down upon the sole edge and welt and formed with an air passage and with perforations for air jets therefrom against the leather along the bearing edges of said plates, such passages being supplied with air under pressure, substantially set forth.

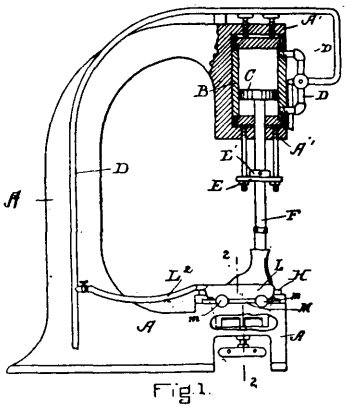


Fig. 1.

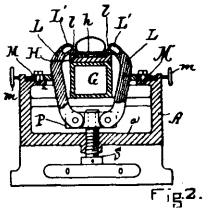


Fig. 2.

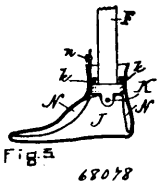


Fig. 3.

68078

No. 68,079. Apparatus for Cultivating Land.
(*Cultivateur.*)

Thomas Churchman Darby, Thomas Albert Darby and Sidney Charles Darby, all of Pleshey, near Chelmsford, in the County of Essex, England, 12th July, 1900; 6 years. (Filed 27th June, 1900.)

Claim.—1st. An implement for digging or cultivating land, having a carrying wheel capable of rocking and of thus assuming either vertical or inclined positions, thereby enabling the machine to steer automatically. 2nd. An implement for digging or cultivating land having discs whose shanks are mounted loosely in sockets on the rotating digging forks or driven by means of toothed wheels. 3rd. An implement for digging or cultivating land having discs whose shanks are mounted in fork sockets which are of oval shape at top and bottom and circular in the middle to enable the disc shanks to assume such positions as to work equally well whichever way the machine may be running. 4th. In an implement for digging or cultivating land, the method of carrying the forward part of the digging apparatus by means of chains passing from the centre of the main wheels of the engine around guide pulleys to a spring pulley, the method of carrying the rear part of the digger by means of chains passing over pulleys on a cross bar resting on the frame of the carrying wheel, and the method of adjusting the depth of digging or raising the digging tools clear of the ground by winding said chains around a spring pulley. 5th. In an implement for digging or cultivating land, the method of driving the digging tools by means of the cross shaft, bevel wheels, and inclined shaft, enabling the digging apparatus to be readily detached from the engine, substantially as herein shown and described. 6th. An implement for digging or cultivating land, having a hinge formed in each of the shafts running parallel to the V frame, thus enabling it to be made narrower for passing through gates, substantially as herein shown and described.

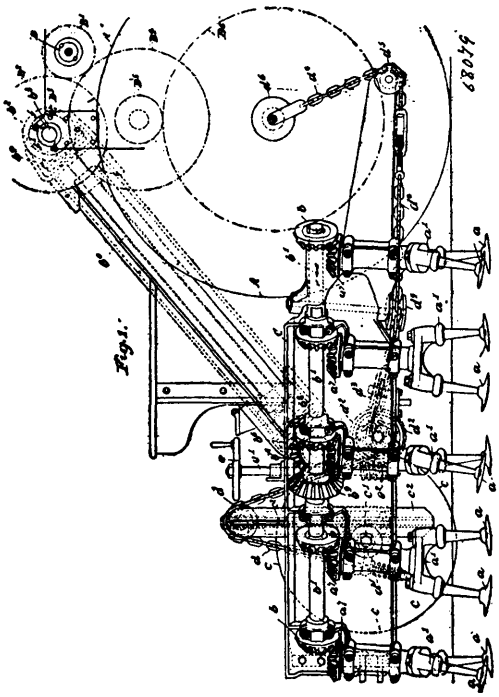


Fig. 1.

68079

No. 68,080. Automatic Exhaust Drain Cocks for Steam Engines. (*Robinet de décharge pour machine à vapeur.*)

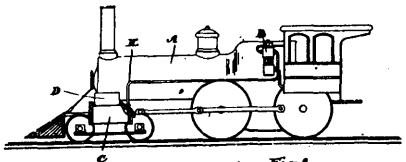


Fig. 1.

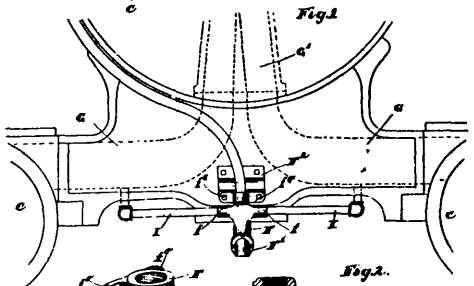


Fig. 2.

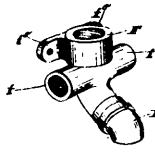


Fig. 3.

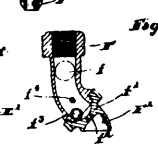


Fig. 4.

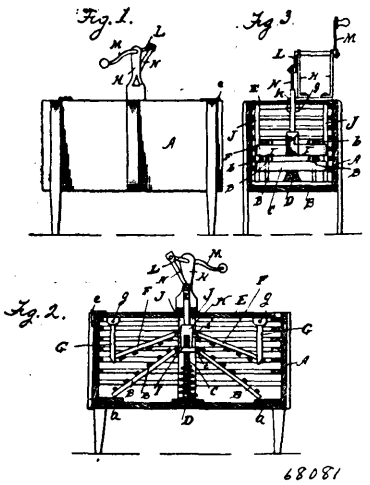
68080

John McGrath, Stratford, Ontario, Canada, 12th July, 1900; 6 years. (Filed 26th June, 1900.)

Claim.—1st. The combination with the air brake pump and the exhaust pipe leading therefrom and downwardly underneath the body of the engine at the front end thereof, of a drain cock suitably connected to the bottom end of the pipe and a suitable valve in the cock arranged as shown and for the purpose specified. 2nd. The combination with the air brake pump and the exhaust pipe leading therefrom and downwardly underneath the body of the engine at the front end thereof, of a drain cock suitably connected to the bottom end of the pipe and having the lower end curved, a cross partition having a central hole and a concaved upper side and a ball designed to lie at the lower portion of the concave, as and for the

purpose specified. 3rd. The combination with the air brake pump and the exhaust pipe leading therefrom and downwardly underneath the body of the engine at the front end thereof, of a drain cock suitably connected to the bottom end of tne pipe and having the lower end curved, a cross partition having a central hole and a concaved upper side and a ball designed to lie at the lower portion of the concave, and a bar extending across the drain cock above the ball, as and for the purpose specified. 4th. The combination with the pump and exhaust pipe extending down underneath the bottom of the engine, of the drain cock suitably constructed internally and provided with laterally extending lugs and the bracket for supporting it on the frame of the engine, as and for the purpose specified. 5th. The combination with the pump and the exhaust pipe and the cylinder and exhaust passageways, of the train cock casing provided with a suitable internal valve and connected to the bottom of the exhaust pipe of the pump, and provided with laterally extending branches and the branch pipes leading from such branches to the bottom of the exhaust passageways of the cylinders, as and for the purpose specified.

No. 68,081. Washing Machine. (*Machine à laver.*)

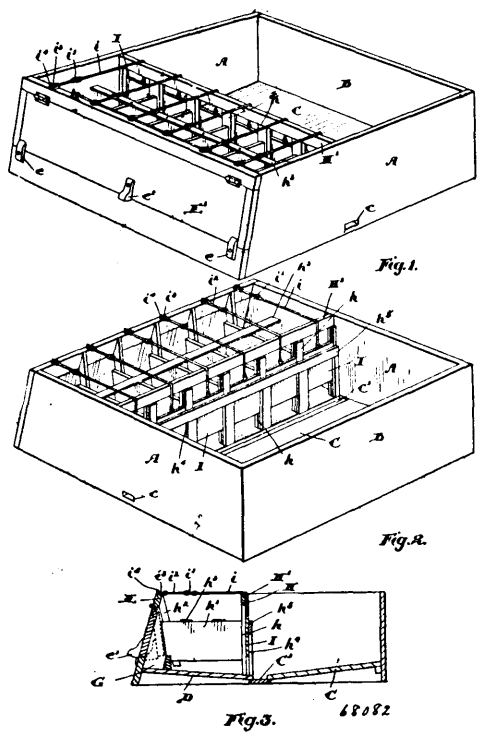


Jacob Kissel, Sioux Falls, South Dakota, U.S.A., 12th July, 1900; 6 years. (Filed 26th June, 1900.)

Claim.—1st. In a washing machine, the combination with a body having fixed slides at the ends of its bottom, and a flexible bottom consisting of two members whose inner ends are yieldingly supported so as to permit of vertical movement and whose outer ends rest upon said slides, of a beater above said flexible bottom and also in two members, links supporting their outer ends so as to permit them to swing in a substantially horizontal plane, and means for moving their inner ends vertically, as and for the purpose set forth. 2nd. In a washing machine, the combination with an interiorly slatted body having upright pairs of guides at the centres of its sides and a yieldingly supported flexible bottom in two members whose inner ends are connected with a cross head having its extremities standing between said guides of a cover having an opening, a rod moving therethrough, mechanism for reciprocating the rod, a flexible heater in two members whose inner ends are pivotally connected to a cross head whose extremities stand between the guides when the cover is closed, connections between the cross head and rod, and means for supporting the outer ends of the members, all as and for the purpose set forth. 3rd. In a washing machine, the combination with the body having fixed slides at the ends of its bottom and guides at the centres of its sides, a spring rising from the centre of its bottom and a flexible bottom consisting of a cross head resting on the spring with its ends moving in said guides, straps fixed to the cross head, bars pivoted at their inner ends to the straps and resting at their outer ends upon said slides, and slats secured across the bars in pairs, of a beater supported by the cover and consisting of two members and an inner interpoted cross head whose extremities stand between the guides, means for supporting the outer ends of the members and means for reciprocating said cross head vertically, as and for the purpose set forth. 4th. In a washing machine, the combination with the body having upright pairs of guides at the centres of its sides, and a yieldingly supported flexible bottom within said body, of a cover hinged to the body, links pivoted beneath the cover, a beater consisting of a cross head whose extremities are adapted to enter between the guides when the cover is lowered, bars pivotally connecting said cross heads and links and constituting members of the beater, and slats connecting the bars in pairs, and means for reciprocating the crosshead vertically, as and for the purpose set forth.

No. 68,082. Pens for Feeding Swine.

(*Parc pour soigner les porcs.*)



James Hinks, Township of Elma, Ontario, Canada, 12th July, 1900; 6 years. (Filed 24th February, 1900.)

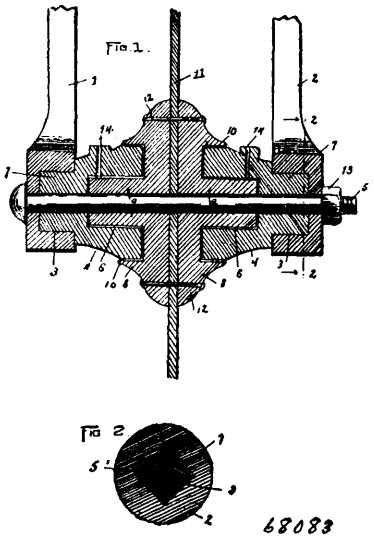
Claim.—1st. In a a pen for feeding swine, the combination with the front flap and trough located behind the same, of a plurality of stalls extending forwardly to the front flap and a door for each stall and means for holding the same in any desired position, as and for the purpose specified. 2nd. In a pen for feeding swine, the combination with the front flap and trough located behind the same, of a plurality of stalls extending forwardly to the front flap and a door for each stall, means for holding the same in any desired position and the longitudinal bars extending over the top of each stall, as and for the purpose specified. 3rd. In a pen for feeding swine, the combination with the front flap and trough located behind the same, of a plurality of stalls extending forwardly to the front flap, and a door for each stall, suitable guideways for the same in order to permit of the vertical movement of the door and means for supporting the door in a partially opened position while yet permitting of a limited movement, as and for the purpose specified. 4th. In a pen for feeding swine, the combination with the front flap and trough located behind the same, of a plurality of stalls extending forwardly to the front flap and a door for each stall, suitable guide ways for the same in order to permit of the vertical movement ot the door, a cord connected at one end to each door and passing forwardly to the front of the pen and means for holding the doors in two positions, as and for the purpose specified. 5th. The combination with the sides, back and front and the inclined bottom C and D, and central trough, of the front trough and flap, the cross partitions H, the guideways in the same, the separating boards h^1, and suitable doors having free vertical movement in the guideways, as and for the purpose specified.

No. 68,083. Plough Colter. (*Coutre de charrue.*)

Will S. Metcalf, Flandreau, South Dakota, U.S.A., 12th July, 1900; 6 years. (Filed 26th June, 1900.)

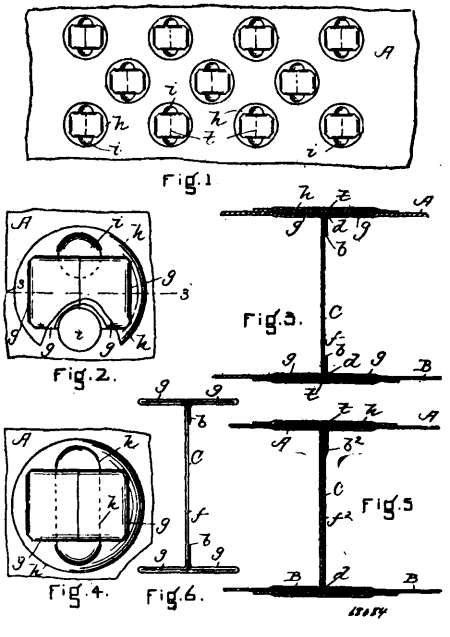
Claim.—1st. The combination with colter arms formed with recesses on their inner sides, of non-revoluble bearings secured to said arms, a colter, a hub comprising oppositely disposed sections formed with sleeve journals, and annular flanges overlapping said bearings, and a securing bolt. 2nd. The combination with colter arms formed on their inner sides with recesses, of bearings formed with projections fitting said recesses and secured therein to prevent rotation of the bearings, a colter, hub sections each provided with a sleeve journal, and an annular flange, and a bolt, extending through the arms, bearings, hub sections, and colter. 3rd. The combination

with colter arms having square recesses on their inner surfaces, of bearings having cylindrical seats and squared outer ends, and formed



with oil holes, a colter, hub sections each provided with a sleeve journal fitting the bearings, and an annular horizontal flange overlapping the bearings, and a securing bolt.

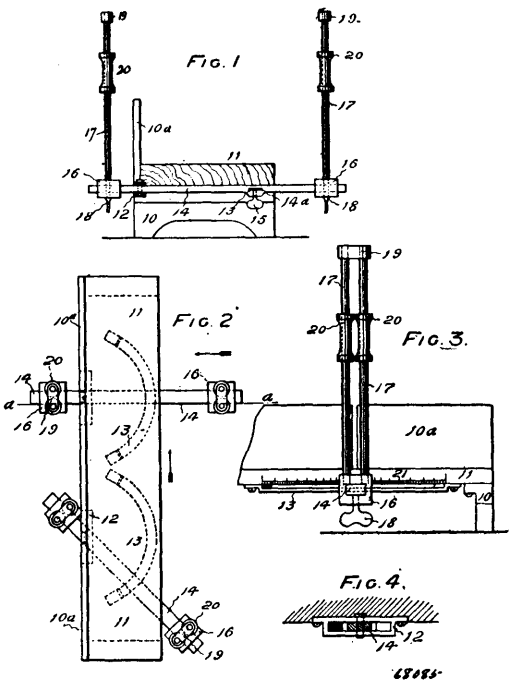
No. 68,084. Air Cushion, Mattress, etc.
(*Coussin, matelas pneumatique, etc.*)



Albert A. Young, Wakefield, Massachusets, U.S.A., 12th July, 1900; 6 years. (Filed 22nd December, 1899.)

Claim.—1st. A stay for connecting the walls of a mattress or similar air goods, comprising a flexible tape folded and secured into an approximate I-shape, substantially as described. 2nd. As a new article of manufacture the flexible stay C, for connecting the walls of air goods, and comprising the tape *f*, having its ends looped to form lateral wings *g*, the walls thus formed being treated and vulcanized together. 3rd. In an air mattress or similar article, the walls A, B, slotted at *d*, in combination with the stay C, having the integral wings *g*, overlapping the outer face of the slot walls, and the friction cap *h*, all being secured together by vulcanizing, substantially as described 4th. In an air mattress or similar article, the walls A, B, slotted at *d*, in combination with the stay C, having the integral wings *g*, overlapping the outer face of the slotted walls, and laterally projecting reinforcements *k*, secured in said wings.

No. 68,085. Mitre Box. (*Boîte à onglet.*)



James Mavis, Langley, British Columbia, Canada, 12th July, 1900; 6 years. (Filed 22nd May, 1899.)

Claim.—In a mitre box, the combination with a longitudinal support, having horizontal and vertical portions to hold the material while being cut, bars 14 pivoted at a suitable distance apart beneath the rear side of the said support having saw guides adjustably fixed to the opposite ends of the same with anti-friction rollers thereon to engage the opposite sides of a saw, slots near the forward ends of the bars 14 and segments 13 passing therethrough, the opposite ends of which are fixed to the under forward part of the support, and thumb screws 15 threaded through thickened portions of the bars 14, beneath the slots therein, designed to engage the bars at any angles, to cut a right hand bevel in one saw guide, and to cut a left hand bevel with the other guide, or cut any desired disimilar bevels without moving the bars 14.

No. 68,086. Manufacture of Laundry Starch.
(*Fabrication d'empois.*)

Maria Dorothea Peterson, Oberjersdal, North Schleswig, Prussia, Germany, 12th July, 1900; 6 years. (Filed 7th July, 1899.)

Claim.—1st. The process for the manufacture of a laundry starch, which consists in mixing together in about the proportions specified sage flour, common salt and dextrin in the dry state, then first stirring the mixture with cold water, and then with boiling water, substantially as hereinbefore described. 2nd. The improved laundry starch composed of sago flour, common salt and dextrin, substantially as hereinbefore described.

No. 68,087. Straight Edge or Ruler. (*Réglet et règle.*)

Vincent Davis Tilley, Cornwall, Ontario, Canada, 13th July, 1900; 6 years. (Filled 14th July, 1899.)

Claim.—A ruler comprising a wooden body portion provided in each edge thereof with a longitudinal groove of dovetailed cross-sectional form, a metallic ruling edge having a dovetailed tenon adapted to one grooved edge of the body portion a metallic cutting edge also having a tenon adapted to the other grooved edge of the body portion, said ruling edge and the cutting edge being secured independently to opposite edges of the body portion and also lying flushing with the body portion in transverse alignment therewith,

and the transverse dowels passing through the interlocking portions of the body and the two metallic edges and serving to hold the said

Fig. 1.

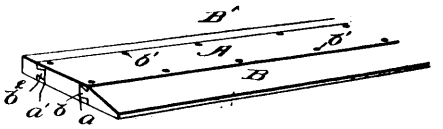
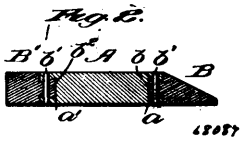


Fig. 2.



metallic edges in fixed or immovable relation to the wooden body portion, substantially as described.

No. 68,088. Inking Pad. (*Coussinet à encre.*)

Fig. 1.

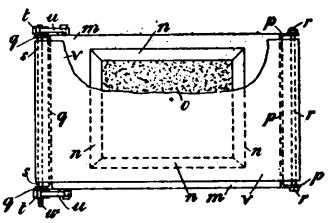
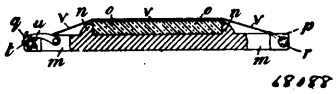


Fig. 2.



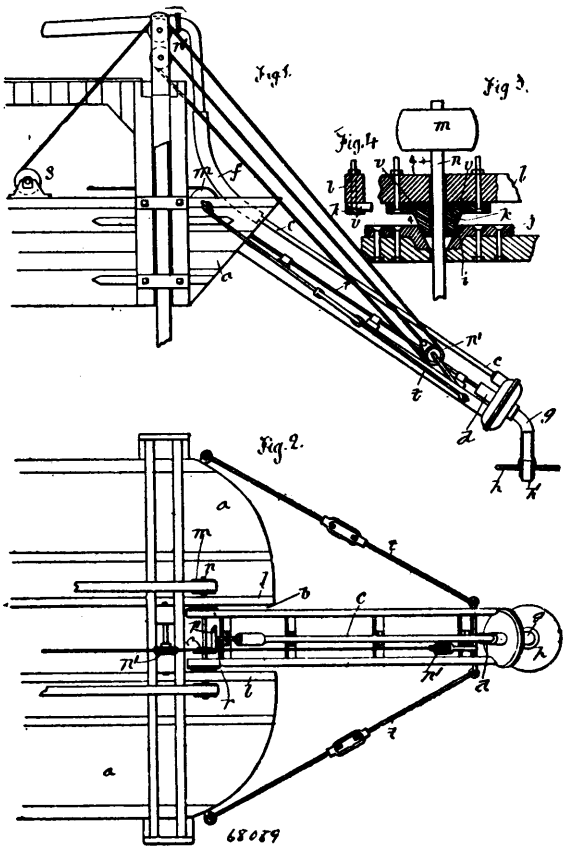
Augustus Christian Kley, Liverpool, County of Lancaster, England, 13th July, 1900; 6 years. (Filed 8th September, 1899.)

Claim.—1st. In combination, the frame or base having a raised lip, a pad held thereby, brackets *p*, *q* secured to the end edges of the frame, a pin held in one bracket, a roller held in the other bracket, a band on the pin, and a pawl and ratchet for applying a tension to the band, substantially as described. 2nd. The inking pad apparatus consisting of the carrier base *m*, frame *n*, pad *o*, pin *r*, and roller *s*, with locking ratchet wheels *t*, and pawls *u*, and textile sheet *v*, stretched between the pin *r* and roller *s*, particularly as shown and set forth.

No. 68,089. Dredging Machine. (*Drège.*)

James Hunter Logan, assignee of Herbert Kossuth Lee, both of Montreal, Quebec, Canada, 13th July, 1900; 6 years. (Filed 2nd March, 1899.)

Claim.—1st. A centrifugal dredge comprising a carrier frame pivotally connected to the dredge, a centrifugal pump mounted upon the outer end of said carrier frame, a jointed discharge pipe leading from said pump to the body of the barge and means for raising and lowering the outer end of said carrier frame, substantially as described and for the purpose set forth. 2nd. In a centrifugal dredge substantially as described, means for pivotally connecting the pump carrying frame to the barge, consisting of a pair



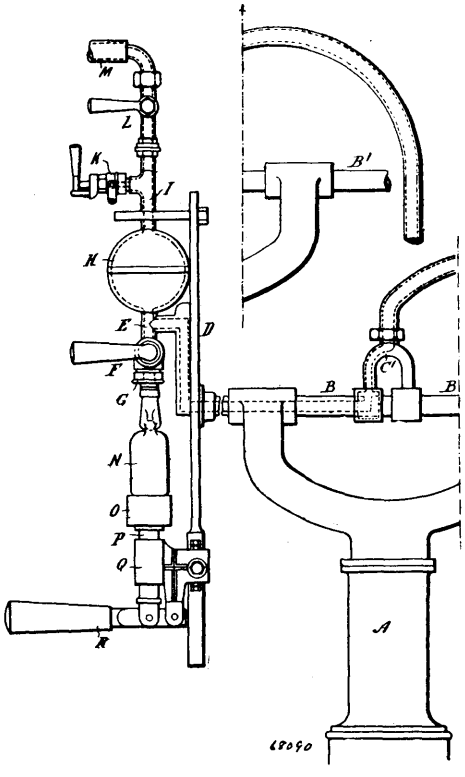
of hollow truncated conical trunnions bolted to the sides of the frame, a pair of hollow truncated conical bearings bolted to the barge and receiving said trunnions, and one or more wedges carried between the trunnions and the carrier frame and having their thickest ends projecting, all as described. 3rd. In combination with a float such as a barge, a ladder frame pivotally connected at one end to said float, a centrifugal pump carried upon the other end of said ladder frame, a pump actuating shaft extending from said pump longitudinally of the ladder frame to the inner end thereof, a mitre gear mounted rigidly upon the inner end of said shaft, a shaft mounted in the axis of said carrier frame, a mitre gear and a pulley mounted rigidly upon said last-mentioned shaft, the mitre gear intermeshing with said first-mentioned mitre gear, and windlass and block and tackle gear for raising and lowering the outer end of said carrier frame, and a pair of stays for steadying said outer end, all substantially as described and for the purpose set forth.

No. 68,090. Method and Process of Preserving Milk and Other Liquids. (*Méthode et procédé pour préserver le lait, etc.*)

Thomas Kyffin Freeman, of 200 Phœnix Street, in the County of London, assignee of Thomas Eves, of Ongar, in the County of Essex, both in England, 13th July, 1900; 6 years. (Filed 5th April, 1899.)

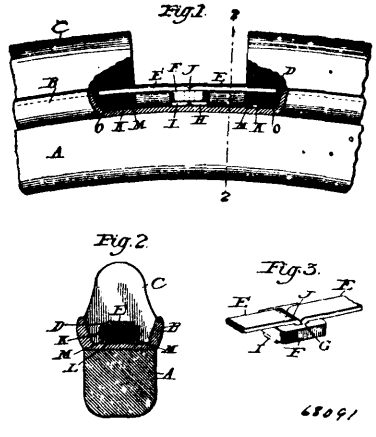
Claim.—1st. The improved process for the preservation of milk and other liquids, without the aid of antiseptics or boiling, consisting essentially in subjecting the cold or cooled liquid to agitation, in order to release the dissolved air therefrom, and then charging the same with carbonic acid gas mixed with oxygen gas, preferably in equal proportions at a pressure of at least thirty pounds per square inch, and hermetically sealing the vessel containing the said liquid under such pressure. 2nd. In the process set forth, causing the carbonic acid gas to re-act first upon the aerobic germs or organisms and then adding the oxygen gas to complete the sterilization in respect to the anaerobic germs or organisms, substantially as described. 3rd. In combination with an apparatus for preserving liquids by gases under pressure, the valve K, for releasing the air from above the liquid, substantially as hereinbefore described and shown. 4th. The improved apparatus for preserving liquids in bulk, consisting essentially of a deep, preferably cylindrical vessel, having

a tube passing nearly to the bottom through which the gases under pressure are passed for the purpose of removing air from the liquid



and from above the same, and saturing the liquid with carbonic acid and oxygen under pressure, an outlet for the expelled air, and a hermetically closed cover, substantially as and for the purpose described.

No. 68,091. Means for Securing Rubber Carriage Tires to Wheels. (*Moyen d'assujetir les bandages de caoutchouc aux roues de voiture.*)



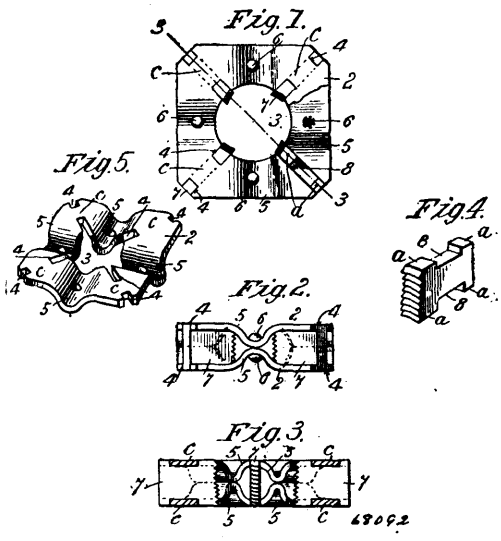
Richard A. Brine, of Revere, Massachusetts, U.S.A., 13th July, 1900; 6 years. (Filed 5th May, 1900.)

Claim.—The combination in a wheel, of a metallic channel, a a rubber tire, and a tape embedded in the tire, the ends of the said tape being passed through a hole G, in a ring F, and the extreme ends, H and I turned towards the left and right so as to occupy positions between the ring and the metallic channel, and the ends of the said rubber tire being provided with recesses to receive the ring and the ends of the tape.

No. 68,092. Die for Cutting Screw Threads.
(*Filière pour vis.*)

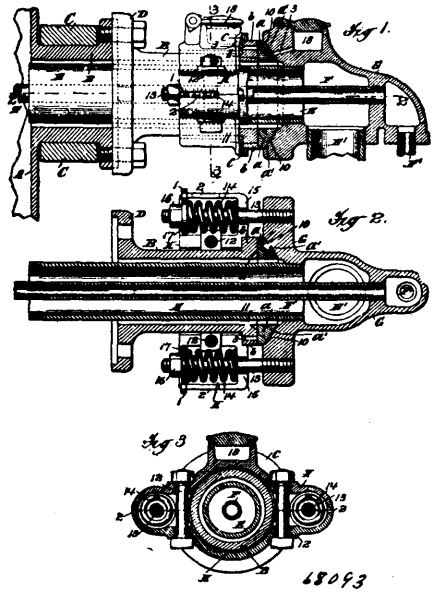
Frederic Elisha Wells, of Greenfield, Massachusetts, U.S.A., 13th July, 1900; 6 years. (Filed 25th August, 1899.)

Claim.—1st. A die for cutting screw threads comprising parallel side plates rigidly secured together, central oppositely located openings through each of said plates, several thread cutting sections occupying positions radial to said openings and located between,



and interlocking with said plates and adapted to leave a passage between said plates and cutting sections, and connecting with said central openings, substantially as described. 2nd. A die for cutting screw threads, comprising side plates, central and oppositely located openings through each of said plates, several thread cutting sections occupying positions radial to said openings and located between, and interlocking therewith, said portions of said plates between said cutting sections being deflected toward each other, and means for rigidly securing said plates together, at said points of deflection, substantially as described. 3rd. A die for cutting screw threads, comprising side plates, each having a central opening therethrough, and several recesses therein in positions radial to the border of said opening, and several thread cutting sections, each having the recesses 8, and the projections a, for inter-engagement with said recesses, and with parts of said plates therebetween, and means for securing said plates together and aganist said sections, substantially as described.

No. 68,093. Pipe Joint for Hollow Revolving Journals. (*Joint de tuyau pour cousinets creux.*)

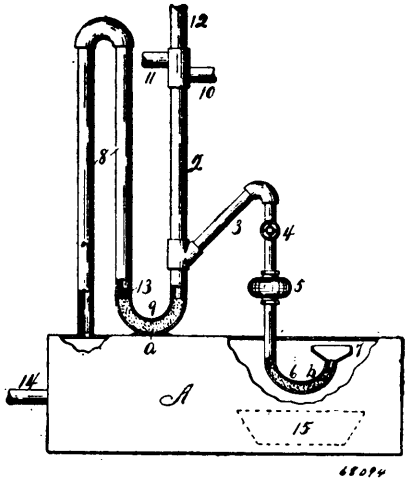


Thomas H. Savery, of Wilmington, Delaware, U.S.A., 13th July, 1900; 6 years. (Flled 24th October, 1899.)

Claim.—1st. The combination with a hollow revolving journal, of a stationary abutment, a loose annular valve between the journal or extension thereof and the abutment, and means for pressing the journal and abutment together under yielding pressure, substantially as described. 2nd. The combination with a hollow revolving jour-

nal, of a stationary abutment, a loose annular valve between the journal or extension thereof and the abutment, one or more springs for pressing the journal and abutment together, and means for adjusting the tension of said springs, substantially as described. 3rd. The combination with a hollow revolving journal, of a stationary abutment, a collar loose on said journal or extension thereof and arranged to press the journal toward the abutment, means for adjusting the collar toward the abutment, and a loose annular valve between the journal and abutment, substantially as described. 4th. The combination with a hollow revolving journal, of a stationary abutment, a collar loose on said journal or extension thereof and spring pressed toward the abutment, said collar being arranged to press the journal toward the abutment, and a loose annular valve between the journal and abutment, substantially as described. 5th. The combination with a hollow revolving journal, of a stationary abutment, a collar loose on said journal or extension thereof, springs pressing said collar toward the abutment, said collar being arranged to press the journal toward the abutment, means for adjusting the tension of the springs, and a loose annular valve between the journal and abutment, substantially as described. 6th. The combination with a hollow revolving journal, of a stationary abutment, and a collar loose on said journal or extension thereof and spring pressed toward the abutment and arranged to press the journal outward toward the abutment to form a steam or similar joint, substantially as described, 7th. The combination with a hollow revolving journal, of a stationary abutment, a collar loose on said journal or extension thereof, spring pressing said collar toward the abutment, said collar being arranged to press the journal outward toward the abutment to form a seam or similar joint, and means for adjusting the tension of the springs, substantially as described. 8th. The combination with a stationary pipe support, as G, of a hollow revolving journal, divided collar H loose on said journal or extension thereof, bearing shoulders *b c* on the journal and col ar, supporting rods 13 for the collar, and springs 14 on said rods pressing the collar toward the pipe support, substantially as described. 9th. The combination with a stationary support, as G, of a hollow revolving journal, divided collar H loose on said journal or extension thereof, bearing shoulders *b c* on the journal and collar, supporting rods 13 for the collar, springs 14 on said rods pressing the collar toward the pipe support, and means for adjusting the tension of the springs, substantially as described. 10th. The combination with a hollow revolving journal, of a stationary abutment, a loose annular valve between the journal or extension thereof and the abutment, one or more springs for pressing the journal outward toward the abutment and means for adjusting the tension of said springs and indicating the amount of tension, substantially as described. 11th. The combination with a hollow revolving journal, of a stationary abutment, a collar loose on said journal or extension thereof, springs pressing said collar toward the abutment, said collar being arranged to press the journal outward toward the abutment to form a steam or similar joint, and means for adjusting the tension and indicating the amount of tension, substantially as described. 12th. The combination with a stationary pipe support, as G, of a hollow revolving journal, divided collar H loose on said journal or extension thereof, bearing shoulders *b c* on the journal and collar, supporting rods 13 for the collar, springs 14 on said collar pressing the collar toward the pipe support, and means for adjusting the tension of the springs and indicating the amount of tension, substantially as described.

No. 68,094. Feed Water Regulator for Acetylene Gas Generators. (*Régulateur d'eau d'alimenta ion pour générateur à gaz acétylène.*)



68094

Ira Cameron Curtis, of Fulton, New York, U.S.A., 13th July, 1900; 6 years. (Filed 24th October, 1899.)

Claim.—1st. The combination with a generator, of a water column, a gas column connected thereto, and a seal in the connection between them upon which the water and gas exert opposing forces to shift said seal according to the direction of the dominating force. 2nd. The combination with a generator, of a water column, a gas column connected thereto, a seal in the connection between them, and an auxiliary protective seal between it and the gas whereby said double seal is shifted one way or the other, according to the direction of the superior force. 3rd. The combination with a generator, of a feed water pipe having a dish terminal, of a seal in said pipe adjacent to said terminal exposed to the force of the water to shift it into said terminal, and to that of the gas to force it out of it, according to whichever force is superior. 4th. The combination with a generator, of a feed water pipe enlarged at its terminal and at a point adjacent thereto, of a seal between said enlargements between the opposing forces of the water and the gas, and shiftable in one direction into the terminal to permit the passage of water, and in the opposite direction into the adjacent enlargement to permit the escape of surplus gas pressure according to whichever exerts the dominating force. 5th. The combination with a generator, of two pipes connected thereto and to each other, and a seal in the connection between said pipes and exposed to the opposing forces of the liquids in the respecting pipes, and moved in one direction or the other by and in the direction of the greater force, as and for the purposes set forth.

No. 68,095. Device for Holding Lawn Mower Cutter for Shapening. (*Appariel à tenir les lames de faucheuses en place pour être aiguisées.*)

Fig. 1.

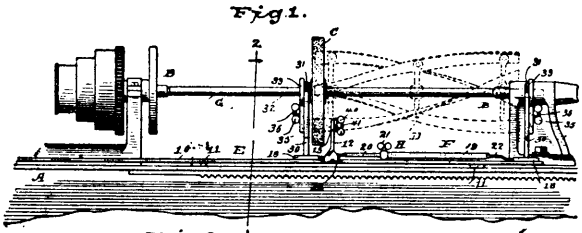


Fig. 2.

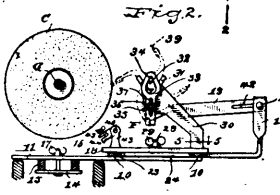
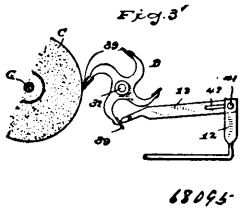


Fig. 3.

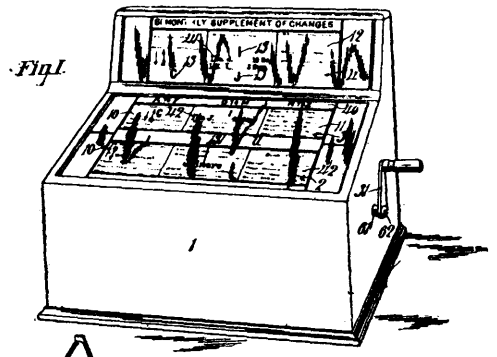


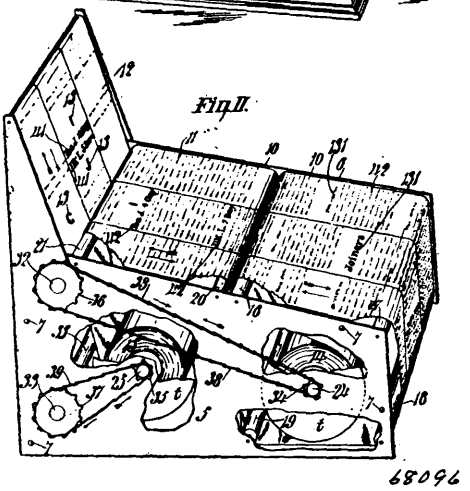
68095

Semuel E. Louden, Riverside, Connecticut, U.S.A., 13th July, 1900; 6 years. (Filed 29th November, 1899.)

Claim.—1st. A device of the character described comprising a frame, an adjustable guide 13 carried thereby and a sliding carriage F, said carriage consisting of laterally adjustable cross pieces and an adjustable tie bar between the cross pieces and each cross piece carrying an arm having means for retaining the shaft of a lawn mower revoluble cutter holder. 2nd. In a device of the character described the combination with a sliding carriage having arms provided with means for retaining the shaft of a lawn mower revoluble cutter holder, of a frame consisting of longitudinal strips 10 and cross pieces 11, said cross pieces carrying plates 14, and bolts and thumb nuts whereby the frame may be attached to the bed of a lathe and an adjustable cutter guide 13 carried by the frame. 3rd. The combination with a frame as E, of a carriage F adapted to slide thereon, said carriage comprising laterally adjustable cross pieces 18, and means for adjustably connecting said cross pieces and each cross piece carrying an arm adapted to retain the shaft of a lawn mower revoluble cutter holder. 4th. The combination with a frame consisting of longitudinal strips 10 and cross pieces 11, of a carriage consisting of laterally adjustable cross pieces 18 having slots 25 and 27, blocks 24 having lugs engaging slots 25, a bolt extending upward through slot 27 and a thumb nut 29 engaging said bolt, each of said cross pieces having an arm provided with means for holding the shaft of a lawn mower revoluble cutter holder. 5th. In a device of the character described the combination with a frame, of a carriage comprising laterally adjustable cross pieces 18 and an adjustable tie bar between said cross pieces, arms extending upward from said cross pieces and having rests to receive the shaft of a lawn mower revoluble cutter holder and vertically adjustable slides 33 having oval eyes through which said shaft may pass and be held in position in the rests. 6th. In a device of the character described the combination with a frame, of a longitudinally movable carriage, laterally adjustable cross pieces on said carriage and means for securing the straight, stationary cutter and the revoluble cutter holder of a lawn mower upon said cross pieces while being sharpened.

No. 68,096. Mechanical Directories and the Like.
(Directoire mécanique etc.)

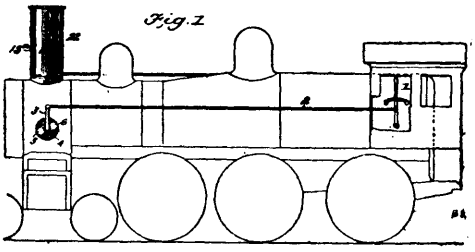


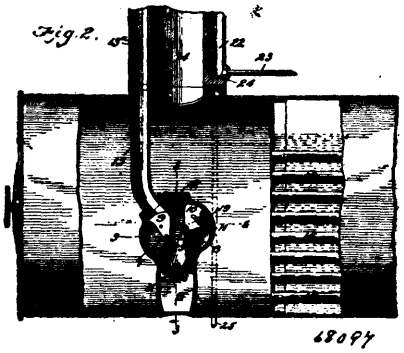


The National Mechanical Directory Company, assignee of George Washington Maxwell, both of Los Angeles, California, U.S.A., 13th July, 1900; 6 years. (Filed 2nd January, 1900.)

Claim.—1st. A directory comprising a directory strip having alphabetically arranged lists of individual names, an index device with letters of the alphabet arranged thereon to correspond with said lists and at distances apart less than and proportionate with the spaces occupied by the directory lists under the corresponding letters of the alphabet, respectively, and reversible means for simultaneously operating the directory strip and index device at speeds proportionate with their repective spacings in one and the other direction, alternately. 2nd. A directory comprising a main directory strip having alphabetically arranged lists of individual names, an index strip with letters of the alphabet arranged thereon to correspond with said lists and at distances apart less than and proportionate with the spaces occupied by the directory lists under the corresponding letters of the alphabet, respectively, and reversible means for simultaneously operating the directory strip and the index strip at speeds proportionate with their respective spacings, and in one and the other direction, alternately. 3rd. A directory comprising a directory strip having alphabetically arranged lists of individual names, a supplemental directory strip having a less number of individual names than the main strip, the same being alphabetically arranged and relatively spaced to correspond with the main strip on a shorter scale, and reversible means for simultaneously operating the said strips in either direction at speeds proportionate with their respective spacings, and in one and the other direction, alternately. 4th. The combination of two rollers mounted parallel with each other, a flexible strip connected at one end with one of the rollers and at the other end with the other roller to be wound and unwound from roller to roller, wheels for said rollers, respectively, a lever carrying said driving wheels and pivoted to simultaneously hold one of the driving wheels in operative engagement with its roller wheel and the other driving wheel out of engagement with its roller wheel, and vice versa, a master wheel journalled to revolve and operatively engaging with said driving wheels and being frictionally connected with the lever to throw the lever in the direction of the rotation of the master wheel, and means for rotating the master wheel. 5th. The combination of two rollers mounted parallel with each other, a master wheel, a flexible strip connected at one end with one of the rollers and at the other end with the other roller, to be wound and unwound from roller to roller, wheels for said rollers, respectively, a lever comprising two spring bars journalled on the shaft of the master wheel on opposite sides of said master wheel, and contacting with the hub of the master wheel, arbors between said bars at the ends thereof, respectively, said bars being sprung friction tight against the hub of the master wheel, wheels for driving said roller wheels, respectively, journalled on said arbors and meshing with the master wheel, and means for rotating the master wheel. 6th. A directory comprising a main directory strip having alphabetically arranged lists of individual names and addresses, a set of rollers for operating said directory strip, an index strip, a set of rollers for operating the index strip, small sprocket wheels, respectively, on the rollers of the index strip, a sprocket chain operatively connecting one of the small sprocket wheels, with one of the large sprocket wheels, a sprocket chain operatively connecting the other small sprocket wheel with the other large sprocket wheel, and reversible means for driving the rollers of one of said sets of rollers in one and the other direction, alternately. 7th. The combination of two main rollers mounted parallel with each other, a master wheel, a flexible strip connected at one end with one of the rollers and at the other end with the other roller to be wound and unwound from roller to roller, wheels for said rollers, respectively, at one side of the machine, small sprocket wheels fastened to the main roller shafts, respectively, at the otherside of the machine. a plurality of sets of supplemental rollers, flexible supplemental strips, one for each set of supplemental rollers each supplemental strip being connected at its ends respectively with the rollers of its set to be wound and unwound from roller to roller, large sprocket wheels on the ends of the supplemental rollers at the same side of the machine with said small sprocket wheels, sprocket chains connecting the sprocket wheels of one of the main rollers with one sprocket wheel, respectively, of each of the sets of supplemental rollers, sprocket chains connecting the sprocket wheel of the other main roller with the other sprocket wheel of the respective sets of supplemental rollers, wheels for driving said main roller wheels respectively, a lever carrying said driving wheels and pivoted to simultaneously hold one of the driving wheels in operative engagement with its roller wheel and the other driving wheel out of engagement with its roller wheel, and vice versa, a master wheel journalled to revolve and operatively engaging with said driving wheels and being frictionally connected with the lever to throw the lever in the direction of the rotation of the master wheel, and means for rotating the master wheel.

No. 68,097. Locomotive Exhaust and Means for Regulating the Draft. *(Emission pour locomotives et moyen de régler le tirage.)*





William Henry Prendergast and Theodore David Kline, both of Savannah, Georgia, U.S.A., 13th July, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. The combination with the smoke box, exhaust steam passage communicating with the latter, and an independent passage or outlet for exhaust steam, of two rocking valves applied respectively to such passages, shafts upon which said valves are mounted, spur gears keyed upon said shafts, an intermediate gear meshing therewith, and lever mechanism for operating such intermediate gear, substantially as shown and described, whereby the oscillation of the intermediate gear effects the opening and closing of the two valves alternately and oppositely as specified. 2nd. The combination with the main exhaust passage and the supplemental side exhaust passage, of two valves 9 and 10 adapted for the respective passages, and means for operating said valves together, but successively, one valve being constructed and arranged as specified to

fully open before the other closes, as and for the purpose specified. 3rd. The combination with the exhaust steam passage, of the sector shape rocking valve having a lengthwise recess or socket, a rock shaft on which said valve is mounted loosely, and a lever arm keyed on the rock shaft, and adapted to move freely in the valve socket, its outer end being so connected with the valve that the latter remains at rest while the rock shaft rotates a part of a revolution, as shown and described, for the purpose specified. 4th. The combination with the main and supplemental exhaust passages, of two rocking valves for opening and closing said passages, openings 26 in the sides of the main passage, and spaces behind said valves for receiving steam for the purpose of balancing the valves, as shown and described. 5th. The combination with the exhaust steam passage, of a valve for closing the same, said valve having an arc slot, and a lever arm having a cross rod or pin working in said slot and a rock shaft to which said lever arm is secured, substantially as shown and described. whereby when the shaft is rotated the lever arm is moved in advance of the valve, as specified. 6th. The combination with the smoke box and a steam exhaust passage, also an independent steam exhaust, of two valves arranged to close the respective passages and adapted to rock as specified, one of said valves being rigidly connected with its rock shaft and the other valve having a supplemental means of attachment to its rock shaft, whereby it is allowed to dwell while the first named valve is moving into or out of the closing position, as specified. 7th. The combination with a locomotive smoke stack, of an auxiliary exhaust passage 22, a pipe for conducting the exhaust of electric light engines thereto and a pipe for conducting off the water of condensation from said passage, substantially as shown and described.

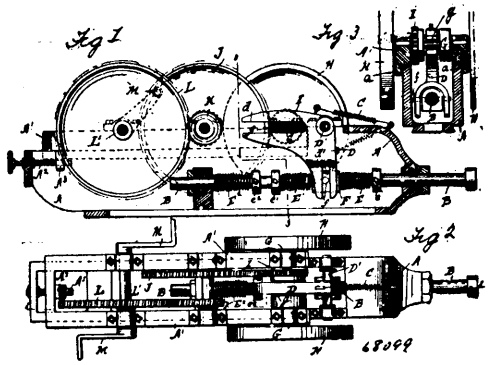
No. 68,098. Method of Manufacturing Starch.

(Méthode de fabrication d'empois.)

Chester Burnell Duryea, Borough of Manhattan, New York, U.S.A., 13th July, 1900; 6 years. (Filed 5th February, 1900.)

Claim.—The process of manufacturing starch consisting in separating the starch mass into independent bodies, one of the bodies being composed of granules of one dimension, and another of the bodies being composed of granules of a different dimension, substantially as set forth.

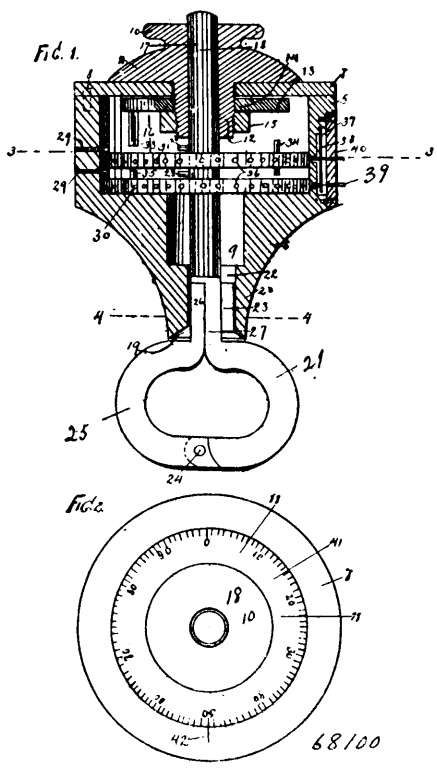
No. 68,099. Drill. (*Forets.*)



Lafayette Durkee, Denver, Colorado, U.S.A., 13th July, 1900; 6 years. (Filed 26th June, 1900.)

Claim.—1st. A drill, comprising a drill holder mounted to reciprocate, a pivoted lever connected with the drill holder, a revolving shaft having a crank pin connected with said lever to vibrate it, means for rotating the shaft, and a spring connecting the pivoted lever with a fixed support, whereby the weight of the drill holder may be compensated for, as the drill operates. 2nd. A drill, comprising a drill holder mounted to reciprocate, a pivoted lever connected with the drill holder, a revolving shaft having a crank pin connected with said lever to vibrate it, means for rotating the shaft, and a spring having one end connected with a fixed support, and its other end adapted to be attached to the pivoted lever on either side of its pivot, whereby the weight of the drill holder may be compensated for as the drill works either up or down. 3rd. A drill, comprising a drill holder mounted to reciprocate and provided with pins, a pivoted lever having a slot in each end, the lower end of the lever being bifurcated to extend on each side of the holder and into the slot of which extends the pins of the drill holder, a revolving shaft, a crank pin carried by the said shaft entering the slot in the upper end of the lever, and means for rotating said shaft, substantially as described. 4th. A drill, comprising a drill holder mounted to reciprocate, a pivoted lever having a slot in each end, a spring connecting the upper end of the lever with the frame of the drill holder, a crank shaft, a crank pin carried by said shaft and entering the upper slot in the lever, and means for rotating said shaft. 5th. A drill, comprising a drill holder mounted to reciprocate, a pivoted lever having a slot in each end, a crank shaft, a crank pin carried by said shaft and entering the upper slot in the lever, means for rotating said shaft, a block connected with the other end of the lever and surrounding the drill holder, and a spring surrounding the drill holder on each side of the block and connected at opposite ends with the block and holder. 6th. A drill, comprising a drill holder mounted to reciprocate, a pivoted lever having a slot in each end and connected at the upper end with the frame of the drill holder, a crank shaft, having movable journals shiftable toward and from the pivot of the lever, a crank pin carried by said shaft and entering the upper slot in the lever, means for rotating said shaft, and a spring connecting the pivoted lever with a fixed support, whereby the weight of the drill holder may be compensated for as the drill operates. 7th. A drill, comprising a drill holder mounted to reciprocate, a pivoted lever connected with the drill holder to reciprocate it, a revolving shaft having a crank pin connected with said lever to vibrate it, means for varying the point of connection with the lever to vary the stroke, means for rotating the shaft, and a spring connected with a vibrating member and a fixed support, whereby the weight of the drill holder may be compensated for, as the drill operates. 8th. A drill, comprising a frame, a drill holder mounted to reciprocate within the frame, a pivoted and spring pressed lever mounted in the frame and having a slot in one end and connected at the other end with the drill holder, a slide mounted on the frame to move toward and from the pivot of said lever, a revolving shaft journalled in said slide, a crank pin carried by said shaft and entering the slot in the lever, and means for rotating said shaft, substantially as described. 9th. A drill, comprising a frame, a drill holder mounted to reciprocate in the frame, a pivoted lever mounted in the frame and having a slot in one end, the other end of the lever being connected with the drill holder, a slide mounted on the frame and adjustable toward and from the pivot of the said lever, a revolving shaft journalled in the slide, and provided with a crank pin working in the slot of the lever, and a gearing for operating said shaft, said gearing being also mounted in the slide, substantially as described. 10th. A drill, comprising a frame, a reciprocating drill holder mounted in the frame and provided with pins, a pivoted and spring actuated bell crank lever mounted in the frame and having its ends slotted, the lower ends being forked, a slide mounted on the frame and adjustable toward and from the pivot of the lever, a shaft mounted in the slide and provided with a crank pin working in the slot at the upper end of the lever, and driving mechanism also mounted in the slide, substantially as described.

No. 68,100. Lock. (*Serrure.*)

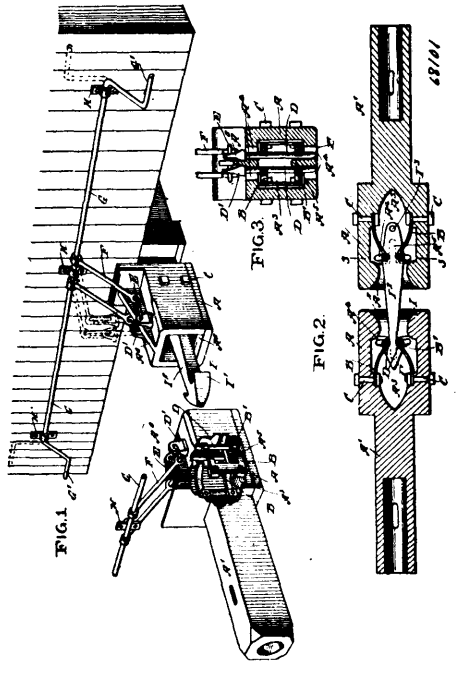


Charles Watson Birum and Angus D. McKay, both of Victor, Colorado, U.S.A., 13th July, 1900; 6 years. (Filed 26th June, 1900.)

Claim.—1st. A lock, comprising a casing, a bolt passed therethrough, a tumbler passed upon said bolt within said casing, devices for normally preventing the passage of said bolt through said

tumbler, means for operating said tumbler, and allowing the passage of said bolt through said tumbler, and said bolt being provided at one end with a pivoted keeper which operates within a bore formed within said casing and through which said bolt passes, substantially as shown and described. 2nd. A lock, comprising a casing provided with a broad extension, a bolt passed through said casing and bored extension, and provided with a laterally directed lug which operates within an extension of the bore of said casing extension, a pivoted keeper connected with said bolt and provided with an angular extension which operates within the bore of said casing extension, a tumbler passed upon said bolt within said casing, devices for normally preventing the movement of said bolt through said tumbler, and means for operating said tumbler to allow the passage of said bolt through said tumbler and allow said angular extension of said keeper to be withdrawn from the bore in said angular extension of said casing, substantially as shown and described. 3rd. A lock of the class described, comprising a casing, a bolt passing through said casing, a pair of tumblers revolubly passed upon said bolt within said casing, a locking pin arranged upon said bolt and normally disposed between said tumblers, another locking pin arranged upon said bolt and normally disposed above said tumblers, said tumblers being provided with slots or recesses adapted to register with said locking pins, and each of said tumblers being provided with a stop pin which are arranged to co-engage, an operating device revolubly mounted upon said casing and extending through an opening therein and provided with an operating pin which operates in connection with one of said stop pins to bring said recesses into engagement with said locking pins, whereby said bolt may be passed through said tumblers, substantially as shown and described.

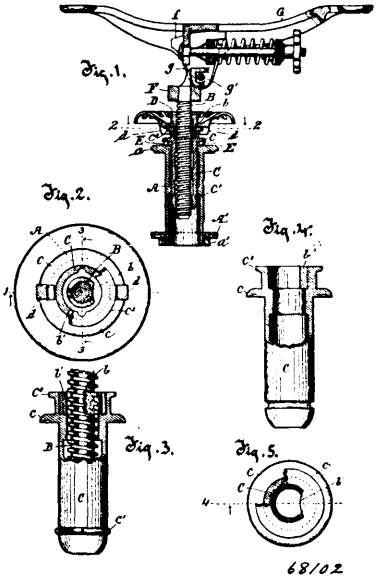
No. 68,101. Car Coupling. (*Attelage de chars.*)



Mark A. Brown and William O. Paxson, both of Douglas, Georgia, U.S.A., 13th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. A car coupling comprising a hollow head having transverse slots, pins movable in said slots vertically and transversely, springs for pressing said pins together, a coupling hook having a head adapted to force the pins apart in coupling, and a shank connected with a car, and means for operating said pins to release the hook. 2nd. A car coupling, comprising a hollow head having transverse slots, pins movable in said slots vertically and transversely, springs for pressing said pins together, a coupling hook having a head adapted to force the pins apart in coupling, and a shank having perforations adapted to receive the pins of another car, to connect the hook with said car, and means for operating said pins to release the hook. 3rd. A car coupling, comprising a hollow head having transverse slots, pins aligning transversely and movable in said slots vertically and transversely, a coupling hook connected with a car at one end and having at its other end a head adapted to be locked by the said pins, and means for operating the pins to release the hook. 4th. A car coupling comprising a hollow head, pins aligning transversely of the head and movable therein vertically, a coupling hook having at one end a head adapted to be locked by the pins on one car, and at its other end transversely aligning apertures adapted to be engaged by the pins of another car, and means for operating the pins to release the hook. 5th. A car coupling, comprising a hollow head having transverse slots, pins aligning transversely and movable in said slots vertically and transversely, a coupling hook having at one end a head adapted to be locked by the pins on one car, and at the other end transversely aligning apertures adapted to be engaged by the pins on another car, and means for operating the pins to release the hook.

No. 68,102. Revolving Chair. (*Fauteuil tournant.*)



Michael Even, Port Washington, Wisconsin, U.S.A., 13th July, 1900; 6 years. (Filed 28th June, 1900.)

Claim.—1st. The combination with a hub constituting a part of a chair base, and screw threaded spindle adapted to carry a chair seat and having a longitudinal keyway, of a sleeve secured and adapted to turn freely in the bore of said hub and provided with an annular flange or shoulder on its upper end and with a key or projection arranged to engage said keyway and prevent the spindle from turning in said sleeve, and a nut engaging the thread on said spindle and provided with a lug engaging the annular flange or shoulder on said sleeve, substantially as and for the purposes set forth. 2nd. The combination with a hub constituting a part of a chair base, and a screw threaded spindle adapted to carry a chair seat, of a sleeve fitted and adapted to to turn in the bore of said hub and provided with as outwardly projecting ball bearing and with an outwardly projecting flange or shoulder at its upper end, balls interposed between said bearing and the upper end of said hub, and a nut engaging the thread on said spindle and bearing on the upper end of said sleeve in revoluble engagement with the flange or shoulder thereon, substantially as and for the purposes set forth. 3rd. The combination with a hub constituting a part of a chair base, and a screw threaded spindle adapted to carry a chair seat and formed with a longitudinal keyway, of a sleeve fitted to turn in the bore of said hub and to receive said spindle which is adjustable endwise therein without turning, a key adapted to engage the keyway of said spindle and formed with a ring which is held in an elargement of the bore of said sleeve, and a nut adapted to engage the screw thread on said spindle and to bear on the upper end of said sleeve, substantially as and for the purposes set forth. 4th. The combination with the hub of a chair base and a screw threaded spindle adapted to carry a chair seat, of a sleeve fitted to turn in the bore of said hub and provided at its upper end with an annular flange, means for retaining said sleeve in said hub, means for preventing the spindle from turning in said sleeve, and a nut threaded to engage with the thread of said spindle and provided with inturned lugs adapted to engage with said flange on opposite sides of the spindle, substantially as and for the purpose set forth.

No. 68,103. Tilting Chair. (*Fauteuil à bascule.*)

Michael Even, Port Washington, Wisconsin, U.S.A., 13th July, 1900; 6 years. (Filed 28th June, 1900.)

Claim.—1st. The combination with a head, having upturned arms, of a frame having depending ears pivoted to said head and provided between said ears with downwardly projecting arm, a bolt engaged at one end with said arm and provided at the opposite end with a nut, two perforated plates through which said bolt passes, one of said plates being pivotally supported against the arms of said head and the other bearing against said nut, and a spring interposed between said plates, substantially as and for the purposes set forth. 2nd. The combination with a head having upturned arms, of a frame having depending ears pivoted to said arms and provided between

said ears with a downwardly projecting arm, a bolt engaged at one end with said arm and provided at the other end with a nut, two

Fig. 1.

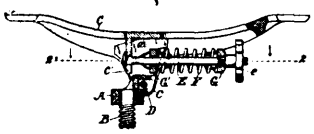


Fig. 2.

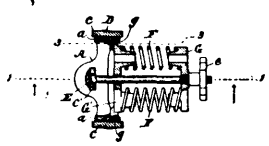
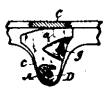


Fig. 3.



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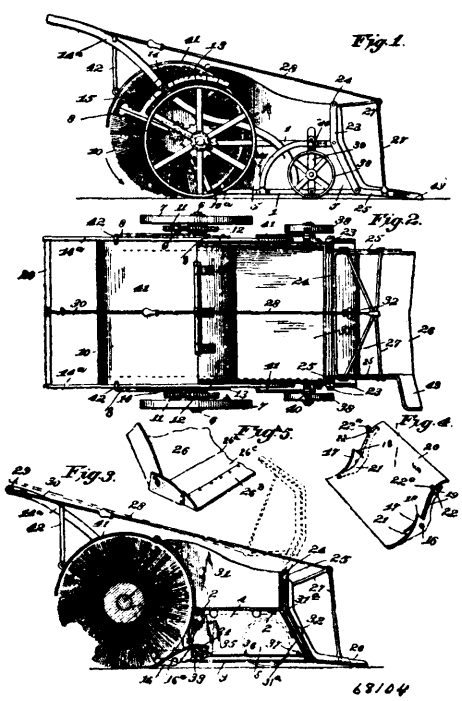
perforated bearing plates, through which said bolt passes, having spring seats on their opposing faces, one of said plates having off-set pivots bearing against the arms on said head, and spiral springs interposed between and bearing at their ends against said plates on opposite sides of and approximately parallel with said bolt, substantially as and for the purposes set forth. 3rd. The combination with a head having upturned arms, of a frame having depending ears pivoted to said arms which are horizontally extended at their upper ends underneath overhanging portions of said frame and constitute therewith stops for limiting the tilting movement of said frame, and a spring opposing the backward movement of said frame, substantially as and for the purposes set forth.

No. 68,104. Hand Street Sweeper.

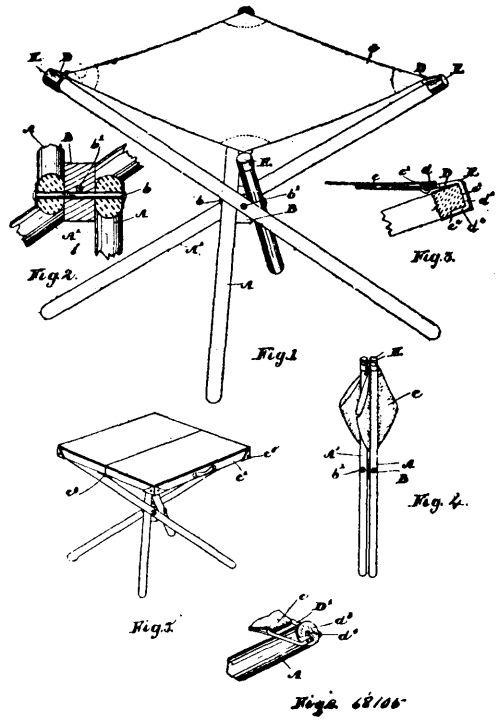
(*Balayeuse de rue à main.*)



William Henry Hecht Miller, Williamsport, Pennsylvania, U.S.A., 13th July, 1900; 6 years. (Filed 29th June, 1900.)

Claim.—1st. In a hand street sweeper, the combination of a supporting frame, a dust pan carried thereby, transporting wheels mounted on the frame, a rotary brush, driving means connecting the brush and the transplanting wheels, and a slidably mounted apron between the brush and the dust pan to direct the sweepings into the dust pan. 2nd. The combination of a supporting frame, a dust pan, transporting wheels, a rotary brush, driving means connecting the brush and the transporting wheels, an apron loosely supported between the brush and the dust pan to direct the sweepings into the pan and adapted to move freely upward and forward, and means for limiting the upward movement of the apron. 3rd. The combination of a supporting frame, transporting wheels, a rotary brush driven by the transporting wheels, a dust pan, apron supports secured to the dust pan, an apron loosely resting on said supports between the brush and the dust pan and adapted to slide upward and forward on said supports. 4th. The combination of a supporting frame, transporting wheels, a rotary brush driven by the transporting wheels, a dust pan, a main dirt receptacle, a pivoted sloop adapted to turn on its pivots to discharge its contents into the main dirt receptacle. 5th. A supporting frame, transporting wheels, a rotary brush driven from said wheels, a dust pan to receive the sweepings from said brush, a scraper in said pan to remove the sweepings therefrom, and means connected to said scraper and extending without the dust pan to operate said scraper. 6th. A supporting frame, transporting wheels, a rotary brush driven from said wheels, a dust pan, a scraper therein, a scoop in front of the dust pan, means for swinging said scoop upward, and means for detachably connecting the scraper to said scoop, whereby when the scoop is swung upward the scraper will be moved forward. 7th. A supporting frame, transporting wheels, a rotary brush driven from said wheels, a dust pan, a scraper therein, means for normally holding the scraper at the rear end of the dust pan, a scoop pivoted in front of the dust pan and adapted to be swung upward, and means for detachably connecting the scraper to said scoop, whereby when the scoop is swung upward the scraper will be drawn forward. 8th. A supporting frame, transporting wheels, a rotary brush driven from said wheels, a dust pan, a movable front to said pan, a scraper in said pan, means for normally holding said scraper at the rear of the dust pan, means for connecting the scraper to the movable front of the pan, a scoop pivoted to the frame in front of the pan, means for detachably connecting the dust pan front to the scoop, means for swinging the scoop upward. 9th. A supporting frame, transporting wheels, brush carrying arms, pivotally mounted on the axles of said wheels, a rotary brush journalled in said arms, means for driving the brush from the transporting wheels, a scale bar carried by the brush carrying arms, clamping means to engage said bar to secure it in various positions to adjust the height of the brush, and a dust pan to receive the sweepings from the brush.

No. 68,105. Camp Stool. (*Tabouret.*)

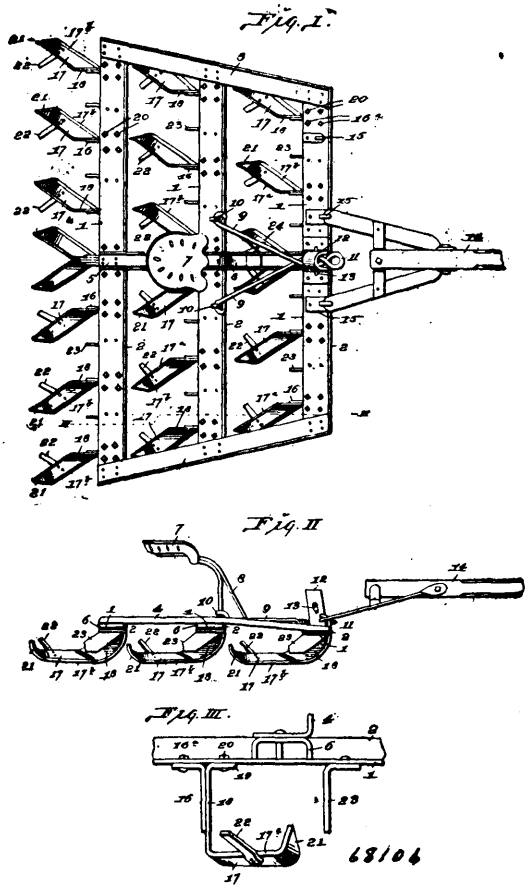


Thomas Stokoe Usher, Brantford, Ontario, Canada, 13th July; 6 years. (Filed 29th June, 1900.)

Claim.—1st. In a camp stool and the like, the combination with the four legs and the seat suitably held at the top of the same, of a rectangular block interposed between the legs at the point of crossing and the pins extending through the block one at right angles to the other, each pin carrying two legs and adapted to allow of the swing of the legs parallel to the planes of the sides of the block, as and for the purpose specified. 2nd. The combinations with the legs crossed and connected together as specified intermediate of

their length, of the seat, the reinforcing piece secured to each corner thereof, the hook having a loop extending through the loop of the reinforcing piece and having the hooked end fitting into grooves on the top of the leg, as and for the purpose specified. 3rd. The combination with the legs crossed and connected together as specified intermediate of their length, of the seat, the reinforcing piece secured to each corner thereof, the hook having a loop extending through the loop of the reinforcing piece and having the hooked end fitting into grooves on the top of the leg and the cap provided with a hole through which such hook extends and fitting over the top of the leg and the hook, as and for the purpose specified. 4th. The combination with the seat and the four legs suitably held together intermediate of their length, of the reinforcing piece secured to each corner thereof and provided with a loop or opening and a fastening device suitably connected on the top of each leg, and provided with a loop connecting it with the loop of the reinforcing piece, as and for the purpose specified. 5th. The combination with the legs crossed and suitably connected together intermediate of their length, of a seat the reinforcing piece secured to each corner thereof, and the hooks having a loop extending through the loop of the reinforcing pieces and the hooked ends fitting into a groove in the top of the leg and a suitable cap designed to cover the hooks and hold them in place in the groove, as and for the purpose specified.

No. 68,106. Weeding Harrows or Perennial Weed Exterminators. (*Sarcleur.*)



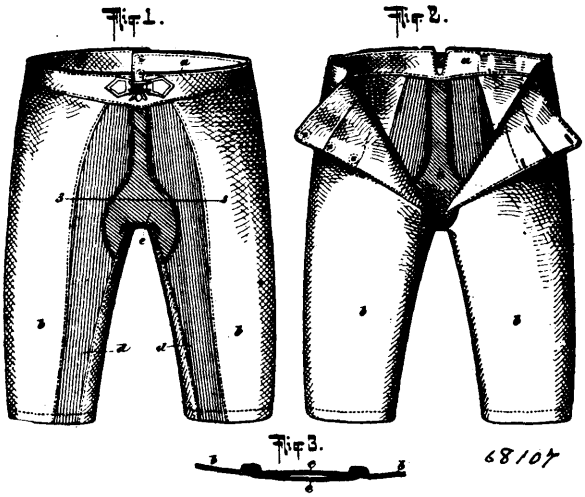
Henry Frederick Deterding, Commerce, Missouri, U.S.A., 13th July, 1900; 6 years. (Filed 30th June, 1900.)

Claim.—A weeding harrow cutter blade formed integral with a vertical runner shaped part having a downwardly curved front cutting edge, with a lateral arm above the runner shaped part, with a narrow body part inclined upwardly toward the rear and having a horizontal cutting edge, and with an upturned forwardly curved lip at the outer end of the body, substantially as described.

No. 68,107. Garment. (*Vêtement.*)

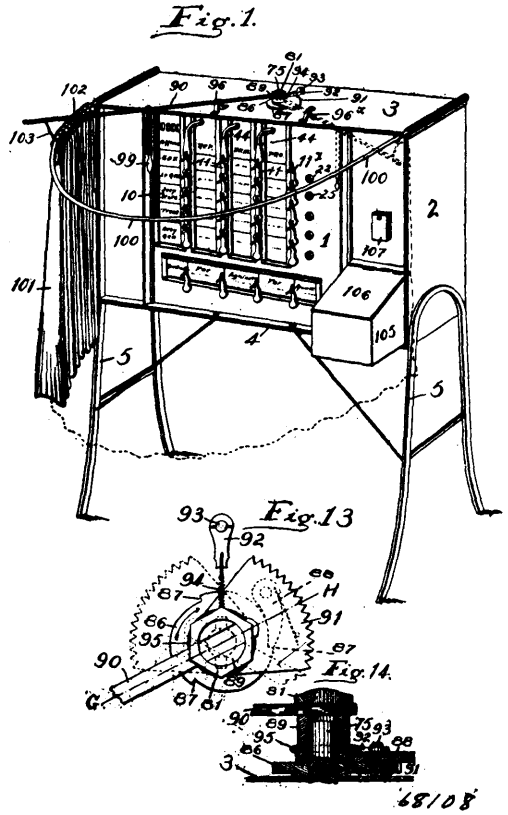
Jeremiah Anderson Scriven, New York City, New York, U.S.A., 13th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—A bifurcated nether garment having the tubular members *b* with the upright elastic insertions *d* in the rear thereof having longitudinally extending wales and the highly elastic tension member or saddle gore *e*, of a general inverted Y shape, the fork of the Y embracing the crotch of the garment and constituting a part of the seat of the garment, the said saddle gore being composed of a



plurality of layers of elastic fabric, the wales or ribs of each fabric running at an angle to the wales or ribs of the other fabric and to the longitudinal and lateral lines of the garment.

No. 68,108. Voting Machine. (*Machine à voter.*)



Frederick Fargo Church, trustee, and Alfred J. Gillespie, both of Rochester, New York, U.S.A., 13th July, 1900; 6 years. (Filed 28th May, 1900.)

Claim.—1st. In a voting machine, the combination with a plurality of registers secured to a supporting frame in fixed relation to each other, of a support, a plurality of independently movable ballot indicators thereon, one for each register, corresponding in relative position with the registers, each indicator being movable into a position to co-operate with its register when the frame and support are moved relatively, means for moving the frame and support relatively, and interlocking devices between the indicators for permitting the operation of a predetermined number to the operative

position. 2nd. In a votiug machine, the combination with a plurality of registers secured to a supporting frame in fixed relation to each other, of a support, a plurality of ballot indicating devices thereon, one for each register, and each independently movable to a position for co-operation with its register, interlocking devices between the indicators to permit the movement of a predetermined number to operative position, and means for causing the relative movements of the register frame and support to cause the co-operation of the actuated indicators and their registers. 3rd. In a voting machine, the combination with a plurality of registers secured to a supporting frame in fixed relation to each other, and each having an actuating member, of a support, a plurality of ballot indicators thereon corresponding with the registers and each having a part for co-operating with the actuating member of its register, when moved to operative position, interlocking devices for permitting the operation of a predetermined member of indicators only, and means for causing the relative movement of the frame and support so as to cause the operation of the registers where indicators are operated. 4th. In a voting machine, the combination with a plurality of registers secured to a supporting frame in fixed relation to each other, and each having an actuating member, of a support, a plurality of ballot indicators thereon, corresponding with the registers and each having a part for positively engaging with the actuating member of its register when moved to one position, interlocking devices for permitting the operation of a predetermined number of indicators only, means for causing the positive relative movement of the frame and support so as to cause the operation of the registers whose indicators are in engagement therewith. 5th. In a voting machine, the combination with a plurality of registers secured to a supporting frame in fixed relation to each other, and each having an actuating member, of a support, a plurality of ballot indicators thereon corresponding with the registers, and each having a part for positively engaging the actuating member of its register when moved to one position, interlocking devices for permitting the operation of a predetermined number of indicators only, means for causing the positive relative movement of the frame and support, and re-setting devices for the indicators. 6th. In a voting machine, the combination with a plurality of registers secured to a supporting frame in fixed relation to each other, of a support, a plurality of ballot indicators thereon corresponding with the registers and each adapted to be moved into operative relation with its register, interlocking devices for permitting the operation of a predetermined number of indicators only, means for causing the positive relative movement of the frame and support and re-setting devices for the indicators. 7th. In a voting machine, the combination with a plurality of registers, secured to a supporting frame in fixed relation to each other, of a support, a plurality of ballot indicators thereon corresponding with the registers and each freely movable into and out of a position to co-operate with its register, interlocking devices between the indicators for permitting the movement of a predetermined number of them to co-operative position, and means for moving the frame and support relatively to cause the actuated indicators to co-operate with their registers. 8th. In a voting machine, the combination with a plurality of registers mounted in fixed relation to each other, of a plurality of freely movable regular ballot indicators corresponding with the registers, normally disconnected from the registers and each adapted to be placed into and out of operative connection with its register, an irregular balloting device embodying a ballot depositing mechanism, interlocking devices between the ballot indicators and the irregular balloting device, whereby the indication of a predetermined number only of regular and irregular ballots is permitted, means for causing the operation of the registers of the ballot indicators actuated, and a re-setting device for returning the regular indicators and irregular device to normal position. 9th. In a voting machine, the combination with a plurality of registers mounted on a frame in fixed relation to each other, of a plurality of independently adjustable ballot indicators corresponding with the registers and adapted to be actuated into operative relation with the registers, a barrier for preventing access to the indicators, operating devices for causing the relative movements of the register frame and the indicators to cause the latter to co-operative with the registers, and connections between said barrier and the operative devices for causing their simultaneous operation. 10th. In a voting machine, the combination with a ballot board or support containing a ticket to be voted, a plurality of separate ballot indicators corresponding to the ticket, freely movable into and out of co-operative relation with their registers, interlocking devices to prevent the operation of more than a predetermined number of indicators to operative position, a plurality of registering devices corresponding to the indicators, a re-setting device for the indicators, and operating devices for causing the relative movements of all the registers and indicators to register the ballots indicated, of a barrier or cover for the ballot board, and connections between it and the said operating devices and the re-setting device, whereby the indicated ballots will be registered, the indicators re-set to normal position, and the barrier removed at a single operation. 11th. In a voting machine, the combination with a plurality of separately movable ballot indicators, a plurality of registers corresponding to the indicators, interlocking devices between the indicators for preventing the operation of more than a predetermined number to operative position, a re-setting device for returning the operated indicators to normal position, and operating devices for registering the ballots indicated, and actuating the resetting device, of an oscillatory barrier or cover for alternately covering and exposing the indicators, and clutch devices between said barrier and the intermittently operating devices, whereby the latter will be operated when the barrier is moved in one direction only. 12th. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators adapted to be actuated into co-operative position with relation to the registers, mechanism for operating the registers of the actuated indicators, an indicator re-setting device connected to said mechanism, an oscillating lever, and clutch devices between said lever and mechanism for operating the latter in one direction only, of a barrier or cover for the indicators, and connections between the barrier and the operating lever for moving the former over and away from the indicators. 13th. In a voting machine, the combination with a series of movable ballot indicators, each embodying a shoulder or projection, as 16, a series of ballot registers corresponding to the indicators and having an actuating member, as 37, and means for operating the registers and actuators relatively toward and from each other, of the straps connected to the indicators having the enlargements thereon, and stops between which the straps extend and arranged to permit the operation of a limited number of the enlargements of the straps between them. 14th. In a voting machine, the combination with a series of ballot registers, each having an actuating member, a corresponding series of ballot indicators, each having a shoulder or projection adapted to co-operate with the actuating member of its register, means for operating a series of registers and indicaters relatively toward and from each other, of the pull straps connected to the indicators having the enlargements thereon, and stops located on opposite sides of the series of straps so as to permit the operation of a limited number of indicators in the series, said stops being arranged between the enlargements and the operating portions of the indicators, whereby the enlargements will be pulled between the stops by the actuation of the indicators. 16th. In a voting machine, the combination with a series of movable ballot indicators and a series of pull straps connected thereto having enlargements thereon, of stops between which the straps pass, said stops being located between the operating portions of the indicators and the enlargements on the straps, and adapted to permit the operation of a limited number of the enlargements between them, and a re-setting bar for engaging the straps between the indicators and enlargements and near the latter. 16th. In a voting machine, the combination with a support having a ballot receiver therein, a series of movable ballot indicators having straps provided with enlargements, a series of registers arranged to be operated by the indicators, a ballot depositing device embodying a cover for the receiver and operated directly by the voter to deposit a prepared ballot and cover the aperture, a strap connected to the depositing device having an enlargement thereon, stops co-operating with the enlargements on all the straps to permit the operation of a single strap, and a re-setting device engaging the straps directly for returning the indicators and ballot depositing device to normal position. 17th. In a voting machine, the combination with a series of registers, a series of ballot indicators devoted to regular candidates and freely movable into and out of co-operative relation with the corresponding registers, of a device for voting for irregular or unnominated persons, embodying a casing having an aperture, a movable cover plate, interlocking devices between the irregular ballot indicators and the cover plate of the irregular voting device to prevent the operation of more than a predetermined number, said interlocking devices being actuated either by the movement of the indicators or the movement of the cover plate, and operating devices for causing the simultaneous relative movement of the indicators and their registers and returning operated cover plates to normal position. 18th. In a voting machine, the combination with a series of registers, a series of ballet indicators forming a part of the permanent structure, one for each register, freely movable into and out of co-operative relation with their corresponding registers, interlocking devices for preventing the operation of more than a predetermined number of indicators, and means for causing the simultaneous operation of all of the registers whose indicators are in operative position. 19th. In a voting machine, the combination with the irregular ballot receiver, of the irregular ballot depositing device arranged to cover said receiver, a catch for retaining the cover when actuated, a plurality of regular ballot indicators normally out of co-operative relation with their registering devices, a plurality of registers for the indicators, means for causing the simultaneous operation of the registers whose indicators have been operated, and interlocking devices between the irregular ballot depositing device and the regular indicators. 20th. In a voting machine, the combination with the irregular ballot receiver, the ballot depositor therefor, the catch for retaining the depositor when operated, the strap connected to the depositor and co-operating with the catch thereof to release the latter when the strap is moved in one direction, and means for operating the strap to release the catch and move the depositor. 21st. In a voting machine, the combination with a series of regular ballot indicators co-operating therewith, of an irregular ballot receiver, a ballot depositor therefor, the catch for retaining the depositor when operated, the strap connected to the depositor and co-operating with the catch, interlocking devices between the regular indicators and the strap for permitting the operation of one regular indicator or the depositor, and a re-setting device co-operating with the strap to release and return the depositor to normal position. 22nd. The combination with a series of ballot indicators

and registering devices therefor, the straps connected to the indicators, having the enlargements thereon, of an irregular ballot receiver, the depositor for the receiver having the catch, the strap co-operating with the catch and depositor and having the enlargement thereon, stops with which the enlargements on the straps co-operate to prevent the operation of more than a predetermined member, and a resetting device co-operating with the straps to return the parts to normal position. 23rd. The combination with a frame, a series of registers on the frame in fixed relation to each other, a support, a series of movable ballot indicators on the support corresponding to the registers, and means for moving the frame and support relatively to cause the actuated indicators to operate their registers, of the straps connected to the indicators having the enlargements thereon, an irregular ballot receiver, the depositor therefor, the catch for the depositor, the strap co-operating with the catch and depositor and having the enlargement thereon, stops with which the enlargements on all the straps co-operate to limit the number operated, and a re-setting device co-operating with the straps to return the parts to normal position. 24th. In a voting machine, the combination with a ballot plate or support, containing the names of candidates, of a movable ballot indicator for each candidate having an index or arm adapted to extend across the ticket of the candidate when operated, a register for each indicator, and means for actuating the registers of the operated indicators. 25th. In a voting machine, the combination with the ballot plate or support containing the names of candidates, of a ballot indicator for each candidate having an index or arm adapted to extend across the ticket of the candidate when operated, said indicator being freely movable into and out of co-operative relation with its ticket, interlocking devices between indicators for candidates for the same office to prevent the operation of more than a predetermined number, a register for each indicator, and means for simultaneously actuating the registers corresponding to the indicators which have been operated. 26th. In a voting machine, the combination of the pivoted index or arm, the arm 13 connected thereto having the shoulder 15 and the extension 14 thereon, of the register frame, a register thereon having the actuating bar 57, and means for moving the frame and indicator relatively. 27th. In a voting machine, the combination with the ballot plate or support containing the names of the candidates, the ballot indicators, each having the arm 13, the shoulder 15 and the extension 14, and interlocking devices between the indicators for candidates for the same office, of the register frame, registers thereon corresponding to the indicators and having the slotted actuators 57, and means for operating the register frame and plate relatively to cause the operation of the registers whose indicators have been moved. 28th. In a voting machine, the combination with the ballot plate or support containing the names of the candidates, the ballot indicators, each having the arm 13, the shoulder 15 and the extension 14, and the strap connected thereto provided with the enlargement, stops with which the enlargements co-operate to limit the number of indicators operated for candidates for the same office, a resetting device co-operating with all of the straps, of the register frame, the registers thereon corresponding to the indicators and means for operating the frame toward and away from the ballot plate. 29th. In a voting machine, the combination with the plate or support having the ballot receiver and the recess 30, of the ballot depositor having the end 29, engaging the recess and the slot, the headed pin operating in the slot and the strap connected to said pin for actuating and being actuated by the cover plate. 30th. In a voting machine, the combination with the ballot plate or support having thereon the names of the candidates to be voted for, of a plurality of ballot indicators for the regular candidates, each having an index adapted to be moved over the ticket of the candidate to whom it is devoted, an irregular balloting device for each office, embodying a ballot receiver and having an index adapted to indicate an irregular ballot, and interlocking devices between the regular indicators and the irregular device of each office. 31st. In a voting machine, the combination with a plurality of series of ballot indicators, a plurality of series of registers normally out of operative connection with the indicators, and interlocking devices between the indicators of candidates for the same office for preventing the operation of more than a predetermined number, said devices permitting the free movement of the individual indicators into and out of operative position, of a plurality of straight ticket bars, each co-operating with the indicators of the candidates of a single party for moving the indicators simultaneously. 32nd. In a voting machine, the combination with the ballot plate or support, a plurality of ballot indicators thereon embodying the pivoted arms 13, shoulder 15, and extension 14, of a plurality of registers corresponding to the indicators and normally out of connection with them, interlocking devices between the indicators to prevent the operation of more than a predetermined number, and a movable straight ticket bar having the operating arm and co-operating with the arms 13, of the indicators. 33rd. The combination with a series of registers, a series of ballot indicators normally out of co-operative relation with the indicators and adapted to be placed into co-operation relation therewith without actuating the registers, of the movable straight ticket bar 40, the link 41, and the arm 42, by which it is supported and actuated, and means for causing the operation of the registers whose indicators are left in co-operative relation therewith. 34th. In a machine, the combination with the ballot plate or support having thereon the names of the candidates to be voted for arranged in party rows or columns, a plurality of ballot indicators for regular candidates, each having an index adapted to be moved over the ticket of the candidate to whom it is devoted, said indicators freely movable to and from voted position, interlocking devices between the indicators for candidates for the same office for preventing the operation of more than a predetermined number, and a straight ticket bar for operating the indicators of all the candidates of a party, of a series of registers, one for each indicator, and means for simultaneously operating all of the registers corresponding to the ballot indicators which have been moved to voted position, whereby the voter may indicate a vote for all the candidates on a ticket, and then change the indicators to vote a split ticket. 35th. In a voting machine, the combination with the casing, the ballot board or support and the ballot indicators thereon, of the movable register frame, the register, the single operating shaft for moving the frame, and connections between the frame and casing for maintaining the the frame and ballot board parallel during their relative movements, 36th. In a voting machine, the combination with the casing, the ballot board or support, the indicators thereon, of the movable register frame, the registers thereon, the links pivoted to the casing and to the frame for maintaining the parallelism of the frame and ballot board, and means for operating the frame toward and from the ballot board. 37th. In a voting machine, the combination with the casing, the ballot board or support, the register frame, and devices on the board and frame for co-operating when the two are moved relatively, of the links pivoted to each other and to the casing, and also pivoted to the frame, and means for operating the frame. 38th. In a voting machine, the combination with the casing, the ballot board or support, the register frame and devices on the board and frame for co-operating when the two are moved relatively, of the single shaft 73, having the actuating cams thereon arranged centrally of the frame and co-operating with it for causing its back and forth movements, and guiding devices for maintaining the parallelism of the frame and ballot support. 39th. In a voting machine, the combinatian with the casing, the ballot board or support, the register frame, and devices on the board and frame for co-operating when the two are moved relatively, the links 70 pivoted to the frame and to the casing, of a cam shaft, the cams thereon for operating the frame, and the external lever connected to the shaft for operating it. 40th. In a voting machine, the combination with the casing, the ballot board or support, the ballot indicators thereon, the register frame and the registers thereon, of the operating shaft, connections between the shaft and frame for causing the relative movements of the frame and support, an oscillating barrier or cover for the ballot board, a clutch connection between the shaft and barrier, and ratchet devices for preventing the return of the barrier when only partially operated in either direction. 41st. In a voting machine, the combination with the casing, a plurality of ballot indicators, a plurality of co-operating registers, and a re-setting device for the indicators, of the shaft controlling the re-setting devices and the operation of the registers, the shaft operating lever, the curtain guide and the curtain sliding thereon and connected to the lever. 42nd. In a voting machine, the combination with the receiver for prepared ballots and a manually operated ballot depositing device adapted to be moved directly by the voter while in proximity therewith to deposit the ballot co-operating with the receiver, of a movable ejector co-operating with the depositing device for ejecting undeposited ballots from the receiver. 43rd. In a voting machine, the combination with a series of regular ballot indicators, a series of registers actuated thereby, a receiver for irregular or prepared ballots, a manually operated ballot depositing device adapted to be moved directly by the voter while in proximity to it to deposit the ballot and co-operating with the receiver, and interlocking mechanism between the regular and irregular devices, substantially as described, of a movable ejector co-operating with the depositing device for ejecting undeposited ballots from the receiver. 44th. In a voting machine, the combination with a series of movable regular ballot indicators, a series of registers corresponding to the indicators, means for actuating the registers of the indicators which have been operated, a receiver for irregular or prepared ballots, an irregular ballot depositing device, and interlocking devices between the regular indicators and the depositing device, substantially as described, of a movable ejector co-operating with the receiver and connections between said ejector and the register actuating means for causing the simultaneous removal of undeposited ballots when the properly indicated ballots are registered. 45th. In a voting machine, the combination of a receiver for irregular ballots, a manually operated depositing device, adapted to be operated directly by the voter while in proximity thereto to deposit the ballot, an ejector, and means for operating the ejector to remove undeposited ballots from the receiver. 46th. In a voting machine, the combination with an irregular ballot receiver, the ballot depositing device, and an ejector co-operating with the receiver, of a series of movable regular ballot indicators, a series of registers corresponding with the indicators and movable with relation to the indicators to cause the operation of the registers and connections between the registers and the ejector for operating the latter. 47th. In a voting machine, the combination with a ballot board or support containing the tickets to be voted, a plurality of ballot indicators freely movable into and out of operating position, having arms co operating with the tickets of their candidates when moved to one postion, a plurality of registers adapted to be operated by the indicators when moved, a plurality of receivers or apertures for irregular or prepared ballots, manually operated ballot deposi-

tors for the receivers, indicating arms connected to the depositors, similar in appearance to those on the regulator indicators, and interlocking devices substantially as described, between the regular indicators and an irregular ballot depositor, whereby the voter may determine at a glance for which candidates he has cast a ballot. 48th. In a voting machine, the combination with the machine casing having a ticket support or plate at the front and containing ballot indicating and registering mechanism, of a curtain guide extending out horizontally from the casing, the curtain movable on said guide and adapted to cover the ticket support, and means for operating the curtain controlling the operating parts of the voting mechanism. 49th. In a voting machine, the combination with the machine casing containing the operating parts, of the curtain guide extending from the casing, the curtain movable on the guide, the lever on the casing connected to the operating parts of the machine, and the handle arranged between the curtain guide and the casing. 50th. In a voting machine, the combination with the casing containing balloting devices, and a movable operating arm connected to the balloting devices controlling the operation of the latter, of a curtain guide extending horizontally from the casing, a curtain movable thereon adapted to cover the front of the machine and connected to the operating arm. 51st. In a voting machine, the combination with ballot indicating devices, and a re-setting bar co-operating therewith, of the rotary shaft and projections thereon, the link and the lever actuated by the projections for causing the movement of the re-setting bar in opposite directions. 32nd. In a voting machine, the combination with ballot indicating devices embodying the movable straps, of the movable bar extending to the exterior of the machine and adapted when moved in one direction to engage and lock the straps from operation. 53rd. In a voting machine, the combination with the casing, balloting devices therein, and an oscillatory arm connected to and controlling the operation of the balloting devices, of the horizontal curtain guide extending over the front of the casing, a curtain movable in the guide connected to the arm and adapted to cover the front of the casing. 54th. In a voting machine, the combination with the register frame, the channeled plates thereon having the guides, the arbors on the plates and the registering wheels on the arbors, the units wheels having the teeth, and the palleted actuating bars sliding in the guides on the channeled plates, of stops or shoulders with which the bars are adapted to engage, and means for moving the frame and stops relatively to cause the actuation of the registers. 55th. In a voting machine, the combination with the casing, ballot registers contained therein, and a door for permitting access to the registers, of an actuating device for the registers, and a locking device for securing said actuating device and co-operating with the door to release the latter when the actuating devices are locked. 55th. In a voting machine, the combination with the casing, ballot registers contained therein, and a door for permitting access to the registers, of the operating shaft, the disc thereon, the key lock having the bolt co-operating with the disc and connections between said bolt and the door for securing the latter when the disc is released. 57th. In a voting machine, the combination with the casing, having the front plate, and the rear doors, of a series of ballot indicators on the front plate, the register frame in the casing and having the grooves in the top and bottom thereof, the channeled plates having a series of registering wheels therein, and actuating members adapted to co-operate with the indicators, said channeled plates having their ends inserted in the grooves in the frame from the rear side, whereby any or all of said channeled plates may be removed through the rear of the casing. 58th. In a voting machine, the combination with a series of movable ballot indicators the slotted straps connected thereto, and the interlocking devices between the straps, of the movable locking bar passing through the slots in the straps and adapted when moved to one position to lock the indicators from operation, substantially as described. 59th. In a voting machine, the combination with a series of regular balloting devices, an irregular balloting device embodying a depositor movable annually to deposit a ballot, interlocking devices between the regular and irregular device, and a readily detachable connection between the depositor and the interlocking devices. 60th. In a voting machine, the combination with a plurality of series of registers, of a plurality of series of ballot indicators forming part of the permanent structure, one for each register, and each capable of movement into and out of co-operative relation with its register without operating the same, interlocking devices between the indicators in the same series for preventing the movement of more than a predetermined number into co-operative relation with their registers, and means for causing the operation of the registers whose indicators have been operated and left in co-operative relation therewith. 61st. In a voting machine, the combination with a plurality of registers, each embodying a train of wheels, units wheels having the teeth, and register actuating bars having the oppositely arranged pallets for alternately engaging the teeth of the units wheels, and a support for said registers, of a support, a plurality of indicators therein, one for each register, for positively engaging the actuating bars, interlocking mechanism for preventing the movement of more than a predetermined number of the indicators to operative position, and means for causing the relative movement of the support and the register support to cause the positive operation of the registers 62nd. In a register for voting machines, the combination with the arbor having the operating wheel thereon, the units wheel secured to the arbor, the numbered wheels or discs on the arbor, and transferring gearing between them, the stop for engaging the wheel of highest denomination and arresting it and all the other wheels at zero successively. 63rd. In a register for voting machines, the combination with the arbor, the units wheel secured thereon, the numbered wheels or discs loose on the arbor, and transferring gearing between them, a stop yielding in one direction and adapted to engage the wheel of highest denomination and arrest it and all the other wheels at zero successively when the arbor is turned backward. 64th. In a register for voting machines, the combination with the units wheel, the numbered wheels or discs, and transferring gearing between them for causing their intermittent movement, a stop adapted to yield in one direction and to engage the wheel of highest denomination and arrest it and the other wheels at zero successively when the wheel of lowest denomination is turned backward. 65th. In a register for voting machines, the combination with the arbor having the units wheel secured thereto and the numbered wheels or discs loose on the arbor, transferring gearing between the wheels, the stop for engaging the wheel of highest denomination and arresting it and all the other wheels at zero successively, and a toothed actuating wheel, of the reciprocatory actuator having pallets thereon adapted to co-operate with the teeth of the actuating wheel. 66th. In a register for voting machines, the combination with the units wheel capable of rotation in both directions, the numbered wheels or discs and transferring gearing between said wheels and the units wheel, of a stop for arresting the backward rotation of the numbered wheel of highest denomination, whereby all the numbered wheels may be returned to zero successively by rotating the units wheel backward. 67th. In a register for voting machines, the combination with the toothed actuating wheel, the units wheel connected thereto, the numbered wheels and transferring gearing between them, of an actuator having pallets adapted to engage the actuating wheel successively and capable of movement to disengage both pallets from the wheel, whereby the latter and the train of wheels may be turned back to zero. 68th. In a register for voting machines, the combination with the toothed actuating wheel, the units wheel connected thereto, the numbered wheels and transferring gearing between them, of a reciprocating actuator having oppositely arranged pallets thereon adapted to engage the teeth on opposite sides of the wheel alternately and separated sufficiently to permit the independent movement of the actuating wheel, whereby the latter and the numbered wheels may be rotated backward to zero. 69th. In a register for voting machines, the combination with a train of numbered wheels, and an actuating wheel therefor provided with teeth inclined on one side and having the recesses at the inner end thereof, of an actuator for said wheel having oppositely arranged pallets thereon adapted to engage the teeth and recesses on the wheel and lock it from rotation. 70th. In a register for voting machines, the combination with a toothed actuating wheel, of a movable actuator consisting of a plate of flat metal having the pallets cut from the metal and bent out at the side thereof and adapted to engage the teeth on the wheel alternately. 71st. In a register for voting machines, the combination with a toothed actuating wheel, of a reciprocatory actuator consisting of a flat metal plate arranged at the side of the wheel and having the integral pallets cut therefrom and bent laterally from the plate to engage the teeth of the wheel alternately. 72nd. In a register for voting machines, the combination with the casing formed of a metal plate bent to form the parallel sides, and the rear portion provided with apertures, of the arbor journalled in the sides, the wheels on the arbor having numbers on their peripheries, transferring gearing connecting them, a toothed actuating wheel, and a reciprocatory palleted actuator guided in the casing and co-operating with the actuating wheel. 73rd. In a register for voting machines, the combination with the casing formed of sheet metal bent to form the parallel sides and having guides formed on one side for the reception of the actuator, a train of wheels in the casing, and a toothed actuating wheel connected thereto, of a reciprocatory actuator having the pallets thereon and operating in the guides in the casing. 74th. In a register for voting machines, the combination with the casing formed of a single piece of sheet metal and embodying the side plate having the guiding lugs thereon and the front plate having a perforation for the actuator, the numbered wheels and the toothed actuating wheel, of the reciprocatory actuator operating in the guides in the casing and having the laterally extended pallets co-operating with the actuating wheel. 75th. The combination with a register having a toothed actuating wheel and a train of numbered wheels operated thereby, of a reciprocatory actuator having oppositely arranged pallets thereon adapted to engage the teeth on opposite sides of the actuating wheel alternately to operate it in one direction, an operating device for the actuator relatively movable toward and from the register, having a projection for engaging the actuator when moved in one direction, and an abutment adapted to be brought into engagement with the actuator for operating the latter in the opposite direction. 76th. The combination with a register having a train of numbered wheels and a reciprocatory actuator therefor, of a support relatively movable toward and from the register, an actuator operating device movable upon the support and having a projection for normally engaging the actuator to operate it in one direction, and a second projection or abutment adapted to be moved into position to engage the actuator and to operate it in the opposite direction. 77th. The combination with a support, a register thereon embodying numbered wheels, a toothed actuating wheel, and a palleted actuator co-oper-

ating with said wheel, of a support movable relatively to the register, and a projection thereon normally engaging the actuator to move in one direction when the register and support are moved relatively. 78th. The combination with a support, a plurality of registers thereon, each embodying numbered wheels, a toothed actuating wheel, and palleted actuators adapted to engage and rotate the wheels when moved in opposite directions, of a support movable relatively to register, a plurality of projections thereon in engagement with the actuators to move them in one direction relatively to the actuating wheel when the supports are movable relatively, a plurality of engaging surfaces on the support adapted to be moved into and out of engagement with the register actuators to cause the latter to move the actuating wheel. 79th. The combination with the register frame, a register thereon having an actuator provided with a slot, of a support movable relatively to the register frame, an arm movable on the support having the extension entering the slot in the actuator, and the shoulder for engaging the end thereof. 80th. The combination with a support, a channeled frame having guides, arbors on the frame, and the registering wheels on the arbors, the units wheels having the teeth, and the palleted actuators sliding in the guides in the frame, of stops or shoulders with which the actuators are adapted to engage said support and stops being relatively movable to cause the actuation of the registers. 81st. The combination with a register embodying a train of wheels, an arbor for said wheels, and the units wheel having the teeth, of a support for said register, an actuator movable in rigid guides having the oppositely arranged teeth or pallets for alternately engaging the teeth of the units wheel, a support, devices thereon for positively engaging the actuator, and means for causing the relative movements of the last-mentioned support and the register support to cause the positive movement of the register actuator in opposite directions. 82nd. The combination with the register embodying the train of wheels, and a units wheel having the teeth, of a sliding actuator having the oppositely arranged pallets for engaging the teeth, and the slot, a movable member having the finger projecting in the slot and the shoulder, and means for moving the member and register casing relatively. 83rd. The combination with a register support, a register thereon embodying an actuator operating positively in both directions and having a slot, of a support, a member pivoted on the support having a shoulder or abutment to engage the actuator, and a curved finger projecting into the slot therein, said last-mentioned support and register support being relatively movable. 84th. The combination with a train of numbered wheels, and a toothed actuating wheel, an actuator therefor adapted to lock the actuating wheel positively when in either of two positions, of a movable member adapted, when moved in one direction, to engage the actuator, and means for moving the member and register relatively to operate the register. 85th. In a register, the combination with a train of numbered wheels, a toothed actuating wheel, an actuator therefor adapted to operate said wheel and to lock it positively when at the extremes of its motion in either direction, of a support, a movable member thereon for engaging the actuator, and means for moving the support and actuator relatively in opposite directions. 86th. The combination with a register embodying a train of numbered wheels, an actuating wheel, and an actuator therefor, of a movable member capable of movement into and out of engagement with the actuator, and means for moving the member and register relatively in addition to the movement of the member into and out of engagement with the actuator, to cause the operation of the register. 87th. The combination with a register embodying a train of numbered wheels, a toothed actuating wheel, and a palleted actuator therefor, of a movable member capable of movement into and out of engagement with the actuator without moving the latter, and means for moving the member and register relatively in addition to the movement of the member into and out of engagement with the actuator to cause the operation of the register. 88th. The combination with a register and an actuator therefor, of a movable member and independent actuator operating means controlled but not operated by the member, means for operating the actuator and register relatively to move the register and return the actuator. 89th. The combination with a register and an actuator therefor, of a movable member adapted to be set or placed for operation upon the actuator and to be moved out of co-operative relation therewith, means for moving the member and register relatively to cause the operation of the register when the parts are moved from normal to abnormal position and returned to normal position again to complete the operation of the register. 90th. The combination with a register, an actuator therefor, and a rotary oscillatory member adapted to be oscillated to operatively engage the actuator and reciprocated relatively to the register to actuate it. 91st. The combination with a register embodying numbered wheels, a reciprocatory actuator operative to move the register one number by the reciprocation of the actuator in opposite directions, of a movable member adapted to be moved into co-operative relation with the actuator without operating it, and means for causing the complete reciprocation of the actuator only when co-operating with the member. 92nd. The combination with a train of numbered wheels, of an actuator therefor adapted to advance the register one complete unit at each reciprocation, of an adjustable member normally in engagement with the actuator to operate it in one direction when moved independently of the adjusting or setting operation and adapted to be adjusted to co-operate with the actuator when in the other direction independently of the setting operation, and means for causing the relative movements of the register and member to cause the actuator to operate the register. 93rd. The combination with a register, an actuator therefor, and a movable member capable of two movements relative to the register, one to engage the actuator and the other to operate it. 94th. The combination with a register, an actuator therefor, and a movable member capable of two movements relative to the register, one to positively engage the actuator and the other to cause the operation of the actuator positively in opposite directions relative to the register. 95th. In a voting machine, the combination with an indicator support, movable ballot indicators thereon, a register support, registers thereon having actuators adapted to be connected to the indicators by the movement of the latter, and means for causing the relative movements of the supports to cause the positive operation in both directions of the register actuators. 96th. In a voting machine, the combination with an indicator support, movable ballot indicators thereon, a register support, register thereon having actuators adapted to be connected to the indicators by the movement of the latter, and means for causing the relative movements of the supports to operate the actuators in opposite directions when connected to the indicator support. 97th. In a voting machine, the combination with an indicator support, a series of movable indicators thereon, a register support, registers thereon, each having an actuator, of connections between the indicator support and the register actuators for operating the latter positively in one direction, said indicators operating when moved on their support to co-operate with the actuators to move them in the opposite direction from that last-mentioned, and means for operating the supports relatively.

No. 68,109. Voting Machine. (*Machine à voter.*)

Fig. 1

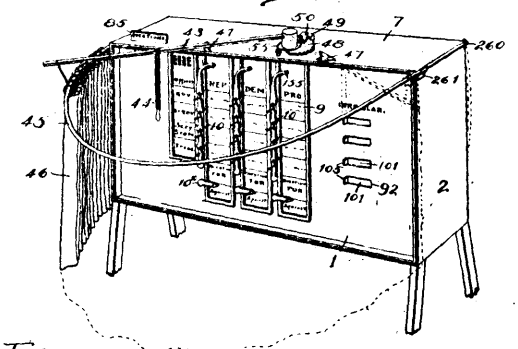


Fig. 19.

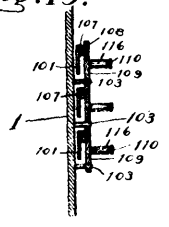
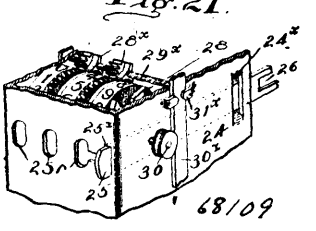


Fig. 21.



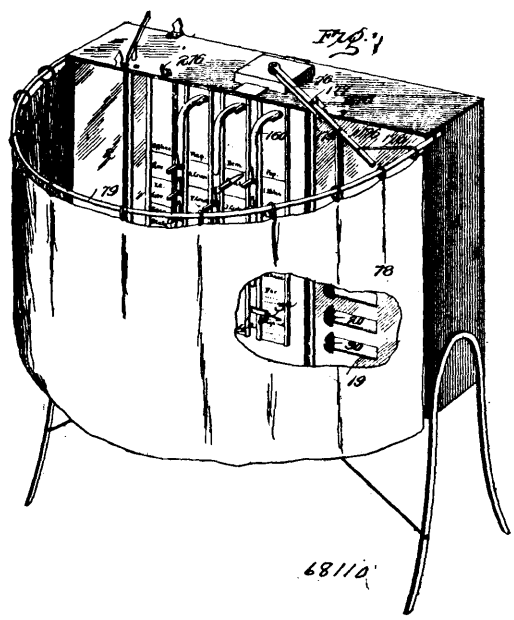
Frederick Fargo Church, trustee, and Alfred J. Gillespie, both of Rochester, New York, U.S.A., 13th July, 1900; 6 years. (Filed 28th May, 1900.)

Claim.—1st. In a voting machine, the combination with a series of registers, a series of ballot indicators devoted to regular candidates and freely movable into and out of co-operative relation with their corresponding registers, of a device for voting for irregular or unnominated persons, embodying a casing having an aperture, and a movable cover plate normally covering said aperture, interlocking devices between the regular ballot indicators and the cover plate of the irregular voting device to prevent the operation of more than a predetermined number, said interlocking devices being actuated either by movement of the indicators or the movement of the cover plate in uncovering the aperture, and operating devices for causing the simultaneous relative movement of the indicators and their registers and returning operated cover plates to normal position over the aperture. 2nd. In a voting machine, the combination with the casing having a series of apertures therein, a plurality of series of registers one for each candidate, a plurality of series of corresponding ballot indicators movable freely into and out of co-operative relation with their registers, interlocking devices for limiting the number of indicators in each series operable by a single voter, and operating devices for simultaneously actuating the registers whose indicators have been operated, of irregular voting devices embodying a plurality of movable covers, one for each of the aper-

tures in the casing and normally covering said apertures, one of said covers being interlocked with the indicators devoted to candidates for each office, a paper web supporting and feeding device in the casing for operating said paper past the apertures, said feeding device being normally disconnected from the register operating devices, and connecting mechanism controlled by the covers for connecting the register operating devices with the web feeding device when any of the covers is moved to open its aperture. 3rd. In a voting machine, the combination with a series of registers, a series of ballot indicators devoted to regular candidates and freely movable into and out of co-operative relation with their corresponding registers, a device for voting for irregular or unnominated persons embodying a casing having an armature and a movable cover plate normally covering said armature, interlocking devices between the ballot indicators and the cover plate of the irregular voting device operating to limit the total number of indicators and covers operated, a movable ballot receiving strip, such as paper, arranged within the casing and accessible through the aperture, means for moving it, operating devices for causing the simultaneous relative movement of the registers and indicators, and connections between said devices, the cover plates, and the paper operating devices for causing their simultaneous operation. 4th. In a voting machine, the combination with a casing having a plurality of voting apertures therein, a pair of paper rollers and actuating devices for operating them, but normally disconnected therefrom, of the movable covers for the voting apertures accessible to the voter, a movable plate or wing inaccessable to the voter and devices for actuating the same actuated by the movement of any of the cover plates and serving to connect the paper feed roller with its actuating device. 5th. In a voting machine, the combination with the casing, having a series of voting apertures therein, a paper feeding device arranged within the casing and adapted to move a web of paper past the apertures, operating mechanism for actuating the paper feeding devices normally disconnected therefrom, of a series of covers, one for each aperture, a movable bar or wing inaccessible to the voter actuated by the movement of any of the covers for operatively connecting the paper feeding devices with their operating mechanism, and a cover re-setting device. 6th. In a voting machine, the combination with the casing, having a series of voting apertures therein, a paper feeding device arranged within the casing and adapted to move a web of paper past the apertures, and operating mechanism for actuating the paper feeding devices, but normally disconnected therefrom, of a series of covers, one for each aperture, a movable plate or wing inaccessable to the voter actuated by the movement of any of the covers adapted, when moved by a cover, to connect the paper feeding devices with their operating mechanism, and a cover re-setting bar. 7th. In a voting machine, the combination with the casing, having a series of voting apertures therein, a paper feeding device arranged within the casing and adapted to move a web of paper past the apertures, and a movable member for actuating the paper feeding devices normally disconnected therefrom, of a series of covers, one for each aperture, a movable plate or wing inaccessible to the voter actuated by the movement of any of the covers adapted, when moved by a cover, to connect the movable member with the paper feeding device, and a cover re-setting bar connected to the movable member. 8th. In a voting machine, the combination with a series of regular ballot indicators, a series of corresponding registers controlled thereby, of a caging having a plurality of apertures for irregular ballots, a singe web of paper in rear of said apertures, and feeding devices therefor, movable covers for said apertures, interlocking devices between the covers and the regular indicators for candidates for the same office for preventing the operation of more than a predetermined number of covers or regular indicators in the same series, a series for operating the paper web feeding devices normally disconnected from it, and connections inaccessible to the voter between said web feeding devices and the covers, whereby when any of the latter are operated to expose the web, the operating devices are connected to the web feeding devices. 9th. In a voting machine, the combination with a series of regular ballot indicators and a series of corresponding registers controlled thereby, of a casing having a plurality of apertures, and feeding devices therefor, movable cover for said apertures, interlocking devices between the covers and the regular indicators for candidates for the same office for preventing the operation of more than a predetermined number of covers or indicators in the same series, a means for operating the web feeding devices normally disconnected from it, connections inaccessible to the voter between said web feeding devices, their operating means and the covers, whereby when a cover is operated to expose the paper the operating devices are connected to the feeding devices, means for operating the registers whose indicators have been operated and means for re-setting the covers and indicators to normal position. 10th. In a voting machine, the combination with the casing having the voting aperture therein, the rotary shaft, a paper feed roll actuated thereby, a wheel on the shaft having teeth or projections, and the reciprocating and laterally movable hook bar for engaging the projections, of the cover for the aperture accessible to the voter, and connections inaccessible to the voter between said plate and the hook bar for moving the latter into engagement with the wheel when the cover plate is operated. 11th. In a voting machine, the combination with the casing and ballot indicating devices therein and accessible from the front, of a horizontal curtain guide, a curtain or barrier movable on said guide in front of the casing, an arm connected to said curtain for operating it, a re-setting device co-operating with the ballot indicators, and connections between said arm and the re-setting device whereby, when the curtain is removed from the front of the casing, the indicators are locked from operation. 12th. In a voting machine, the combination with the casing having a voting aperture therein, a movable cover for said aperture accessible to the voter and having a projection thereon, of a paper roll in the casing, actuating devices for said roll embodying a wheel having projections or teeth, a reciprocating and swinging hook, a movable plate or wing inaccessble to the voter actuated by the cover for moving the hook to engage the projections on the wheel. 13th. In a voting machine, the combination with the casing, having an irregular voting aperture therein, a cover for said aperture, a series of regular ballot indicators, a series of longitudinally movable wedge straps or rods, one for each regular indicator, and one for the cover plate, stops for preventing the operation of more than a predetermined number of straps or rods, and a detachable latch connection between the cover and its wedge strap operating to move the wedge on the latter between the stationary stops but permitting the cover to move freely in the opposite direction. 14th. In a voting machine, the combination with the casing having a voting aperture therein, a movable cover for said aperture, a series of regular ballot indicators, interlocking devices between the regular indicators and the cover, and a detachable latch connection between the cover and the interlocking devices, whereby the interlocking of the regular indicators and the cover will be accomplished when the cover is moved in one direction until the machine is re-set, and means for returning the cover and interlocking devices to normal position. 15th. In a voting machine, the combination with the casing having a voting aperture, a movable cover for said aperture, a series of regular ballot indicators, interlocking devices between the regular indicators and the cover embodying a movable rod or strap for each, a re-setting bar for re-setting the rods or straps after actuation, a latch connection between the cover and its rod or strap, and means for re-setting the cover after actuation. 16th. In a voting machine, the combination with a casing having an aperture, a movable cover for said aperture, having the yielding portion and the projection thereon, of the movable locking rod or strap, the lever connected thereto and adopted to be engaged by the projection on the cover. 17th. In a voting machine, the combination with a casing having an aperture, and a movable cover for said aperture, of a movable locking rod or strap, a lever adapted to be engaged by the cover and having a loose connection with the strap. 18th. In a voting machine, the combination with a casing, having an aperture and a movable cover for said aperture, having the yielding portion and the projection thereof, of a movable locking rod or strap, the pivoted lever loosely engaging the strap and adapted to be engaged by the projection on the cover, and means for re-setting the rod and the cover independently. 19th. In a voting machine, the combination with the casing, having a plurality of irregular voting apertures, movable covers for said apertures, a plurality of series of independent regular ballot indicating devices and registers, corresponding to the latter, but normally unconnected therewith, of a movable member, such as an interlocking rod or strap, for each cover and each regular indicator, and adjustable means for grouping said members to prevent the operation of more than a predetermined number in each group, means for supporting and simultaneously feeding a single web of paper common to all of the voting apertures controlled by the covers, mechanism for simultaneously actuating the registers whose indicators have been operated, re-setting devices for the operated covers, and re-setting devices for the ballot indicators and the movable members of the covers. 20th. In a voting machine, the combination with the casing having a voting aperture, a cover plate for said aperture, and paper feeding devices within the casing embodying a wheel or disc having projections thereon, of a reciprocating hook for engaging said projection, means operated by the cover plate for causing the engagement of the hook, and means for locking the paper feeding devices from operation excepting when the hook is moved. 21st. In a voting machine, the combination with the casing, a series of ballot indicators, a series of registers, and a movable frame for the latter, of the supporting and guiding arms pivoted to said frame and casing and swinging in a vertical plane, and means for moving the register frame on said supports. 22nd. In a voting machine, the combination with the casing, a series of ballot indicators, a series of registers, and a movable frame for the latter, of the yoke resting on the casing swinging in a vertical plane, and carrying the register frame and the rotary cams engaging the register frame to move it toward and from the indicators. 23rd. In a voting machine, the combination with the casing, a series of ballot indicators, a series of registers, and a register frame, of the yokes pivoted to the casing and to the frame and swinging in a vertical plane, the shaft and cams thereon engaging the frame to move it on the yokes. 24th. In a voting machine, the combination with a register frame, and a plurality of registers thereon, each having an actuating member, of a support, a movable ballot indicator having a plurality of shoulders or projections thereon, corresponding to the registers, either but not both of said shoulders being freely movable into and out of co-operative relation with the actuating member of its corresponding register, and means for causing the relative movements of the register frame and support. 25th. In a voting machine, the combination with a register frame, and a plurality of registers thereon, each having an actuating member, of a support, a movable ballot indicator thereon having a plurality of shoulders or projections corresponding to the registers, either but

not both of said shoulders being movable into co-operative relation with the actuating member of its corresponding register, a re-setting device for returning the indicator to normal position out of co-operative relation with any register actuating member, means for operating the re-setting device, and means for causing the relative movements of the register frame and support to actuate the indicated registers. 26th. In a voting machine, the combination with a register frame, two registers thereon, each having an actuating member, of a support, a rotary ballot indicator on the support having two shoulders or projections, either but not both of which may be brought into co-operative relation with its corresponding register, means for causing the relative movements of the frame and support to actuate the indicated registers, and a re-setting device for the indicator. 27th. In a voting machine, the combination with a register frame, two registers thereon, each having an actuating member, of a support, a rotary ballot indicator thereon having two shoulders or projections, either but not both of which are adapted to be moved into co-operative relation with its corresponding register at the same time, a movable re-setting bar having projections engaging the indicator on both sides of its pivot to return it to normal position, and means for operating the support and register frame relatively to cause the actuation of the indicated registers. 28th. In a voting machine, the combination with a plurality of ballot indicators, of a progressively movable locking bar for the indicators arranged to co-operate with and maintain the latter in locked position successively as it is moved in one direction. 29th. In a voting machine, the combination with a plurality of oscillatory ballot indicators, of a progressively moving locking bar for the indicators having shoulders arranged to engage and maintain the indicators in locked position successively as it is moved in one direction to prevent the operation of one or more of them. 30th. In a voting machine, the combination with a duplex oscillatory ballot indicator, movable in two directions from a central position, of a movable locking member having shoulders or projections arranged when moved in one position to engage and prevent the operation of said indicator in either direction. 31st. In a voting machine, the combination with a plurality of duplex oscillatory ballot indicators movable in two directions from a central position, of a progressively movable locking bar having shoulders or projections arranged when moved in one direction to successively engage the indicators and prevent their movement in either direction, and a re-setting bar for returning operated indicators to normal central position. 32nd. In a voting machine, the combination with a plurality of ballot indicators, of a progressively movable locking member for co-operating with them and successively preventing their operation, and a sign or indicator connected to said member for denoting which of said indicators are locked from operation. 33rd. In a voting machine, the combination with a support, a plurality of ballot indicators thereon, a register frame and registers thereon corresponding to the indicators, of the oscillatory cam engaging the register frame and having the pin 65 thereon, the re-setting rod for the indicators, the bar 61 operating said rod having the curved finger 63 and projection 64, substantially as described. 34th. In a voting machine, the combination with the casing support, ballot indicators thereon, the movable register frame, and the oscillatory cams for actuating it toward and from the support, of the operating lever, connected to and moving with said cams, and a curtain or cover for the indicators connected to said lever and operated there by. 35th. In a voting machine, the combination with the casing, the ballot indicators thereon, the movable register frame, and the oscillatory cams for actuating it, of the operating lever connected to and moving with the cams, locking devices for preventing the return of the lever until it has been moved the full distance in either direction, and re-setting devices for the indicators also operated by the lever. 36th. In an interlocking device for voting machines, a red or strap formed of sheet metal and having a tongue punched out from it on one or both sides to thicken the strap at this point. 37th. In an interlocking device for registering machines, and in combination with limiting steps, a strap arranged to operate between said steps having the tongue extending therefrom on one or both sides, and a supporting piece arranged beneath said tongue to thicken the strap at this point. 38th. In a voting machine, the combination with a plate or support having ballot indicating devices thereon, of a movable barrier or cover for preventing access to said plate, and an operating handle connected to said barrier to operate it, of the teethed segment connected to said handle, the reversible double pawl 49 having the projection 52, the yoke 54 co-operating therewith, and the spring 33 for operating the yoke. 39th. In a voting machine, the combination with a casing, having the voting apertures therein, separate movable covers one for each of the apertures, a plurality of series of ballot indicating and registering mechanism, of paper rolls containing a single web of paper common to all of the aperatures, operating devices inaccessible to the voter for moving the paper when any of the covers are operated, and interlocking devices between the covers and indicating and registering devices. 40th. In a voting machine, the combination with a casing, having apertures therein, separate covers one for each of said aperatures, of a single web of paper arranged in proximity to all said apertures, operating devices for operating the paper web, and connections inaccessible to the voter between the covers and said operating devices for feeding the paper when any of the covers are operated. 41st. In a voting machine, the combination with a casing, a plurality of regular ballot indicators and registers therefor arranged in office and party series, of an irregular voting device embodying apertures in the casing, and separate covers therefor, one for each office series, a single web of paper in proximity to all of the apertures and feeding rollers for said paper, means for simultaneously operating the regular registers and the paper feeding rollers. 42nd. In a voting machine, the combination with the casing, having voting devices thereon, of the curved curtain guide hinged to the casing and arranged to be turned parallel therewith or at an angle thereto, and a curtain movable on said guide. 43rd. In a voting machine, the combination with a plurality of movable regular ballot indicators, an irregular or independent indicator movable into and out of voted position, and interlocking mechanism between the indicators for preventing more than a predetermined number from simultaneously occupying voted position, said regular indicators being capable of movement into and out of voted position, without recording a vote, and said irregular indicator operating the interlocking mechanism when moved in one direction only. 44th. In a voting machine the combination with a casing having an aperture and a recording surface arranged in the casing and adapted to be exposed through said aperture, and a cover for said aperture, of means for intermittently moving said recording surface and a loose connection between the cover and said means, which causes the cover to connect the operating means with the recording surface on the opening movement only, the connections between the cover and operating means being inclosed within the casing. 45th. In a voting machine the combination with a casing having an aperture, a plurality of movable regular ballot indicators, a movable cover for the aperture and interlocking mechanism between the indicators and cover, said regular indicators being capable of movement into and out of voted position without recording a ballot and said cover being movable into and out of voted position but capable of operating the interlocking mechanism when moved in one direction only.

No. 68,110. Voting Machine. *(Machine à voter.)*



Frederick Fargo Church, trustee, and Alfred J. Gillespie, both of Rochester, New York, U.S.A., 13th July, 1900; 6 years. (Filed 28th May, 1900.)

Claim.—1st. In a voting machine, the combination with the casing having a series of apertures therein, a series of separately operable movable covers, one for each of said apertures, a movable barrier for preventing access to the front of the casing, connections between it and the covers for re-setting the latter, of a frame removable bodily from the casing and embodying the paper rollers, and a web support in rear of the apertures, a roller operating device actuated by the movement of the barrier, and detachably connected with the paper feeding rollers by the movement of any of the cover plates, whereby the frame and rollers may be bodily removed from the casing. 2nd. In a voting machine, the combination with the casing, having a series of apertures therein, a series of separately operable movable covers for said apertures, and a movable barrier for preventing access to the front of the casing, of a frame removable bodily from the casing and embodying paper rollers, and a paper web support in rear of the apertures, a roller actuator operated by the movement of the barrier, connections between said actuator and the covers for connecting the actuator with the roller when any cover is operated. 3rd. In a voting machine, the combination with a casing, having a series of apertures therein, and a series of separately operable movable covers for said apertures, of a frame bodily removable from the casing and embodying paper holding rollers and a web

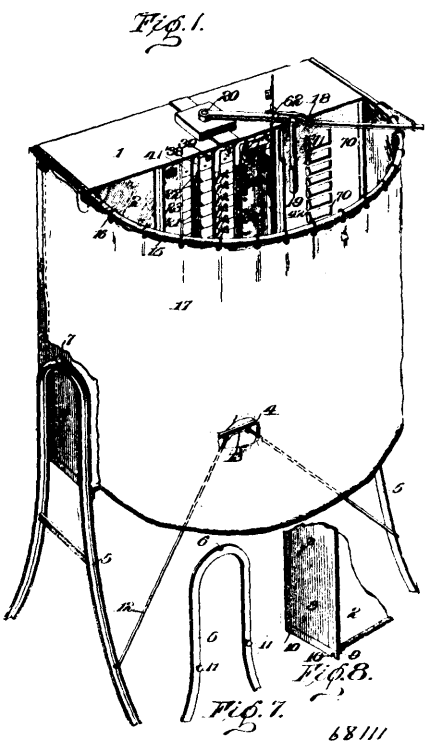
support, said rollers carrying a web of paper extending in rear of all the casing apertures, means for operating the feeding rollers and controlled by the operation of any of the covers, and detachable securing devices for holding the frame in the casing. 4th. In a voting machine, the combination with the casing having the apertures and covers at the front therefor, and the flanges at the rear, of the removable frame mounted in the casing having the web rollers and web support thereon, the projection on the frame for engaging one of the flanges at the rear of the casing, and the catch arranged between the frame and casing for locking the frame in position within the casing. 5th. In a voting machine, the combination with a casing having the apertures and covers therefor at the front, and the flanges at the rear, of the removable frame embodying the end plates having the roller guides, the rollers therein, the plate on the frame engaging one flange in the casing, and the spring catch 68 engaging the other flange for locking the frame in position. 6th. In a voting machine, the combination with a casing having the apertures and covers therefor, of the frame embodying the end plates having the guides thereon, the central shaft, the paper support, the rollers guided on the end plates, and the springs, each composed of a single piece of spring material having both the ends bearing on the rollers to move the latter toward the central shaft. 7th. In a voting machine, the combination with a casing having the apertures and covers therefor at the front, and the flanges at the rear, and the inclined centering plates 64 at the bottom, of the removable frame having the web support, the shaft and operating discs, the web rollers guided in the frame, and the springs operating upon them, and the spring catch holding the frame removably in position between the centering plates. 8th. In a voting machine, the combination with a casing having the apertures and covers therefor, of the frame embodying the end plates having roller guides thereon, and the pins or projections, the paper support, the central shaft, the paper rollers arranged in the guides on the plates, and the spring arms co-operating with the rollers and adapted to be engaged with the pins on the plates when desired to permit the removal of the rollers. 9th. In a voting machine, the combination with the casing having apertures, the covers for the latter, and the centering plates or flanges 64, or the removable frame having a paper support and paper feeding rollers thereon, and the spring catch engaging the casing. 10th. In a voting machine, the combination with the casing having an aperture, a movable cover for said aperture, and paper holding and feeding devices arranged in the casing in rear of the aperture, of a series of ballot indicators, interlocking devices between said indicators and the cover, a movable member, such as hook 46, for actuating the paper feeding devices, a movable arm, such as 66, inaccessible to the voter for connecting the member with the feeding device, an intermediate movable part arranged between the cover and the interlocking devices and operable by the movement of the former in one direction only, said intermediate part operating the member into engagement with the feeding devices by a movement in one direction only. 11th. In a voting machine, the combination with the casing having an aperture, paper holding and feeding devices in rear thereof, of the cover plate, a pivoted lever, such as 23, the interlocking rod loosely connected thereto, the movable hook adapted to engage the paper feeding devices, and a means operated upon by the lever and operating the hook for causing the latter to engage the feeding devices when the cover is operated in one direction. 12th. In a voting machine, the combination with the casing having an aperture and paper holding and feeding devices in rear thereof, a movable member for controlling the operation of the feeding devices, of the cover for the aperture, the interlocking rod, a movable part separate from the cover, the controlling member and the interlocking rod, but serving to operate the controlling member and the interlocking rod in one direction only, and capable of operation in one direction only by the cover. 13th. In a voting machine, the combination with the casing having the aperture, the cover for the aperture, the lever operated in one direction only by the cover, of the interlocking rod moved in one direction only by the lever, and the pivoted wing co-operating directly with the lever and moved in one direction only thereby. 14th. In a voting machine, the combination with a casing having apertures therein, covers for the apertures, a plurality of series of regular ballot indicators, a paper holding and feeding device in rear of the apertures, a movable member for operating the paper feeding devices, and interlocking devices between the regular indicators of each series and one of the covers embodying an interlocking rod for each cover and indicator, of two detachable connections between each cover and its interlocking rod, whereby the rod will be moved in one direction only by the lever, a movable wing operating when moved in one direction to connect the movable member with the paper feeding devices, said wing being operated by any of the covers in one direction only, and being out of direct connection with the interlocking rods of the covers. 15th. In a voting machine, the combination with the casing having the apertures, covers therefor, of the levers 23, latch connections between the covers and levers, the interlocking rods 26, loosely engaging the levers and moved in one direction only by them, and the wing engaging the levers and operated in one direction only thereby, a paper feeding device, a movable operating member, and connections between said wing and member for moving the latter into engagement. 16th. In a voting machine, the combination with the casing having the apertures, covers therefor, a paper feeding device in rear of the apertures and embodying a movable shaft, of a longitudinally movable and swinging hook adapted to co-operate with the shaft, means for throwing the hook into engagement with the shaft, and actuated by the movement of a cover, and means for moving the hook out of engagement, and spring devices for holding the hook in either position of adjustment. 17th. In a voting machine, the combination with the casing having the apertures, the covers therefor and paper holding and feeding devices in rear of the apertures embodying a toothed wheel, of a longitudinally and laterally movable bar, such as a pitman, a hook pivoted thereon, means actuated by the covers for moving the hook into engagement with the wheel, and means for disengaging the hook when the pitman is moved in one direction. 18th. In a voting machine, the combination with the casing having the apertures, the covers therefor, and paper holding and feeding devices in rear of the apertures embodying a toothed wheel, of a longitudinally and laterally movable bar, a hook pivoted thereon, a spring for holding the hook in two positions, a stationary abutment engaged by the hook to disengage it from the wheel when moved in one direction, and means operated by the covers for connecting the back with the wheel. 19th. In a voting machine, the combination with a casing, voting mechanism in the casing, a curtain guide on the casing, and a curtain movable on the guide, of an operating arm controlling the voting mechanism, and a removable cover or screen arranged over the curtain guide. 20th. In a voting machine, the combination with a plurality of movable ballot indicators, an equal number of registers with which the indicators are arranged to co-operate, and a single means for returning any operated indicator to normal position without actuating its register. 21st. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators, one for each register, each adapted to be moved into co-operative relation with its register, and means for causing the simultaneous operation of the registers, whose indicators have been operated, of a single means for returning all said operated indicators to normal position without operating the registers. 22nd. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators, each adapted to be moved into co-operative relation with its register, of a movable part or indicator visible from the exterior of the machine, and adapted to be moved by the operation of any of the indicators and arranged, when it is moved, to return the operated indicators to normal position without operating their registers. 23rd. In a voting machine, the combination with a plurality of registers, a plurality of corresponding ballot indicators movable into and out of co-operative relation with their registers, of means for causing the simultaneous operation of the registers, whose indicators have been operated, means for re-setting all the operated indicators after the actuation of their registers, and an independent re-setting device operable from the exterior of the machine for restoring operated indicators to normal position before the actuation of the registers. 24th. In a voting machine, the combination with a plurality of series of registers, a plurality of series of ballot indicators movable into and out of co-operative relation with their registers, interlocking mechanism for preventing the operation of more than a predetermined number of indicators in each series, and straight ticket mechanism for simultaneously operating one of the indicators in each series, and means for causing the operation of the registers whose indicators have been operated, of means for restoring or re-setting the operated indicators to normal position before the actuation of the registers. 25th. In a voting machine, the combination with a plurality of registers, a corresponding plurality of ballot indicators movable into and out of co-operative relation with their registers, the apertured rods connected to the indicators and freely movable singly in opposite directions, of the bar co-operating with said rods, and means exterior of the machine for operating said bar to return the indicators without operating the registers. 26th. In a voting machine, the combination with a plurality of registers, a corresponding plurality of ballot indicators movable into and out of co-operative relation with their indicators, and longitudinally movable interlocking rods connected to the indicators, of a movable bar engaging the rods, the rock shaft connected to the bar and having the operating and indicating handle exterior of the machine casing. 27th. In a voting machine, the combination with a plurality of registers, a corresponding plurality of ballot indicators adapted to be moved into and out of co-operative relation with their registers, the interlocking rods, the connections between them for preventing the operation of more than a predetermined number, of means for causing the simultaneous operation of the registers whose indicators have been operated, an indicator re-setting bar actuated by said means, and an auxiliary indicator restoring bar co-operating with the indicating interlocking rods, and having an operating handle at the exterior of the casing, said restoring bar being capable of actuation in one direction independently of the main re-setting bar. 28th. In a voting machine, the combination with a movable indicator, of an interlocking rod connected thereto consisting of a strip of metal having an engaging shoulder extending laterally of the rod, and a plate doubled over on opposite sides of the strip and co-operating with the shoulder to prevent relative longitudinal movement. 29th. In a voting machine, the combination with a movable indicator, of an interlocking rod connected thereto consisting of a strip of metal having the ears or shoulders on opposite sides, and the apertured plate engaging said shoulders and bent down upon the opposite sides of the strip. 30th. In a voting machine, the combination with a movable indicator, of an interlocking rod connected thereto consisting of a strip of metal having notches formed in the sides and forming shoulder, the plate 14 hav-

ing the aperture and the narrow portions at the sides engaging the notches on the strip and bent down upon opposite sides of the strip. 31st. In a voting machine, a ballot indicator embodying an oscillatory stud and a single plate of metal bent as shown to form the tongue 6, curved finger 7, abutment 8 and slot 9, in combination with a relatively movable register having a slotted actuator co-operating with the finger and abutment. 32nd. In a voting machine, a double oscillatory indicator embodying a single plate 5^a cut and bent to form the abutments 8^a, fingers 7^a and flattened at one side, substantially as described, in combination with two registers movable rotatively to the indicator and having the slotted actuators co-operating with the abutments and fingers. 33rd. In a voting machine, the combination with a casing having a series of apertures and covers therefor, of a plurality of series of ballot indicators, interlocking mechanism between the covers and indicators embodying longitudinally movable interlocking rods, and locking devices for positively engaging and locking the rods connected to the cover. 34th. In a voting machine, the combination with a casing having an aperture, a movable cover therefor, a longitudinally movable interlocking rod connected to and operated by the cover, and a catch thereon adapted to engage with a stationary stop, of a series of ballot indicators, each having interlocking rods, and means for preventing the operation of more than a predetermined number of covers or indicators. 35th. In a voting machine, the combination with a casing having irregular or free ballot indicating devices embodying movable parts, a plurality of series of ballot indicators, interlocking rods connected to the said movable parts and indicators, of adjustable abutments with which the interlocking rods co-operate to form groups, and movable securing devices for the abutments adapted when moved to one position to co-operate with the rods of the irregular balloting device to lock it. 36th. In a voting machine, the combination with a plurality of series of ballot indicating devices, a series of movable irregular or free ballot indicating devices, and interlocking rods for all of said devices, of abutments between which the rods operate in groups, the reversible pins for securing the abutments having the projections for engaging and locking the irregular indicator rods when turned to one position. 37th. In a voting machine, the combination with the channel bars, the blocks between them, and the abutments 12, of the interlocking rods, and the reversable abutment-locking pin having the projection for engaging an adjacent interlocking rod and preventing its operation when turned to one position. 38th. The combination with a series of interlocking rods, the separating blocks or plates, and the stationary abutments, of the wedges or enlargements flexibly connected to the rods and arranged to be moved between the separating blocks or plates by the longitudinal movement of the rods. 39th. In a voting machine, the combination with a plurality of ballot indicators, an equal number of registers co-operating therewith but not capable of direct operation by the movement of the indicators alone, and means causing the subsequent operation of the registers whose indicators have been actuated and left in voted position, of an indicating mechanism for denoting exteriorly of the machine the operation of any ballot indicator before the operation of the register. 40th. In a voting machine, the combination with a plurality of ballot indicators, an equal number of registers co-operating therewith but incapable of direct operation by the movement of the indicators to voted position alone, and means for causing the subsequent operation of the registers whose indicators have been actuated and left in voted position, of an indicating device operated by any of the ballot indicators and denoting to persons other than the voter the operation of the indicator.

No. 68,111. Voting Machine. *(Machine à voter.)*

Frederick Fargo Church, trustee, and Alfred J. Gillespie, both of Rochester, New York, U.S.A., 13th July, 1900; 6 years. (Filed 28th May, 1900.)

Claim.—1st. In a voting machine, the combination with a casing having the notches and projections on the sides, of the detachable supporting legs having the co-operating notches and projections, and the brace rods connected thereto for engaging the casing. 2nd. In a voting machine, the combination with the casing having the flanges at the lower edge of the sides, of the detachable supporting legs provided with projections for engaging the flanges and extending upwardly along the sides of the casing. 3rd. In a voting machine, the combination with the casing having the flanges at the lower edges of the sides, and the projections above them, of the detachable supporting legs having the notches in the top, the projections engaging the flanges on the casing, and the brace rods on the legs engaging the casing. 4th. In a voting machine, the combination with the casing having the notched flanges at the lower edges of the sides, and the headed projections above them, of the legs having the notches at the top, the headed projections co-operating with the notches in the flanges, and the brace rods connected thereto. 5th. In a voting machine, the combination with the casing, of the detachable supporting legs formed of single pieces of angle iron extending up the sides of the casing and connected thereto at two points, and the braces secured to the legs and casing. 6th. In a voting machine, the combination with a plurality of ballot indicating devices having projecting studs, of a cover plate for said indicators having apertures adapted to receive said studs to hold the plate in position. 7th. In a voting machine, the combination with a plurality of movable ballot indicating devices having projecting studs, and a movable straight ticket indicator, of a cover plate having apertures for receiving the studs on the indicators and supported



thereby, and adapted to engage and prevent the operation of the straight ticket indicator. 8th. In a voting machine, the combination with a plurality of movable ballot indicating devices, and a movable straight ticket indicator, of the cover plate for engaging the indicators having the flange at one end, and the longitudinally extending flange. 9th. In a voting machine, the combination with a plurality of movable ballot indicators, and a locking bar for preventing their operation, a movable arm co-operating with the bar at one end to lock it, and a locking rod connected to said arm and having the finger thereon co-operating with the other end of the bar to lock it. 10th. In a voting machine, the combination with a plurality of movable ballot indicators, and a locking bar for preventing their operation having the slotted end, a movable arm co-operating with the bar at one end to lock it, a locking rod connected to the arm and having a finger extending through the slot in the bar, and a stationary abutment with which said last-mentioned arm co-operates. 10th. In a voting machine, the combination with a plurality of movable ballot indicators, and a locking bar for preventing their operation, having the shoulder and the slotted end, of the oscillatory shaft having the arm engaging the shoulder on the bar, the locking rod connected to the shaft, and having the finger operating in the slot in the bar, and the stationary abutment. 12th. In a voting machine, the combination with a plurality of ballot indicators, and the locking bar co-operating therewith and moved thereby, of the oscillatory shaft, the spring for operating it, and means operated by the shaft for locking and unlocking the bar. 13th. In a voting machine, the combination with a plurality of ballot indicators, and the locking bar co-operating therewith and thereby, of the movable arm co-operating with the locking bar, a locking device pivoted on the arm and having one end movable with the bar, and a stationary abutment with which the locking device engages. 14th. In a voting machine, the combination with a plurality of series of ballot indicators, and the locking bar co-operating therewith and moved thereby, a straight ticket operating device for operating a series of ballot indicators, of a locking device for arresting the locking bar, and moving with the latter, and connections between the straight ticket operating device and the locking device for releasing the latter when the former is operated. 15th. In a voting machine, the combination with a plurality of ballot indicators, and a locking bar movable therewith, having the shoulder and the bevelled portion beside it, and the slotted portion, of a stationary abutment having the bevelled portion, the locking rod having the finger operating in the slot in the bar and co-operating with the abutment, and a movable arm co-operating with the bar and connected to the rod. 16th. In a voting machine, the combination with a plurality of series of ballot indicators, and the interlocking rods therefor, having the thickened portions, of abutments between which the rods extend, devices for detachably securing the abutments dividing the rods into groups, and an additional compensating plate adapted to be inserted between the rods for preventing the operation

of more than one for each group. 17th. In a voting machine, the combination with a plurality of series of ballot indicators, and the interlocking rods therefor having the thickened portions, of the channel, the separating plates or blocks arranged in the channel between which the rods extend, the abutments in the channel, means for detachably holding them stationary dividing the rods into groups, and the compensating plate having the extended ends arranged in the channel, and the projecting shank. 18th. In a voting machine, the combination with the ballot indicators, interlocking rods connected thereto and having the thickened portions, the channel, the abutments, and means for securing them rigidly when desired, and the compensating plate having the ends adapted to fit in the channel, the shank and the laterally extending outer end. 19th. In a voting machine, the combination with the ballot indicators, the interlocking rods connected thereto having the thickened portions composed of the bent plates extending on opposite sides of the rods, one of said rods having a single plate thereon, and the adjacent rods having two plates on opposite sides of the plane in which the single plate extends, of the separating plates between the rods and the abutments for limiting the number of rods, it is permissible to operate. 20th. In an interlocking mechanism, the combination with two stationary abutments, a series of movable blocks or plates, of interlocking rods extending between the blocks having the enlargements thereon, the enlargements an the proximate sides of adjacent rods being out of line with each other and together thicker than the blocks. 21st. In an interlocking mechanism, the combination with a series of movable blocks or plates, of interlocking rods extending between the blocks and having enlargements thereon, those on the proximate sides of adjacent rods being out of line with each other and together thicker than the blocks. 22nd. In a grouping device, the combination with movable blocks, of interlocking rods extending between blocks having enlargements or projections on opposite sides, those on adjacent rods being arranged to break joints with each other. 23rd. In an interlocking mechanism, the combination with blocks or plates, of interlocking rods extending between them having enlargements thereon, those on one rod breaking joints with the ones on the next adjacent one. 24th. The combination with a series of ballot indicators, interlocking rods connected thereto, separating blocks or plates between which the rods extend and stationary abutments, of enlargements on the interlocking rods adapted to be moved between the separating blocks, and those on adjacent rods being arranged to break joints. 25th. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators movable into co-operative relation with the registers to indicate a vote, and means for subsequently actuating the registers whose indicators have been moved to and left in voted position, of an alarm mechanism connected to and operated by any of the indicators to sound an alarm when any of them have been moved into co-operative relation with their registers. 26th. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators movable into co-operative relation with the registers to indicate a vote, and means for actuating the registers whose indicators have been moved to and left in voted position, of an alarm mechanism adapted to sound a succession of alarms connected to and operated by any of the indicators when moved into co-operative relation with their registers, one of said alarms being sounded when the indicator is first moved to co-operating position and another when the movement is completed. 27th. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators movable into co-operative relation with the registers to indicate a vote, and means for subsequently actuating the registers of the indicators moved to and left in voted position, of a bar operated by the movement of any of the indicators, and an alarm mechanism actuated thereby for sounding an alarm when any of the indicators are operated. 28th. In a voting machine, the combination with a plurality of ballot indicators, a movable member co-operating with them, and means for locking it to prevent the operation of any of them, of an indicating device connected to said member for indicating the operation of any of said indicators to persons other than the voter. 29th. In a voting machine, the combination with a plurality of ballot indicators, a bar co-operating with the indicator, and means for locking it to prevent the operation of any of them, of an indicating device operated by the movement of the bar to indicate to persons other than the voter the operation of any of the said indicators. 30th. In a voting machine, the combination with a plurality of series of ballot indicators, and a movable member operated by the movement of any of the indicators, of a locking device for the member, means for unlocking the member, and operating a plurality of the indicators, and an indicating device actuated when the member is unlocked to indicate the fact to persons other than the voter. 31st. In a voting machine, the combination with a plurality of series of ballot indicators, and a movable member operated by the movement of any of the indicators, of a locking device for the member, means for unlocking the member and operating a plurality of indicators, and an audible alarm actuated when the member is unlocked to indicate the fact to persons other than the voter. 32nd. In a voting machine, the combination with a plurality of series of ballot indicators, and means for locking them, of a straight ticket indicator connected to the locking devices for releasing the indicators when it is operated and an indicating device for indicating the fact to persons other than the voter, when said straight ticket indicator is operated. 33rd. In a voting machine, the combination with a plurality of series of ballot indicators movable into and out of voted position, means for locking them, a straight ticket indicator connected to the locking devices for releasing the indicators when it is operated and operating to voted position a number of the indicators, registering mechanism with which the indicators are adapted to co-operate when moved to voted position, and means for subsequently operating the registers of the indicators that are left in voted position, of an indicating device for indicating the fact to persons other than the voter when a straight ticket device has been wholly or partially operated. 34th. In a voting machine, the combination with a plurality of ballot indicators separately movable into and out of voted position, registers adapted to co-operate therewith, means for operating the registers whose indicators are left in voted position, a movable bar with which the indicators co-operate, and an alarm mechanism adapted to be sounded when the bar is moved. 35th. In a voting machine, the combination with a plurality of ballot indicators movable by the voter into and out of voted position, and registers with which the indicators co-operate, of a movable bar operated by the movement of the indicators to voted position, the bell or alarm, the arm having a projection thereon, and the projection with which the one on the arm co-operates, said projections being movable relatively by the operation of the bar to cause the alarm to be sounded when an indicator is moved to voted position. 36th. In a voting machine, the combination with a plurality of ballot indicators, a movable bar operated by the movement of the indicators to voted position, the arm on the bar, the bell thereon, and the latch, of the stationary projection with which the latch co-operates when moved in one direction. 37th. In a voting machine, the combination with a ballot indicator movable into and out of voted position, and a register therefor with which the indicator co-operates when moved to and left in voted position, and means for operating the register, of an alarm mechanism operated by the movement of the indicator to voted position for sounding a double alarm during the complete movement. 38th. In a voting machine, the combination with the movable bar, the arm pivoted thereon having two projections, and the bell, of a stationary projection with which those on the arm co-operates during its movement. 39th. In a voting machine, the combination with the movable bar, the arm pivoted thereon having a projection, the bell and the bell hammer normally out of contact with the bell, of the stationary projection with which the one on the arm co-operates when moved in one direction. 40th. In a voting machine, the combination with registering devices, ballot indicators adapted to be moved intoan d out of co-operative relation with the registers, and means for operating the registers, whose indicators are left in co-operative relation therewith, a locking device for the indicators, straight ticket ballot indicating devices connected with said locking device and releasing the latter when a straight ticket ballot is indicated, of limited franchise voting devices, and an alarm mechanism actuated by the operation of a straigh tticket device. 41st. In a voting machine, the combination with a plurality of registers, a corresponding plurality of ballot indicators, the interlocking rods for the latter having the apertures, of a plurality of limited franchise registers, a corresponding plurality of indicators having apertures interlocking rods similar to the first-mentioned ones, and a locking-bar co-operating with the first-mentioned interlocking rods, and having the reduced portion passing through the apertures in the locking bar. 42nd. In a voting machine, the combination with the casing, of the two detachable supporting legs formed of single pieces of angle iron extending upon and detachably fastened to the sides of the casing. 43rd. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators movable into co-operative relation with the registers to indicate a vote, means for subsequently operating the registers of the indicators left in voted position, a device for indicating votes for a plurality of persons, and an alarm mechanism for indicating to other persons than the voter the operation of said last-mentioned indicating device. 44th. In a voting machine, the combination with a plurality of registers, a plurality of ballot indicators, movable into and out of co-operative relation with these registers to indicate a vote, means for subsequently operating the registers of the indicating left in voted position, a device for indicating votes for a plurality of persons, and an alarm mechamism for indicating to other persons than the voter, the operation of said last-mentioned indicating devi e. 45th. In a voting machine, the combination with a plurality of individual candidate ballot indicators, a plurality of straight ticket ballot indicators, and locking devices for preventing the separate operation of the individual ballot indicators, of a movable member actuated by the voter, a locking device for preventing the operation of said member, connections between the two locking devices and the straight ticket ballot indicators, whereby when one of the latter is operated the individual candidate indicators and the movable member are released. 46th. In a voting machine, the combination with a plurality of individual candidate registers, a plurality of ballot indicators therefor, freely movable into and out of co-operative relation with their registers, interlocking devices between the indicators for candidates for the same office to prevent the operation of more than a predetermined number, a series of straight ticket ballot indicators, and locking devices for preventing the separate operation of the individual ballot indicators, of a movable member operated by the voter for causing the simultaneous actuation of the registers whose indicators are operated, a locking device for preventing the operation of said number, and connections between the straight ticket indicators and the two locking devices releasing the latter when one of said straight ticket indicators is

operated. 47th. In a voting machine, the combination with a plurality of series of ballot indicators, those devoted to candidates of the same party being arranged in the same series, and interlocking devices between the indicators in each series devoted to candidates for the same office, of registering devices corresponding to the indicators, a movable member controlling the co-operative action of the indicators and registers, a lock therefor, a locking device for retaining the ballot indicators, a straight ticket device for operating each of the party series of indicators simultaneously, and connections between the indicator-locking device and the lock for the movable member, whereby the latter will be released only when the straight ticket device is actuated. 48th. In a voting machine, the combination with a plurality of series of individual candidate ballot indicators, a straight ticket indicator for each series, a movable barrier preventing access to the indicators, and a member controlling it, of a locking device for holding the controlling member, a locking device for retaining all the indicators, and between the straight ticket indicators and both the locking devices, whereby the latter will be released only when a straight ticket indicator is moved. 49th. In a voting machine, the combination with a plurality of series of individual candidate ballot indicators, a straight ticket indicator for each series, a register for each individual indicator, and a movable member controlling the operative relation of the indicators and their registers, of a lock for the movable member, a lock for the indicators, and connections between the straight ticket indicators and the locks, whereby the latter will be released only when the straight ticket indicators are operated. 50th. In a voting machine, the combination with a plurality of series of ballot indicators, interlocking devices between one or more indicators of each series to prevent the operation of more than a predetermined number in any one group, a locking bar common to all the indicators, and a lock therefor, of a movable member operated by the voter, a lock therefor, a movable member for each series adapted to operate all the indicators of the series simultaneously, and connections between said members and the locks for releasing the latter when a series of indicators is operated. 51st. In a voting machine, the combination with a plurality of series of ballot indicators having the rods, the locking bar engaging the rods, and a lock for the bar, of a movable member operated by the voter, a lock therefor, connections between the two locks, and means operated by the voter for disengaging the locks prior to the operation of the indicators to indicate the vote. 52nd. In a voting machine, the combination with a plurality of series of independently movable ballot indicators, means for operating all the indicators of any series simultaneously, and a lock for retaining the indicators from operation, of a movable member adapted to be operated by the voter, a lock for retaining it, connections between the two locks, and means operated by the movement of any series of indicators for first releasing the indicator lock and then by the continued movement of the indicators releasing the lock for the movable member. 53rd. In a voting machine, the combination with a plurality of series of ballot indicators, the rods connected thereto, the locking bar co-operating with the rods, the two locks co-operating with the bar at separated points, and connections between them for causing their simultaneous operation, and means for causing the operation of said locks to release the locking bar when all the indicators of one series are operated. 54th. In a voting machine, the combination with a plurality of series of ballot indicators having the rods, interlocking mechanism between the rods of one or more indicators in different series forming groups and preventing the operation of more than a predetermined number of indicators in each group, a locking bar for engaging the rods, a lock for retaining it, and a rod re-setting bar, of a plurality of series of registers, one for each indicator, a register frame, means for moving the registers and frames relatively and embodying a movable member operated by the voter, a lock for said movable member, connections between said lock and the locking bar lock, straight ticket operating devices for causing a simultaneous operation of the indicators of a series, and means for releasing both the before mentioned locks when the straight ticket devices are operated. 55th. In a voting machine, the combination with a plurality of individual candidate ballot indicators, a straight ticket indicator, and locking devices for preventing the separate operation of the individual ballot indicators, of a movable member, a locking device for preventing the operation of said member, connections between said two locking devices and the straight ticket ballot indicator, whereby when the latter is operated the individual candidate indicators are released. 56th. In a voting machine, the combination with a plurality of individual candidate ballot indicators, a straight ticket indicator, and locking devices for preventing the separate operation of the individual ballot indicators, of connections between said locking devices and the straight ticket indicator, whereby when the latter is operated, the individual indicators are released. 57th. In a voting machine, the combination with a plurality of series of ballot indicators, each indicator movable into and out of voted position, interlocking devices between the indicators in the same series to prevent the operation to voted position of more than a predetermined number, and devices for locking the indicators, of a plurality of straight ticket indicators, and connections between them and the locking devices, whereby the indicators are released only after the operation of a straight ticket indicator. 58th. In a voting machine, the combination with a plurality of series of individual candidate ballot indicators, each indicator movable into and out of voted position, interlocking devices between the indicators in the same series to prevent the operation to voted position of more than a predetermined number, and devices for locking the indicators from operation, of a plurality of straight ticket indicators, each arranged to move to voted position, the indicators of the candidates of a party, and connections between said indicators and the locking devices, whereby, when a straight ticket indicator is operated, the individual candidate indicators are released and may be moved as desired. 59th. In a voting machine, the combination of a plurality of ballot indicators devoted to candidates for the same office, a plurality of registers, one for each indicator, and connections between registers devoted to the same candidates for causing their simultaneous operation. 60th. In a voting machine, the combination of a plurality of ballot indicators devoted to candidates for the same office, a plurality of registers, one for each indicator, and detachable connections between registers devoted to the same candidate for causing their simultaneous operation. 61st. In a voting machine, the combination with a plurality of ballot indicators arranged in party and office lines, said lines extending at an angle, a plurality of registers corresponding to the indicators, and means for connecting for simultaneous operation the registers devoted to the same candidates in different party lines. 62nd. In a voting machine, the combination with a plurality of voting devices for the candidates arranged in party lines, and connections between the voting devices devoted to the same candidate in different party lines for causing their simultaneous operation. 63rd. In a voting machine, the combination with a support or plate, and a plurality of movable ballot indicators thereon, of a plurality of registering devices corresponding to the indicators, a support for the registering devices movable relatively to the indicator support to actuate the registering devices whose indicators have been operated, and connections between two or more of the registering devices for causing their simultaneous operation when the indicators of either have been actuated. 64th. In a voting machine, the combination of a series of ballot indicators, a series of registers controlled thereby, interlocking devices for preventing the operation of more than a predetermined number of indicators, and connections between two or more registers in the series to cause their simultaneous actuation. 65th. In a voting machine, the combination of a series of ballot indicators, a series of registers controlled thereby, interlocking devices between the indicators for preventing the operation of more than a predetermined number, means for causing the relative movements of the registers, and indicators to actuate the registers of the operated indicators, and connections between two or more of the registers to cause their simultaneous actuation when the indicator of either is operated. 66th. In voting machine, the combination with the support, a series of ballot indicators thereon independently adjustable to voting position, and interlocking devices for preventing the operation of more than a predetermined number, of a movable frame, a series of registers thereon corresponding to the indicators, each having an actuating member arranged to co-operate with an indicator when the latter is operated, and positive connections between two or more of the register actuating members for causing their positive operation. 67th. In a voting machine, the combination with a series of registers, each having an actuating member, of a rock shaft having the arms thereon adapted to connect positively with the actuating members of the registers to cause the simultaneous operation of two or more when any one of the actuators is operated. 68th. In a voting machine, the combination with a series of registers, each having an actuating member, of a rock shaft having independently adjustable arms thereon adapted to be connected with the register actuating members to couple two or more for simultaneous operation. 69th. In a voting machine, the combination with a series of registers, each having an actuating member, of a rock shaft, a series of arms thereon corresponding to the register actuators adjustable radially of the shaft, and adapted to be connected to the register actuators. 70th. In a voting machine, the combination with a series of registers, each having an actuating member, of the rock shaft having the apertures, and the arms having the parallel portions passing through the shaft and adapted to be connected to the register actuators. 71st. In a voting machine, the combination of a series of voting devices, and means for connecting two or more of said devices, when devoted to the same candidate, to cause their simultaneous operation. 72nd. In a voting machine, the combination with a register support, registers thereon having actuators, an indicator support, movable ballot indicators thereon adapted to co-operate with the register actuators, and means for operating the supports relatively, of a rock shaft journalled on the register support and detachably connected to one or more register actuators.

No. 68,112. Voting Machine. *(Machine à voter.)*

Frederick Fargo Church, trustee, and Alfred J. Gillespie, both of Rochester, New York, U.S.A., 13th July, 1900; 6 years. (Filed 28th May, 1900.)

Claim.—1st. In a voting machine, the combination with a movable ballot indicator, of a register, and means for moving said register and indicator relatively toward and from and laterally of each other to cause the actuation of the register and re-setting of the indicator. 2nd. In a voting machine, the combination with a support, and a ballot indicator movable thereon, of a register support, a register thereon having a movable actuator adapted to co-operate with the ballot indicator, said register and indicator supports being movable

relatively to cause the complete operation of the register and the re-setting of the indicator. 3rd. In a voting machine, the combina-

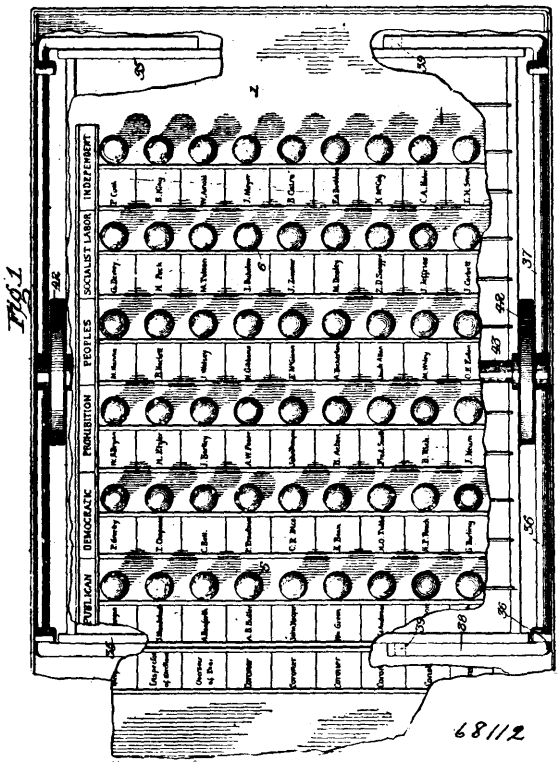


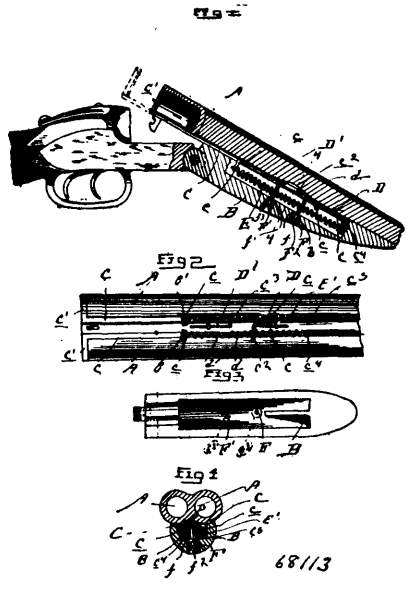
Fig 1

tion with a register support, a register thereon having a movable actuator, of a support, a movable ballot indicator thereon co-operating with the actuator to attach it to the indicator support, said supports being rotatively movable and operating to cause the operation of the register and to re-set the indicator to normal position during the complete cycle of their relative position. 4th. In a voting machine, the combination with a register support, a register thereon having a movable actuator, of a support, a movable ballot indicator thereon co-operating with the actuator to attach it to the indicator support, said supports being relatively movable to cause the operation of the register and said register support engaging the indicator to return it to normal position during a complete cycle of operation. 5th. In a voting machine, the combination with a register support, a register thereon provided with an actuator co-operating positively with the register to actuate it one step when moved relatively thereto in two directions, of a support, a ballot indicator movable thereon and operating when moved to connect the register actuator to the support, said indicator and register supports being relatively movable in two directions to actuate the register and in a different direction to re-set the indicator. 6th. In a voting machine, the combination with a register support, a register thereon, and a register actuator, of a support, a movable indicator on the support for detachably connecting the actuator thereto, said register and indicator supports being movably relatively toward and from and laterally of each other and thereby cause a complete operation of the register and re-set the indicator during a complete cycle of movement. 7th. In a voting machine, the combination with a register support, a register thereon, of a support, a movable ballot indicator thereon co-operating when set or moved with the register, said supports being relatively movable to cause the operation of the register when the indicator is set, and direct connections between the register frame and indicator for causing the re-setting of the latter after the actuation of the register during a complete cycle of movement. 8th. In a voting machine, the combination with a register support, a plurality of registers thereon, of a support, a plurality of ballot indicators thereon corresponding in number with registers and co-operating with the latter when moved to voted position, interlocking mechanism between the indicators, said register and indicator supports being relatively movable to cause the actuation of the registers whose indicators are moved to voted position, and said register support co-operating directly with the indicators that have been moved to return them to normal position, whereby the registers are actuated and the indicators re-set during a complete circle of the relative movement of the two supports. 9th. In a voting machine, the combination with a register support and a plurality of registers thereon, of an indicator support, ballot indicators movable thereon corresponding in number and position with the registers an ' adapted to co operate directly with the register support, interlocking devices between the indicators, said register and indicator supports being relatively movable to cause the actuation of the registers whose indicators have been set or voted, and to re-set the operated indicators during a complete cycle of operation of the machine. 10th. In a voting machine, the combination with a register support, a register thereon having a movable balloted actuator in positive mechanical engagement therewith, of a support, a ballot indicator movable thereon operating when moved to voted position to connect the actuator with the support, and means for moving the register and indicator supports relatively toward and from and laterally of each other and thereby cause the actuation of the register and the re-setting of the indicator. 11th. In a voting machine, the combination with a register support, a plurality of registers thereon, each having a movable balloted actuator in positive mechanical engagement therewith, of a support, of a plurality of ballot indicators movable thereon, one for each register, and operating when moved to voted position to connect the actuator with the support, and means for moving the register and indicator supports relatively toward and from and laterally of each other and thereby cause the actuation of the registers whose indicators have been operated and the re-setting of all of the indicators. 12th. In a voting machine, the combination of a register support, a plurality with registers thereon, each having movable palleted actuator in positive mechanical engagement therewith, of a support, a plurality of ballot indicators movable thereon, one for each register, and operating when moved to voted position to connect the actuators with the support, interlocking devices between the indicators for preventing the operation of more than a predetermined number, and means for moving the register and indicator supports relatively toward and from and laterally of each other and thereby cause the actuation of the registers whose indicators have been operated and the re-setting of all of the indicators. 13th. In a voting machine, the combination with a register support, a register, and an actuator therefor, of a support, a movable ballot indicator thereon for causing the engagement and disengagement of the register actuator and the indicator support when the indicator is moved in opposite directions, and means for moving the two supports relatively to operate the register and release the actuator from the indicator support. 14th. In a voting machine, the combination with a register support, a register and an actuator therefor, of a support, a movable ballot indicator thereon for causing the engagement and disengagement of the register and actuator support when the indicator is moved in opposite directions, said indicator being adapted to be directly engaged by the register support to return it, and means for operating the register and indicator supports relatively to cause the operation of the register and the return of the indicator to normal position. 15th. In a voting machine, the combination with a register support, a register and an actuator therefor, of a support, a ballot indicator movable thereon and adapted to engage the actuator and lock it to the indicator support when moved in one direction and to engage the register support to be re-set thereby, and means for operating the register and indicator supports relatively away from each other, then laterally in one direction, then toward each other, and then laterally in the other direction to first position. 16th. In a voting machine, the combination with a register support, a register, and an actuator therefor having the hooked end, of a support, a ballot indicator movable thereon having the incline to engage the actuator and cause it to engage the support and adapted to be engaged itself by the register support, means for operating the indicator and register supports relatively toward and from and laterally. 17th. In a voting machine, the combination with the register supports, a register thereon, and an actuator therefor, having the hooked end, of a support, a projection thereon adapted to be engaged by the actuator, a movable ballot indicator on the support for moving the actuator into engagement with the projection, and means for operating the register and indicator supports relatively. 18th. In a voting machine, the combination with a support, a movable ballot indicator thereon, of a register support, a register thereon co-operating with the indicator, and means for moving the supports relatively and thereby cause the operation of the register and the return of the indicator to normal position. 19th. In a voting machine, the combination with a support and a movable ballot indicator thereon, of a register support, a register thereon co-operating with the indicator, and means for moving the supports relatively and thereby cause the actuation of the register and the return of the indicator to normal position without other operating mechanism. 20th. In a voting machine, the combination with a support having a projection, and a movable ballot indicator having an incline adapted to co-operate with a register actuator, of a register support adapted to engage the indicator to return it, a register thereon having the actuator, and means for moving the indicator and register supports relatively. 21st. In a voting machine, the combination with the register support, a register thereon, a palleted register actuator having a reciprocating and tilting movement, of a support, a ballot indicator thereon adapted to co-operate with the actuator, and means for moving the indicator and register supports relatively. 22nd. In a voting machine, the combination with a register support, a register thereon having a palleted reciprocating end oscillatory actuator, of a support, a movable ballot indicator thereon adapted to oscillate the actuator to engage the indicator support, and means for operating the supports relatively. 23rd. In a voting machine, the combination with a register support, a register thereon having a palleted reciprocating and oscillatory actuator, of a support, a movable ballot indicator thereon adapted to move the actuator in a direction to

engage the indicator support, and means for operating the supports relatively to cause the operation of the register and the return of the indicator without other operating parts. 24th. In a voting machine, the combination with a register support, a register thereon having an actuator movable to operate the register and also movable in another direction without operating it, of a support, an indicator movable thereon and adapted to co-operate with the actuator, and means for moving the supports relatively. 25th. In a voting machine, the combination with a support, a register thereon having a relatively movable actuator loosely connected therewith, of a support, an indicator movable thereon to move the actuator without operating the register, and means for moving the supports relatively. 26th. In a voting machine, the combination with a support, a register thereon embodying the toothed operating wheel, the reciprocatory palleted actuator capable of an oscillatory movement on the axis substantially coincident with that of the wheel, of a support, a movable indicator thereon for oscillating the actuator, and means for causing the relative movements of the supports. 27th. In a voting machine, the combination with a support, a register thereon having the toothed operating wheel, the shaft or arbor, the reciprocatory palleted indicator having the slot for the arbor, of a support, a movable indicator thereon adapted to engage the actuator to tilt it, and means for operating the supports relatively. 28th. In a voting machine, the combination with a register support and a register thereon having an actuator, of a support, having opposing stops or projections thereon, a movable ballot indicator on the support operating when moved to engage the register actuator with both stops, and means for operating the supports relatively to actuate the register and return the indicator to normal position without other operating devices. 29th. In a voting machine, the combination with a register support and a register thereon having an actuator, of a support having the two stops thereon, a movable ballot indicator on the support having the inclined portion for engaging the actuator and moving it into engagement with one of the stops, and means for moving the supports relatively. 30th. In a voting machine, the combination with a register support and a register thereon provided with an actuator, of a support provided with two stops, a movable ballot indicator having the inclined portion for engaging the register actuator, said indicator being adapted to be engaged by the register support, and means for operating the supports relatively. 31st. In a voting machine, the combination with a register support, a register thereon having an actuator, of a support, a movable ballot indicator thereon adapted when moved to cause the engagement of the actuator and indicator support, and an oscillatory shaft and connections for causing the relative separation and lateral movement of the supports at each complete movement in one direction. 32nd. In a voting machine, the combination with a register support, a register thereon having an actuator, of a support, a movable ballot indicator thereon adapted when moved in one direction to cause the engagement of the actuator and indicator support, and an oscillatory cam engaging one of the supports, and moving it away from and laterally of the other at each complete movement in one direction. 33rd. In a voting machine, the combination with a register support and a register thereon, of a support, a ballot indicator thereon adapted to co-operate with the register, and operating devices for moving the supports toward and from and laterally to cause the operation of the register and re-set the indicator. 34th. In a voting machine, the combination with a register support, a register on the support having an actuator, of a support, a ballot indicator thereon adapted to co-operate with the actuator, and the cams engaging the register support and causing its longitudinal and lateral movements relative to the indicator support. 35th. In a voting machine, the combination with a register support and a register thereon having an actuator, of a support, a movable ballot indicator thereon normally in co-operative relation with the register support, and means for moving the supports relatively, whereby during a complete cycle of operation of the machine, the indicator when set will cause the operation of the register and said indicator will be engaged by the register frame and returned to normal position. 36th. In a voting machine, the combination with the register support, and a plurality of registers thereon provided with actuators, of a support having the two stops thereon, a plurality of movable ballot indicators on the support operating when moved to connect the actuators with the stops, and adapted to be engaged by the register support, interlocking devices between the ballot indicators to prevent the operation of more than a predetermined number, and means for causing the relative movements of the supports to operate the registers, whose indicators have been voted and return the indicators during a complete cycle of movement of the machine. 37th. In a voting machine, the combination with the register support and registers thereon, of a support having the channel plates thereon provided with the flanges extending in opposite directions, and the reciprocatory ballot indicators adapted to engage the registers, and means for moving the supports relatively. 38th. In a voting machine, the combination with the register support, a plurality of registers thereon, each having an actuator, of a support having the channel plates provided with the flanges extending in opposite directions, the movable indicators having the inclined portions co-operating with the register actuators, and means for operating the supports relatively. 39th. In a voting machine, the combination with the register support, a plurality of registers thereon, each having an actuator, of a support having the channel plates provided with flanges extending in opposite directions, the movable indicators adapted to co-operate with the actuators and engage them with the flanges, the interlocking blocks in the channel plates co-operating with the indicators, and means for causing the relative movement of the supports. 40th. In a voting machine, the combination with a support, a plurality of rows of movable ballot indicators thereon, spreaders carried by the indicators when operated to voted position, and permitted a movement independent thereof, of wedge blocks operated by the spreaders, and a flexible connection between the end blocks in the rows for permitting the operation of a limited number in all of the rows. 41st. In a voting machine, the combination with a support, a plurality of rows of ballot indicators thereon movable into and out of voted position, spreaders carried by the indicators when operated to voted position and permitted a movement independent thereof, of wedge blocks operated by the spreaders, a flexible connection with which the end wedge blocks of each row co-operate, and means for adjusting the chain to regulate the number of indicators operable in all of the rows. 42nd. In a voting machine, the combination with a support, a plurality of rows of ballot indicators movable into and out of voted position, spreaders carried by the indicators when operated to voted position, and permitted a movement independent thereof, of wedge blocks operated by the spreaders, blocks at the end of the rows of wedge blocks having projections thereon, stationary projections on the support, and a flexible connector extending around the projections on the support and blocks adapted to limit the number capable of operation in all of the rows. 43rd. In a voting machine, the combination with a plurality of rows of ballot indicators, movable wedge blocks operated by the movement of one or more indicators, of end blocks for each row operated progressively by the wedge blocks therein, and a flexible connector co-operating with the end blocks and with stationary projections, and means for adjusting the connector to limit the number of blocks operable in all the rows. 44th. In a voting machine, the combination with a plurality of rows of ballot indicators, movable wedge blocks operated by the movement of one or more indicators, of end blocks for each row operated progressively by the wedge blocks therein, and having projections thereon, means for securing the end blocks, projections between the rows, and a flexible connector extending around the stationary projection and those on the end blocks, and means for securing the connector, and thereby limiting the number of rows of indicators that interlock.

No. 68,113. Cartridge Ejectors for Guns.

(Ejecteur de cartouches pour fusils.)

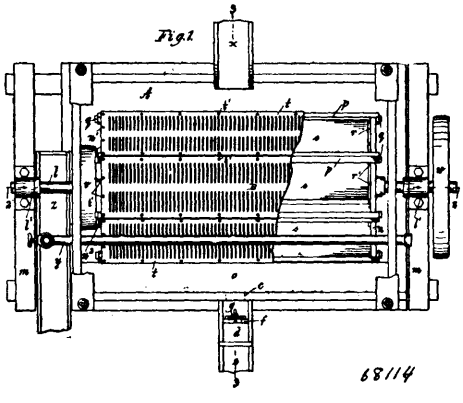


Coleman H. Wayman, Princeton, Missouri, U.S.A., 16th July, 1900; 6 years. (Filed 10th January, 1900.)

Claim.—1st. In a breech loading gun, the combination of a longitudinally movable bar slidably mounted in bearings on the under side of the gun barrel, and having a cartridge engaging portion, a spring acting to force the said bar rearwardly to eject the cartridge, a spring piece secured to the gun barrel beside said bar and extending parallel therewith, a finger on said spring piece extending horizontally above said bar and adapted to engage a shoulder on the upper side thereof and hold said bar against the action of the spring, and a vertically disposed push button slidably mounted in the under side of the stock in line with said spring piece and adapted to engage the same to release said bar, substantially as described. 2nd. In a double barreled breech loading gun, the combination of two longitudinally movable bars each slidably mounted in bearings on the under side of one of the barrels and each having a cartridge

engaging portion, a spring for each bar acting to force the same rearwardly to eject the cartridge, two oppositely arranged spring pieces secured to the barrels between said rods and extending parallel with said rods one in advance of the other, a finger on each spring piece extending across one of said bars and adapted to engage a shoulder thereon and hold said bar against the action of its spring, and vertically disposed push buttons slidably mounted in the under side of the stock one in advance of the other and each in line with and adapted to engage one of said spring pieces to release said bars, substantially as described.

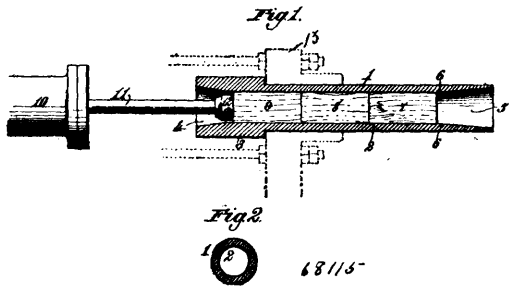
No. 68,114. Apparatus for Separating Pulp for Paper Making. *(Appareil pour séparer et nettoyer la pulpe á fabriquer le papier.)*



Fred C. Michaelis, Ballston Spa, New York, U.S.A., 16th July, 1900; 6 years. (Filed 11th January, 1900.)

Claim.—1st. A screening cylinder for separating and cleaning of pulp for paper making, consisting of a shaft, polygonal end plates mounted on the shaft, curved plates secured to the end plates and extending inwardly from the corbers thereof to a point approximately midway between the centres and the peripheries of the end plates, and of screens secured to the end plates and composing together with the end plates the body of the cylinder. 2nd. A cylinder for separating and cleaning of pulp for paper making, consisting of a shaft, polygonal end plates mounted on the shaft, one of the end plates being provided with a flanged aperture located approximately in its centre, of curved plates secured to the end plates and extending inwardly from the corners thereof to a point about midway between their centres and their peripheries, and of flat screens secured to the peripheries of the end plates and forming the body of the cylinder. 3rd. A screening cylinder for separating and cleaning the pulp for paper making, consisting of a shaft, polygonal end plates mounted on the shaft and having corresponding curved flanges extending from the corners of the end plates to a point about midway between their centres and their peripheries, curved plates secured to the flanges, ribs secured to the corners of the end plates and extending from one end plate to the other, and flat screens secured to the end plates and to the ribs. 4th. The combination with a screening cylinder consisting of a shaft, polygonal end plates mounted on the shaft and of screens secured to the end plates and forming together with the end plates the body of the cylinder, of curved end plates set in the cylinder and extending inwardly from the corners of the end plates to a point approximately midway between their centres and their peripheries. 5th. An apparatus for separating and cleaning of pulp for paper making, consisting of a vat having an aperture approximately in centre of one side thereof, suitable standards, one on each end of the vat, a shaft passing longitudinally through the vat and mounted in bearings supported on the standards, a screening cylinder mounted on the shaft within the vat and consisting of polygonal end plates secured to the shaft and provided with corresponding flanges extending between their centres and peripheries, curved plates secured to the flanges and extending from one end plate to the other, and of flat screens secured to the peripheries of the end plates, the screening cylinder having a flanged aperture in its end plate, opposite the aperture in the vat, an inlet and an outlet trough conveying the pulp material into and from the apparatus, an outlet for discharge of the residue, and means for rotating the shaft. 6th. An apparatus for separating and cleaning pulp for paper making, consisting of a vat, having an aperture approximately in centre of one side thereof, suitable standards, one on each end of the vat, a shaft passing through the vat and mounted in bearings supported on the standards, a polygonal screening cylinder secured to the shaft within the vat, and having an aperture in its end plate, opposite the aperture in the vat, curved plates set in the cylinder from each corner thereof to a point about midway between its centre and periphery, a collar covering the joint between the edges of the aperture of the cylinder and the aperture of the vat, a perforated water pipe set in the vat above the screening cylinder to one side of the centre thereof, an inlet and an outlet trough conveying the pulp material into and from the apparatus, an outlet for discharge of the residue, and means for rotating the shaft. 7th. An apparatus for separating and cleaning pulp for paper making, consisting of a vat having a discharge aperture approximately in centre of one end side and another aperture in the longitudinal wall thereof, a trough provided in the bottom of the vat and alongside of its perforated longitudinal wall, a stand pipe adjoining the vat and communicating therewith through the aperture, a partition wall set in the stand pipe extending from a point below its upper edge and down to its bottom and provided with an aperture opposite the aperture in the wall of the vat, a slide valve closing the aperture in the partition wall, a culvert communicating with the stand pipe, a trough connecting with the discharge aperture of the vat, a straining cylinder rotatably mounted in the vat, and having an aperture coinciding with the discharge aperture of the vat, and means for rotating the cylinder in the vat.

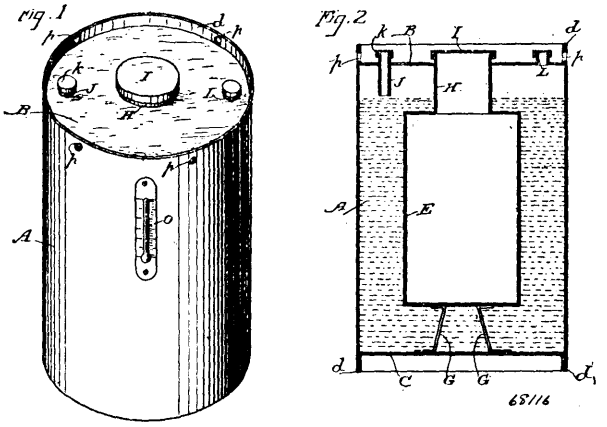
No. 68,115. Die for Compressing Wood.
(Etampe pour la compression du bois.)



Henry Jacob Scheid, Marion, and William Alexander Beasley, Fairmont, both in Indiana, U.S.A., 16th July, 1900; 6 years. (Filed 30th November, 1899.)

Claim.—1st. A die for compressing wood, having a bore provided at one end with a tapered inlet and at its opposite end with a reversely tapered or flared outlet, substantially as described. 2nd. A die for compressing wood, having a bore provided at one end with a tapered inlet and at its opposite end with a reversely tapered or flared outlet, the incline of the wall of which is less than that of the inlet, substantially as described. 3rd. A die for compressing wood, having a straight bore communicating at one end with a tapered inlet opening and at its opposite end with a reversely tapered or flared outlet opening the wall of said bore and of said outlet opening being continuous and free from angles, substantially as described.

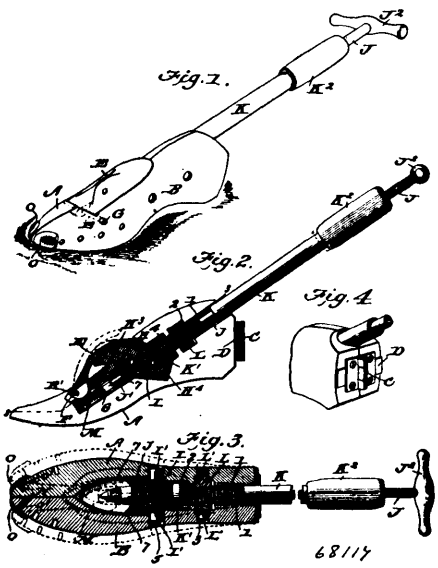
No. 68,116. Apparatus for Thawing Explosives.
(Appareil pour dégeler les explosifs.)



William Jay Smith, San Francisco, California, U.S.A., 16th July, 1900; 6 years. (Filed 17th January, 1900.)

Claim.—In a thawing apparatus, the combination of an outer tank, an inner tank, the walls of the tanks being spaced apart to form a chamber around the inner tank, the outer tank being provided with a chime at its upper end having openings, and with a head having an opening for the passage which communicates with the inner tank, and with an inlet and an outlet for the heating medium, the said passage, inlet and outlet extending above the openings in the chime.

No. 68,117. Boot Tree. *(Forme.)*



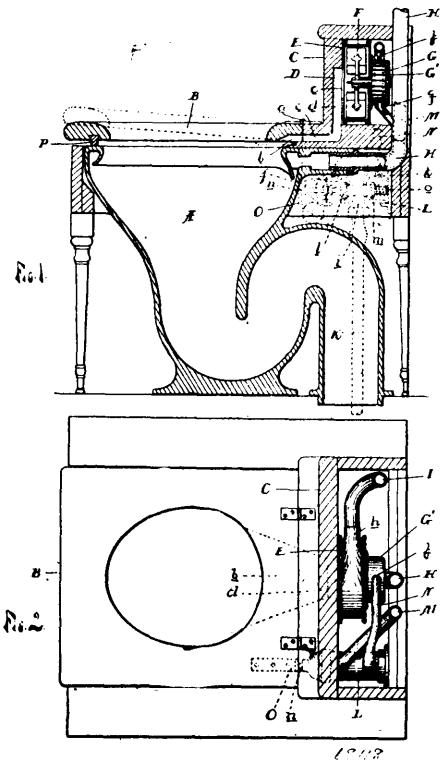
Mary Jane Hall, William Stephen Copeland and Louis R. Fechtig, all of Aspen, Colorado, U.S.A., 16th July, 1900; 6 years. (Filed 18th June, 1900.)

Claim.—1st. A tree, comprising the body section, the instep block, the rocker pivoted between its ends and having an arm engaging said block and an arm for engagement by the operating device, and such device engaging said arm, substantially as set forth. 2nd. In a tree, substantially as described, the combination of the body sections, the screw shaft provided with means for spreading such sections, the bearing piece having a threaded bearing for said screw shaft, the rocker supported on said bearing piece and provided with an arm for operating the instep block and with an arm for engagement by the screw sleeve, the screw sleeve and its bearing, and the instep block arranged for operation by the rocker, substantially as set forth. 3rd. In a tree, the combination of the body sections, the screw shaft arranged to spread said sections, the instep block, the bearing piece having a threaded bearing for the screw shaft, the rocker supported on the bearing piece and arranged to operate the instep block, and the screw sleeve arranged to engage and operate the rocker, substantially as set forth. 4th. A tree, comprising the sections, the leaf hinge connecting the said sections, and the spring for closing said sections arranged adjacent to and held by the hinge which connects said sections, substantially as set forth. 5th. The combination in a tree, of the body sections, the hinge connecting the rear ends of said sections, and the actuating spring composed of a plate extending between the rear ends of the sections, substantially as set forth. 6th. In a tree, substantially as described, the combination of the body sections provided in their inner faces with bearing openings, the instep block having at its front end a shaft whose ends fit and journal in said openings, and means for operating said instep block, substantially as set forth. 7th. A tree, provided with the body sections and means for operating the same, and having said sections provided with the corrugated plates by which to prevent slipping, substantially as described. 8th. The combination, in a tree, of the body sections provided in their inner faces with openings for the bearing pieces for the shaft and sleeve and for the pivot shaft of the instep block, the instep block having its shaft held in the sections, the bearing pieces for the shaft and sleeve having their trunnions held in their respective openings, the rocker supported on the bearing piece for the screw shaft and having means for operating the instep block, the screw shaft having means for spreading the body sections, the spring for retracting said sections, and the threaded sleeve arranged to operate the rocker, substantially as shown and described. 9th. In a tree, substantially as described, the combination of the body sections, the screw for spreading the same, the bearing piece for such screw shaft, the instep block, the rocker having an opening for the said screw shaft and openings fitting over the bearing piece therefor, and means for operating such rocker, substantially as set forth.

No. 68,118. Ventilating Device for Water Closets.
(Appareil de ventilation pour latrines.)

Albert Drouillard, and Edmund J. Sculley, both of Windsor, Ontario, Canada, 16th July, 1900; 6 years. (Filed 28th June, 1900.)

Claim.—1st. In a ventilating device for water closets, the combination with a seat frame and its hinged seat, of an exhaust fan and motor for driving the same adjacent to the bowl, a water supply pipe for said motor, a valve in said supply pipe provided with means for automatically operating it by the movement of the seat and a ventilating passage provided with an outlet from the bowl formed between the seat and the top of the bowl formed between the seat and the top of the bowl and leading into the exhaust fan, substantially as set forth. 2nd. In a ventilating device for water closets, the combination with a seat frame and seat hinged thereto, of a box supported upon the seat frame in rear of the seat, an exhaust fan and water motor for driving it inclosed within the box, a water supply pipe for said motor provided with a valve, means for automatically operating said valve by the movement of the seat and a ventilating passage through the seat and seat frame into the box and connecting the yop of the bowl in rear of and beneath the seat with the exhaust fan, substantially as described. 3rd. In a ventilating device for water closets, the combination with the bowl and seat frame having a hinged seat, of an exhaust fan supported above the seat frame in rear of the seat and communicating with the bowl, a water motor attached to said fan and adapted to operate the same, a two-way valve in the water supply pipe of the closet controlling the flow of water through said pipe to the usual flushing appliances of the closet and to the water motor through a separate branch leading from said valve to the motor, means for operating said valve by depressing the seat, a discharge connection from the motor into the bowl, substantially as specified. 4th. In a ventilating device for water closets, the combination with the seat frame and seat hinged thereto, of the box C, supported upon said frame in rear of the seat, the ventilating passage D, formed in said seat, seat frame and box, and the exhaust fan inclosed within the box and having an inlet opening in its casing through which said ventilating passage communicates with the fan and an outlet opening leading from the exterior, substantially as set forth. 5th. In a ventilating device for water closets, the combination with the seat frame and seat hinged thereto, of the box C, supported on the seat frame in rear of the seat, the exhaust fan F, and water motor H, inclosed within said box, the ventilating passage D, leading from the bowl to the fan, the water supply pipe K, having the valve L, the discharge pipe g, from the water motor into the flushing pipe of the closet, and the bracket O, on the seat for operating the valve L, as described.

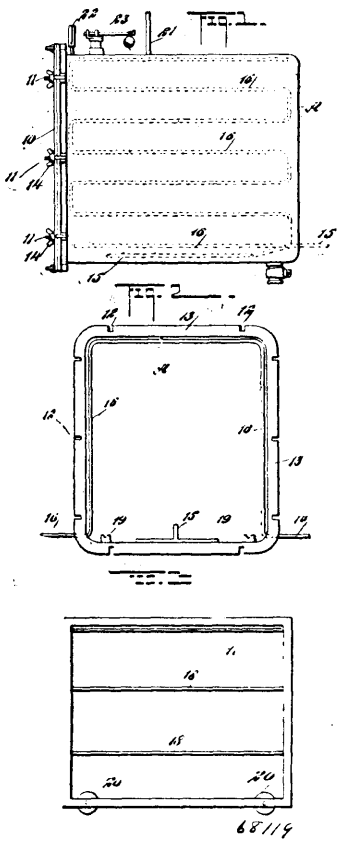


No. 68,119. Steam Cooking Apparatus.
(Appareil de cuison à vapeur.)

Thomas Douglas, of London, England, 16th July, 1900; 6 years. (Filed 28th June, 1900.)

Claim.—1st. In a steam cooking apparatus, the combination with a chamber having a removable door and means for locking the door thereto in a steam tight manner, and a perforated steam inlet pipe located within the said chamber, of an imperforate coil or pipe disposed within the said chamber near the inner walls thereof, the said imperforate coil having its inlet and outlet ends at the exterior of

the chamber, the said chamber being further provided with a safety valve and an exhaust pipe, and a carriage arranged to fit within the



said chamber, and within the imperforate coil in close proximity to the perforated inlet pipe, the said cage or carriage having means for supporting the material to be cooked, and a device for raising and lowering the said cage or carriage from and into the said chamber, as described. 2nd. In a steam cooking apparatus, the combination, with a chamber having a removable door and means for locking the door thereto in a steam tight manner, and a perforated steam inlet pipe located within the said chamber, of an imperforate coil or pipe disposed within the said chamber near the inner walls thereof, the said imperforatec oil having its inlet and outlet ends at the exterior of the chamber, the said chamber being further provided with a safety valve and an exhaust pipe, and a carriage arranged to fit within the said chamber and within the imperforate coil in close proximity to the perforated inlet pipe, the said cage or carriage having means for supporting the material to be cooked, substantially as described.

No. 68,120. Vapourizing Attachment for Burners.
(*Appareil évaporatoire pour brûleurs d'huile.*)

Francis Edgar Stanley and Freelan Oscar Stanley, both of Newton, Massachusetts, U.S.A., 16th July, 1900; 6 years. (Filed 5th February, 1900.)

Claim—1st. The within-described device for starting a vapour burner supplied with volatile liquid, the same consisting of a detachable tubular heater, and means for temporarily connecting it with the liquid supply reservoir, said device having a nozzle for passing the vapour to the burner, substantially as set forth. 2nd. A vapourizing device for burners consisting of a tube adapted to be heated when detached from the burner, and means for connecting the said tube in the line of supply to the burner, substantially as set forth. 3rd. The combination of a vapour burner having a pipe for conducting volatile liquid toward the burner, a detachable vapourizing tube, with means for connecting it in the line of liquid supply to the burner, and valves arranged to control the flow of liquid to the vapourizing tube, substantially as set forth. 4th. The combination of a vapour burner having a pipe for conducting volatile liquid toward the burner and a nozzle communicating with said pipe, a detachable vapourizing tube also provided with a nozzle, with means for connecting it in the line of liquid supply to the burner, and valves arranged to control the flow of liquid to the vapourizing tube, substantially as set forth. 5th. The combination of the burner casing and means for supplying a combustible mixture

Fig. 1.

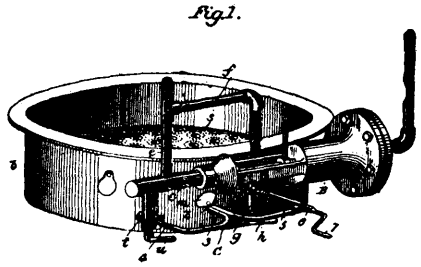
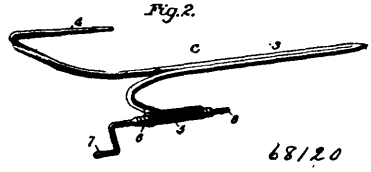


Fig. 2.



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thereto, and a casing above and surrounding the burner and inclosing a combustion chamber and provided with an opening *z* for the reception of a detachable vapourizer, substantially as set forth.

No. 68,121. Nut Lock. (*Arrête-écrou.*)

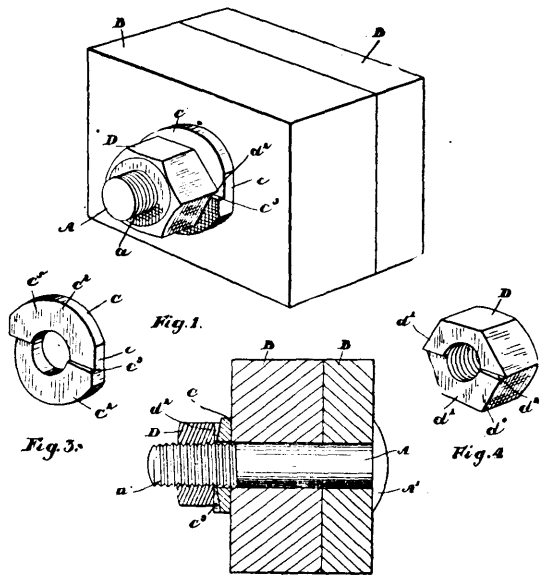

Fig. 1. Fig. 2. Fig. 3. Fig. 4.

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William Stinson, James Leslie Love, and Duncan D'Esterre Cooper, all of Toronto, Ontario, Canada, 16th July, 1900; 6 years. (Filed 28th June, 1900.)

Claim.—The combination with the bolt and parts to be held together, of a washer adapted to be passed over the threaded end of the bolt and abutt against one of of the parts and provided peripherially with a plurality of sides and a nut adapted to fit on the end of the bolt next the washer, said nut and washer being provided with interlocking faces whereby both washer and nut must be turned together so as to lock the nut in position or to unloosen the nut, as and for the purposes specified. 2nd. The combination with the bolt and parts to be held together, of a washer adapted to be passed over the threaded end of the bolt and abutt against one of the parts and provided peripherially with a plurality of sides and on the face with a plurality of ratchet teeth having one side inclined and the other side substantially at right angles thereto and radially arranged, and a nut provided with ratchet teeth corresponding in form with the ratchet teeth on the washer, but oppositely set and designed, when the nut is screwed and the washer is brought home to have the radial sides engaged with the radial sides of the washer, as and

for the purpose specified. 3rd. The combination with the bolt and the parts to be held together, of a washer and adapted to be passed over the threaded end of the bolt and abutt against one of the parts and having a ratchet toothed outer face and a nut provided with a ratchet toothed inner face designed to co-act with the ratchet toothed outer face of the washer, as and for the purpose specified.

No. 68,122. Closure for Bottles and Similar Articles.
(Bouchon de bouteilles, etc.)

Fig. 1

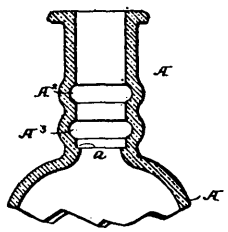

Fig. 2.

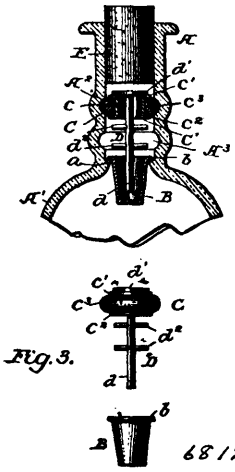

Fig. 3.

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John Antony Pearce, of Tallahassee, Florida, U.S.A., 16th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. A closure for bottles comprising a perforated stopper having a ring of elastic material to fit a groove in the neck of the bottle, a valve mounted in an opening in the stopper and having a stem provided with two pins one of which engages the stopper when the valve moves outwardly, and a thimble provided with a flange adapted normally to rest upon a projection in the neck of the bottle and to engage the other pin when the thimble moves outwardly, substantially as described. 2nd. A closure for bottles comprising a neck having two grooves and an inward projection, a perforated stopper having an elastic ring fitting one of the grooves, a valve mounted in an opening in the stopper and having a stem provided with two pins, one of which engages the stopper when the valve moves outwardly, and a thimble having a flange adapted normally to rest on the projection in the neck and to move outwardly into position opposite the other groove and engage the other pin, substantially as described.

No. 68,123. Attachment for the Finger Bars of Mowers and Harvesters. *(Attache pour lames de faucheuses et moissonneuses.)*

William Gatermann, of Newton, Wisconsin, U.S.A., 16th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. In combination with the finger bar and guards of a mower or harvester, a series of castings, each having a forward and downward projecting front end with a socket for receiving the point of the guard, lugs for engagement with the finger bar on each side of the guard, and an upward projecting heel with a longitudinal groove in its upper surface, a series of clamps, whose forward ends engage with the finger bar and whose rear ends fit within the said heel grooves, bolts connecting said clamps and castings, a series of vine lifting shoes, having upward and rearward extending arms rising therefrom and having sockets in their rear ends for the reception of the front ends of said castings, springs secured to the upper rear ends of said shoes and bearing down upon the forward ends of said castings, pivot bolts connecting said shoes and castings, and swath removing fingers loosely connected to the heels of said castings. 2nd. In combination with the finger bar and guards of a

Fig. 2.

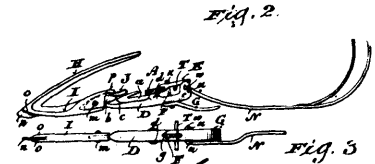

Fig. 3

Fig. 4.

Fig. 5.

Fig. 1.

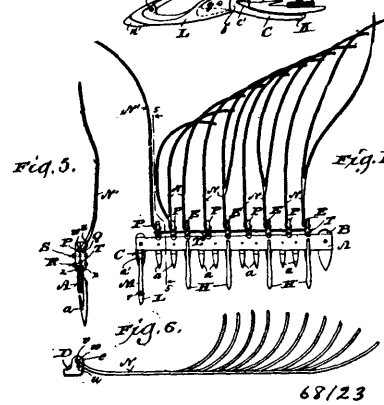

Fig. 6.

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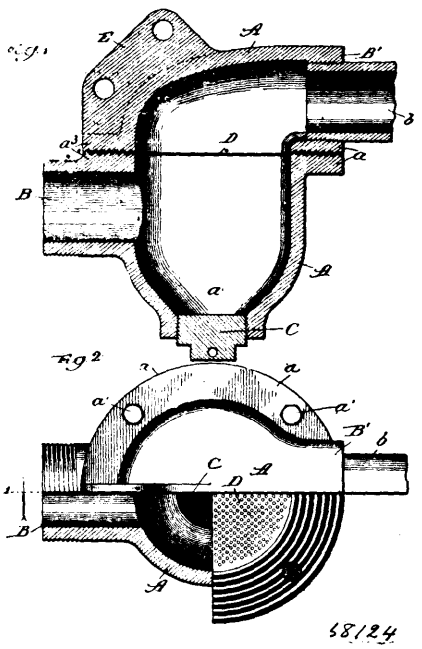
mower or harvester, a series of vine lifting shoes, a series of castings pivotally connected to said shoes and clamped to said finger bar, and each casting terminating in a heel having laterally projecting lugs thereon, and a transverse opening therethrough, said opening being of generally circular shape with an upward elongation, and a series of swath removing fingers having curved free outer ends and bent inner ends with rearwardly turned terminations, whereby said bent ends may be inserted through the transverse openings in the heels of the castings and rest loosely on the said laterally projecting lugs. 3rd. In combination with the finger bar and guards of a mower or harvester, a series of vine lifting shoes, a series of guard supporting castings pivotally connected to said shoes, and each casting having lugs for engagment with the underside of the finger bar, an upward projecting heel with a longitudinal groove in its upper surface, a longitudinal slot between said lugs and said heel, and a series of opposed angular recesses surrounding said slot on the underside of said casting, a series of clamps, whose forward ends engage with said finger bar, and whose rear ends fit within the said heel grooves, said clamps having bolt holes therethrough, and a series of bolts passing through said bolt holes in the clamp and said slots in the castings, and having angular lower heads for adjustable engagement with the said angular recesses in the castings. 4th. In combination with the finger bar and guards of a mower or harvester, a series of vine lifting shoes, a series of guard supporting castings pivotally connected to said shoes and clamped to said finger bar, a series of swath removing fingers loosely connected to said castings, and a series of runners rigidly secured to said castings and projecting rearwardly therefrom. 5th. In combination with the finger bar and guards of a mower or harvester, a series of vine lifting shoes, a series of guard supporting castings pivotally connected to said shoes and each casting having lugs for engagement with the underside of the finger bar, an upward projecting heel with a longitudinal groove in its upper surface, a longitudinal slot between said lugs and said heel, and a series of opposed angular recesses surrounding said slot on the underside of said casting, a series of clamps, whose forward ends engage with said finger bar and whose rear ends fit within the said heel grooves, said clamps having bolt holes throughout, a series of runners each having a bolt hole therethrough, and an angular ended lug on its upper surface for adjustable engagement with the said angular recesses in the casting, and a series of bolts, each uniting a runner casting and clamp together. 6th. In combination with the finger bar of a mower or harvester, a series of castings transversely clamped thereto, and having heels at their rear ends formed with transverse holes therethrough, and laterally projecting lugs below the planes of said holes, and a series of swath removing fingers, having bent inner ends hooked within the transverse holes in the said heels of the castings and loosely supported on said laterally projecting lugs, and free curved outer ends inclined towards the wheel side of the machine. 7th. In combination with the finger bar of a mower or harvester, and the outer guard on the grain side, a shoe beneath said guard, and connected by bolts thereto and to the finger bar at the rear end of the shoe, and having a projecting front end with a socket therein for the reception of the point of said guard, another shoe having an enlarged socket at its rear end

for the reception of the front end of the first named shoe, and a rear projecting upper portion, a pivot bolt for connecting the two shoes, a set screw projecting downward through the said rear projecting upper portion of the second named shoe, and a spring surrounding the shank of said set crew between said projecting portion and the upper surface of the first named shoe, an upward and rearward projecting divider arm adjustably jointed to the forward end of said second shoe, and a set bolt for securing said arm in its adjusted position. 8th. In combination with the finger bar of a mower or harvester, a series of pairs of clamps, each pair having opposed shouldered and roughened or serrated jaws for holding the said finger bar between them, and inner and outer opposed transverse semi-circular grooves, and laterally projecting lugs, a brace rod seated in the inner grooves and extending through all the pairs of clamps to strengthen and connect them together, a series of swath removing fingers having bent ends seated in the outer grooves and resting loosely on the said laterally projecting lugs, and series of bolts uniting the members of each pair of clamps on each side of said brace rod. 9th. In combination with the finger bar of a mower or harvester, a series of clamps transversely secured thereto, the opposing members of each pair of clamps being formed with opposed transverse semi-circular grooves, and laterally projecting lugs, a series of swath removing fingers having bent ends hooked within the transverse grooves of all the pairs of clamps except the outer pair next to the grain side of the machine, and having free curved outer ends inclined towards the wheel side of the machine, and a trailer, formed of a single spring metal rod, having a bent end hooked within the transverse groove of the said outer pair of clamps, and having a free curved outer end, inclined, back of the curved end of the adjacent swath remover, in an opposite direction, and towards the grain side of the machine, to engage with, lift and turn over the uncut mass in the field, as the machine advances, the said swath removing fingers and trailer resting on said laterally projecting lugs.

No. 68,124. Feed Water Strainer for Locomotives

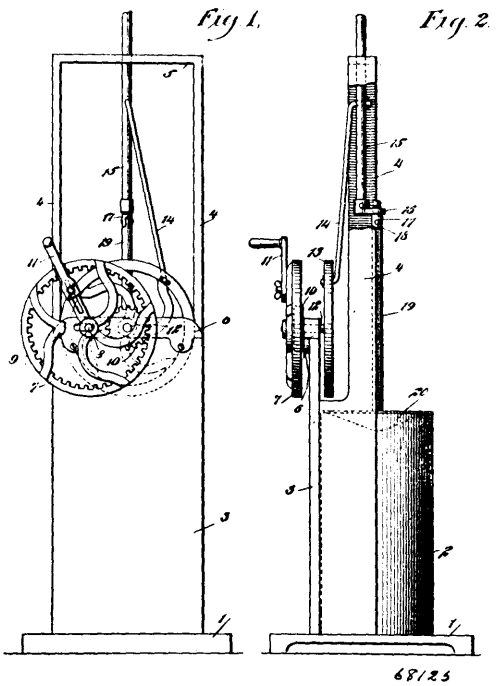
(*Filtre pour eau d'alimentation pour locomotives.*)



John Z. Hayes, assignee of Joseph Peter Hayes, both of Detroit, Michigan, U.S.A., 16th July, 1900; 6 years. (Filed 28th June, 1900.)

Claim.—1st. In a strainer of the class described, the combination of a body portion made in two parts and each part being provided with annular flanges, the lower part having an inlet opening and a waste chamber below the inlet opening and the upper part being provided with an outlet opening, and a piece of perforated or reticulated material forming a strainer arranged in a horizontal plane between the annular flanges above the inlet opening and the waste chamber and below the outlet opening, substantially as described. 2nd. In a strainer of the class described, the combination of a body portion made in two parts, the lower of main portion provided with an inlet opening, a waste chamber below the inlet opening and a screw plug for opening and closing the waste opening of the waste chamber and the upper part provided with an outlet opening, a lug for securing the strainer to the end beam of a locomotive, and a base of perforated or reticulated material forming the strainer proper secured in position and in a horizontal plane between the two parts of the body portion, substantially as described.

No. 68,125. Churn. (*Baratte.*)



William Franklin Fribley, Bourbon, Indiana, U.S.A., 16th July, 1900; 6 years. (Filed 3rd July, 1900.)

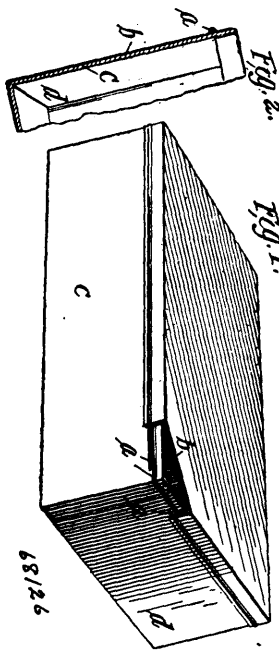
Claim.—1st. In a churn, a driving mechanism, comprising an interiorly toothed wheel, a plate on which said wheel is adjustably mounted, a pinion having its shaft bearing in said plate, a pinon having its shaft bearing in said plate, a balance and crank wheel attached to said shaft, and connections between said last-named wheel and the churn dasher, substantially as specified. 2nd. In a churn, a driving mechanism, comprising a slotted plate, a driving gear wheel mounted to rotate on a stud adjustable in said slot, a pinion having its shaft bearing in said plate and also in the driving gear wheel, a balance and crank wheel on the shaft of said pinion, a plunger rod, a rod connection between the balance and crank wheel and said plunger rod, and a connection between the plunger rod and the churn dasher, substantially as specified. 3rd. In a churn, a driving mechanism comprising a driving gear wheel, a crank handle adjustable on said wheel, a pinion with which said wheel engages, a plunger rod driven by said pinion, a churn dasher rod, and a pivoted stirrup connection between said dasher rod and the plunger rod, substantially as specified.

No. 68,126. Box. (*Boîte.*)

The Box Stay Company, Boston, assignee of Arthur H. Alger, Brockton, both of Massachusetts, U.S.A., 16th July, 1900; 6 years. (Filed 3rd July, 1900.)

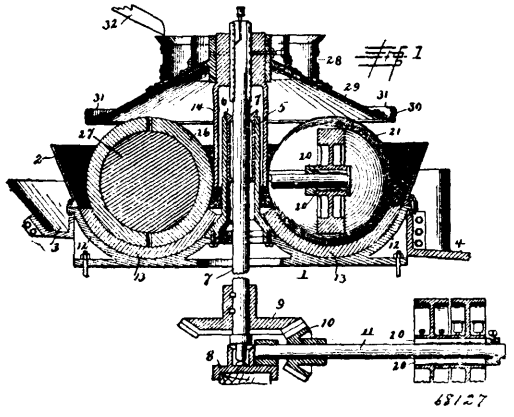
Claim.—1st. A pasteboard box comprising the box and the paper covering therefor with a reinforcing cord extending entirely around the box and held between the said box and the paper covering which is pasted thereto, substantially as described. 2nd. In combination with the pasteboard box having a covering pasted thereon with strengthening cord concealed between said covering paper and the pasteboard sides of the box extending entirely around the box and a box cover adapted to fit over the concealed cord, substantially as described. 3rd. In combination with the box having a paper covering pasted thereto with the cord concealed between said paper

covering and the box and extending entirely around the box and a box cover having a paper covering with a cord extending around the



same and between the paper covering and the sides of the cover, the said cover fitting over the concealed strengthening cord of the box, substantially as described.

No. 68,127. Ore Granulators and Pulverizers.
(Granuloir et pulvérisateur de minerais)



John Milton Montgomery, John T. Baldwin, Edward W. Clark and S. Robert Fair, all of Butte, Montana, Edwin M. Clark, West Superior, Wisconsin, all in the U.S.A., 16th July, 1900; 6 years. (Filed 5th August, 1899.)

Claim.—In combination with the frame or casing 1, the vertical shaft 7, centrally journalled therein, the removable shoe 13, located in said frame concentric with said vertical shaft, the annular screen frame 2, and the annular water trough 3, encompassing said screen frame, the vertical driving sleeve 14, fixed to the upper end of said shaft 7, and provided with oppositely disposed horizontal arms 15 and 16, the shafts 18, 18, fixed in the outer ends of said arms, the pushing wheels 19, journalled on the outer ends of said shafts, the crushing spheres 21, located in the path of said wheels, a spring-actuated scraper 23, fixed on the arm 15, and projecting into the path of the spheres, a scraper 22, also fixed to the arm 15, and having its free end projecting into and adapted to travel in the groove in said shoe 13, and the rotating hopper 28, fixed to the upper end of said driving sleeve, and provided with a conical bottom 29, from which the material to be operated upon shall be discharged by gravity into the annular screen frame 2, substantially as and for the purpose set forth.

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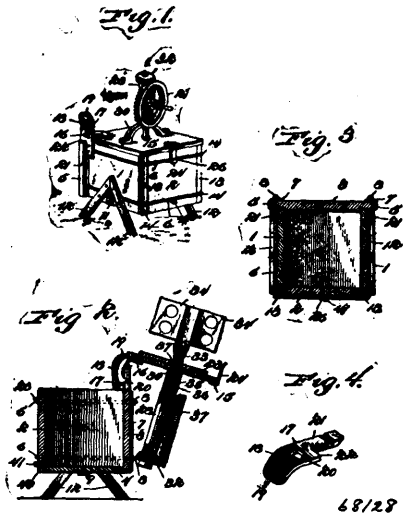
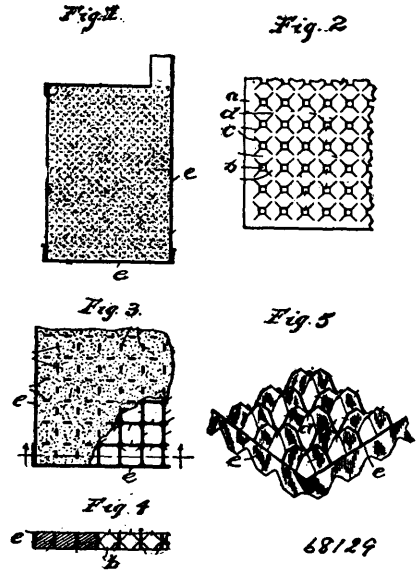
No. 68,128. Churn. *(Baratte.)*



Simon Smith, Weisberg, and Frank Rekberger, Manchester, both of Indiana, U.S.A., 16th July, 1900; 6 years. (Filed 22nd January, 1900.)

Claim.—The combination with a churn body and the cover thereof, of a hinge connection therefor, comprising opposite fixed hinge pintles projecting laterally at opposite sides of the cover, and opposite members fitted to the churn body, each member having a vertically a disposed slot receiving the adjacent pintle, and upper and lower, rearwardly extending notches in communication with the respective upper and lower ends of the slot, the pintles being slidable in the respective vertical slots, and also adapted to be seated within the respective notches, substantially in the manner shown and described.

No. 68,129. Storage Batteries. *(Accumulateur d'électricité.)*



Charles E. Corrigan, assignee of Harry G. Osburn, both of Chicago, Illinois, U.S.A., 17th July, 1900; 6 years. (Filed 26th August, 1899.)

Claim.—1st. An accumulator plate formed of a sheet of metal and having a series of sections thereof severed except at opposite ends and bent or twisted into position perpendicular to the plane of the plate to form the perpendicular side walls of adjacent transverse pockets, whereby the falling out of the pellets of active material is effectively prevented, substantially as described. 2nd. An accumulator plate formed of a sheet of metal and having a series of sections thereof partially severed and bent or twisted about a medial axis into the transverse positions to form the symmetrica

side walls of transverse pockets, substantially as described. 3rd. An accumulator plate formed of a sheet of metal and having a series of sections thereof severed except at the opposite ends and bent or twisted into transverse positions to form the side walls of transverse pockets for the reception of active material, substantially as described. 4th. An accumulator plate formed of a sheet of metal and having a series of sections joined to the body of the plate by narrow necks at opposite ends of the sections and bent or twisted into transverse positions to form the side walls of transverse pockets, substantially as described. 5th. An accumulator plate formed of a sheet of metal having pieces thereof removed at intervals to leave a series of openings bounded by strips of metal severed except at opposite ends, said strips being bent into transverse positions to form the side walls of adjacent pockets, substantially as described. 6th. An accumulator plate formed of a sheet of metal having a series of openings therein and incisions extending therefrom and having the sections or strips of metal between the same bent or twisted into transverse positions, substantially as described. 7th. An accumulator plate formed of a sheet of metal and having a series of sections thereof partially severed and bent or twisted about a medial axis into transverse positions to form the symmetrical side walls of transverse pockets and active material in said pockets, substantially as described. 8th. An accumulator plate formed of a sheet of metal and having a series of sections thereof severed except at opposite ends and bent or twisted into transverse positions to form the side walls of transverse pockets and active material in said pockets, substantially as described.

No. 68,130. Plough Attachment. (*Attache de charrue.*)

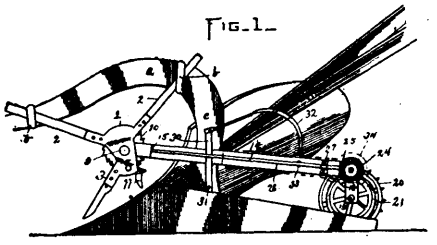


Fig. 1.

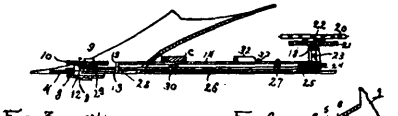


Fig. 2.

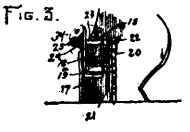


Fig. 3.

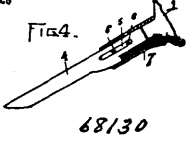


Fig. 4.

68/130

Caesar Wilson, Litchfield, Minnesota, U.S.A., 17th July, 1900; 6 years. (Filed 4th July, 1900.)

Claim.—1st. In a plough attachment, the combination with the coulter case or frame, having a radial arm adapted to be secured to a plough beam, of the revoluble colter in said case or frame, the trail frame hinged on the axle of the colter, the traction wheel mounted in said trail frame, and connections between said traction wheel and said colter to revolve the latter, substantially as described. 2nd. In a plough colter, the longitudinally movable cutter arm, in combination with a tension spring, to extend said arm, and a support for said arm and spring, substantially as described. 3rd. In a plough attachment, the combination wth a relatively fixed guiding arm or cutter bar, of a revoluble colter and means to rotate said colter, substantially as described. 4th. In a plough attachment, the supporting case or frame adapted to be secured to a plough and having a downwardly inclined arm, in combination with a revoluble colter mounted in said case or frame, and a traction device, and connections to rotate said colter, substantially as described. 5th. The combination, with the case or frame, adapted to be secured to a plough, and having the revolving colter, of the trail frame connected to said colter case or frame, and having the traction device, and connections to rotate the colter, substantially as described. 6th. In a plough attachment, the combination with the colter case or frame, of the revolving colter supported therein, the trail frame, the traction and connection actuating devices to rotate the collar, and the spring, or equivalent devices, bearing downward on said trail frame for the purpose set forth, substantially as described. 7th. In a plough attachment, the trail frame, formed of a single bar material, and comprising the longitudinal arm 14, having the offset 28, and the downward arm 16 bent to form the lateral offset 17 and vertical arm 18, for the purpose set forth, substantially as described. 8th. In a plough attachment, the combination with a supporting frame or case, having the yielding cutter bar or arm 4, and the rigid cutter 11, in rear thereof, the revoluble colter in said support or frame, and means to rotate said colter, substantially as described.

No. 68,131. Automatic Shut Off Mechanism for Steam Engines. (*Mécanisme d'interception pour machines à vapeur.*)

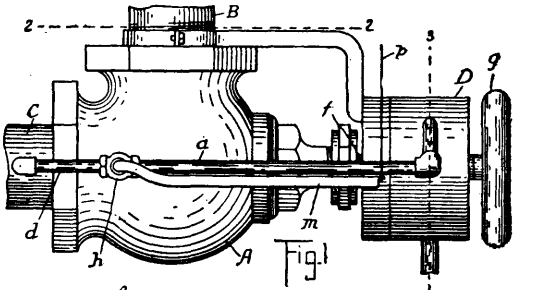


Fig. 1.

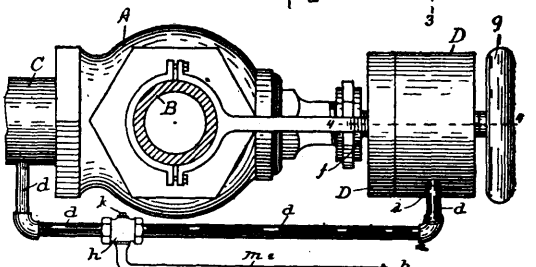


Fig. 2.

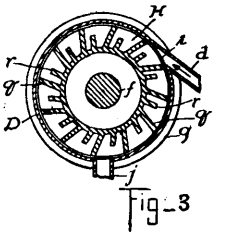


Fig. 3.

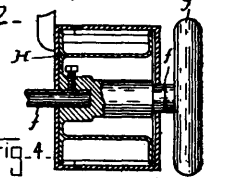


Fig. 4.

Levi Da Rozir of Cambridge, and Louis P. Coté, of Somerville, both of Massachusetts, U.S.A., 17th July, 1900; 6 years. (Filed 3rd July, 1900.)

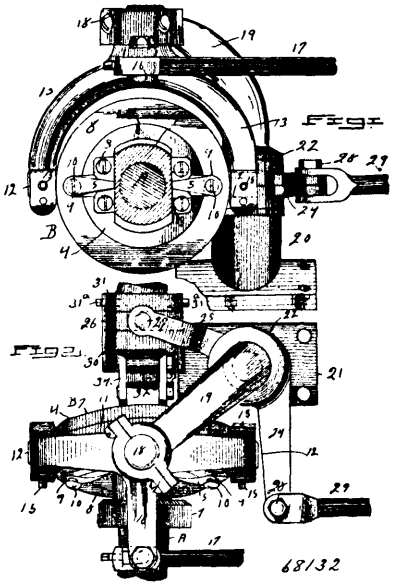
Claim.—1st. In a steam engine, the trottle valve provided with a fan wheel on its stem in combination with a casing enclosing said wheel, an exhaust for said casing, a pipe tapping the steam supply pipe of said engine, and opening into said casing, a valve in said first pipe and devices for operating said valve whereby the steam pressure from the engine supply may be delivered direct to said wheel, and said pressure shut off by the consequent closing of said throttle. 2nd. The throttle valve and its stem in combination with the valve inlet B, and valve outlet C, the fan wheel H, fast on said stem, the steam box D enclosing said wheel and stem, the branch pipe *d*, connecting said outlet C, between the engine and throttle with said box, the valve in said branch, devices for operating said valve, and an exhaust in said box, all being arranged to operate substantially as specified.

No. 68,132. Mechanism for Reversing Engines.
(*Mécanisme de renversement.*)

William W. Leach, of Jewell, Ohio, U.S.A., 17th July, 1900; 6 years. (Filed 4th July, 1900.)

Claim.—1st. In a reversing mechanism for engines, the combination with a sleeve adapted to be secured to the crank shaft of the engine, said sleeve having trunnions, of an eccentric on said sleeve having internal half bearings for said trunnions, a peripheral flange at one edge of said ring parallel with said flange, a ring loosely mounted between said flange and parallel ring, blocks secured in the eccentrics and constituting half bearings for said trunnions, arms on said blocks projecting over the outer face of said parallel ring, a pivoted yoke connected to said loose ring at diametrically opposite points, a valve rod attached to said yoke and means for turning the eccentric on its pivotal support. 2nd. In a reversing mechanism for engines, the combination with a sleeve to be secured to the crank shaft of the engine, an eccentric pivoted to said sleeve and a ring on the eccentric, of a fixed bracket, a yoke pivotally mounted in said bracket and attached at its ends to the ring on the

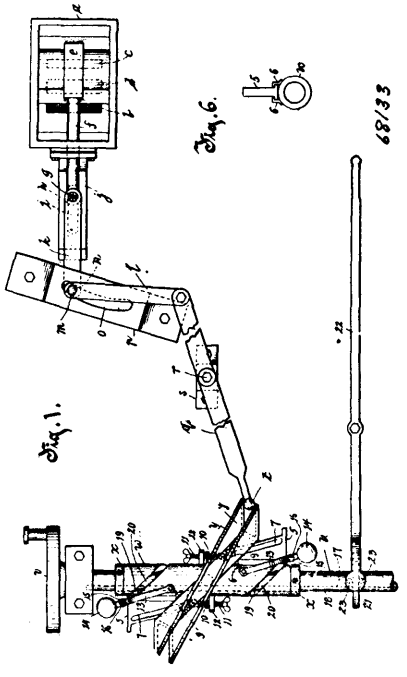
eccentric, an arm projecting from the yoke for the attachment of a valve rod, a lever mounted between its ends on the fixed bracket,



said lever comprising two parallel members, each provided at one end with a curved arm, a sleeve to slide on the crank shaft, a connection between the sliding sleeve and the eccentric, and connections between the curved arms on the parallel members of the lever and the sliding sleeve.

No. 68,133. Valve Gear for Steam Engines.

(Renvois de mouvement de tiroir pour machine à vapeur.)

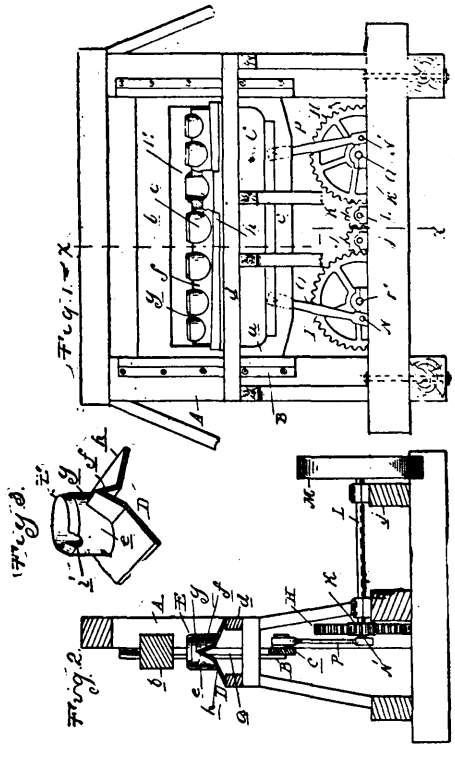


Oswald Jackson, of Carrolton, Illinois, U.S.A., 17th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a valve rod extending from the valve, a connecting rod pivoted to the valve rod, a plate provided with an elongated slot in which the end of the connecting rod works, a crank shaft, a lever actuated by the crank shaft, a connection between the lever and the connecting rod, and governor mechanism actuated by the crank shaft and connected with the valve operating mechanism, and adapted to regulate the throw of the valve. 2nd. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a valve rod extending from the valve, a connecting rod pivoted at one end to the valve rod, and carrying at its opposite end an anti-friction roller, a plate provided with an elongated slot in which the anti-friction roller works, a crank shaft, a lever actuated by the crank shaft, a connection between the lever and the connecting rod, and governor mechanism actuated by the crank shaft and connected with the valve operating mechanism, and adapted to regulate the throw of the valve. 3rd. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a valve rod extending from the valve, a connecting rod pivoted to the valve rod, a plate provided with an elongated slot in which the end of the connecting rod works, a crank shaft, a lever actuated by the crank shaft, a link connecting said lever with the connecting rod, and governor mechanism actuated by the crank shaft and connected with the valve operating mechanism, and adapted to regulate the throw of the valve. 4th. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a crank shaft, a cam mounted at an obliquity upon the crank shaft, a lever having one end engaging the cam, a connection between the opposite end of said lever and the valve, and governor mechanism actuated by the crank shaft and connected with the valve operating mechanism and adapted to regulate the throw of the valve. 5th. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a crank shaft, a cam mounted upon the crank shaft in such manner as to be turned to a more or less oblique position, a lever having one end engaging the cam, connections between said lever and the valve rod, and governor mechanism adapted to act on the cam in order to throw said cam at a more or less oblique position dependent upon the speed of the engine, and thereby regulate the throw of the valve. 6th. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a crank shaft, a hub mounted on the crank shaft so as to revolve therewith, a cam pivotally mounted on the hub so as to rotate therewith but adapted to be thrown on its pivots to a more or less oblique position, a lever having one end engaging the cam, connections between the lever and the valve, and governing mechanism acting on the cam so as to throw the same at a more or less oblique plane depending upon the speed of the engine, and thereby regulating the speed of said engine. 7th. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a crank shaft, a hub mounted on the crank shaft so as to revolve therewith, a cam pivotally mounted on the hub so as to rotate therewith but adapted to be thrown on its pivot to a more or less oblique position, said cam having sets of lugs extending from opposite points thereof, wedge plates slidingly mounted on the hub, bolts passing through the sets of lugs and engaging the wedge plates, a lever having one end engaging the cam, connections between the opposite end of said lever and the valve, governor mechanism adapted, when the speed of the engine becomes too great, to actuate the wedge plates in a direction to turn the cam to a more upright position, and means, when the speed of the engine becomes reduced, for turning the cam back towards its former position, and at the same time returning the wedge plates to their normal position. 8th. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a crank shaft, a hub mounted on the crank shaft so as to revolve therewith, a cam pivotally mounted on the hub so as to rotate therewith but adapted to be thrown on its pivots to a more or less oblique position, said cam having sets of lugs extending from opposite points thereof, plates slidably mounted on the hub, said plates provided with oblique slots, bolts passing through the sets of lugs and through the oblique slots, a lever having one end engaging the cam, connection between the opposite end of said lever and the valve, governor mechanism adapted, when the speed of the engine becomes too great, to actuate the wedge plates in a direction to turn the cam to a more upright position, and means, when the speed of the engine becomes reduced, for turning the cam back towards its former position, and at the same time returning the wedge plates to their normal position. 9th. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder, a crank shaft, a hub mounted on the crank shaft so as to revolve therewith, a cam pivotally mounted on the hub so as to rotate therewith, but adapted to be thrown on its pivots to a more or less oblique position, said cam having sets of lugs extending from opposite points thereof, plates slidably mounted on the hub, bolts passing through the sets of lugs and engaging the wedge plates, a lever having one end engaging the cam, connections between the opposite end of said lever and the valve, governor mechanism consisting of sets of arms pivoted to the hub, each set of arms carrying at its outer end a governor ball, and each set of arms also having an anti-friction roller mounted therebetween, the said rollers adapted, when the speed of the engine becomes too great, to act against the wedge plates and force plates in a direction to turn the cam to a more upright position, and means when the speed of the engine becomes reduced, for turning the cam back towards its former position, and at the same time returning the wedge plates to their normal position. 10th. In a valve gear, the combination of a valve casing, a valve therein for regulating the ports leading to and from the cylinder,

a crank shaft having a longitudinal recess therein, a bar fitting in said recess, said bar provided with a projecting pin or pins, a hub mounted on the shaft so as to rotate therewith, said hub provided with an oblique slot or slots which the pin or pins engages or engage, a cam mounted on the crank shaft, a lever having one end engaging the cam, connections between said lever and the valve, and means for moving the rod longitudinally.

No. 68,134. Block Cutter. *(Coupe bloc.)*



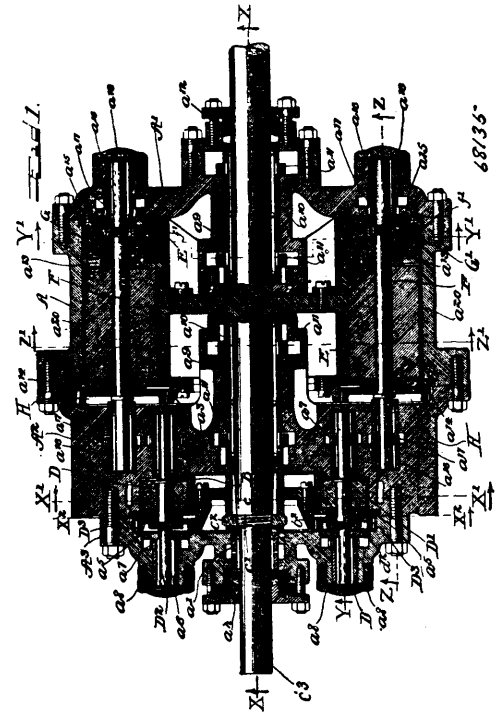
Donald G. Ross, of Beaverton, Michigan, U.S.A., 17th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. In a block cutting machine, the combination with a reciprocating head, of an annular cutter blade arranged beneath said head, and a dividing cutter extending from opposite sides of said annular cutter blade and forming a support therefor, for the purpose described. 2nd. In a block cutting machine, the combination with a reciprocating cross head of a series of separated annular cutters arranged in line with said cross head and a supporting bed for said cutters having a sharp dividing ridge therebetween, for the purpose described. 3rd. In a block cutting machine, the combination with a reciprocating cross head, of a series of separated annular cutters arranged in line with said cross head, and the bed D having annular supports *e* for the cutters, the sharp dividing ridge *f* between said cutters and the inclined wings *h* for the purpose described.

No. 68,135. Rotary Engine. *(Machine rotatoire.)*

Fred William Morgan, assignee of Edward Christopher Warren, both of Chicago, Illinois, U.S.A., 17th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. A compound rotary engine comprising a casing and cylindric piston which rotates concentrically within said casing and which is provided with a plurality of annular flanges which divide the interior of the casing into a plurality of annular compartments or piston chambers, each compartment being provided with a plurality of piston projections which alternate with these of the adjacent or next compartment, and rotary abutments arranged at opposite sides of the piston, and which are of a diameter to extend and rotate between the flanges of the latter, and which are provided with a plurality of peripherial notches or cavities adapted to receive the projections on the piston during the rotation of the latter, the said casing being provided with the suitable ports or passages for admitting and exhausting steam from one compartment to another, the said passages or ports being arranged so as to admit the steam at opposite or substantially opposite points for the purpose of balancing the pressure upon the piston, and such casing being also provided with a suitable steam spaces or cavities for maintaining pressure upon the said rotary abutments, substantially as and for the purpose described. 2nd. A compound rotary engine compressing a suitable cylinder or casing, an annular cylindric or drum like piston which rotates concentrically within said casing and which is peripherially flanged intermediate of its ends in such manner as to



divide the interior of the casing into a plurality of annular compartments, each compartment being provided with a plurality of projections and the projections of one compartment alternating with those of the adjacent or next compartment, one or more rotary abutments provided with peripherial notches adapted to receive the said projections on the rotary piston and arranged to co-operate with said piston and suitable ports or passages whereby the steam may be admitted and exhausted from one compartment of the piston chamber to another. 3rd. A compound multiple expansion rotary engine, comprising high, intermediate and low pressure piston chambers the said chambers having suitable supply and exhaust ports, concentric rotary pistons mounted to rotate in unison upon a shaft and enclosed and operating within said piston chambers, the piston E being provided with end flange *e* and e^4 and also with an intermediate flange which is arranged adjacent to the flange e^4, for the purpose stated, rotary abutments co-operating with said pistons, the steam being primarily admitted to the high pressure chamber wherein it operates to revolve the enclosed piston without expanding, the exhaust from the said high pressure chamber being received and expanded within the intermediate pressure chamber, and the exhaust from the latter being received and expanded within the low pressure chamber. 4th. A compound multiple expansion rotary engine, comprising high, intermediate and low pressure piston chambers, said chambers having suitable supply and exhaust ports, rotary pistons B and E mounted to rotate in unison upon a single shaft C and inclosed and operating within said piston chambers and provided respectively with flanges *b b* and *e* e^1 e^3 e^4 for the purpose described, suitable abutments co-operating with said pistons, the steam being primarily admitted to the high pressure chamber and allowed to pass through the latter without expanding, the exhaust from the said high pressure chamber being received by and expanded within the intermediate pressure chamber and the exhaust from the latter being received by and expanded without the low pressure chamber. 5th. A compound rotary engine comprising high, intermediate and low pressure piston chambers, pistons B and E, rotating in unison upon a single shaft within said chambers and provided respectively with flanges *b b* and *e* e^1, e^3, e^4, substantially as and for the purpose set forth, and a suitable inlet and outlet ports for admitting and exhausting steam to and from the said chambers, and suitable abutments co-operating with said pistons, the steam being primarily admitted to the high pressure chamber and exhausted therefrom to the intermediate pressure chambers or chambers, and the exhaust from the latter being conveyed to the low pressure chamber, and means whereby the pressure in the intermediate pressure chamber may be augumented by a direct admission of steam at full boiler pressure, and whereby said chamber may be made to serve as a high pressure chamber. 6th. A rotary engine comprising in combination the casing providing a pison chamber, the piston E, provided with flanges *e*, e^1, e^3, e^4, and rotating concentrically within said chamber and provided with eight piston projections, a couple of cylindric rotary abutments located at opposite sides of the

said piston, each abutment being provided with a couple of recesses adapted to receive the said piston projections during the rotation of the piston, the said abutments having a rolling or frictionless contact with the said piston, and the said casing being provided with suitable inlet and outlet ports for admitting and exhausting the steam to and from the said piston chamber. 7th. A compound double expansion reversible rotary engine, comprising in combination high, intermediate and low pressure piston chambers, the rotary flanged pistons B and E, inclosed within said chambers and constructed substantially as shown and described, suitable abutments co-operating with said pistons, suitable supply and exhaust ports for the piston chambers, the steam being primarily admitted to the high pressure chamber wherein it operates to rotate the inclosed piston without expanding, the exhaust from said high pressure chamber being received and expanded within the intermediate pressure chamber, which is larger than said high pressure chamber, and the exhaust from the intermediate pressure chamber being received and expanded within the low pressure chamber, suitable valves for controlling the said supply and exhaust ports, and means for operating said valves for the purpose of reversing the engine. 8th. In a compound rotary engine, a cylinder casing and a piston rotating concentrically therein, the said piston being flanged so as to divide the interior of the casing into two compartments, and the said piston being also provided with piston projections whereof those of the compartment alternate with those of another compartment, two or more rotary abutments provided with recesses adapted to receive the said piston projections during the rotation of the piston, one or more horse shoe shaped rings arranged upon the abutment shaft or shafts opposite the piston flange or flanges, and one or more pressure spaces or cavities for keeping the said abutments in contact with the piston, one or more inlet ports for admitting steam to one of said two compartments, ports or ducts for conveying the exhaust from such compartment to the other compartment, and suitable ports or ducts for exhausting from the latter. 9th. A compound double expansion rotary engine, comprising high intermediate and low pressure piston chambers, pistons rotating concentrically within said chambers and provided with piston projections, the piston projections in the high pressure chamber alternating with those in the intermediate pressure chamber, and the piston projections in the latter chamber alternating with those of the low pressure chamber, rotary abutments provided with recesses adapted to receive the said piston projections, suitable supply and exhaust ports for admitting and exhausting steam to and from the said piston chambers, the steam being admitted to each chamber at opposite points so as to balance the pressure upon the inclosed piston, and the steam being primarily admitted to the high pressure chamber wherein it operates to rotate the inclosed piston without expanding, the exhaust from the high pressure chamber being received and expanded within the intermediate pressure chamber, and the exhaust from the latter being received and expanded within the low pressure chamber. 10th. A compound double expansion rotary engine, comprising the high, intermediate and low pressure piston chambers, pistons rotating concentrically therein and provided with piston projections, four of such projections in each chamber, the piston projections of the high pressure chamber alternating with those of the intermediate pressure chamber, and the piston projections of the latter alternating with those of the low pressure chamber, rotary abutments arranged at either side of said pistons and provided with recesses adapted to receive the said piston projections, inlet and outlet ports adjacent to said abutments for admitting and exhausting steam to and from the said chambers, the steam being admitted at opposite points so as to balance the pressure upon the pistons, and the steam being primarily admitted to the high pressure chamber wherein it operates to rotate the inclosed piston without expanding, the high pressure chamber being received and expanded within the intermediate pressure chamber, and the exhaust from the latter being received and expanded within the low pressure chamber. 11th. In a rotary engine, the combination of a suitable ported cylinder, one or more abutments, a rotary shaft, and a hollow cylindric piston which is made in two sections, one of which is provided internally with a web which is forged integral with the said shaft, and the other of said sections being formed with an end web which is bolted to the said web on the other section. 12th. In a rotary engine, the combination of a ported cylinder, suitable abutments, a rotary shaft, and a hollow cylindric piston composed of a couple of telescoping sections and provided internally with a web which is formed integral with the said shaft. 12th. In a rotary engine, the combination of a ported casing, one or more abutments, a rotary shaft and a hollow cylindric piston composed of a couple of telescoping sections, each section being provided internally with a web, and of said webs being formed integral with the said shaft. 14th. The combination of a cylinder, suitable rotary abutments, a rotary shaft, a piston composed of two telescoping sections and provided internally with a web which is formed integral with the said shaft, pinions on the abutment shafts, and an annular ring which is secured to one end of the said piston and which is provided with teeth adapted to engage the said pinions. 15th. The combination of a cylinder and one or more abutments, a rotary shaft, a high pressure piston keyed to said shaft, and a second piston provided peripherially with flanges which divide the interior of the cylinder into intermediate and low pressure chambers, the said second piston being made in two sections, one of which is provided internally with a web formed integral with the said shaft. 16th. A rotary engine comprising a cylindric or drum-like piston which is provided peripherially with annular flanges, rotary abutments arranged to extend between said flanges, pinions on the abutment shafts, an annular ring which is secured to one end of said piston and provided with teeth adapted to engage said pinions, and a cylinder or casing which encloses the piston and abutments and also the said gearing. 17th. In a rotary engine, and in combination with oppositely arranged rotary abutments, a hollow cylindric piston which is provided peripherially with annular flanges and which is composed of a couple of sections, one of which is provided internally with a web formed integral with the shaft, a cylinder having heads provided with bosses which extend into the piston and form bearing for the shafts, pinions on the abutments shafts, and an annular ring secured to one end of said piston and provided with teeth which engage the said pinions, the said ring and pinions being enclosed by the said cylinder. 18th. In a rotary engine, the combination of oppositely arrangad rotary abutments, a rotary shaft, a cylindric piston provided internally with a web formed integral with the shaft, pinions on the abutment shafts, an annular ring secured to one end of said piston and provided with teeth which engage said pinions, and a cylinder or casing having inwardly extending bosses which form bearings for the shaft and which are provided with bushings and oil rings, substantially as described. 19th. A compound rotary engine comprising a high pressure chamber and enclosed piston, a second piston having flanges which divide the interior of the cylinder or casing into intermediate and low pressure chambers, suitable abutments co-operating with said pistons, the said cylinder or casing having space between its inner surface and the ends of the pistons, a rotary shaft upon which said pistons are mounted, and a thrust bearing which prevents end movement on the part of said shaft. 20th. The combination of oppositely arranged rotary abutments, a rotary shaft, a piston keyed upon said shaft, a second piston having an internal web which is formed integral with said shaft, a casing having space between its inner surface and the ends of said piston, substantially as and for the purpose set forth. 21st. The combination of a rotary shaft, a high pressure piston mounted thereon, a second piston which is also mounted upon said shaft and which is flanged to divide the interior of the casing into intermediate and low pressure chambers, suitable abutments co-operating with said pistons, and means for supplying motive fluid. 22nd. The combination of a cylinder, one or more abutments, a rotary shaft, a high pressure piston keyed to said shaft, and a combined intermediate and low pressure piston having a web formed integral with said shaft, substantially as set forth. 23th. The combination of a combined intermediate and low pressure piston composed of a couple of telescoping sections which are bolted together and one of which is formed integral with the rotary shaft, a high pressure piston keyed to said shaft, oppositely arranged rotary abutments, and a cylinder or casing provided with suitable ports and passages. 24th. The combination of a shaft having a tapered piston, a piston locked upon said tapered portion by a nut screwed upon said shaft, a thrust bearing for the hub of said piston, a second piston having a web formed integral with said shaft, suitable abutments co-operating with said pistons, and a suitable cylinder or casing having ports and passages for admitting and exausting the motive fluid. 25th. A rotary engine comprising a flanged piston, rotary abutments co-operating with said piston, each abutment being composed of a plurality of sections having interlocking end portions, and a cylinder or casing having suitable ports or passages. 26th. A rotary engine comprising a piston which is flanged and which is composed of two sections, rotary abutments arranged to co-operate with said piston, a casing adapted to enclose said piston and abutments, each abutment being made in two sections which have interlocking end portions, and the said casing being provided internally with webs, which extend between the said sections, substantially as described. 27th. A rotary engine comprising a flanged piston made in two sections, a shaft upon which said piston is mounted, rotary abutments co-operating with said piston, each abutment being composed of sections, which are mounted upon a shaft and which are provided with interlocking end portions, a gear carried by the piston shaft and arranged to engage pinions on the abutment shafts, the said pinions having hub portions, which interlock with the end portions of said abutments, and a casing adapted to enclose the piston and abutments, and also the said gearing, and having webs which extend between the said abutment sections, substantially as described. 28th. A rotary engine comprising a piston provided with end flanges and also with an intermediate flange, a casing of cylinder having webs, which are located opposite the said intermediate flange, rotary abutments co-operating with said piston, each abutment being made in sections, which are separated by said webs, and which have interlocking end portions, pinions having hubs which interlock with the ends of the abutments, and which are gear connected withthe piston shaft, the said piston being made in sections, and removable rings being arranged opposite the end flanges of the piston, substantially as and for the purpose set forth. 29th. The combination of a rotary piston made in sections, and a rotary abutment composed of sections having interlocking end portions, substantially as described. 30th. In a rotary engine, and in combination with a suitable piston and cylinder, a rotary abutment shaft having a shoulder, a pinion mounted upon said shaft, an abutment composed of interlocking sections, which are arranged upon said shaft, the said pinion also

interlocking with the said abutment, and a nut for tightening the pinion and abutment against the said shoulder on the shaft. 31st. The combination of a combined intermediate and low pressure piston and having heads, a high pressure piston arranged in a recess formed in one of said cylinder heads, a supplemental head for enclosing said high pressure piston, both pistons being mounted upon a single shaft, and suitable abutments being provided and arranged to co-operate with said pistons. 32nd. The combination, in a compound rotary engine of a shaft, a piston mounted thereon, a cylinder enclosing said piston and provided with heads, a second piston mounted upon said shaft and arranged in a recess formed in one of said cylinder heads, a supplemental head for enclosing said second piston, and oppositely arranged rotary abutments. 33rd. The combination, in a compound rotary engine, of a combined intermediate and low pressure piston having a web, which is formed integral with a shaft, a cylinder enclosing said piston and provided with heads, a high pressure piston keyed to said shaft and arranged within a recess formed in one of said cylinder heads, a supplemental head for enclosing said high pressure piston, and suitable abutments arranged to co-operate with said pistons. 34th. A compound multiple expansion rotary engine, comprising a plurality of pistons, which are mounted upon a single shaft, suitable abutments co-operating with said pistons, a casing or cylinder having space between its inner surface and the ends of the said piston, substantially as and for the purpose described. 35th. In a rotary engine, the combination of a piston made in two sections and provided with a web which is formed integral with the piston shaft, a second piston which is keyed to said shaft, rotary abutments which are gear connected with said piston shaft, a casing adapted to enclose the piston and abutments and also the said gearing and having space between its inner surface and the ends of the pistons and also between its inner surface and the abutments, and a thrust bearing which prevents end movement on the part of said shaft, substantially as described. 36th. In a rotary engine, and in combination with a cylinder and suitable abutments, a piston having annular flanges formed upon its periphery, piston heads arranged between the flanges, pin extended through the flanges and piston-heads, an annular toothed ring which is bolted to one end of the piston, substantially as and for the purpose set forth. 37th. In a compound rotary engine, the combination of an annular high pressure piston having annular peripherial flanges, a toothed ring secured to one end of said piston, rotary abutments arranged to co-operate with said piston, pinions having hub portions which interlock with the said abutments, the said pinions being arranged to engage said toothed ring on the piston, a shoulder on the abutment shaft, a nut for clamping the pinion and abutment against said shoulder, and a casing or cylinder having space against said shoulder, and a casing or cylinder having space between its inner surface and the ends of the piston and also between its inner surface and the rotary abutments, substantially as and for the purpose described. 38th. In a reversible compound multiple expansion fluid motor, the combination of a piston shaft, a high pressure piston mounted upon said shaft, a combined intermediate and low pressure piston also mounted upon said shaft and provided with flanges which divide the interior of the casing into annular compartments, oppositely arranged rotary abutments which co-operate with said piston and which are gear connected with said piston shaft, the said casing being provided with suitable ports or passages and a reversing valve being provided for reversing the order of admission and exhaust, substantially as described. 39th. In a reversible compound multiple expansion rotary engine, a valve casing, a plurality of rotary valves adapted to control the passages in said casing, and having pressure spaces at their larger ends to keep them seated, means for connecting the passage in the valves casing with the ports and passages in the engine casing. 40th. In a compound reversible rotary engine, and in combination with an engine casing and suitable pistons, a valve casing a plurality of rotary plug valves for controlling the passages in the valve casing, each valve having two oppositely arranged recesses, pressure paces for keeping the valves seated, means for connecting the valves for simultaneous adjustment, and means for connecting the passages in the valve casing with the ports and passages in the engine casing. 41st. In a compound reversible rotary engine, and in combination with an engine casing and suitable pistons, a valve casing, a plurality of rotary valves adapted to control the passages in said valve casing, one of said valves being provided with an independently adjustable valve by which the high pressure piston can be rendered neutral and live steam permitted to enter the intermediate pressure chamber, means for connecting the said rotary valves for simultaneous adjustment, and means for connecting the passages in the valve casing with the ports and passages in the engine casing. 42nd. In a compound reversible rotary engine, and in combination with an engine casing and suitable pistons, a valve casing, a plurality of rotary plug valves connected for simultaneous adjustment and adapted for controlling the passages in said valve casing, one of said valves being provided with a supplemental rotary valve by which the high pressure piston can be rendered neutral and live steam admitted directly to the intermediate pressure chamber, and means for connecting the passages in the valve casing with the ports and passages in the engine casing. 43rd. In a compound reversible rotary engine, and in combination with an engine casing and suitable pistons, a valve casing having an opening or passage at each end and a plurality of passages at each side, rotary plug valves for controlling said passages in the valve casing, each valve being provided with a couple of recesses, means for connecting said valves for simultaneous adjustment, a supplemental rotary valve arranged within one of said rotary plug valves and adjustable independently for the purpose of rendering the high pressure piston neutral and admitting live steam directly to the intermediate pressure chamber, means for connecting one of said openings in the valve casing with a source of fluid pressure, means for connecting the other end opening of the valve casing with an exhaust passage, and means for connecting the lateral or side passages of said valve casing with the ports and passages in the engine casing.

No. 68,136. Pump for Tire Inflation. (*Pompe à air.*)

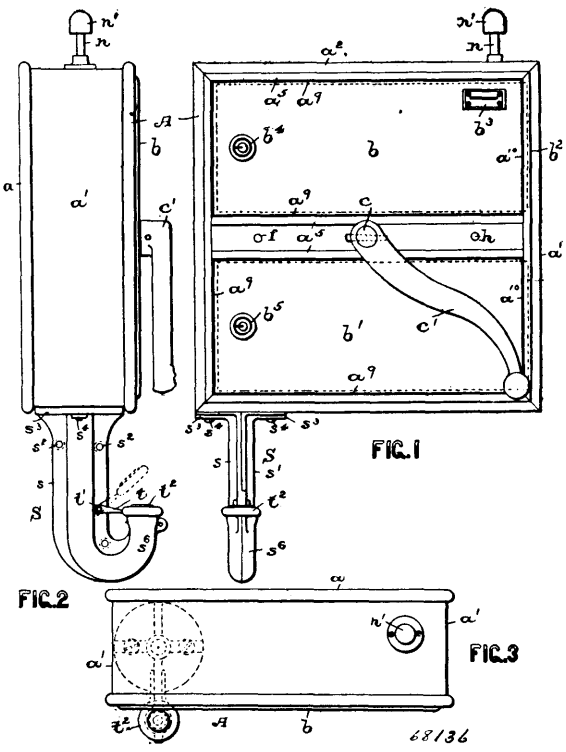


FIG. 1

FIG. 2

FIG. 3

68136

Clement C. Clawson, of Newark, New Jersey, U.S.A., 17th July, 1900; 6 years. (Filed 9th May, 1900.)

Claim.—1st. In combination with pumping mechanism inclosed in a casing, a rigid wheel support on the outer side of said casing, said support having a goose neck and an opening therein, and a pipe connecting the pump mechanism with said wheel support, substantially as and for the purposes set forth. 2nd. In combination with pumping mechanism enclosed in a casing, a rigid wheel support on the outer side of said casing, consisting, essentially, of a pair of grooved plates s and s^1, means for securing them together, a gooseneck s^6, and a pipe p^3 arranged between said grooved plates, substantially as and for the purposes set forth. 3rd. In an air pump operating mechanism, the combination, with a casing and its mechanism therein, of a wheel support on the outer side of said casing, having a goose neck provided with an air outlet, and a cap removably arranged over said outlet, substantially as and for the purposes set forth. 4th. In combination with pumping mechanism enclosed in a casing, a rigid wheel support on the outer side of said casing, comprising a pair of grooved sections, a tube connected with the pump mechanism and arranged in said grooved sections, and means for securing said sections together, substantially as and for the purposes set forth. 5th. In combination with pumping mechanism enclosed in a casing, a rigid wheel support comprising a pair of separable sections on the other side of said casing, said support having a gooseneck and an opening therein, and means connected with said support and pumping mechanism for conveying air from said pumping mechanism into and through said support to the tire on said support, substantially as and for the purposes set forth.

No. 68,137. Dress Maker's Chart. (*Patron pour couturière.*)

Victoria Robert, of Lévis, Quebec, Canada, 17th July, 1900; 6 years. (Filed 9th May, 1900.)

Claim.—1st. A template for each section of a dress waist having two or more scales by which the different dimensions may be located and marked on the material from which the waist is to be made, substantially as herein shown and described. 2nd. A set of templates to give the shapes of the different sections of a dress waist, each template having scales in which numbered openings are made

through which the outline points may be marked upon the dress material, substantially as herein shown and described. 3rd. A set

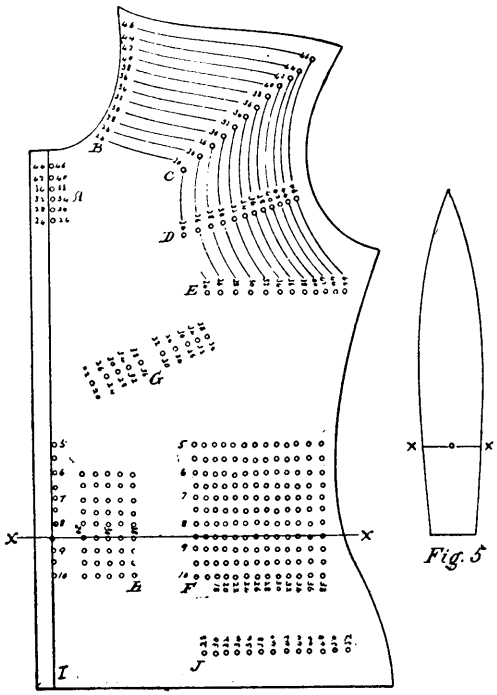


Fig. 1 68137

Fig. 5

of dress chart templates in which proportional scales having numbered openings through the template are arranged to correspond, those of one template with those of the others of the set, substantially as herein shown and described.

No. 68,138. Automatic Feed Device.

(*Appareil d'alimentation automatique.*)

George W. Hamlin, of Canandaigua, Ward H. Preston of Shortsville, and George H. Preston, of Manchester, all of New York, U.S.A., 17th July, 1900; 6 years. (Filed 27th June, 1900.)

Claim.—1st. An automatic feeding device comprising a rotatable member provided upon its periphery with a series of pockets, substantially as specified. 2nd. The combination with a slicing machine, of a feed device comprising a rotary member having a series of pockets adapted to take from an exterior hopper, carry therefrom and deliver into said machine a predetermined quantity of fruit or its equivalent material, substantially as specified. 3rd. An automatic feeding device comprising a rotatable member provided with pockets each open at its delivery end, and means for delivering fruit therefrom at a desired point in the rotation of such device, substantially as specified. 4th. The combination with a slicing machine, of a feeding device constructed, arranged and adapted to feed fruit singly thereto, substantially as specified. 5th. The combination with a slicing machine and with a hopper, of feeding devices constructed, arranged and operating to take, carry and deliver singly fruit from said hopper to said machine, substantially as specified. 6th. An automatic feeding device comprising a rotatable member provided upon its periphery with a series of pockets open at their opposite ends and inclined obliquely to the horizontal axis of the peripheral rim of said member, substantially as specified. 7th. In an automatic feeding device, the combination with a rotating member of a machine located in a horizontal plane, of a feed wheel disposed at an angle to the vertical axle of said member, and pockets carried by said wheel and adapted to automatically deliver to said rotating member, substantially as specified. 8th. In an automatic feeding device, the combination with a rotating member of a machine located in a horizontal plane of a teed wheel disposed at an angle to the vertical axis of said member, pockets carried by said wheels and adapted to automatically deliver to said rotating member, and a hopper beneath said wheel having a face concentric to the periphery of the wheel, substantially as specified. 9th. In an automatic feeding device, the combination with a rotating member of a machine located in a horizontal plane, of a feed wheel disposed at an angle to the vertical axis of said member, pockets carried by said wheel and adapted to automatically deliver to said rotating member, a hopper beneath said wheel having a face concentric to the periphery of the wheel, and a guard plate for said hopper extending upward from one side of said wheel, substantially as specified. 10th. In an automatic feeding device, the combination with a rotating member of a machine located in a

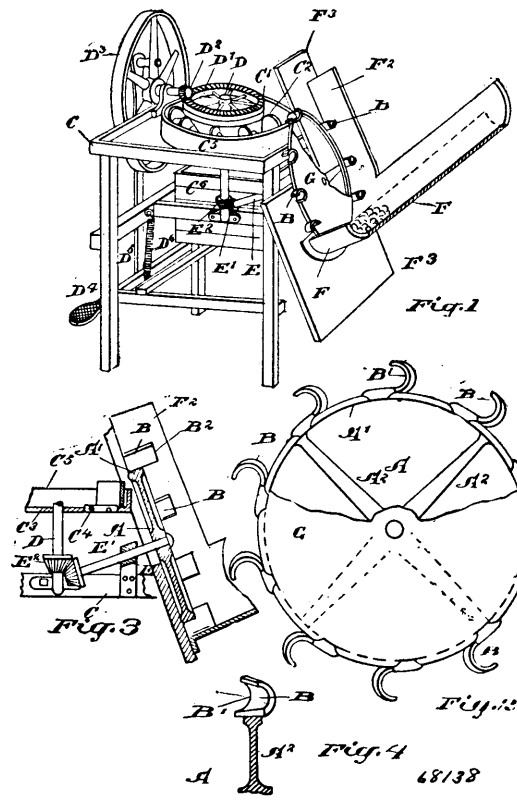


Fig. 1

Fig. 3

Fig. 2

Fig. 4 68138

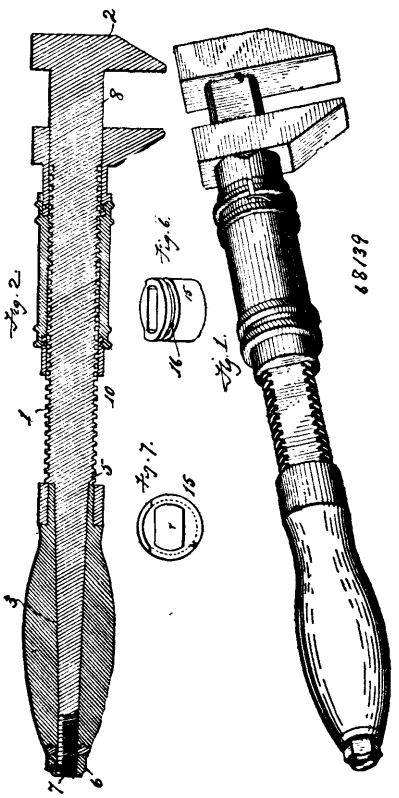
horizontal plane, of a feed wheel disposed at an angle to the vertical axis of said member, pockets carried by said wheel and adapted to automatically deliver to said rotating member, a hopper beneath said wheel having a face concentric to the periphery of the wheel, a guard plate for said hopper extending upward from one side of said wheel, and a back plate at one side of said wheel and terminating adjacent to the highest point of said wheel, substantially as specified. 11th. In an automatic feeding device, the combination with a machine provided with a drum having a series of sweeps operating over a horizontal base, of means for driving said drum, a feed wheel driven from said drum and having pockets adapted in their rotation to register with the spaces between the sweeps on said drum, substantially as specified. 12th. In an automatic feeding device, the combination with a machine embodying a rotating drum having sweeps operating over a horizontal base, of means for rotating said drum, a feed wheel provided with a shaft geared to the shaft of said drum, pockets carried upon the periphery of said feed wheel and adapted to pass through a hopper at the lower portion thereof, means for covering the spokes of said wheel upon the side next to said hopper, and means for preventing the delivery of material from said pockets until the same reached a position to deliver between said sweeps, substantially as specified.

No. 68,139. Wrench. (*Clé à écrou.*)

Lott Frederick and George H. Dugan, both of North Summit, Pennsylvania, U.S.A., 17th July, 1900; 6 years. (Filed 15th June, 1899.)

Claim.—1st. In a wrench, a post having a fixed jaw and partial screw guides in the opposite edges, in combination with a movable jaw having a rearwardly extending sleeve provided with an external groove, and a controller sleeve having partial threads fitting said guides and a thread on its inner end engaging said external groove and means to lock the parts in position, all arranged, as set forth. 2nd. In a wrench, a post having a fixed jaw and mutilated screw threads, in combination, a movable jaw having a rearwardly extending tubular flange provided with an external groove, and a controller sleeve having partial threads fitting said screw threads and having an interiorly reduced end provided with a thread taking into said external groove, and means to lock the parts in position, all arranged, as set forth. 3rd. In a wrench, the combination with a post having a fixed jaw with mulitated screw threads, of a movable jaw having a rearwardly extended tubular flange provided with an external groove, and a controller having an interiorly reduced end provided with a thread engaging said external groove, and means to lock the

same consisting of a recess in the tubular flange and a spring actuated pin in the controller fitting the recess, all arranged, as set



forth. 4th. In a wrench, the combination with a post having mutilated screw threads and a fixed jaw, of a movable jaw having a rearwardly extended sleeve, a controller having partial screw threads fitting said mutilated threads, and also having interiorly reduced ends, a closing collar fitting the rear reduced end, said sleeve fitting the forward reduced end, and means to lock the sleeve, the controller and the closing collar, all in position, as set forth.

No. 68,140. Medicinal Compound for Animals.

(*Composition médecinale.*)

Thomas Farlinger, Dundee, Quebec, Canada, 17th July, 1900; 6 years. (Filed 30th January, 1900.)

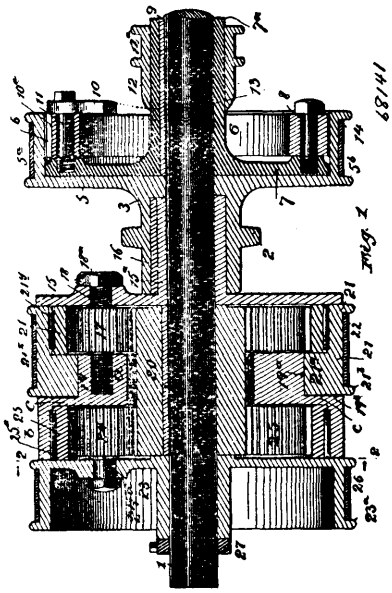
Claim.—A tonic and stimulative composition for domestic animals, comprising ginger, sulphur, powdered gentian, nitre and crude antimony, in substantially the proportions specified.

No. 68,141. Variable Speed Gearing.

(*Engrenage variable de vitesse.*)

Colcord Upton, of Beverly, Massachusetts, U.S.A., 17th July, 1900; 6 years. (Filed 28th April, 1900.)

Claim.—1st. The combination of a driving part, a driven part, a member mounted to rotate around the driving part, a rack mounted to rotate around the driving part, a gear in mesh with said rack, means for communicating independent rotation from the driving part to said gear, and means connecting said gear with said member to rotate the latter and the driven part by the movement of said gear along said rack, substantially as described. 2nd. The combination of a driving part, a driven part, a rack mounted to rotate around the driving part, gearing connecting the driving part with the driven part and with said rack, and means for locking the driving part to the driven part, substantially as described. 3rd. The combination of a driving part, a driven part, a member mounted to rotate freely around the driving part, a rack carried by said member, a gear carried by the driving part, a piston in mesh with said rack and gear, means connecting said piston with the driven part, and means for locking the driven part to said member, substantially as described. 4th. The combination of a driving part, a driven part, a member mounted to rotate freely around the driving part, a rack carried by said member, a brake to control the rotation of said member, a gear carried by the driving part, a pinion in mesh with said rack and gear, means connecting the pinion with the driven part, and friction devices for connecting the driven part with said member, substantially as described. 5th. The combination of a driving part, a driven part, gearing connecting the driving part with the driven part so they will rotate in the same direction, means



for locking said driving part in connection with the driven part, and gearing connecting the driving part with the driven part to rotate the latter in a direction reverse to the direction of rotation of the driving part, substantially as described. 6th. The combination of a driving part, a driven part, a gearing connecting the driving part with the driven part, means for locking said driving part in connection with the driven part, other gearing connecting the driving part with the driven part to rotate the latter in a direction reverse to the direction of rotation of the driving part, and means for limiting the rotation of part of said gearing around the driving part and means to limit rotation of the driven part, substantially as described. 7th. The combination of a driving part, a driven part, gearing connecting the driving part with the driven part, means for locking said driving part in connection with the driven part, a rack connected with said driven part, a gear connected with said driving part, a pinion in mesh with said rack and gear, a support for said pinion mounted to rotate around the driving part, and means to limit rotation to said support, substantially as described. 8th. The combination of a driving part, a driven part, gearing connecting the driving part with the driven part, and means for locking said driving part in connection with the driven part, with a rack connected with a driven part, a gear connected with the driven part, a pinion in mesh with said rack and gear, a member carrying said pinion and mounted to rotate around the driving part, and a brake to limit rotation of said member, substantially as described. 9th. The combination of a driving part, a driven part, gearing connecting the driving part with the driven part, other gearing connecting the driving part with the driven part to rotate the latter in a direction reverse to the direction of rotation of the driving part, substantially as described. 10th. The combination of a driving part, three independently rotative members, one member being supported by another member to rotate freely therearound, and two sets of power transmitting mechanisms each including three elements, an element of two power transmitting mechanisms being carried by the driving part, an element of two power transmitting mechanisms being carried by one of the rotative members, and one element of each power transmitting mechanism being carried by each of the other rotative members, substantially as described. 11th. The combination of a driving part, three independently rotative members, one member being supported loosely by another member to rotate freely therearound, and two sets of power transmitting mechanisms each including three elements, an element of two power transmitting mechanisms being carried by the driving part, an element of two power transmitting mechanisms being carried by one of the rotative members, one element of each power transmitting mechanism being carried by each of the other rotative members, and means for firmly connecting the driving part with one of said rotative members for rotating them at the same speed, substantially as described. 12th. The combination of a driving part, a driven part, a pinion and a rack connected with the driven part, an independent rotative rack in mesh with said pinion, a pinion in mesh with the first mentioned rack, a rotative member carrying said pinion, means carried by the driving part for operating said pinions, and means for firmly connecting the rotative part with the driven part to rotate them at the same speed, substantially as described. 13th. The combination of a

driving part, a rotative member mounted thereon, a pinion carried by said member, a rack in mesh with said pinion and mounted to rotate freely therearound, means to rotate said pinion by the driving part, means to limit the rotation of said rack, a driven part rigidly connected with the rotative member, and means to firmly connect the driven part, substantially as described. 14th. The combination of a driving part, a rotative member having a guideway, a rack guided to rotate therearound, a pinion carried by said rotative member in mesh with said rack, and means carried by the driving part to rotate said pinion, substantially as described. 15th. The combination of a driving part, a rotative member having a guideway, a rank guided to rotate therearound, a pinion carried by said rotative member in mesh with said rack, means carried by the driving part to rotate said pinion, and means for firmly connecting the driving part with said rotative member, substantially as described. 16th. The combination of a driving part, a rotative member, an annulus or ring carried thereby, a rack guided to rotate around said ring, a pinion in mesh with said rack, means carried by the driving part in mesh with said pinion, and means for firmly connecting the driving part to said rotative member, substantially as described. 17th. The combination of a driving part, a rotative member, an annulus or ring carried thereby, a rack carried by said annulus or ring, a rack guided to rotate around the annulus or ring, a pinion in mesh with the last mentioned rack and carried by the rotative member, a pinion in mesh with the first mentioned rack, a rotative element carrying said pinion, and means carried by the driving part for operating said pinions, substantially as described. 18th. The combination of a driving part, a rotative member, an annulas or ring carried thereby, a rack carried by said annulas or ring, a rack guided to rotate around the annulus or ring, a pinion in mesh with the last mentioned rack and carried by the rotative member, a pinion in mesh with the first mentioned rack, a rotative element carrying said pinion, means carried by the driving part for operating said pinions, means for limiting the rotation of the loose rack and of the rotative element, and means for firmly uniting the driving part to said rotative member, substantially as described. 19th. The combination of a driving part, a rotative member, an annulus carried thereby and having an annulas guideway and a radial bearing surface, a loose rack guided to rotate around the annulus, a pinion carried by the rotative member in mesh with said rack, a rack carried by the rotative member, a pinion in mesh therewith, a rotative element carrying said pinion, means carried by the driving part for rotating said pinions, and means for limiting the rotation of the loose rack and of the rotative element, substantially as described. 20th. The combination of a driving part, a disc mounted to rotate thereon, studs carried by said disc, an annulus or ring connected with said studs, a pinion journalled between the annulus or ring and the disc, a rack guided to rotate around the annulus and in mesh with the pinion, means carried by the driving part to rotate said pinion, and means for limiting the rotation of said rack, substantially as described. 21st. The combination of a driving part, a drum loose thereon, means for connecting the drum firmly to the driving part, a disc connected with said drum, a pinion and an annulus or ring connected with said disc, a rack guided to rotate around said annulus or ring and in mesh with said pinion, means carried by the driving part to rotate said pinion, means to limit the rotation of said rack, and a driven part connected with the drum, substantially as described.

No. 68,142. Wrought Metal Radiator. (*Calorifère.*)

Frank A. Wilmot, of Bridgeport, Connecticut, U.S.A., 17th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. A radiator header cupped and drawn from a blank of wrought metal, the edges of said blank being unequally closed inward, portions of said edges being secured together and other portions formed for the attachment of pipes. 2nd. A radiator section comprising a series of wrought metal pipes and a header cupped and drawn from a blank of wrought metal, the edges of said blank being unequally closed inward, portions of said edges being secured together and other portions having the said pipes attached thereto. 3rd. A radiator section comprising a series of wrought metal pipes and a header cupped and drawn from wrought metal and having a continuous outer face, the edges of said blank being unequally closed inward, portions of said edges being formed with a series of collars to which the pipes are secured and other portions of said edges being secured together. 4th. A radiator section consisting of a series of wrought metal pipes, and upper and lower headers cupped and drawn from a blank of wrought metal, the edges of the header blanks being unequally closed inward, portions of said edges being formed with collars to which the pipes are attached and other portions of said edges being secured together by joints between the collars. 5th. The radiator header B cupped and drawn from a blank of wrought metal the edges of said blank being unequally closed inward, portions of said edges being formed into collars 10 and other portions between said collars being secured together, substantially as shown, for the purpose specified. 6th. In a wrought metal radiator, the combination with headers having countersunk openings 23, of tubes 24 having flanges which engage the countersinks of contiguous headers and tubes 26 which inclose

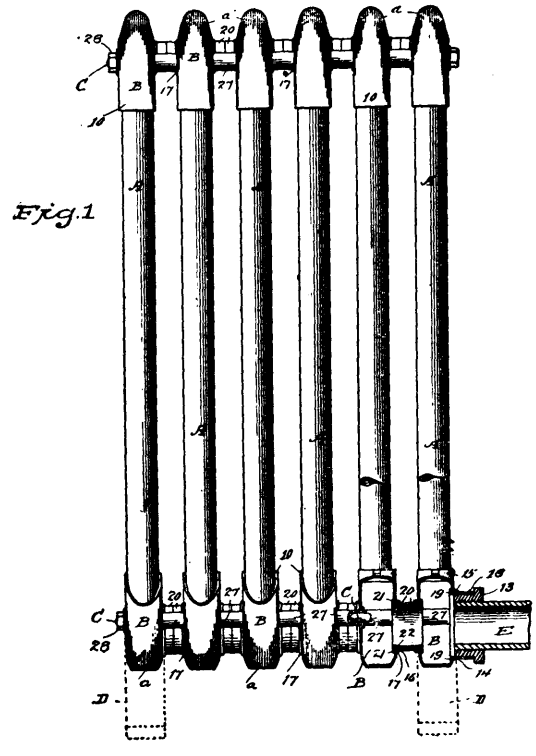


Fig. 1

tubes 24 and the ends of which abut against the sections, whereby collapsing or bursting of the sections is prevented.

No. 68,143. Wrought Metal Radiator (*Calorifère.*)

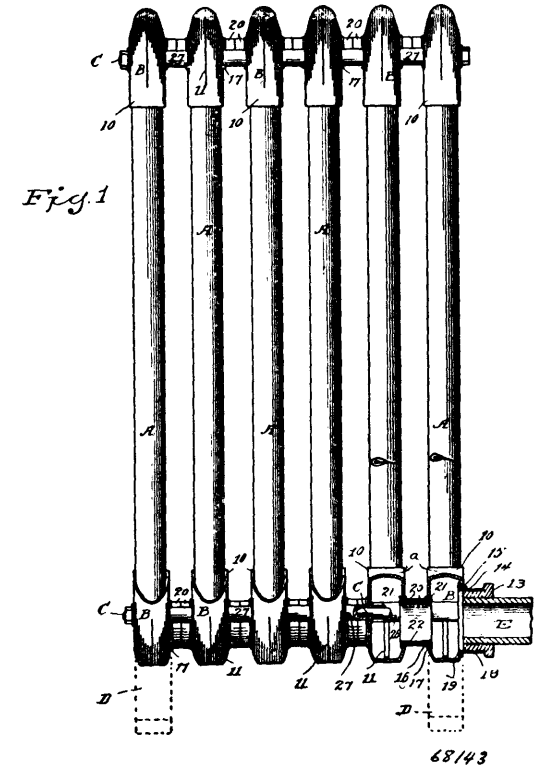


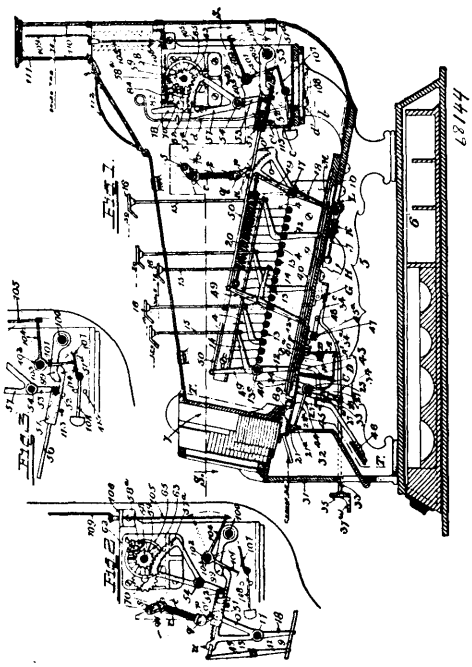
Fig. 1

68143

Frank A. Wilmot, of Bridgeport, Connecticut, U.S.A., 17th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. A radiator section comprising a series of wrought metal pipes and a header cupped and drawn from wrought metal, the edges of the header blank being closed in and secured on the outer face of the header and openings being formed in the inner continuous face to receive the pipes. 2nd. A radiator section comprising a series of wrought metal pipes and a header cupped and drawn from wrought metal, the edges of the header blank being closed in and secured on the outer face of the header, openings being formed in the inner continuous face thereof, and collars 10 being formed surrounding said openings. 3rd. A radiator section consisting of a series of wrought metal pipes and upper and lower headers cupped and drawn from wrought metal, the edges of the header blanks being lapped and secured on the outer face thereof and collars being formed on the inner continuous face to which the pipes are attached. 4th. A radiator header cupped and drawn in one piece from a blank of wrought metal, the edges of the blank being closed in and secured on the outer face thereof and openings being formed in the inner continuous face to receive pipes.

No. 68,144. Change Maker and Indicator.
(Régistre de monnaie.)

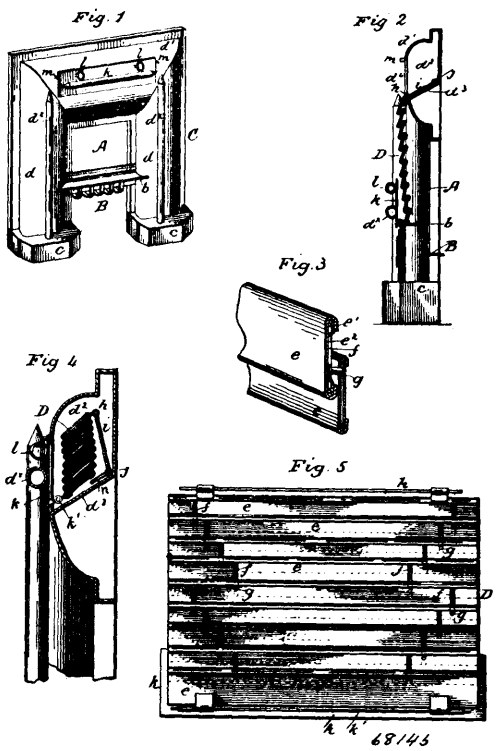


Michael McAneny and Henry August Frambach, both of Denver, Colorado, U.S.A., 19th July, 1900; 6 years. (Filed 12th March, 1900.)

Claim.—1st. In a combined change maker and cash register, the combination of change making devices, spring-actuated registering devices, and a key connected with and arranged to operate both sets of devices. 2nd. The combination of change making devices, spring-actuated registering devices, indicating devices, and a key connected with and arranged to operate all of said devices. 3rd. In a cash register, the combination of push keys, a spring placed under tension by the direct movement of the keys, and a registering device, idle during the direct movement of the keys, but connected to be operated by the recoil of the spring. 4th. The combination of coin receptacles, co-operating coin ejecting slides, spring-actuated registering mechanism and a push key connected with the slides and registering mechanism, and arranged to operate the slides and said mechanism. 5th. The combination of coin receptacles, co-operating slides, rock shafts having fingers engaging the slides in operative relation, push keys connected with crank arms on the rock shafts, and spring-actuated registering mechanism also connected with arms on the rock shafts, whereby the operation of the push keys actuates the slides and the registering mechanism. 6th. In a cash register, the combination of push keys, a spring, intermediate mechanism arranged to place the spring under different degrees of tension as the different keys are pressed, and a registering device idle during the pushing movement of the keys, but connected to be operated by the recoil of the spring. 7th. The combination of coin receptacles, slides provided with spring supported coin ejecting tongues, means for depressing said tongues below the plane of the coins in said receptacles, push keys having purchase amounts indicated thereon, rock shafts having fingers engaging the slides, and having arms connected with the keys, and spring-actuated registering mechanism also connected with the crank arms of the shafts, whereby the coin ejecting slides and said mechanism are actuated, and purchase amounts registered without delivering change. 8th. The combination with coin receptacles, co-operating coin ejecting slides, rock shafts connected in operative relation with the slides, and push keys for operating the rock shafts, of reciprocating shoes connected with the crank arms on the rock shafts, a segmental rack operated by any shoe, a register shaft, a pinion loose on said shaft and meshing with the segmental rack, a ratchet wheel fast on the shaft, a pawl carried by the pinion and engaging the toothed face of the ratchet wheel, a spring placed under tension by turning the pinion in one direction, the recoil of the spring reversing the movement of the pinion which turns the register shaft through the instrumentality of the pawl and ratchet wheel. 9th. The combination with change making devices and push keys for actuating the same, of reciprocating shoes connected in operative relation with the push key, a register shaft, and a spring placed under tension by the shoes for rotating the said shaft by its recoil action. 10th. In a change maker and cash register, the combination with change making devices and keys for operating the same, of reciprocating shoes also operated by the keys, a register shaft operated by the shoes, and dogs for limiting the operating movement of the shoes. 11th. The combination with change making devices and keys for operating the same, of reciprocating shoes also operated by the keys, a register shaft, a spring placed under tension by the shoes and connected with the register shaft which is operated by its recoil action. 12th. The combination with change making devices and keys for operating the same, of reciprocating shoes, a register shaft, a spring placed under tension by the shoes and connected with the register shaft, whereby the recoil of the spring operates the shaft. 13th. In a cash register, the combination of push keys, a spring placed under tension by the movement of the keys, and a register shaft operated by the recoil of the spring after the keys have been released from pressure. 14th. In a combined change maker and cash register, the combination of coin ejecting slides, rock shafts provided with fingers adapted to engage said slides, said shafts being also provided with two sets of crank arms, push keys connected with one set of crank arms, reciprocating shoes connected with the other set of crank arms, and registering mechanism actuated by the shoes. 15th. In a combined change maker and indicator, the combination of coin ejecting slides, rock shafts provided with fingers adapted to engage said slides, said shafts being also provided with two sets of crank arms, push keys connected with one set of crank arms, reciprocating shoes connected with the other set of crank arms, and indicating devices actuated by the shoes. 16th. In a combined change maker, cash register and indicator, the combination of coin ejecting slides, rock shafts provided with fingers adapted to engage said slides, said shafts being also provided with two sets of crank arms, push keys connected with one set of crank arms, reciprocating shoes connected with the other set of crank arms, and registering mechanism and indicating mechanism actuated by the shoes. 17th. The combination of change making mechanism and push keys having purchase amounts designated thereon for operating same, and spring-actuated mechanism initially operated by the same push keys for registering the amounts designated by the keys. 18th. The combination of change making mechanism and push keys having purchase amounts designated thereon for operating said mechanism, spring-actuated mechanism initially operated by the same push keys for registering the amounts designated by said keys, and auxiliary mechanism for regulating the change delivering basis. 19th. The combination of change making mechanism and push keys having purchase amounts designated thereon for operating said mechanism, spring-actuated mechanism initially operated by the same push keys for registering the amounts designated by said keys, and suitable mechanism also actuated by the push keys for indicating the amount of each purchase as designated by said keys. 20th. The combinatian of push keys, indicating devices, a spring, means interposed between the spring and the push keys for placing the spring under tension during the pushing action of the keys, and means interposed between the keys and the indicating device for actuating the latter during the pushing action of the keys, but after the spring has been placed under tension, and registering devices operated by the recoil of the spring. 21st. The combination of change making devices, spring-actuated cash registering devices, indicating devices and operating means connected with all of said devices. 22nd. The combination with a register shaft, a pinion mounted thereon, a segmental rack meshing with the pinion, a rock shaft on which said rack is made fast, arms attached to said shaft and carrylng a rod, reciprocating shoes carrying yielding plugs adapted to engage said rod, dogs arranged to stop the movement of the rod, bell crank levers actuated by extensions formed on the shoes, and rods connected with said levers, and supporting indicating tablets. 23rd. The combination of a change maker, a spring-actuated cash register, and suitable operating means connected with both instrumentalities, the change making function being performed with reference to the purchase amounts registered. 24th. The combination of change making devices, spring-actuated registering devices, indicating devices and operating means connected with all of said devices. 25th. The combination of a spring-actuated register shaft and means for initially operating the same, of a shaft extending

parallel with the register shaft, and provided with a worm, a vertical shaft, a worm-wheel mounted thereon, adjacent and in the plane of the worm, a register dial fast on the vertical shaft, and a movable bracket in which the vertical shaft is journalled, whereby the worm-wheel may be shifted into and out of engagement with the worm at will. 26th. In a change maker, the combination with change making mechanism and push keys for operating the same, of means for locking the operated parts against the return movement until their function has been completed. 27th. In a change maker, the combination with the change making mechanism, of a locking device connected with an operating part and arranged to prevent the return of the parts until the direct operation is completed. 28th. In a combined change maker and cash register, the combination with change making mechanism and registering mechanism, of locking means connected with an operating part, and arranged to act during the direct movement of the mechanism. 29th. The combination with registering mechanism, of means for locking the inactive parts against movement during the operation of the active parts. 30th. The combination with indicating mechanism, of means for locking the inactive parts against movement, during the operation of the active parts. 31st. The combination with change making, registering and indicating mechanism, of means for locking the inactive parts against movement during the operation of the active parts. 32nd. The combination with change making mechanism, of means for locking the active parts against the return movement until their operation is completed, and means for locking the inactive parts against movement until the function of the active parts is completed. 33rd. The combination with registering mechanism, of means for locking the active parts against return movement until their operation is completed, and means for locking the idle parts against movement until the function of the active parts is completed. 34th. The combination with indicating mechanism, of means for locking the active parts against the return movement until their operation is completed, and means for locking the idle parts against movement until the function of the active parts is completed. 35th. The combination with change making, registering and indicating mechanism, of means for locking the active parts against movement until their operation is completed, and means for locking the idle parts against movement until the function of the active parts is performed. 36th. The combination of a spring actuated register shaft, a ratchet wheel fast thereon, a pawl connected with the spring and arranged to travel over the ratchet face of the wheel while placing the spring under tension, and means for locking the shaft against the forward registering movement as the pawl reaches its destination. 37th. The combination with change making mechanism arranged to make change on a predetermined basis, and one or more auxiliary keys arranged when operated to change the said basis, of means for locking said push key or keys in the operated position. 38th. The combination with change making mechanism arranged to make change on a predetermined currency unit basis, one or more auxiliary push keys arranged when operated to change the said change making basis, of means for locking said push key or keys in the operated position, and means connected with an operating part of the machine, for releasing the locking means after the latter has performed its function. 39th. The combination of change making and registering mechanism connected in operative relation, and means for causing the change making mechanism to operate idly during the registering operation, when no change is required, and a device for locking said means in the operated position. 40th. The combination with change making and registering mechanism connected in operative relation, and means for causing the change making mechanism to operate idly during the registering operation when no change is required, a device for locking the said means in the operated position, and means connected with an operating part of the machine for automatically releasing the locking device. 41st. The combination with change making and registering mechanism, and a rock shaft actuated at every operation of the machine, of an alarm device mounted on the machine, and means mounted on the said rock for operating the alarm device. 42nd. In a coin delivery device, the combination with coin receptacles and slides adapted to enter said receptacles, of a series of rock shafts, having fingers for actuating the slides from one direction, and a yieldingly retained rock shaft having fingers engaging all the slides for moving the latter in the opposite direction. 43rd. In a machine of the class described, the combination with a number of coin receptacles, of a plurality of coin ejecting slides adapted to enter said receptacles, a number of rock shafts having fingers adapted to engage the slides, one of said shafts having a plurality of fingers, the arrangement being such that one finger of the last-named shaft and one finger of one of the other shafts, engage the same slide, whereby the last-named slide may be independently actuated by the finger of either shaft, the finger of the other shaft in the meantime remaining idle. 44th. In a coin delivering device, the combination with coin receptacles, of coin ejecting slides provided with stops, rock shafts, each having fingers adapted when actuated to engage stops of certain slides and cause the latter to enter certain receptacles, and means independent of said fingers for automatically retracting the slides, substantially as described. 45th. In a coin delivering device, the combination with coin receptacles, of longitudinally slotted coin ejecting slides, rock shafts each having fingers normally engaging the forward extremities of slots in certain of the slides, and a yielding by retained rock shaft having fingers operatively engaging all of the slides to retract the latter.

No. 68,145. Blower for Grates. (*Soufflet de grille.*)



James Sidney Roark and John Lewis Harper, both of Americus Georgia, U.S.A., 19th July, 1900; 6 years. (Filed 3rd July 1900.)

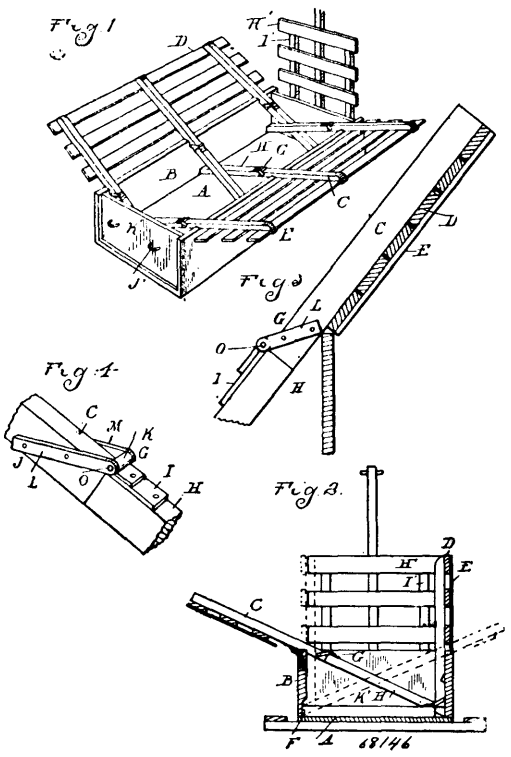
Claim.—1st. A blower such as described, consisting of a collapsible screen formed of a plural number of partially overlapping double slats or back lined plates, said plates having each rivets at either end thereof, and transverse slots mediate said rivets, adapted to engage corresponding slots and rivets, respectively, in the said adjacent plate, and a supporting frame having a pocket with a closed bottom, substantially as described. 2nd. The combination with a frame having a pocket in the top thereof open towards the front, of a blower consisting of a collapsible screen formed of a plural number of metal slats or plates, said plates having each rivets at either end and transverse slots mediate said rivets, respectively, in the next adjacent plate, said screen having a hinged connection in said pocket and a depending plate to close said pocket when the screen is not in use, substantially as described. 3rd. The combination with an open grate fire place, of a mantle attachment or frame, comprising top and lateral members, the top member formed as a receptacle or pocket open towards the front and having a suitable bottom, of a blower consisting of a collapsible screen formed of a plural number of metal slabs or plates having a front double flanged member and a back member embraced thereby, with a space between said plates for heat radiation, said back member having rivets substantially near its ends, and transverse slots mediate said rivets adapted to engage corresponding slots and rivets, respectively, in the next adjaoent plate, a plate hinged to the upper of said slats and to near the rear of the pocket whereby the screen can be collapsed and folded back therein, and a hinged plate depending from the lowermost slat, adapted to serve as a closure for the pocket, and a shelf or plate extending laterally across the front of the grate and against which the screen is adapted to abut when in its lowermost position for completely closing the fireplace save through the grate, substantially as described.

No. 68,146. Hay or Stack Racks. (*Ratelier à foin.*)

Thomas Toohey and William Morris, both of Gagetown, Michigan, U.S.A., 19th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. The combination with a wagon box, of side racks, posts for said side racks comprising two hinged sections, the lower section of a length substantially equal to the width of the wagon box, and a notch or holding means at the base of the sides of the body with which the end of the lower section of the post loosely engages, substantially as described. 2nd. The combination with a wagon box, of the side racks therefor, posts for said side racks formed in sections, and hinges connecting the post sections, each comprising two complementary members, one of which extends on a plane at right angles to its complementary member.

3rd. The combination with a wagon box, of the side racks therefor, posts for said side racks formed in sections, and a hinge for each



pair of post sections, comprising a strap or bar secured to the top o one section and terminating in a tubular bearing, two spaced straps connected to the opposite side of the complementary post section, and a pivot pin extending through the bearing and connecting the spaced straps, substantially as described. 4th. The combination with a wagon box, and a side rack therefor consisting of a series of spaced bars or slats, a multiple of posts secured to the series upon one side thereof, and a corresponding number or straps or bars attached to the opposite side of the series, each strap extending entirely across the series and projecting slightly below the latter, substantially as and for the purpose described.

No. 68,147. Fire Extinguishing Compound.

(Extincteur d'incendie.)

Hubert Harcourt Hull, Jersey City, New Jersey, assignee of Guy Edwards, of the Borough of Manhattan, New York, both in the U.S.A., 19th July, 1900; 6 years. (Filed 9th January, 1900.)

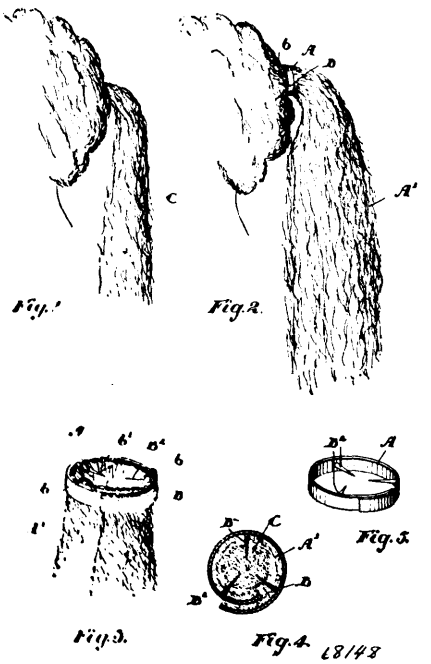
Claim.—1st. A fire extinguishing compound in the form of a dry powder containing carbonate of lime, sand, bicarbonate of soda, in about the proportions specified. 2nd. A fire extingushing compound in the form of a dry powder containing carbonate of lime, sand, bicarbonate of soda, and gun powder in the conditions described, inclosed in a moisture proof casing adapted for storage and use, as herein specified.

No. 68,148. Self-Fastening Hair Switches.

(Attache pour cheveux.)

Jean Tranclé Armand, Toronto, Ontario, Canada, 19th July, 1900; 6 years. (Filed 16th January, 1900.)

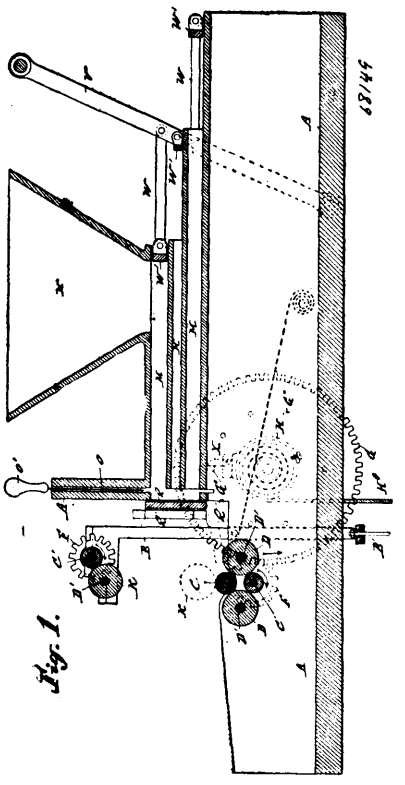
Claim.—1st. A switch for the hair comprising an over-lapping spring ring having the hair suitably fastened to the same and designed to be sprung over the fastening of the natural hair, as and for the purpose specified. 2nd. A switch for the hair comprising an over-lapping spring ring having the hair suitably fastened to the same and designed to be sprung over the fastening of the natural hair, and a suitable covering provided with loops for the insertion of hair pins or other fastening devices, as and for the purpose specified. 3rd. A switch for the hair comprising an over-lapping spring ring having the hair suitably fastened to the same and designed to be sprung over the fastening of the natural hair and suitable prongs



extending inwardly from the ring through the switch and natural hair, as and for the purpose specified.

No. 68,149. Machine for Making Cigars.

(Machine pour la fabrication des cigares.)

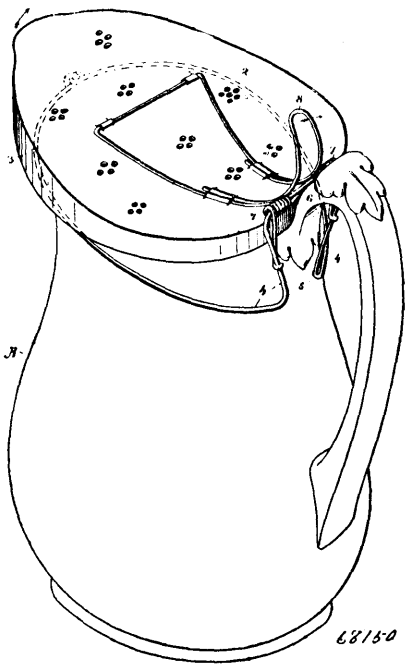


Edmund Dubois, of Brussels, Belgium, 19th July, 1900; 6 years. (Filed 13th October, 1899.)

Claim.—1st. In combination in a cigar making machine, rolling mechanism and feeding mechanism comprising a series of compart-

ments adapted to receive tobacco of different grades, means for feeding the tobacco from the several compartments to a common point, means for severing a predetermined quantity of the tobacco and means for conveying the same to the roller mechanism, substantially as described. 2nd. In combination, a series of compartments, a pusher adapted to be reciprocated in each compartment, a removable backing plate adapted to receive the pressure of said pusher to compress the tobacco, means for severing a predetermined quantity of the compressed tobacco, rolling mechanism and means for withdrawing said backing plate and conveying the severed tobacco to the rollers. 3rd. In combination, a plurality of compartments, pushers working therein, a backing plate, means for holding the same in place, rolling mechanism normally out of operation and means for bringing said mechanism into operation and removing the support for said backing plate, said plate conveying the tobacco to said rollers.

No. 68,150. Removable Ventilating Pitcher Covers.
(*Couvercle de pôt à l'eau.*)



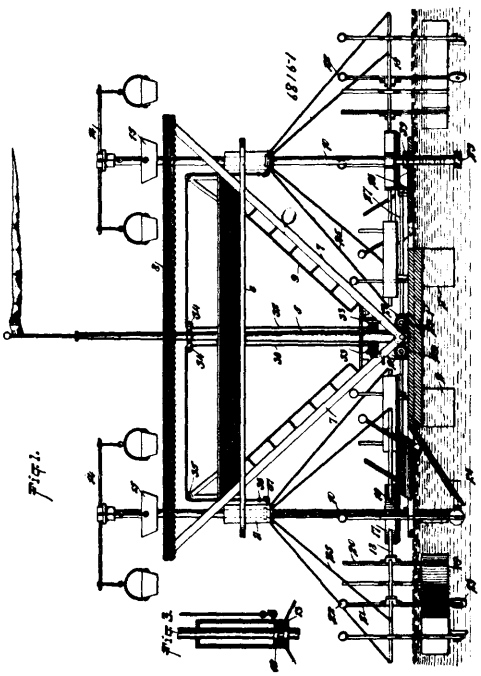
Andrew Smith, Alexander Drennan and Archie Graham, all o Bodie, California, U.S.A., 19th July, 1900; 6 years. (Filed 6th July, 1900.)

Claim.—1st. The combination with a pitcher, of a spring pressed open work or screen cover, and a means for removably attaching it to the top of the pitcher. 2nd. The combination with a pitcher of a cover curved to fit the outline of the top having a surrounding dependent flange, an elastic ring and loop surrounding the pitcher, means for hinging the cover to the loop, and springs by which the cover is normally closed. 3rd. The combination with a pitcher of a screen or perforated cover curved to fit the outline of the top of the pitcher, having a dependent surrounding flange, a wire ring surrounding the smaller part of the pitcher between the small of the body and the outward curve of the top, a loop formed by a continuation of the ring turned upwardly upon each side of the handle having a bar extending across above the handle, to which the cover is hinged, said loop and ring being elastic and capable of being spread at the point where it clasps the pitcher whereby the device can be entirely removed therefrom. 4th. The combination with a pitcher of a cover of screen or perforated material having a depending flange, and curved to fit the upper edge of the pitcher, a ring surrounding the smaller part of the pitcher below the divergent upper edge, said ring being continuous around the body of the pitcher to points where it approaches interior to the handle, thence turned upwardly and divergent upon each side of the handle, thence forming a cross bar or rod above the handle, coiled springs surrounding said bar having one end attached to the cover and the other to the upturned portions of the loop, and a thumb piece attached to the cover and curved upwardly with relation to the cover and transverse rod.

No. 68,151. Current Motors. (*Moteur à courent.*)

Robert Salter Theall, of Fort Pierre, South Dakota, U.S.A., 19th July, 1900; 6 years. (Filed 11th May, 1900.)

Claim.—1st. A current motor, comprising a floating deck, a mast mounted to rotate on said deck and having vertical movement relatively thereto, sweeps extended outward from the mast, paddles mounted to swing on said sweeps, a power shaft operated by the



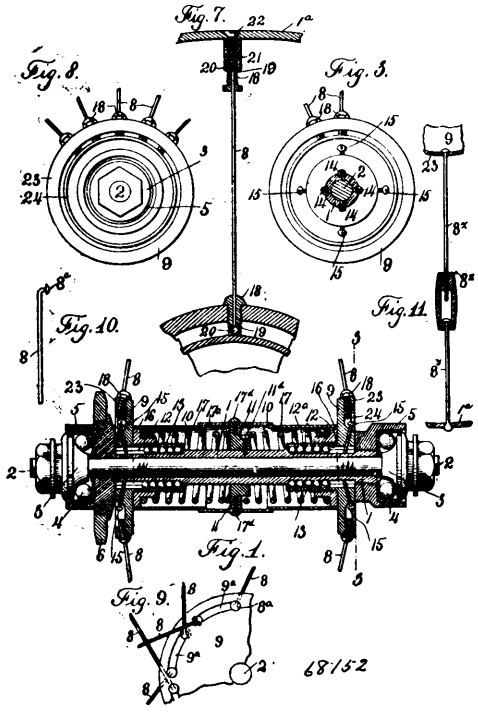
rotation of the mast, means for raising and lowering the mast, and cars carried by the mast, substantially as specified. 2nd. A current motor, comprising a deck mounted to float, a mast supported by said deck and mounted to rotate and to have vertical movement, sweeps extended outward from the mast, paddles or blades having swinging connection with the sweeps, supporting arms for the paddles or blades weighted at the ton, a power shaft adapted to be operated by rotary motion of the mast, a spar extended upward from the deck and a bridge extended between the spar and the mast, substantially as specified. 3rd. A current motor, comprising a deck adapted to float, a spar extended upward from said deck, masts at the opposite ends of the deck and mounted to rotate, sweeps extended outward from the masts, blades or paddles supported by the sweeps, a bridge supported on the spar and extended to the masts, and cars suspended from arms extended from the upper portion of the masts, substantially as specified. 4th. A current motor, comprising a deck adapted to float, a spar extended upward from the centre of the deck, masts extended upward from the ends of the deck, the said masts being adapted to rotate and also to have vertical movement, boxings through which said masts extend, lifting cables connected with said boxings and with windlasses, sweeps extended outward from the lower portions of the masts, guys extended from the outer ends of said sweeps to collars on the masts, and blades or paddles mounted to swing on the sweeps, substantially as specified. 5th. A current motor, comprising a deck mounted on floats, a spar extended upward from the centre of said deck, masts extended upward from the ends of said deck and mounted to rotate, blades or paddles carried by the masts, a bridge extended from the spar to the masts, brace bars extended from the deck near its centre and connecting with the bridge near its ends, the said bars also forming stringers for stairways leading to the bridge, arms extended outward from the upper ends of the masts, and cars suspended on said arm, substantially as specified.

No. 68,152. Automatic Wheel. (*Roue.*)

Emil Olund and Peter John Caesar, both of Duluth, Minnesota U.S.A., 19th July, 1900; 6 years. (Filed 12th May, 1900.)

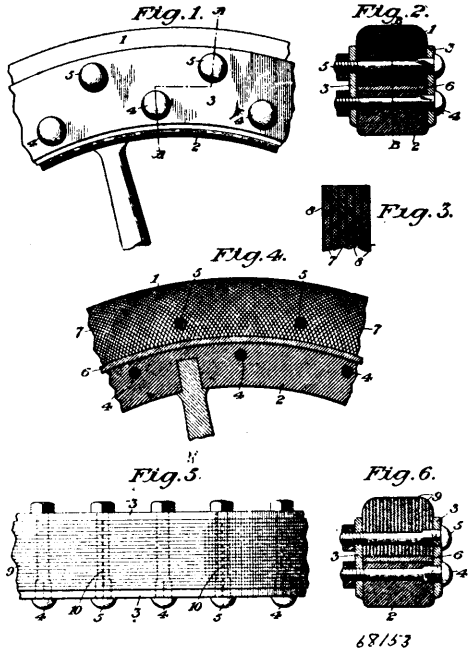
Claim.—1st. In a wheel, a flexible rim and the described means for attaching spokes to the hub, consisting of the hub flanges having an inward axial movement, balls interposed in axial grooves formed between the hub flanges and hub, and means for holding the hub flanges outward with a yielding pressure, substantially as and for the purpose set forth. 2nd. In a wheel, the combination of the rim, the spreading spokes, the hub, the hub flanges axially movable upon the hub and provided with inwardly projecting sleeves, the resilient medium for holding the hub flanges outward, and the adjusting nuts threaded upon the sleeves of the hub flanges and affording the abutment for the resilient medium, substantially as and for the purposes set forth. 3rd. In a wheel, the combination of the hub flange 9 having a perforated rim and an abutment 24 within said rim, the spokes 8 and the screws 18 through which the spokes are passed, provided with slots 19 in which the spokes are headed and impinging against the abutment 24 to prevent displacement of the

spokes, substantially as and for the purposes set forth. 4th. A wheel comprising an axle box or hub, formed with roller grooves, a



flexible rim, flanges having inwardly extending sleeves formed with roller grooves, rollers in said grooves, means for holding the flanges outward with yielding pressure, the telescoping sheathing, and the spokes rigid under tension and yielding under compression, substantially as described.

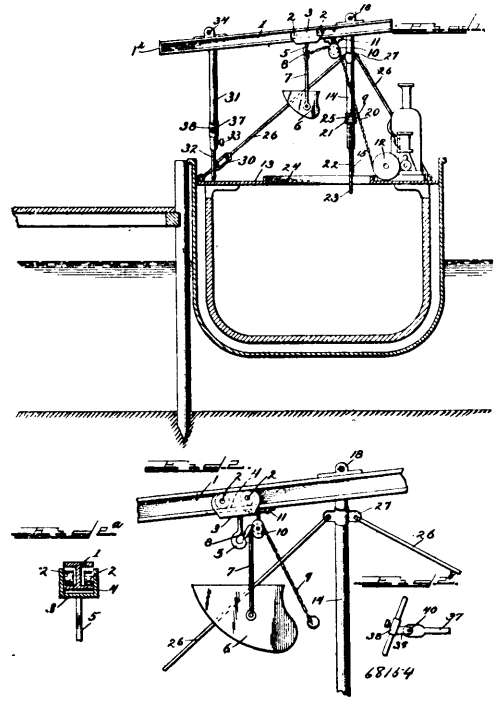
No. 68,153. Vehicle Wheel Tire. (*Bandage de roue.*)



Arthur Leroy Stevens, New York City, New York, U.S.A., 19th July, 1900; 6 years. (Filed 14th May, 1900.)

Claim.—1st. A vehicle wheel tire comprising compacted layers of lengthwise disposed woven fabric and a rubber adhesive. 2nd. A vehicle wheel tire comprising edgewise disposed layers of woven fabric and a rubber adhesive compacted by or during vulcanization. 3rd. A vehicle wheel tire comprising compacted lawyers of edgewise disposed bias cut woven fabric and a rubber adhesive. 4th. A vehicle wheel tire comprising layers of edgewise disposed bias cut woven fabric and a rubber adhesive compacted by or during vulcanization. 5th. A vehicle tire comprising compacted layers of edgewise disposed woven fabric and a rubber adhesive, combined with a felly, and fastenings securing the tire and felly and maintaining lateral laminal integrity of the tire. 6th. A vehicle tire comprising compacted layers of edgewise disposed woven fabric and a rubber adhesive, combined with a felly, flange plates secured to the felly and projecting therefrom and laterally sustaining the compacted layer tire, and means clamping the tire between said flange plates. 7th. A vehicle wheel tire comprising compacted layers of edgewise disposed woven fabric and a rubber adhesive, combined with a felly, flange plates fastened to the felly, and bolts passed transversely through the flange plates and tire and clamping the tire between said plates. 8th. A vehicle wheel tire comprising compacted layers of edgewise disposed woven fabric and a rubber adhesive, combined with a felly, a bed plate peripherally fitting the felly, flange plates held at opposite faces of the felly and projecting beyond the bed plate and laterally sustaining the compacted layer tire which rests on the bed plate and projects beyond the flange plates, and means clamping the tire between said flange plates. 9th. A vehicle wheel tire comprising compacted layers of lengthwise disposed woven fabric and a rubber adhesive and having transverse holes adapted to receive fastenings holding the tire to a wheel rim. 10th. A vehicle wheel tire comprising edgewise disposed layers of woven fabric and a rubber adhesive compacted by or during vulcanization and having transverse holes adapted to receive fastenings holding the tire to a wheel rim. 11th. A vehicle wheel tire comprising compacted layers of edgewise disposed bias cut woven fabric and a rubber adhesive and having transverse holes adapted to receive fastenings holding the tire to a wheel rim.

No. 68,154. Portable Hoist. (*Grue portative.*)



Cyrus Henry Sinclair, Chicago, Illinois, U.S.A., 19th July, 1900; 6 years. (Filed 5th July, 1900.)

Claim.—1st. In a portable hoist the combination of a track or runway, a pair of inclined standards detachably secured to said runway at or near each end thereof, a pair of guys secured to and bracing one pair of standards, a trolley on said runway, a holder for the material to be hoisted adapted to be attached to said trolley and a flexible connection supported near one end of said runway and connected to said holder for elevating and lowering the latter, substantially as set forth. 2nd. In a portable hoist the combination of a track or runway, a pair of inclined standards detachably secured to said runway, guys for holding the upper ends of said standards against oscillation longitudinally of said runway, bolts secured to said standards and having means of attachment to the surface upon which said standards are supported for holding the lower ends of said standards against movement, said standards serving to support said runway at one point, means for supporting said runway at another point, a trolley on said runway, a holder for the material to be hoisted adapted to be connected to said trolley and means for

raising and lowering said holder, substantially as set forth. 3rd. In a portable hoist the combination with the vessel deck having a hatch, of a runway, a pair of inclined standards detachably secured to said runway, bolts having hooks adapted to pass through the hatch and engage under the edge thereof, means for adjustably securing said bolts to said standards, trolley on said runway, a holder for the material to be hoisted adapted to be supported from said trolley and means for raising and lowering said holder, substantially as set forth. 4th. In a portable hoist the combination of a runway, a pair of telescopic standards detachably secured to said runway, and serving to support said runway at one point, means for supporting said runway at another point, a trolley on said runway, a holder for the material to be hoisted adapted to be secured to said trolley and means for raising and lowering said holder, substantially as set forth. 5th. In a portable hoist, the combination of a runway, a pair of inclined standards detachably secured to said runway at or near each end thereof, a brace secured to the standards of one of said pairs for preventing them from spreading, guys for preventing the standards of the other of said pairs from oscillating at their upper ends lengthwise of said runway, bolts adapted to be secured to the surface on which said standards are supported and to the last said standards for preventing the latter from spreading, a trolley on said runway, a holder for the material to be hoisted adapted to be attached to said trolley andmeans for raising and lowering said holder, substantially as set forth. 6th. In a portable hoist the combination of a runway, extensible standards for said runway detachably secured thereto, a trolley on said runway, a holder for the material to be hoisted adapted to be attached to said trolley and means for raising and lowering said holder, substantially as set forth. 7th. In a portable hoist the combination of a runway, inclined extensible standards detachably pivoted to said runway for supporting the same, means for holding said standards from turning on their pivots, a trolley on said runway, a holder for the material to be hoisted adapted to be attached to said trolley and means for raising and lowering said holder, substantially as set forth. 8th. In a portable hoist the combination of a runway consisting of an eye beam having flanges, a trolley having side plates, rollers pivoted in said side plates and engaging over said flanges respectively on opposite sides of said beam, inclined standards supporting said eye beam, a holder for the material to be hoisted adapted to be secured to said trolley and means for raising and lowering said holder, substantially as set forth. 9th. In a portable hoist the combination of a runway consisting of a beam having flanges, a trolley supported by said flanges, perforated lugs formed on said beam standards for supporting said beam having perforated ears, bolts or pins passing through said lugs and ears, means for bracing said standards against oscillation, a holder for the material to be elevated adapted to be secured to said trolley and means for raising and lowering said holder, substantially as set forth. 10th. In a portable hoist the combination of a beam having a flange, a trolley supported by and running on said flange, inclined standards detachably pivoted to said beam and having extensible portions, collars adjustably secured on said standards, bolts provided with hooks, adjustably secured to said collars, a holder for the material to be hoisted adapted to be attached to said trolley and means for raising and lowering said holder, substantially as set forth. 11th. In a portable hoist the combination of the beam 1, having the perforated lugs 18, 34, the trolley having rollers engaging with said beam, a holder adapted to be secured to said trolley, means for raising and lowering said holder comprising a sheave 10, secured to said lugs 18, 34, the bolts 22, secured to one pair of said standards and having hooks 23, adjustable guys 26, secured to one pair of said standards near their upper ends and the brace rod 37, detachably secured to the other pair of said standards for preventing the same from spreading, substantially as set forth.

No. 68,155. Composition of Matter.

(*Composition de matieres.*)

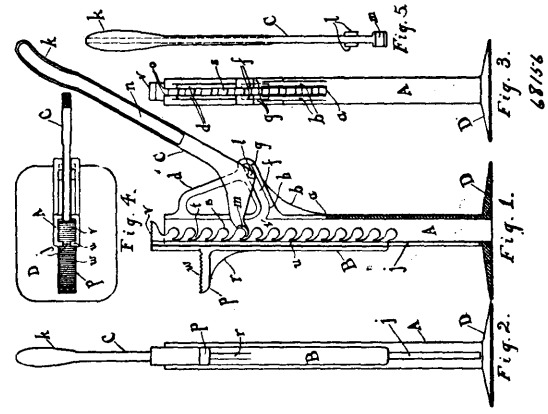
Gothard Wyss and Vincent Wyss, both of Pittsburgh, Pennsylvania, U.S.A., 19th July, 1900; 6 years. (Filed 6th February, 1900.)

Claim.—1st. The herein described composition of matter, consisting of oil and tallow combined substantially in the manner and in the proportions specified, with a sufficient quantity of nitro-benzol to act as a preservative. 2nd. The herein described composition of matter, consisting of boiled linseed oil and tallow, combined substantially in the manner and in the proportions specified, with a sufficient quantity of nitro-benzol to act as a preservative.

No. 68,156. Lifting Jack. (*Cric.*)

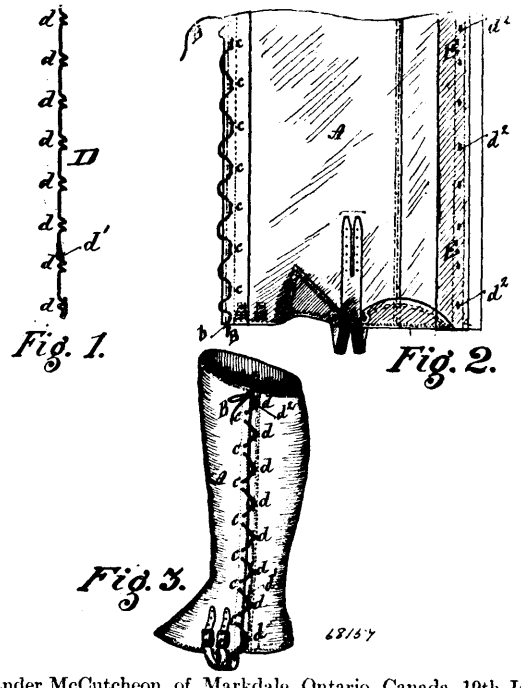
Walter K. Palmer, of Lawrence, Kansas, U.S.A., 19th July, 1900; 6 years. (Filed 5th July, 1900.)

Claim.—1st. The combination with a hollow standard having ears thereon, the ears provided with inclined grooves which open into the hollow standard, said grooves having at their lower ends a seat, of a bar provided with rounded teeth and having slidable connection with the hollow standard, and a lever having a heel at one end projecting from each face thereof sufficiently far to slide in the inclined grooves of the ears, the lever provided with a socket at one end adapted to receive a tooth, the heel and socket set at just the right angle with respect to the handle end of the latter, so that when the latter is depressed the desired distance, the heel will just fit in the seat, while the socket retains its contact and hold upon the rounded tooth. 2nd. The combination with a hollow standard having ears



thereon, said ears provided with inclined grooves which form a seat and opening at their lower ends into the hollow portion of the standard, and a bar having sliding connection with the standard, this bar provided with transverse, cylindrical teeth, of a lever having a sector-shaped heel at one point projecting from each face thereof sufficiently far to slide in the inclined grooves of the ears, the dimensions of the heel being such that it occupies the width of the grooves in all positions, the lever being provided with a socket at one end adapted to receive and turn with respect to a tooth, the heel and socket set at just the right angle with respect to the handle end of the lever, so that when the latter is depressed the desired distance, the heel will just fit in the seat while the socket retains its contact and hold upon the curved tooth, and the open ended grooves permitting the ready insertion and removal of the lever. 3rd. A lifting jack comprising three separate parts, to wit:—a standard having a central groove therein provided with ears in which inclining grooves are formed, said grooves having at their lower ends a seat opening upwardly into the central groove of the standard, a toothed bar having cylindrical teeth and slidable connection in the groove of the standard, and a lever having slidable connection in the inclined grooves, said lever provided with a heel and a concaved end, the latter to engage the cylindrical teeth, the distance between the heel and the extreme concaved end being less than the distance between the teeth and the outer end of the grooves, whereby the several parts may be assembled by first dropping the heel of the lever into the upper end of the standard groove and thence moving it into the inclined grooves in the ears, then moving the heel upward to the outer ends of said grooves, and by then placing the bar in the standard groove.

No. 68,157. Fastening for Leggings. (*Attache de guêtre.*)



Alexander McCutcheon, of Markdale, Ontario, Canada, 19th July, 1900; 6 years. (Filed 6th July, 1900.)

Claim.—1st. In a legging the wire stay D on which are formed the hooks *d* and means for attaching same to the legging substantially as described and for the purposes mentioned. 2nd. In a legging the wire stay D on which are formed the hooks *d* and means for attaching the same to the legging in combination with the pairs of eyelet holes *c*, *c*, substantially as described and for the purposes mentioned. 3rd. In a legging the wire stay D on which are formed the hooks *d* and means for attaching the same to the legging in combination with the pairs of eyelet holes *c*, *c*, and means for lacing the same together on the outside alternately substantially as described and for the purpose mentioned. 4th. In a legging eyelet holes in one of the flaps arranged in pairs, substantially as described and for the purpose mentioned.

No. 68,158. Gathering Iron. (*Cueillette.*)

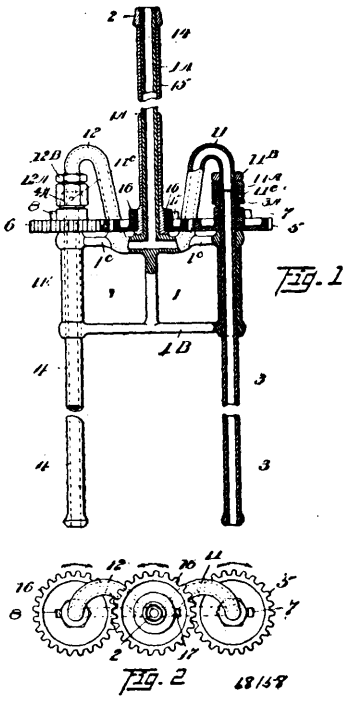


Fig. 1

Fig. 2 68158

Dana Foster Richardson, of Toledo, Ohio, U.S.A., 19th July, 1900; 6 years. (Filed 15th January, 1900.)

Claim.—1st. In a gathering iron for glass working, a central rod, a hollow rotatable spindle fitted over the central rod, rotatable gathering irons supported from the central rod, and operative connection between the hollow spindle and the gathering irons whereby the said irons may be turned simultaneously by turning the hollow spindle, substantially as described. 2nd. In a gathering iron for glass working, a frame having fixed thereto a central rod, two or more gathering irons carried by said frame and adapted to be rotated relatively thereto, a hollow rotatable spindle fitted over the central rod, and operative connection between the hollow spindle and the several gathering irons whereby said irons are rotated simultaneously by turning the hollow spindle, substantially as described. 3rd. The combination of a frame having two or more tubular gathering irons carried thereby, each gathering being rotatable upon its own axis, a central tubular rod, suitable connections between the central rod and each of the tubular gathering irons whereby air blown into the central tubular rod will pass simultaneously out of the tubular gathering irons and means for simultaneously rotating the gathering irons. 4th. The combination of a frame, a blow pipe, hollow gathering irons, and hollow connections between the blow pipe and the gathering irons to admit air therethrough, substantially as described. 5th. The combination of a frame, a blow pipe, rotatable hollow gathering irons, hollow connections between the blow pipe and the gathering irons, gears fixed upon the geathering irons, and a central gear meshing with the gears upon the gathering irons whereby the gathering irons are simultaneously rotated by turning the central gear, substantially as described. 6th. The combination of a central rod, a rotatable spindle thereon, a central gear on said spindle, gathering irons, and gears upon the gathering irons meshing with the central gear, substantially as described. 7th. In a gathering iron for glass working, a frame having fixed thereto a central rod, two or more rotatable gathering irons carried by said frame, a gear fixed to each of the gathering irons, a hollow rotatable spindle fitted over the central rod, and a gear fixed to said hollow spindle and meshing with the several gears fixed to the several gathering irons, substantially as described. 8th. In a gathering iron for glass working, a frame having fixed thereto a tubular central rod, two or more rotatable hollow gathering irons carried by the frame, pipes making connection between the tubular central rod and the several hollow gathering irons, gears fixed to each of the hollow gathering irons, a rotatable hollow spindle fitted over the tubular central rod, and a gear fixed to the hollow spindle and meshing with the several gears fixed to the gathering irons whereby the said gathering irons may be turned simultaneously by turning the hollow spindle, substantially as described.

No. 68,159. Tire for Bicycles and other Vehicles.
(*Bandage pour bicycles, etc.*)

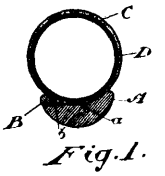


Fig. 1.

Fig. 2.

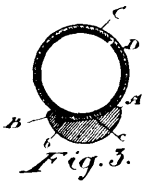


Fig. 3.

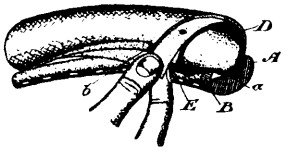


Fig. 4. 68159

Edward S. Roney, Toronto, Ontario, Canada, 19th July, 1900; 6 years. (Filed 3rd May, 1900.)

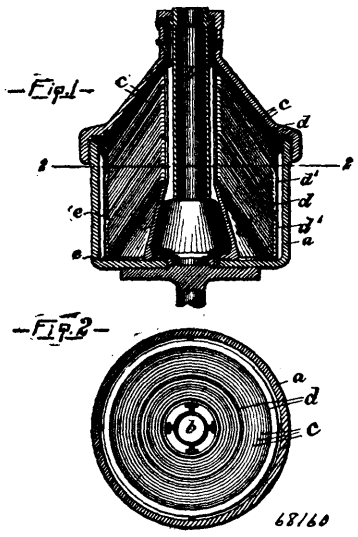
Claim.—1st. In a tire, a main tire and cover which may be opened to expose the main tire, in combination with a thin band of rubber located between them, substantially as and for the purpose specified. 2nd. In a tire, a main tire having its surface of white rubber and a cover which may be opened to expose the main tire, in combination with a thin band of black rubber secured at one edge to the tire or cover and located between them, substantially as and for the purpose specified. 3rd. In a tire, a main tire and a cover which may be opened to expose the main tire, in combination with a thin band of rubber located between them, and secured more or less completely at one edge to a part of the tire, substantially as and for the purpose specified.

No. 68,160. Centrifugal Creamers. (*Crémeuse centrifuge.*)

The De Laval Separator Company, Jersey City, assignee of John Joseph Berrigan, Orange, both of New Jersey, U.S.A., 19th July, 1900; 6 years. (Filed 4th July, 1900.)

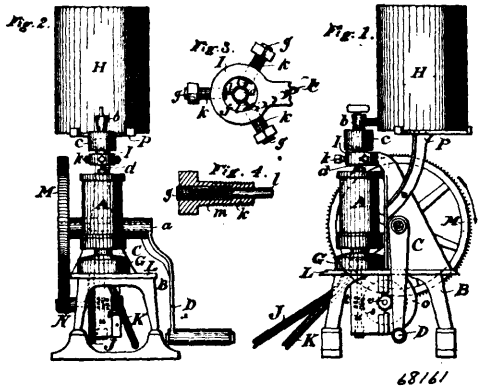
Claim.—1st. In a centrifugal creamer, the combination with a series of superposed conical division plates extending toward, and terminating opposite, but not contacting with, the periphery of the bowl, the outer ends of said division plates terminating in substantially the same upright plane, of an upright annular wall, interposed between the outer ends of the division plates and the periphery of the bowl, forming passages respectively between said annular wall and the periphery of the bowl, and between said annular wall and the outer ends of said division plates. 2nd. In a centrifugal creamer, the combination with a series of superposed conical division plates extending toward, and terminating opposite, but not contacting with, the periphery of the bowl, of a conical division plate corresponding to the form and inclination of the first-named division plates, a downward extension therefrom in the form of an annular wall interposed between the outer ends of said first-named plates and the periphery of the bowl, forming passages respectively between said annular wall and the periphery of the bowl, and between said annular wall and the outer ends of said first-named plates. 3rd. In a centrifugal creamer, the combination with a series of superposed conical division plates extending toward and

terminating opposite, but contacting with, the periphery of the bowl, of a conical division plate corresponding to the form and



inclination of the first-named division plates, a downward extension therefrom in the form of an annular wall interposed between the outer ends of said first-named plates and the periphery of the bowl and terminating at its lower end above the bottom of the bowl, forming passages respectively between said annular wall and the periphery of the bowl, and between said annular wall and the outer ends of said first-named plates.

No. 68,161. Centrifugal Separator. (*Séparateur centrifuge.*)



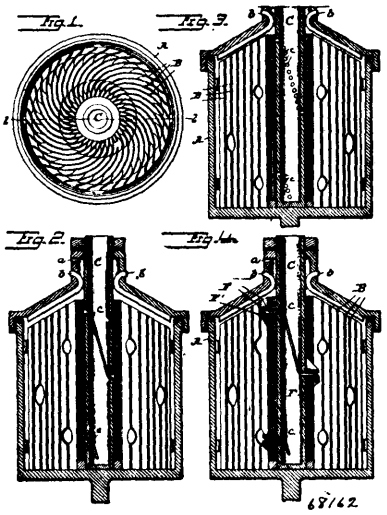
The De Laval Separator Company of Jersey City, assignee of John Joseph Berrigan, of Orange, both in New Jersey, U.S.A., 19th July, 1900; 6 years. (Filed 4th July, 1900.)

Claim.—1st. The combination with the revolving bowl of a centrifugal separator, of a shaft connected with the lower portion thereof for driving the same, means to drive said shaft, an independent hollow shaft projecting from the top of the bowl, and yielding bearings for said last mentioned shaft, said bearing being adapted to yield to lift the hollow shaft and bowl free from the operating shaft. 2nd. The combination with the revolving bowl of a centrifugal separator, of a shaft connected with the lower portion thereof for driving the same, means to drive said shaft, an independent rigid hollow shaft projecting from the top of the bowl, and yielding bearings for said last mentioned shaft, said bearing comprising three or more equi-distant sliding bearing rods each provided with a spring which produces a limited upward movement of the rods, substantially for the purpose described.

No. 68,162. Centrifugal Liquid Separator.
(*Séparateur centrifuge de liquides.*)

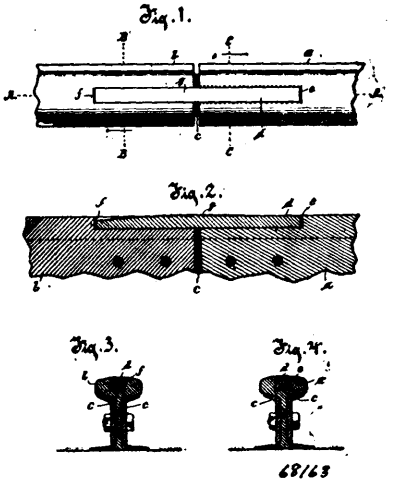
The de Laval Separator Company of Jersey City, assignee of John Joseph Berrigan, of Orange, both in New Jersey, U.S.A., 20th July, 1900; 6 years. (Filed 4th July, 1900.)

Claim.—1st. In a centrifugal liquid separator, in combination with a bowl provided with a plurality of upright plates, of a tubular shaft provided with an aperture extending from the interior to the exterior of said shaft, and extending spirally around and along said shaft. 2nd. In a centrifugal liquid separator, in combination with a plurality of upright plates, of a tubular shaft provided with an



outwardly projecting flange, said flange extending spirally around and along the periphery of said shaft, there being an aperture cut through said flange and the wall of the tubular shaft, the aperture conforming in direction to the spiral flange. 3rd. In a centrifugal liquid separator, in combination with a plurality of upright plates, of a tubular shaft provided with an outwardly projecting flange, said flange extending spirally around and along the periphery of said shaft, there being an aperture cut through said flange, the aperture conforming in direction to the spiral flange and the wall of the tubular shaft, said outwardly projecting flange being provided with a downwardly projecting flange at its outer end.

No. 68,163. Railroad Construction.
(*Construction de chemin de fer.*)

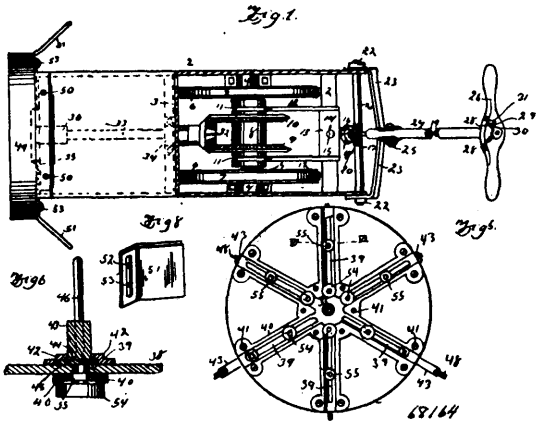


Elizabeth Baasen, of Milwaukee, Wisconsin, Charles Christadora, Peter Martin, and Henry Martin, assignees of Frederick Hachmann, all of St. Paul, Minnesota, U.S.A., 20th July, 1900; 6 years. (Filed 5th July, 1900.)

Claim.—1st. The combination with two adjoining rails provided in the upper surface of their adjacent ends with longitudinal recesses, of a bar extending between said rails and supported in said recess, the upper surface of which is flush for its principal part with the upper surfaces of the rails, said bar being longitudinally movable, but vertically immovable with respect to one of said rails and being free to be moved vertically into and out of the recess of the other rail. 2nd. The combination with two adjoining rails provided in the upper surfaces of their adjacent ends with longitudinal recesses, of a bar extending between said rails and supported in said recesses, the upper surfaces of which is flush for its principal part with the upper surfaces of the rails, one end of said bar and the recess engaged thereby being of dovetail shape in cross section and the other end of the bar having vertical sides which engage vertical side walls in the other recess. 3rd. The combination with two adjoining rails

provided in the upper surfaces of their adjacent ends with longitudinal recesses, of a bar extending between said rails and supported in said recesses, said bar being longitudinally movable but vertically immovable with respect to one of said rails and being free to be moved vertically into and out of the recess of the other rail, the end of the bar engaging said last mentioned recess having its upper surface inclined for a short distance to bring the same below the level of the rail.

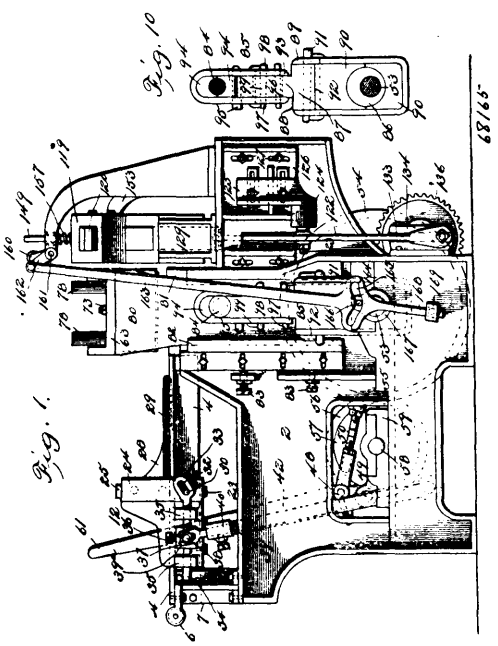
No. 68,164. Malt Turner. (*Moulin à drèche.*)



Frederick Herster, Rosedale, Kansas, U.S.A., 20th July, 1900; 6 years. (Filed 4th October, 1899.)

Claim.—1st. A malt turner, comprising a wheeled frame, a rotating disc at the front end of said frame, and provided with radially moving arms, for turning malt as the machine is pushed across the floor, substantially as described. 2nd. A malt turner, comprising a wheeled frame, a rotating disc at the front end of said frame, and provided with radially moving arms, having resilient brushes at their outer ends, for turning malt as the machine is pushed across the floor, substantially as described. 3rd. A malt turner, comprising a wheeled frame, a rotating disc at the front end of said frame, and provided with radially moving arms and with forwardly projecting pins or tines for turning the malt as the machine is pushed across the floor, substantially as described. 4th. A malt turner, comprising a wheeled frame, a driven shaft, a rotatable disc at the front end of the frame and provided with radial arms for lifting the malt, said wheel being geared to said shaft, and a cam for radially adjusting said arms as the disc rotates, substantially as described. 5th. A malt turner, comprising a wheeled frame, a rotating disc at the front end of said frame, and provided with radially moving arms for turning the malt as the machine is pushed across the floor, and an arched plate or hood overhanging said disc, substantially as described. 6th. A malt turner, comprising a wheeled frame, a rotating disc at the front end of said frame, and provided with radially moving arms for turning the malt as the machine is pushed across the floor, and arched plate or hood overhanging said disc, and rearwardly directing levellers carried by the machine, substantially as described. 7th. A malt turner, comprising a wheeled frame, a driven shaft, a longitudinal shaft geared thereto, a disc secured upon the front end of said shaft, and radially moving arms carried by said disc, substantially as described. 8th. A malt turner, comprising a wheeled frame, a driven shaft, a longitudinal shaft geared thereto, a wheel mounted rigidly on the front end of the same and provided with radial slots, radial arms mounted upon said wheel and suitably guided, rollers carried by said arms, and a cam engaging said rollers and adapted to radially adjust said arms as the disc rotates, substantially as described. 9th. A malt turner, comprising a wheeled frame, a driven shaft, a sleeve keyed to slide but not to rotate on said shaft and provided with oppositely disposed wheels, a longitudinal shaft carrying at its front end a malt turning wheel and at its rear end a smaller wheel, and an adjustable frame for throwing one or the other of said sleeve wheels in gear with the wheel upon the rear end of said shaft, substantially as described. 10th. A malt turner, comprising a wheeled frame, provided with a tubular handle, a driven shaft, a sleeve keyed to slide but not to rotate on said shaft, and provided with oppositely disposed wheels, a longitudinal shaft carrying at its front end a malt turning wheel and at its rear end a small wheel, an adjustable frame for throwing one or the other of said sleeve wheels in gear with the wheel upon the rear end of said shaft, a shaft connected to said frame and carried by the handle of the machine, and a handle to operate said shaft and thereby adjust said frame, substantially as described. 11th. A malt turner, comprising a wheeled frame, a rotating disc at the front end of said frame, provided with radially arranged arms, and pins or tines projecting from said arms, substantially as described.

No. 68,165. Dish Making Machine. (*Machine à faire des plats.*)



Thomas Crebbin, of Bridgeport, Alabama, U.S.A., 20th July, 1900; 6 years. (Filed 30th October, 1899.)

Claim.—1st. In a dish making machine, the combination with the cutting mechanism, of a feed table, and a reciprocatory carriage supported by the table and having a pair of relatively fixed and movable clamp-fingers for the veneer, a friction check device for arresting the movement of the carriage until said fingers grip the veneer, and means connected with the movable finger for moving it toward and from the fixed finger and for reciprocating the carriage, substantially as set forth. 2nd. In a dish making machine, the combination with a cutting mechanism, of a feed table having a longitudinal slideway, a reciprocatory feed carriage having a friction check device slidably working in the slide way, said carriage having also a pair of relatively fixed and movable clamp-fingers, and means connected with the movable finger for moving it toward and from the fixed finger and for reciprocating the carriage. 3rd. In a dish making machine, the combination with the cutting mechanism, of a feed table having a longitudinal slideway, a reciprocatory feed carriage having a hollow slide block registering in said slideway, and a clamp for the veneer, said hollow slide block having opposite relatively fixed and movable side walls and interior pressure springs for holding the movable side walls in frictional engagement with one side wall of the slideway, and operating mechanism for reciprocating the carriage and setting into action the clamp thereof, substantially as set forth. 4th. In a dish making machine, the combination with the cutting mechanism, of a feed table having a longitudinal slideway, a reciprocatory feed carriage having a yoke frame carrying a slide block working in said slideway, a lower clamp finger slidably fitting in the upper side of the table and secured to said slide block, vertically movable clamp slides mounted in the yoke frame and carrying an upper clamp finger lying directly above the lower clamp-finger, operating mechanism for reciprocating the carriage, and means, operated by said mechanism, for adjusting said clamp slides, substantially as set forth. 5th. In a dish making machine, the combination with the cutting mechanism, of a stationary feed table, a reciprocatory feed carriage having a yoke frame carrying a lower clamp-finger slidably fitting in the table, vertically movable clamp slides mounted in the side portions of the yoke frame and carrying an upper clamp-finger lying above and co-extensive with the lower clamp-finger, said clamp slides having projected from their outer sides rigid studs, longitudinally movable adjusting rods slidably supported at opposite sides of the yoke frame and provided at one end with inclined slots receiving said studs, an upright swinging standard having at its upper end a cross head, adjusting links connecting the ends of said cross heads with said adjusting rods, and means for operating said standard, substantially as set forth. 6th. In a machine of the class described, the combination with the cutting mechanism, of a reciprocatory feed carriage having a frame carrying a lower fixed clamp-finger, vertically movable clamp slides mounted in the carriage frame and carrying an upper clamp-finger, adjusting rods supported by the carriage frame and having an operative connection with the clamp slides, an upright swinging standard pivotally connected at its upper end with the adjusting rods, a suitably arranged operating shaft, and an adjustable eccentric rod connection

between said shaft and said standard, substantially as set forth. 7th. In a machine of the character described, a forming mechanism, a reciprocating feeder, and a combined cutting and holding mechanism arranged between the feeder and forming mechanism and adapted to fix the position of the blank during the backward movement of the feeder prior to gripping the stock, substantially as described. 8th. In a machine of the character set forth, a forming mechanism, a feeder, a combined cutting and holding mechanism arranged between the feeder and forming mechanism and actuating mechanism for sliding the feeder forward and advancing the previously cut and scored blank to the forming mechanism for operating the cutting and holding mechanism to grip, cut and score the blank during the backward movement of the feeder, substantially as specified. 9th. In a dish making machine, a stationary knife platen, a vertically reciprocating frame having a knife head, longitudinally disposed scoring knives, and transversely arranged cutting knives springing from the scoring knives, and having their cutting edges in a lower plane than said scoring knives, and a pair of horizontal presser plates yieldingly supported by the knife head and normally projected below the plane of the cutting edges of said knives to engage the veneer of stock in advance of the knives, said presser plates being located exterior to the scoring knives and provided with a plurality of notches open at their inner edges and receiving the cutting knives, substantially as set forth. 10th. In a dish making machine, a stationary knife platen, a vertically reciprocating frame having a knife head provided in its under side with a plurality of intersecting knife receiving grooves, a combination cutting and scoring knife having different members fitting in said grooves, and wedge bolts mounted in the head and engaging with the knife to retain the same in place, substantially as set forth. 11th. In a machine of the class described, the machine frame provided upon opposite sides with vertically arranged guides, a vertically reciprocating frame bearing, slitting and scoring knives, presser plates adapted to move with and act in advance of the knives, standards pendent from the frame and working in said guides, a transverse operating shaft journalled in the frame, and adjustable connections between the operating shaft and the said pendent standards for imparting a reciprocating movement to said frame, said connections being adjustable to vary the depth of cut of the said knives and to maintain the operative relation of the presser plates with respect thereto, substantially as set forth. 12th. In a machine of the class specified, the combination with the machine frame, the vertically reciprocating knife carrying frame, provided with offstanding connecting pins or studs, and the operating shaft having eccentrics, of extensible pitmen connecting said eccentrics with said pins or studs, each of said pitman consisting of a head having a narrow arm extension, oppositely disposed yokes embracing the head and its arm extension and provided within their closed ends with sectional adjustable bearings respectively for the eccentrics and said pins or studs, wedges between the said bearings and the terminals of the head and its extension, and a plurality of adjusting wedge keys fitted in coincident openings of the arm extension and yoke thereof to provide for lengthening and shortening the pitmen to vary the depth of cut of the knife, substantially as set forth. 13th. In a dish making machine, the combination with the sectional form block and a folder, of a pair of oppositely located stapling devices disposed to co-operate respectively with the form block, means for relatively adjusting the sections of the form block toward and from each other, to correspond to various sizes of blanks, and means for adjusting the stapling devices to correspond to the various positions of the forming block sections, substantially as set forth. 14th. In a dish making machine, the combination with the sectional form block and the folder movable toward and from the form block, of a pair of oppositely-located obliquely disposed stapling devices adjoining respectively, the sections of the form block and co-operating therewith, means for adjusting the sections of the form block toward and from each other, to correspond to various sizes of blanks, and means for adjusting the stapling devices to correspond to the various positions of the forming block sections. 15th. In a dish making machine, the combination with the sectional form block, bearing clenching devices, and the folder, of opposite obliquely disposed stapling devices, means for adjusting the sections of the form block toward and from each other, to correspond to various sizes of blanks, and means for adjusting the stapling devices to correspond to the various positions of the form block sections. 16th. In a dish making machine, the combination with the sectional form block, of frustro-conical form bearing clenching devices and the movable folder, of obliquely disposed stapling devices arranged at the side of the form block, means for adjusting the sections of the form block toward and from each other to correspond to various sizes of blanks, and means for adjusting the stapling devices to correspond to the various positions of the form block sections. 17th. In a dish making machine, the combination with the cutting mechanism, of a pair of oppositely arranged stapling devices, each carrying a form block member or half, and the folder movable toward and from the form block, substantially as set forth. 18th. In a dish making machine, the combination with the cutting mechanism, of a pair of oppositely arranged laterally and vertically adjustable stapling devices, each carrying a form block member or half, and the folder movable toward and from the form block, substantially as set forth. 19th. In a dish making machine, the combination with the cutting mechanism, of a pair of oppositely arranged oblique stapling devices, each having a casing body formed at its lower end with a form block member or half, the separate members or halves of the form block being aligned and the folder movable toward and from the form block, substantially as set forth. 20th. In a dish making machine, the combination with the cutting mechanism, of a stationary form block provided in opposite portions thereof with openings, reciprocatory clenching plungers working in the form block openings, a pair of oppositely located stapling devices having casing bodies adjoining the form block, staple forming and driving mechanism mounted in the casing body of each stapling device in alignment with the clenching plunger, a reciprocatory head connected with said staple forming and driving mechanism of each stapling device, a longitudinally movable operating rod connected at one end with said head, operating connections for said rod, a rock lever mounted in each portion of the form block and connected at one end with the clenching plunger therein, and a supplemental slide rod having one terminal engaging with the opposite end of said rock lever and its other terminal fitted in said reciprocatory head, substantially as set forth. 21st. In a dish making machine, the combination with the cutting mechanism, of a sectional form block, a pair of oppositely located stapling devices adjoining the form block, means for adjusting the stapling devices and form block sections toward and from each other, a reciprocatory head for operating the staple forming, driving and clenching mechanism of each stapling device, an operating rod connected with said head, a suitably arranged shaft having a cross-head crank plate, an extensible link having a crank pin connection at one end with said crank plate, and a bell crank lever operatively connecting the opposite end of said link with one end of said operating rod, substantially as set forth. 22nd. In a dish making machine, the combination with a form block, of a flat clamp plate having opposite terminal folding flanges and a head plate movable independently of the clamp plate and provided with oppositely disposed divergent folding plates between the folding flanges of the clamp plate. 23rd. In a dish making machine, the combination with the form block, of a flat relatively movable clamp plate having folding flanges at opposite ends, a substantially U-shaped head plate movable independently of the clamp plate, and divergent folding plates located opposite the spaces between the folding flanges of the clamp plate and secured to the members of the U-shaped head plate. 24th. In a dish making machine, the combination with the cutting mechanism, and the stationary form block, of a reciprocatory folder, consisting of a central clamp plate provided at its terminals with short downturned folding flanges, and oppositely arranged downwardly divergent side folding plates provided at their ends with inturned wings and at their upper edges with short inwardly disposed flanges, and means for operating the separate members of the folder synchronously and independently, substantially as set forth. 25th. In a dish making machine, a form block, a reciprocating stem, means for positively moving said stem toward the form block, spaced stops for limiting the movement of said stem, a head plate slidable upon the said stem between the stops thereof and having spaced folding plates, and a clamp plate applied to the lower end of the stem and having opposite terminal folding flanges located in the spaces formed between the folding plates, substantially as set forth. 26th. In a dish making machine, the combination with the frame having supporting standards, of a reciprocatory folder having a central member and a head carrying side members, a spring operated stem mounted in suitable guides carried by the standards and connected with said central member, a rock shaft supported by the standards and having a centrally arranged crank, and a terminal crank arm, rods connecting said central crank with the head carrying the side members of the folder, a suitably arranged shaft carrying a crank disc, a swivelled fulcrum block arranged at one side of said crank disc, and a pitmen connected at one end with the terminal crank of the rock shaft and having its other end slidably engaging the fulcrum block, said pitmen having intermediate its ends a cam plate portion provided with a sigmoidal slot receiving the pin of the crank disc, substantially as set forth. 27th. In a dish making machine, a form block composed of sections, means for adjusting the sections toward and from one another, a shell form removably fitted to the adjustable form block, and folding mechanism co-operating with the form block, substantially as specified. 28th. In a dish making machine, the combination with the cutting mechanism, of a feed table, and a reciprocatory carriage supported by the table and having a pair of relatively fixed and movable clamp fingers for the veneer, means connected with the clamp and carriage for operating the clamp and subsequently moving the carriage, said means having a limited sliding movement with respect to the carriage, and a friction check device for arresting the movement of the carriage until said means has reached the limit of its movement to grip or release the veneer. 29th. In a dish making machine, the combination with the knife platen and the cutter, of a feed table, a reciprocatory carriage supported by the table and having a fixed clamping finger, a movable clamp finger mounted upon the carriage, rods having a limited sliding movement upon the carriage, connections between the rods and the movable finger for operating the finger during the slidable movement of the rod, and means connected with said rod for moving the carriage and adapted to move the rods to operate the movable finger.

No. 68,166. Advertising Device. *(Appareil d'annonce.)*

Fig. 1.

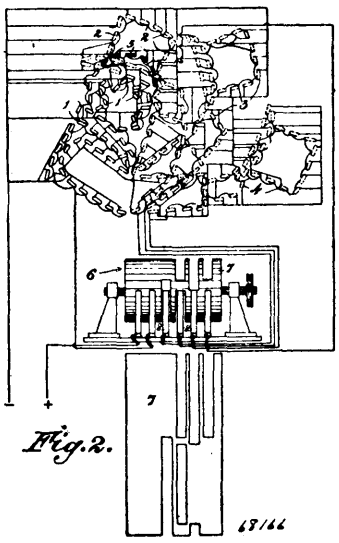


Fig. 2.

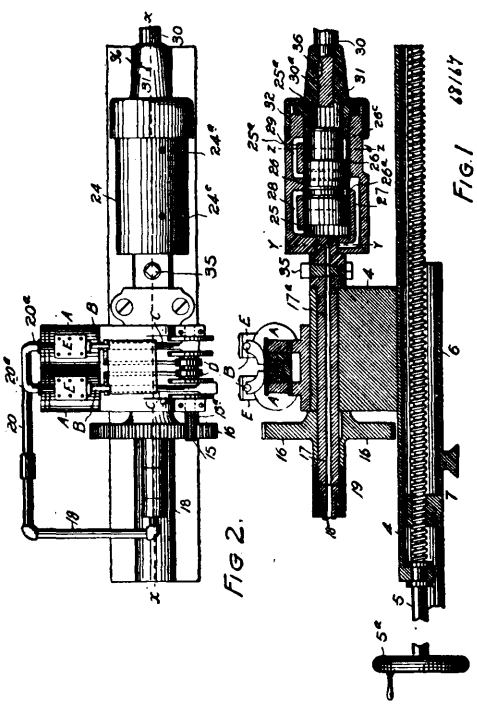
Frederick Alcock, Putney, Surrey, England, 20th July, 1900; 6 years. (Filed 19th July, 1899.)

Claim.—1st. In an illuminated advertising device, the combination with the representation of a figure in several attitudes or positions which would be successively taken up by the figure in making a given movement, electric lamps arranged on a number of circuits and one or more of which is common to two or more attitudes or positions of the figure and others of which are only lit up when the figure is shown in one of its several attitudes or positions and a switch controlling the lamp circuits, the movable contact of which will complete each of several of the circuits in consecutive order, and approximately simultaneously with the breaking of each preceding circuit, as set forth. 2nd. In an advertising device, the combination of several groups of electric incandescent lamps so arranged on several circuits as to form or illuminate the outline of a design or figure, or portions thereof, in different attitudes some of said groups being common to two or more attitudes with switching mechanism, by the operation of which the group of lamps on one circuit are switched off simultaneously, or nearly simultaneously, with the switching on of the circuit of the succeeding group of lamps thereby making the design or figure appear to assume different attitudes, substantially as described.

No. 68,167. Rock Drill. *(Foret.)*

Alfred Pretz Schmucker and Louis Dennison Sweet, both of Denver, Colorado, U.S.A., 20th July, 1900; 6 years. (Filed 26th December, 1899.)

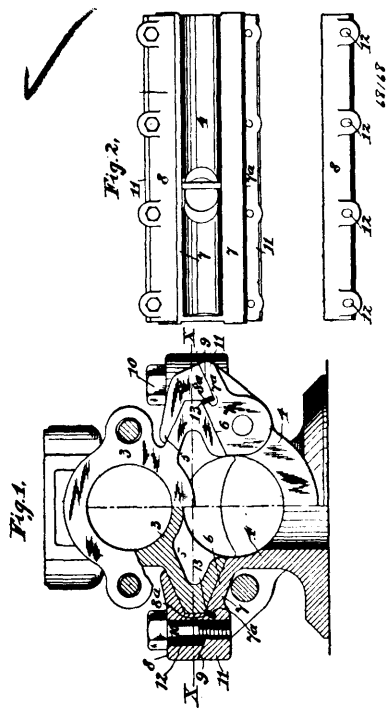
Claim.—1st. In a drill operated by air or other suitable fluid, the combination with a suitable support, and a carrier movable thereon, of a nut mounted on the support, a screw shaft connected with the carrier and engaging the nut, an air tube journalled in the carrier, a cylinder made fast to the forward extremity of the air tube and provided with ducts adapted to take the air from the tube and deliver it alternately to the front and rear parts of the cylinder chamber, a piston located in said chamber and adapted to reciprocate when actuated by the air from the said ducts, the piston being grooved to allow the air to cross the chamber, the wall of the cylinder being provided with suitable exhaust ports, and a drill bit supported to be actuated by the reciprocating piston. 2nd. In a drill, the combination with a carrier movable on a suitable support, of a screw connected with the carrier and engaging a nut on said support, an air tube journalled in the carrier, a cylinder made fast to the forward extremity of the air tube and provided with ducts adapted to take the air from the tube and deliver it alternately to the front and rear parts of the cylinder being provided with suitable exhaust ports, a reciprocating piston located in said chamber and forming a hammer, a drill bit supported to be actuated by the said piston, and suitable means for rotating the air tube and the cylinder attached thereto. 3rd. The combination with a suitable carrier and feed mechanism therefor, of an air tube journalled in the carrier and movable longitudinally therewith, a cylinder attached to the forward extremity of the air tube and provided with ducts communicating with the air tube and arranged to deliver the air to the front and rear of the piston, a piston located in the cylinder chamber, adapted to be reciprocated by the action of the air, said piston being fashioned to allow the air to cross the chamber from one duct to another, a drill supported to be actuated by the reciprocating piston, and suitable means for rotating the air tube, the cylinder, and their attachments, comprising a suitable motor, a gear wheel fast on the air tube, a pinion operated by the motor and meshing with the gear,



and suitable means for conducting air to the motor. 4th. In a drill or similar instrument, the combination with a suitable support, of a revoluble air shaft mounted thereon, a cylinder fast on the air shaft and rotating therewith, a piston hammer located in the cylinder and operated by the air from the said shaft, a bit mounted on the cylinder and arranged to be driven by the piston hammer, and means operated independently of the movement of the piston hammer for rotating the air shaft, the cylinder and the bit. 5th. The combination of a revoluble cylinder, a piston hammer located therein, a bit mounted on the cylinder and adapted to rotate therewith, said bit being arranged to be operated by said hammer, and means for delivering to the cylinder air, or other suitable fluid, for operating the hammer. 6th. The combination of a revoluble cylinder, a piston hammer located therein, a bit mounted on the cylinder, adapted to turn therewith, and arranged to be operated by the piston hammer, and means for automatically rotating the cylinder and bit. 7th. In a drill adapted to be operated by air, the combination of a cylinder, a piston hammer located therein, a drill bit mounted on the cylinder and adapted to be operated by the hammer, an air shaft fast on the cylinder and arranged to deliver air thereto for the operation of the hammer, means also operated by air for rotating the cylinder and suitable means for cutting off the flow of air to the cylinder while the rotating mechanism is in operation. 8th. The combination of a drill bit, a piston hammer, an air shaft for delivering air to the cylinder, a motor, a pinion fast on the motor shaft, and a gear fast on the air shaft and meshing with the pinion. 9th. The combination of a drill bit, a cylinder upon which the bit is mounted, a piston hammer located in the cylinder, an air shaft connected with the cylinder and adapted to deliver air thereto, a feed screw, a motor, a pinion fast on the shaft of the motor, a gear fast on the air shaft and meshing with the pinion, means for delivering air to the motor, and means for cutting off the flow of air to the cylinder while the motor is in operation. 10th. The combination of a revoluble cylinder, a piston hammer located therein, a bit mounted on the cylinder and arranged to rotate therewith, said bit being adapted to be operated by said hammer, means for delivering to the cylinder air, or other fluid, for operating the hammer, and means operated independently of the hammer's action for rotating the cylinder and bit. 11th. The combination of a bit, a revoluble cylinder upon which the bit is mounted, and with which it is adapted to turn, a hammer located in said cylinder for driving the bit, and means for rotating the said cylinder, said means operating independently of the hammer's action, whereby the rotation of the cylinder may continue while the hammer is inactive. 12th. In a drill or similar apparatus adapted to be operated by air, or other expansive fluid, the combination of the cylinder, a piston hammer located therein, a bit mounted on the cylinder and adapted to be operated by the hammer, an air shaft fast on the cylinder and arranged to deliver air thereto for the operation of the hammer, and means also operated by the air for rotating the shaft and cylinder. 13th. In a drill or similar apparatus adapted to be operated by air or other expansive fluid, the combination of a revoluble cylinder, a

piston hammer located therein, a drill bit mounted on the cylinder and adapted to be operated by the hammer and to turn the cylinder, means for delivering air to the cylinder for operating the hammer, and means also operated by the air or other expansive fluid for automatically rotating the cylinder and drill bit.

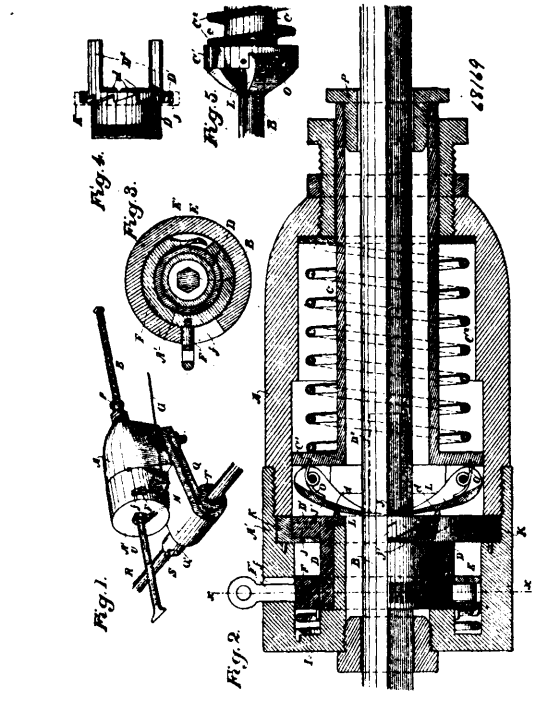
No. 68,168. Rock Drill. (*Forêt.*)



The Rand Drill Company, of New York, assignee of Hugh Vincent Conrad, and Robert Lunnan Ambrose, both of North Tarrytown, New York, U.S.A., 20th July, 1900; 6 years. (Filed 13th October, 1899.)

Claim.—1st. In a rock drill and cylinder provided with outwardly projecting longitudinal guide ribs, each of said ribs comprising an upper portion extending outwardly from the cylinder and a lower portion turned backwardly towards a point in a line passing between them and through the axis of the cylinder the same point being below the cylinder proper whereby the lower portion of said ribs are free at their inner ends, substantially as shown, each of said ribs having two angular faces which converge towards points on a straight line drawn through both of said ribs, said guides being adapted to work in corresponding slideways in the shell of the drill. 2nd. In a rock drill, the combination with a cylinder and guides on said cylinder composed of longitudinal ribs, which ribs are tapered in cross section, of a shell having stationary slideways with which the said ribs are adapted to engage, an adjustable slideway adapted to engage with one of the said ribs, bolts for attaching said adjustable slideway to said shell, said bolts arranged at an angle otherwise than a right angle with the connecting faces of the said slideway and the shell whereby they shall exert a constant pressure to force the adjustable slideway inwardly, the holes through which the said bolts pass in the adjustable slideway having clearance whereby such inward adjustment is permitted and means for restraining said adjustable slideway from exerting an undue pressure upon said guide. 3rd. In a rock drill the combination with a cylinder and guides on said cylinder composed of longitudinal ribs, each rib having two angular faces, both of which converge towards points on a straight line drawn through both of said ribs, of a shell having stationary slideways upon which the lower faces of said longitudinal ribs engage, adjustable slideways with which the upper faces of said ribs are adapted to engage, bolts for attaching said adjustable slideways to said stationary slideways, said bolts arranged at such an angle with the connecting faces of the said slideways that they shall exert a constant pressure to force the adjustable slideways inwardly, and removable spacing pieces for preventing the slideways from exerting an undue pressure upon the guides, substantially as specified. 4th. In a rock drill the combination with a cylinder and guides on said cylinder composed of longitudinal ribs, each of said ribs having faces 5-6 converging substantially as shown, of a shell having stationary slideways 7 upon which the lower faces 6 of said guides engage, adjustable slideways 8 with which the upper faces 5 of said guides engage, angular faces 9 through which the said adjustable slideways engage with the said shell, bolts fitted to said shell, slotted holes in said adjustable slideways through which said bolts are adapted to pass and removable spacing pieces 13, substantially as and for the purpose specified.

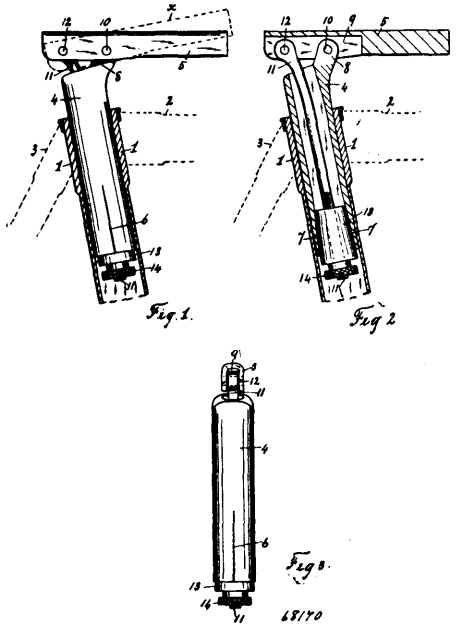
No. 68,169. Rock Drill. (*Forêt.*)



Russell Avery, of Sausalito, California, and Henry Cook Campbell, of San Francisco, California, both in the U.S.A., 20th July, 1900; 6 years. (Filed 3rd October, 1899.)

Claim.—1st. In a rock drill, a casing through which the drill is guided and movable, a support and a sleeve by which the casing is secured to said support, and means by which the casing and connected mechanism can be moved transversely away from the line of the hole and returned again to its position. 2nd. In a rock drill, a casing, a drill movable axially therethrough, a sleeve connected with said casing having an opening transverse to the line of movement of the drill, a fixed support upon which said sleeve is movable transversely out of or into the line of the hole to be drilled, a collar against which it abuts and means for fixing the sleeve whereby the drill may be returned to its alignment with the hole. 3rd. In a rock drill, a casing and a support therefor, a drill extending axially through said casing and guided thereby, a mechanism for intermittently turning the drill, a cord connecting therewith and with the bolt of the hammer wielder whereby the drill is raised and turned at each swing of the body in making the stroke. 4th. In a rock drill, a fixed support, a casing and guide through which the drill is axially movable, a pawl and ratchet mechanism whereby the drill is turned, connection between said mechanism and the body of the operator, whereby the swing in making the hammer stroke acts to raise and turn the drill between each stroke. 5th. In a rock drill, a fixed support, a casing carried thereby, a sleeve within the casing through which the drill shank passes, having a flange at one end with edge slots, a second sleeve in line therewith having arms engaging the slots, and a reduced portion provided with ratchet teeth, a pawl engaging said teeth, and means for actuating it, teeth formed on the end of the larger part of the ratchet sleeve, a fixed ring having similar teeth so that the turning of the ratchet sleeve engages the teeth and moves the ratchet and the flanged sleeve back from the fixed ring, grips carried by the flanged sleeve to move the drill in unison with the sleeve, and a spring by which the parts are returned when the engaging teeth have passed each other. 6th. A hand drill guide consisting of a casing and an interior sleeve and turning mechanism through which the drill may be advanced, a clamp and a fixed supporting column with means for securing the drill guide to give direction to the drill, said clasp being slidable transversely upon the column whereby the drill may be withdrawn from the hole, shifted to one side, and returned to the hole without altering its alignment.

No. 68,170. Adjustable Bicycle Seat Post.
(Poteau de siège de bicycle.)



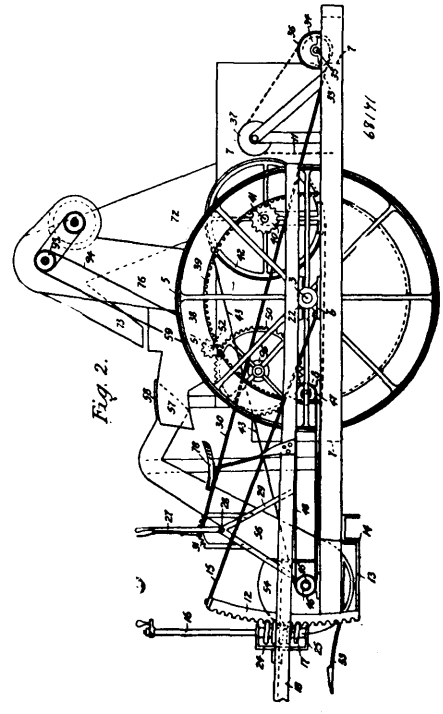
William G. Dutton, of Ingersoll, Ontario, Canada, 20th July, 1900; 6 years. (Filed 12th May, 1899.)

Claim.—1st. The combination with a seat post mast, of a seat post, consisting of a vertical tubular member, in which slits, extending in a longitudinal direction from one end, are formed, and a horizontal member pivoted on said vertical member, a rod pivotally secured at one end to said horizontal member, and a wedge shape nut adjustable on said rod, and engaging with the interior face of the slitted end of said vertical member, substantially as and for the purpose set forth. 2nd. The combination with a seat post mast, of a seat post, consisting of a vertical tubular member, in which slits, extending in a longitudinal direction from one end, are formed, and the interior face of said vertical member at said end bevelled or tapered, and a horizontal member pivoted on said vertical member, a rod pivotally secured at one end to said horizontal member, and a wedge shaped nut adjustable on said rod, and engaging with the interior, bevelled or tapered face of the slitted end of said vertical member, substantially as and for the purpose set forth.

No. 68,171. Harvesting Machine. *(Moissonneuse.)*

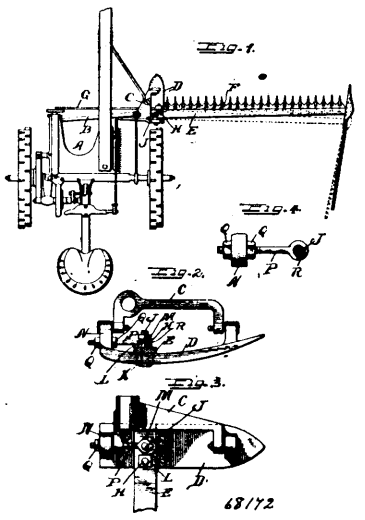
Peter Bryant Richards of Nathalia, Victoria, Australia, 20th July, 1900; 6 years. (Filed 9th July, 1900.)

Claim.—1st. In harvesting machines, in combination a main frame (carrying stripper comb) supported at either side on independent axles and free to swing upon same a winnower frame set within the main frame and pivoted to main frame, means for maintaining winnower frame level, substantially as and for the purposes set forth. 2nd. In harvesting machines, in combination a main frame mounted upon wheels having independent axles with a space between, a winnower frame set in the space and pivoted near one end upon a spindle supported by main frame and having at the other end a chain and pulley connection with main frame, substantially as and for the purpose set forth. 3rd. In harvesting machines, in combination a main frame mounted upon wheels having independent axles with a space between, such frame carrying stripper comb, main thrasher drum and shoot, means of adjusting the angle of main frame, a winower frame pivoted to the main frame and having means connected with main frame for maintaining winnower frame in level position, substantially as and for the purposes set forth. 4th. In harvesting machines, in combination a main frame mounted upon wheels having independent axles with a space between, a platform connected with steering wheel and with axle of main supporting wheel and carrying worm, a rack bar engaging with said worm and connected to main frame, a winnower frame pivoted to the main frame and having means connected with main frame for maintaining winnower frame at a constant level, substantially as and for the purposes set forth. 5th. In harvesting machines, in combination a main frame mounted upon wheels having independent axles with a space between, a frame as 9 having hollow boss set in bearing on main frame, a winnower frame supported near one end by such frames and having means near the other end for maintaining winnower frame level, substantially as and for the purposes set forth. 6th. In harvesting machines, in combination a frame mounted upon wheels having independent axles with a space between and supporting striper comb and main thrasher drum and a shoot having inclined sides and of greater width



on the upper face, a winnower frame pivoted to and set within main frame and carrying a hopper with extension to receive end of shoot, substantially as and for the purposes set forth. 7th. In harvesting machines, in combination a frame mounted upon wheels having independent axles with a space between, a pivoted winnower frame set in the space, a hopper supported by the winnower frame and a peg drum set in the hopper and having its spindle bearing on the winnower frame, substantially as and for the purposes set forth. 8th. In harvesting machines, in combination a frame mounted upon wheels having independent axles with a space between, a pivoted winnower frame set in the space and carrying hopper as 57, 59, 64, peg drum as 60, shoot plate as 65, having adjustable extension, and riddles, substantially as and for the purposes set forth. 9th. In harvesting machines, in combination a frame mounted upon wheels having independent axles with a space between, a winnower frame set in the space and pivoted to said main frame, a fan with casing open at the back and provided with one or more hinged doors, substantially as and for the purposes set forth. 10th. In harvesting machines, In combination a frame mounted upon wheels having independent axles with a space between, a winnower frame set in the space and pivoted to main frame means for maintaining winnower frame level, a grain elevator and tailings elevators secured to said winnower frame and leading towards each other and having a single through spindle to actuate their belts, substantially as and for the purposes set forth. 11th. In harvesting machines, in combination a frame mounted upon wheels having independent axles with a space between, a pivoted winnower frame in the space, a grain elevator and tailings elevator secured to said winnower frame and having device as illustrated in the accompanying drawings for keeping the elevating belts tight, substantially as and for the purposes set forth. 12th. In harvesting machines, in combination a frame mounted upon wheels having independent axles with a space between, a winnower frame set in the space and pivoted to main frame, such winnower frame carrying winnowing mechanism, substantially as illustrated in the accompanying sheets of drawings, and having its back closed in with doors. 13th. In harvesting machines, in combination a frame mounted upon wheels having independent axles with a space between, a winnower frame set in the space, frames as 9, connected to winnower frame and having hollow boss bearing in main frame, a spindle, carrying fan, through the hollow boss, pinion on fan spindle, pinion on peg drum spindle and intermediate toothed wheel 50, gearing with the said pinions, and means for actuating pinion of fan spindle from main supporting wheel of machine substantially as and for the purposes set forth. 14th. In harvesting machines, the combination of curved rack bar 12, secured to main frame, long rod 15, stay rod 22, worm rod 16, with worm 17, substantially as specified. 15th. In harvesting machines, the combination of lever 27 with spring pawl and fulcrumed on angle plate 29, rod 30, rack 31, chain 33, pulley 34, spindle 35, pulley 36, pulley 37, supported on main frame, and winnower frame 7, substantially as specified.

No. 68,172. Mowing Machines. (*Faucheuse.*)



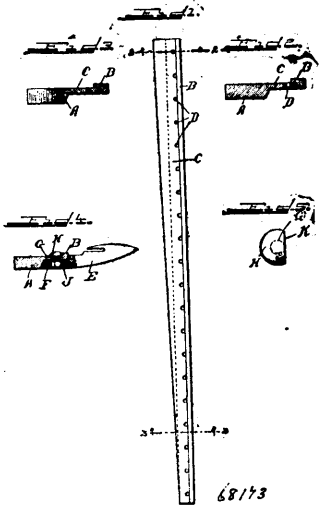
Maurice Kane, of Chicago, Illinois, U.S.A., 20th July, 1900; 6 years. (Filed 7th July, 1900.)

Claim.—1st. In a mowing machine, the combination with a finger bar, in which the cutter bar is carried, a shoe upon which said finger bar is supported, said shoe being pivotally mounted, whereby the finger bar may be folded into convenient position for transportation, an actuating pitman for said cutter bar, of means for adjusting the position of the finger bar upon and with reference to said shoe, whereby alignment between said bar and its actuating pitman is restored and maintained, as and for the purpose set forth. 2nd. In a mowing machine, a finger bar, in which the cutter bar is carried, a shoe for supporting the same, and an actuating pitman for the cutter bar, in combination with means for swinging the cutter bar forwardly upon and with reference to said shoe, to restore and maintain alignment between said cutter bar and pitman, as and for the purpose set forth. 3rd. In a mowing machine, a finger bar adapted to carry a cutter bar, a pitman for actuating said cutter bar, and a shoe for supporting the finger bar, in combination with means for adjusting the finger bar upon and with reference to said shoe, whereby the outer end of said finger bar may be moved forwardly to restore and maintain alignment between said cutter bar and its actuating pitman, as and for the purpose set forth. 4th. In a mowing machine, a finger bar adapted to carry a cutter bar, an actuating pitman for the latter, a shoe, the finger bar being pivotally supported thereon, said shoe provided with a laterally extending elongated slot, a bolt passing through such slot and securing the finger bar to the shoe, in combination with an eye bolt engaging the first-mentioned bolt, and means for adjusting such eye bolt, whereby said finger bar is capable of being rocked about its pivot, to restore and maintain alignment between said bar and pitman, as and for the purpose set forth. 5th. In a mowing machine, a finger bar, a cutter bar supported thereby, an actuating pitman for said cutter bar, a supporting shoe for said finger bar, said shoe provided with an upturned heel or lug and an elongated slot, a securing bolt for said finger bar and shoe, an adjusting bolt for said finger bar and shoe, said adjusting bolt arranged to pass through the elongated slot in said shoe, an eye bolt arranged to be engaged by said adjusting bolt, and having its stem arranged to pass through said upturned heel or lug, and set nuts mounted upon said eye bolt stem and arranged on opposite sides, respectively, of said upturned heel or lug, whereby said finger bar may be rocked or swung upon said shoe to restore and maintain alignment between said cutter bar and pitman, as and for the purpose set forth.

No. 68,173. Finger Bar for Mowing Machines.
(*Lames pour faucheuses.*)

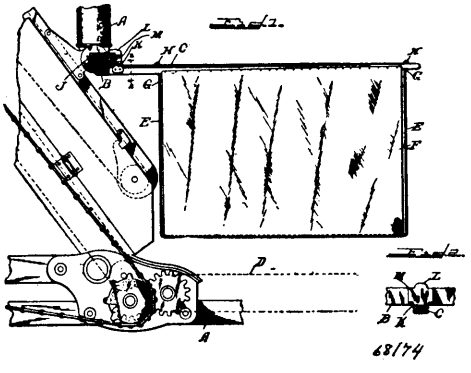
Maurice Kane, of Chicago, Illinois, U.S.A., 20th July, 1900; 6 years. (Filed 7th July, 1900.)

Claim.—1st. As a new article of manufacture, a finger bar for mowing machines, having a thickened portion at the rear edge thereof and a longitudinal rib on the upper surface of the front edge thereof, as and for the purpose set forth. 2nd. As a new article of manufacture, a finger bar for moving machines, having a thickened portion on the under surface thereof at its rear edge, said thickened portion decreasing in width from the inner toward the outer end of the bar, and having a rib formed on the upper surface at the front edge of said bar, as and for the purpose set forth. 3rd. As a new article of manufacture, a finger bar for mowing machines, comprising a thickened portion at its rear edge and a longitudinal rib at the front edge thereof, and a thin web connecting such rib and thickened portion, as and for the purpose set forth. 4th. The combination with a finger bar having a rib at the front edge thereof, of a guard, and a securing bolt for clamping said guard to said bar, the head of



said bolt engaging behind said rib, as and for the purpose set forth. 5th. The combination with a finger bar having a longitudinal rib on the upper surface of its front edge, and a guard having a perforated heel, a bolt passing through said bar and the perforation in said heel for clamping these parts together, the front edge of said bolt being planed off and engaging the rear surface of said rib, as and for the purpose set forth.

No. 68,174. Wind Break for Harvesting Machines.
(Garde vent pour moissonneuses.)



Maurice Kane, of Chicago, Illinois, U.S.A., 20th July, 1900; 6 years. (Filed 7th July, 1900.)

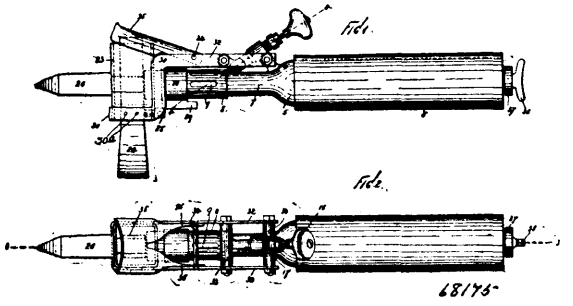
Claim.—1st. The combination with a supporting beam of a grain binder, of an arm detachably supported therefrom and carrying a wind break, said arm adapted to be shifted bodily and parallel to itself along said supporting beam, as and for the purpose set forth. 2nd. The combination with a supporting beam of a grain binder, of an arm having an angle plate and a hooked plate adapted to respectively engage the rear lower edge and the front upper edge of said supporting beam, whereby said arm is detachably supported by said beam and is adapted to be shifted bodily parallel to itself along said beam, and a wind break carried by said arm, as and for the purpose set forth. 3rd. The combination with a supporting beam, of an arm having an adapted plate at the inner end thereof adapted to engage the rear lower edge of said beam, a plate connected to said beam having wings or flanges to engage the front edge of said beam and a hooked end engaging over the upper end of said beam, and a wind break carried by said arm, as and for the purpose set forth. 4th. The combination with a supporting beam, of an arm detachably connected thereto, a wire or rod bent into U-shape and having its ends supported by said arm, and a canvas or other covering connected to said arm and held by said wire or rod, as and for the purpose set forth.

No. 68,175. Soldering Iron. *(Fer à souder.)*

Charles Shields, of Brooklyn, New York, U.S.A., 20th July, 1900; 6 years. (Filed 26th December, 1899.)

Claim.—1st. A device of the class described, compressing a tubular handle forming a reservoir open at one end and provided at the

other with a tubular extension, said extension being provided with a transverse partition having passages, and the end thereof adjacent

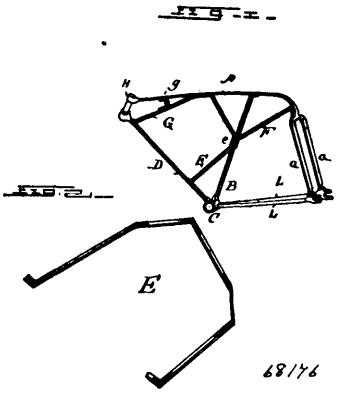


to said partition with a diaphragm having a perforation, a tubular casing connected with said extension and enclosing said diaphragm, and provided with side openings for admitting air, and a transverse head connected with said tubular casing and communicating therewith and provided with soldering irons, one end of said head being closed by a collar, and one of said irons being provided with a shank which is inserted through said collar and into and through said head, and the other iron being provided with a shank which is inserted through the outer side of the said head, and in line with the handle and into the shank of the other iron, said head being also larger in cross section than the shank of the first named iron, whereby an annular space is formed around said shank, substantially as shown and described. 2nd. A device of the class described, compressing a tubular handle forming a reservoir open at one end and provided at the other with a tubular extension, said extension being provided with a transverse partition having passages, and the end thereof adjacent to said partition with a diaphragm having a perforation, a tubular casing connected with said extension and enclosing said diaphragm, and provided with side openings for admitting air, and a transverse head connected with said tubular casing and communicating therewith and provided with soldering irons, one end of said head being closed by a collar, and one of said irons being provided with a shank which is inserted through said collar and into and through said head, and the other iron being provided with a shank which is inserted through the outer side of the said head, and in line with the handle and into the shank of the other iron, said head being also larger in cross section than the shank of the first named iron, whereby an annular space is formed around said shank, said casing being also provided with a valve tube in communication with the passage in said partition, and a valve pin mounted in said tube and controlling said passage, substantially as shown and described. 3rd. A device of the class described, compressing a tubular handle forming a reservoir open at one end and provided at the other with a tubular extension, said extension being provided with a transverse partition having passages, and the end thereof adjacent to said partition with a diaphragm having a perforation, a tubular casing connected with said extension and enclosing said diaphragm, and provided with side openings for admitting air, and a transverse head connected with said tubular casing and communicating therewith and provided with soldering irons, one end of said head being closed by a collar, and one of said irons being provided with a shank which is inserted through said collar and into and through said head, and the other iron being provided with a shank which is inserted through the outer side of the said head, and in line with the handle and into the shank of the other iron, said head being also larger in cross section than the shank of the first named iron, whereby an annular space is formed around said shank, said casing being also provided with a valve tube in communication with the passage in said partition, and a valve pin mounted in said tube and controlling said passage, and said handle and said reservoir being provided with a removable packing which is adapted to close said tubular extension and a rod connected with said packing, whereby it may be inserted and removed, substantially as shown and described.

No. 68,176. Bicycle Frame. *(Cadre de bicycles.)*

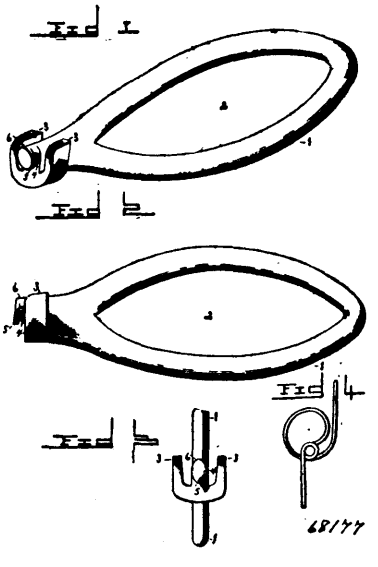
Jonas L. Knoll, Labanon, Pennsylvania, U.S.A., 20th July, 1900; 6 years. (Filed 15th May, 1900.)

Claim.—1st. A bicycle frame, having its parts made of flat spring rods, braced together by other flat spring rods and secured to the steering rod and crank hanger, substantially as shown and described 2nd. A bicycle frame, having its backbone formed of a flat spring rod, connected at one end to a steering rod and curved at its other end, and provided with branches adapted to engage the hub of the rear wheel, a seat post made of a flat spring rod, secured to the inner side of said backbone and connecting it to the shaft hanger, and a front brace connecting the steering rod to the shaft hanger and flat spring rods connecting the various parts adapted to give resiliency to the frame, substantially as shown and described. 3rd. A bicycle, having its frame constructed of flat spring rods, of an equal width and arranged to connect the steering rod, shaft hanger and sprocket wheel, and having its outer frame supported to a spring



seat post by means of spring braces connected thereto, said parts all being adapted to give resiliency to the frame, substantially as shown and described

No. 68,177. Implement for Applying Stay-Wires to Wire Fences. *(Outil pour poser des liens aux clôtures de fil de fer.)*



Edwin Columbus Jacobs, Norwalk, and Benjamin Howard Jacobs, Cleveland, assignees of Clarence Orlando Downing, Norwalk, all in Ohio, U.S.A., 23rd July, 1900; 6 years. (Filed 8th February, 1900.)

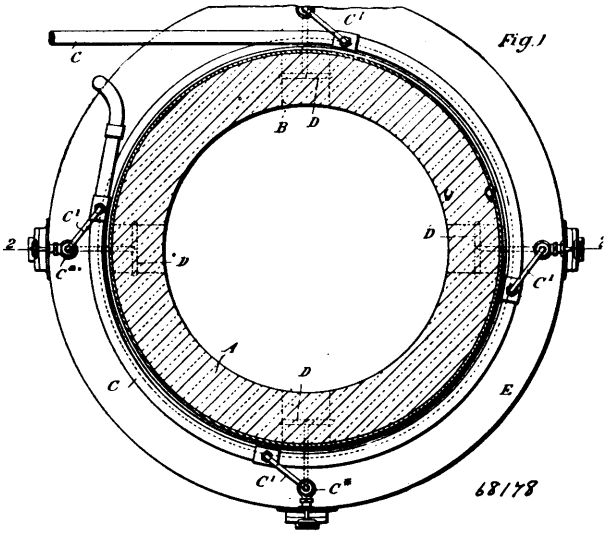
Claim.—1st. In an implement of the class described, a handle provided with one or more hooks, and a projecting end having an interrupted or partial head, substantially as specified. 2nd. In combination, handle 1, having opening 2, hooks 3, 3, projecting end 4, interrupted or partial ridge 5, and headless or ridgeless portion 6, all of said parts being integral and arranged, substantially as described.

No. 68,178. Apparatus for Injecting Steam into Cupolas in the Process of Melting Iron. *(Appariel pour injecter la vapeur dans les fourneaux à manches pendant le procédé de la fonte du fer.)*

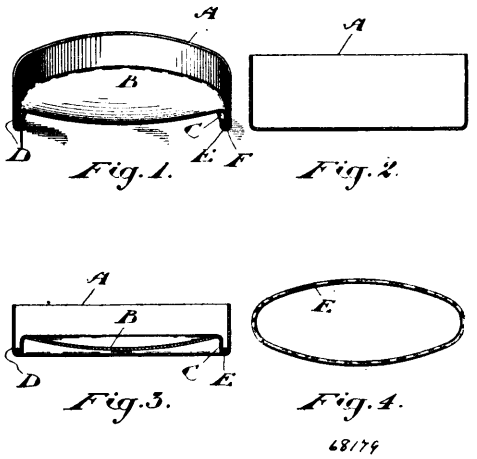
The Doherty Iron Castings Process, Limited, assignee George Lewis Morton, all of 16 St. Helen's Place, London, England, 23rd July, 1900; 6 years. (Filed 14th December, 1899.)

Claim.—1st. In a device of the character described, the combination with a cupola, and tuyeres in said cupola, of annular steam pipes fitted around the interior of said tuyeres, said pipes having perforations therein, substantially as described. 2nd. In a device of the character described, the combination with a cupola, and tuyeres in said cupola, of annular steam passages located around the interior of said tuyeres, said passages having perforations communicating therewith so located that the jets of steam from said

passages will converge to the centres of the tuyeres, substantially as described. 3rd. In a device of the character described, the combination with a cupola, and tuyeres in the said cupola, of steam pipes fitted around the interior of the said tuyeres, and partly embedded in the wall or lining of the tuyeres, the said steam pipes having perforations for the escape of steam, substantially as described. 4th. In a device of the character described, the combination with a cupola, and tuyeres in the said cupola, of steam pipes fitted around the interior of the said tuyeres, and partly embedded in the wall or lining of the tuyeres, the said steam pipes having perforations for the escape of steam, the said perforations being arranged to produce a series of jets of steam which will converge in the path of the air blast, substantially as described.



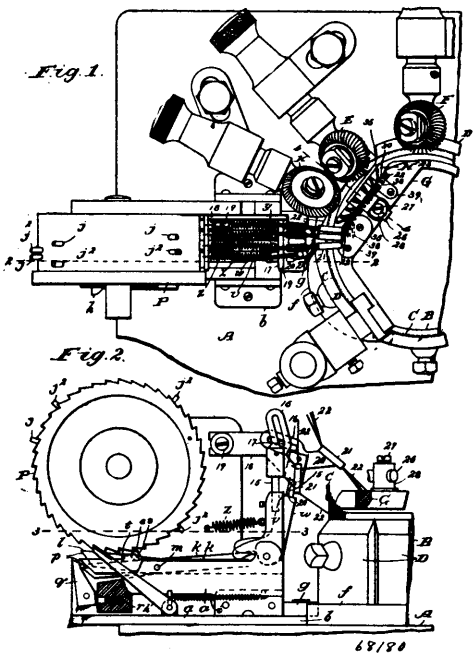
No. 68,179. Can Bottoms and Process of Making the same. *(Procéde pour la fabrication des fonds de buîtes de fer blanc.)*



The McClary Manufacturing Company, assignee of Joseph Nicholson, both of London, Ontario, Canada, 23rd July, 1900; 6 years. (Filed 8th April, 1899.)

Claim.—1st. A can bottom made in one piece and shaped by stamping and spinning to form the raised bottom B, the double side walls, C and D. and bead F, substantially as and for the purpose specified. 2nd. A can bottom made in one piece and shaped by stamping and spinning to form the raised bottom B, the double side walls C and D, and bead F, in combination with a metal ring inserted within the bead F, substantially as and for the purpose specified. 3rd. A can bottom made in one piece and shaped by stamping and spinning to form the raised bottom B, and the double side walls C and D, in combination with a metal ring inserted between the side walls at their bend, substantially as and for the purpose specified. 4th. The process of making a bottom for cans which consists, first—in stamping from a sheet of metal a short cylinder with an integral closed end; second—in stamping up the end of the cylinder to form a raised bottom with double walls below its edge; third—in spinning outward the upper portion of the inner wall to cause it to approach the outer wall, substantially as and for the purpose specified. 5th. The process of making a bottom for cans which consists; first—in stamping from a sheet of metal a short cylinder with an integral closed end; second—in stamping up the end of the cylinder to form a raised bottom with double walls below its edge; third—in inserting a metal ring between their walls at their bend; fourth—in spinning outwardly the inner wall to cause it to approach the outer wall above the said ring, substantially as and for the purpose specified.

No. 68,180. Striping Attachment for Circular Knitting Machines. *(Appareil à razér pour machine à tricoter.)*



Daniel Francis Sullivan and James Aloysius Cawley, both of Lowell, Massachusetts, U.S.A., 23rd July, 1900; 6 years. (Filed 3rd October, 1899.)

Claim.—1st. In a striping device for circular knitting machines a rotary yarn cutter actuated by contact with the finished portion of the knitted fabric. 2nd. In a stripping device for circular knitting machines a rotary yarn cutter actuated by contact of its blades with the finished portion of the knitted fabric and disposed within the needle circle. 3rd. In a striping device for circular knitting machines, a rotary yarn cutter disposed within the cylinder and actuated by contact with finished fabric, a fixed blade co-operating therewith, and a projection on said blade for engaging and guiding the yarn as it leaves the loop wheel of said machine, substantially as and for the purpose described. 4th. In a device of the character described a cutter disposed within the needle cylinder and a frictional holding device behind said cutter into which said cutter is arranged to direct a yarn thrown out of action and before severing it, substantially as and for the purpose specified. 5th. In a device of the character described. the horn, the cutter wheel mounted thereon and having radial blades in position to be engaged and actuated by the finished fabric, the fixed blade in rubbing contact with said wheel, said wheel guiding the thread as it is thrown in or out of action. 6th. In a device of the character described, the horn in combination with the fixed blade, the rotary cutter wheel, and the packing between said horn and wheel. 7th. In a device of the character described, the horn disposed within the cylinder in combination with the vertical rotary journalled on said horn and having blades in position to be engaged by the finished work a material distance from the needle cylinder whereby said cutter is actuated, the fixed blade co-acting with said cutter and provided with the guide projection, and a holding device for retaining an end of the thread after being severed by said cutter.

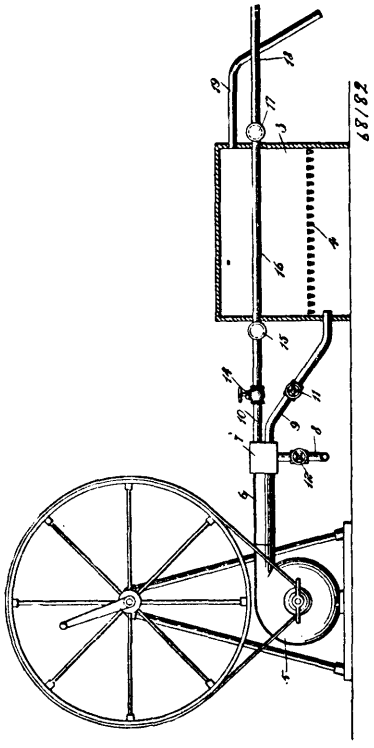
No. 68,181. Match. *(Allumette.)*

Sigmund Adolf Rosenthal, of 37 Walbrook, London, England, 23rd July, 1900; 6 years. (Filed 13th October, 1899.)

Claim.—1st. A composition or paste for forming the heads of matches consisting of thiosulphate of copper and sulphocyanide of copper, one or more materials for oxidizing same, such as chlorate of potash, inert materials such as powdered glass and the like and

binding materials such as glue and the like substantially as set forth. 2nd. A composition or paste for forming the heads of matches consisting of thiosulphate of copper, sulphocyanide of copper, chlorate of potash, powdered glass, sulphide or antimony, sulphate of calcium, sulphur and glue solution in or about the proportions stated.

No. 68,182. Heating Apparatus. *(Appareil de chauffage.)*



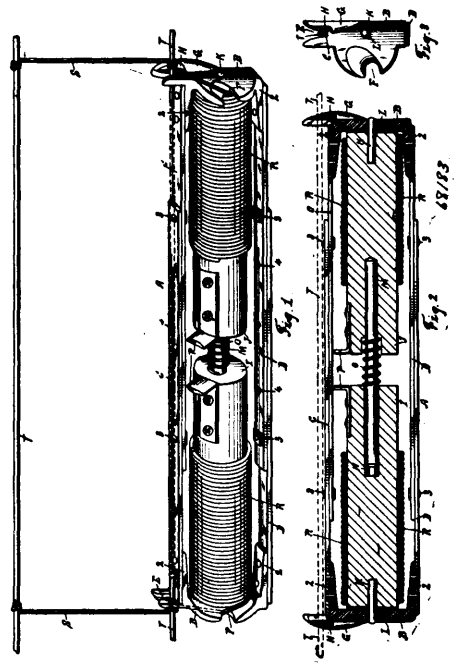
William Hull, of Souris, Manitoba, Canada 23rd July, 1900; 6 years. (Filed 4th June, 1898).

Claim.—1st. The combination of a furnace having a grate therein, of a blower mounted adjacent to the furnace, a hot air flue passed through the furnace and in communication with the blower, and draft tube also in communication with the blower, and led to the furnace below the grate thereof. 2nd. The combination of a furnace, a blower having connection therewith to force the draft thereof, and a hot air flue communicating with the blower and run through the furnace. 3rd. The combination of a furnace, a blower communicating therewith to force the draft thereof, and a pipe leading from the furnace to carry off the product of combustion, the pipe being elongated and capable of extension to apply the hot gases and flame for industrial purposes. 4th. The combination of a furnace, two cylinders located outside of the furnace and at opposite points thereof, flues passing through the furnace and communicating with the cylinders and a blower in communication with one of the cylinders to force the flow of air through the flues. 5th. The combination of a furnace, a blower, a box with which the throat of the blower communicates, a pipe 8 leading from the box, a pipe 9 leading from the box to the furnace to force the draft thereof, a pipe 10 leading from the box, flues 16 in communication with the pipe 10, a pipe 18 in communication with the flues, and a pipe 19 in communication with the furnace and carrying off the products of combustion therein. 6th. The heating apparatus herein shown and described.

No. 68,183. Fence Wire Stay Machine.
(Machine à étais pour clôtures de fil de fer.)

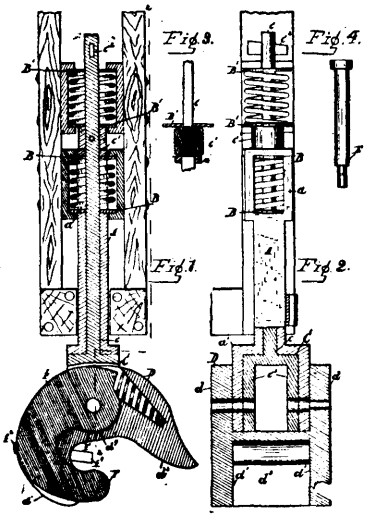
James F. Paisley, of the township of London, Ontario, Canada, 23rd July, 1900; 6 years. (Filed 29th June, 1898.)

Claim.—1st. In a fence wire stay machine, the frame A, in the ends B, of which the openings E, the recesses F, and sockets L are formed, in combination with the spools I, J, in the former of which the socket N is formed, the pivot pins K, the spindle M, and the coil spring O, substantially as and for the purpose set forth. 2nd. In a fence wire stay machine the frame A, in the ends B, of which the opening E, the recess F, and sockets L, are formed and provided with the recessed bearing flange G, in combination with the spools I, J, in the former of which the socket N is formed, the pivot pins K, the spindle M, and the coil spring O, substantially as and for the purpose set forth. 3rd. In a fence wire stay machine the frame A, in the ends B, of which the openings E, the recesses F, and sockets L, are formed and provided with the recessed bearing flange G, and the overlapping side bars C, D, in combination with the



spools I, J, in the former of which the socket N is formed, and thumb catches P, the pivot pins K, the spindle M, and the coil spring O, substantially as and for the purpose set forth.

No. 68,184. Car Couplings. *(Attelage de chars.)*

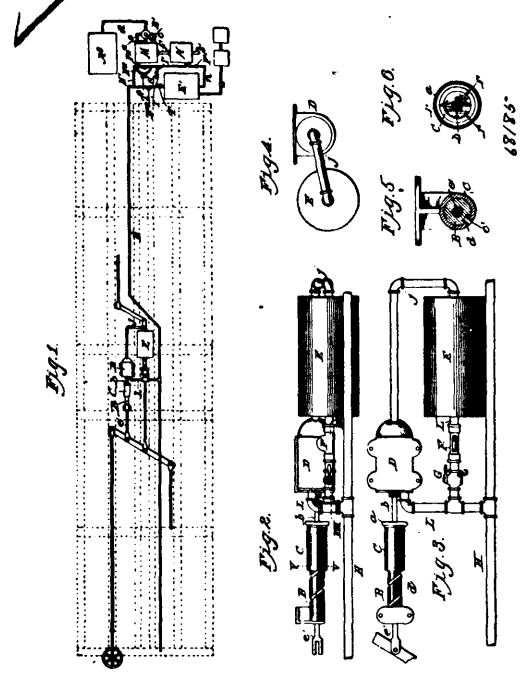


Philo Campbell Ewart, Cincinnati, Ohio, U.S.A., 23rd July, 1900; 6 years. (Filed 10th July, 1900.)

Claim.—1st. The combination in a car coupling, of a draft stem, a draft rod secured to the car, and a coupling head pivotally connected with the draft stem and draft rod, substantially as and for the purpose set forth. 2nd. In a car coupling, the combination with a coupling head, of a draft stem and a draft rod, independently connected with the car and the coupling head, substantially as and for the purpose set forth. 3rd. In a car coupling, the combination of a draft stem and a draft rod independently secured to the car and a coupling head pivotally connected with the draft stem and draft rod, substantially as and for the purpose set forth. 4th. In a car coupling, the combination of a draft stem connected with a draft spring, a draft rod independently connected with the car, and a coupling head independently connected with the draft stem and draft rod, substantially as and for the purpose set forth. 5th. In a car coupling, the combination of a draft stem connected with a draft spring,

a draft rod independently connected with the car and a coupling head pivotally connected with the draft stem and draft rod, substantially as and for the purpose set forth. 6th. In a car coupling, the combination of a draft stem connected with a draft spring, a draft rod connected with another draft spring and a coupling head independently connected with the draft stem and draft rod, substantially as and for the purpose set forth. 7th. In a car coupling, the combination of a draft stem connected with a draft spring, a draft rod connected with another draft spring and a coupling head pivotally connected with the draft stem and draft rod, substantially as and for the purpose set forth. 8th. In a car coupler, the combination of a draft stem, having a pocket adapted to actuate a draft spring, a draft rod extending through the pocket and secured in the rear thereof, and a coupling head independently connected with the draft stem and draft rod, substantially as and for the purpose set forth. 9th. In a car coupler, the combination of a draft stem, having a pocket adapted to actuate a draft spring, a draft rod extending through the pocket and secured in the rear thereof, and a coupling head pivotally connected with the draft stem and draft rod, substantially as and for the purpose set forth. 10th. The combination, with a coupling head, of a draft stem, having a pocket adapted to embrace the followers, and a draft rod attached to the coupling head extending through the pocket and adapted to engage with another set of followers, substantially as and for the purpose set forth. 11th. The combination with a coupling head, of a hollow draft stem, attached to a coupling head and having a pocket embracing the followers and a draft rod attached to the coupling head, extending through the pocket and secured in the rear thereof, substantially as and for the purpose set forth. 12th. The combination, with a coupling head, of a hollow draft stem, attached to the coupling head and having a pocket embracing the followers, and a draft rod, attached to the coupling head, extending through the pocket and engaging with another set of followers independently connected with the car, substantially as and for the purpose set forth. 13th. The combination, in a car coupling, of a draft stem, having a pocket adapted to embrace a set of followers, a draft rod extending through the pocket and adapted to engage with the rear of the pocket, and with the front and rear of the second set of followers, substantially as and for the purpose set forth. 14th. The combination, with the coupling head, of a draft stem, a draft rod, and a swivel pin connecting the draw stem, draft rod and coupling head, substantially as and for the purpose set forth. 15th. The combination, with a coupling head, having a recess in its rear wall, of a coupling hook adapted to swing at the side and rear of the coupling head and having a boss upon its shank adapted to take into the recess, substantially as and for the purpose set forth. 16th. The combination, with the coupling head, having a recess in its side and rear wall, and a secondary recess in the rear wall, of a coupling hook, adapted to swing in the side and rear recess, and provided with a boss upon its shank adapted to take into the secondary recess, substantially as and for the purpose set forth. 17th. The combination of a draft stem, a coupling head pivoted thereto, and a coupling hook pivoted to the stem, and having a shank adapted to swing at the side and rear of the coupling head and formed to partially embrace it, substantially as and for the purpose set forth. 18th. The combination of a draft stem, a coupling head pivoted thereto, and having a recess in its rear wall, and a coupling hook adapted to swing at the side and rear of the buffer head and having a boss adapted to take into the recess, substantially as and for the purpose set forth. 19th. The combination, of a draft stem, a coupling head pivoted thereto, and having a recess in its side and rear wall and a secondary recess in the rear wall, and a coupling hook adapted to swing in the side and rear recess, and provided with a boss adapted to take into the secondary recess, substantially as and for the purpose set forth. 20th. The combination, with a coupling head, of a draft stem, and a swivel pin connecting the coupling head, and draft stem, and having its lower end smaller than its upper portion, substantially as and for the purpose set forth. 21st. The combination, with a coupling head, of a draft stem, a draft rod, and a swivel pin connecting the coupling head, draft stem, and draft rod, and having its lower end smaller than its upper portion, substantially as and for the purpose set forth. 22nd. The combination of a draft stem, a draft rod, a coupling head, a coupling hook, a swivel pin connecting the draft stem, draft rod, coupling head and coupling hook, and having its lower end smaller than its upper portion, substantially as and for the purpose set forth. 23rd. The combination of a draft stem, a coupling head, a coupling hook, having a shank to swing at the side and rear of the head and formed to partially embrace it, and a swivel pin, connecting the stem, the head and the hook, and having its lower end smaller than its upper portion, substantially as and for the purpose set forth. 24th. The combination of a draft stem, a coupling head having a recess in its rear wall, a coupling hook adapted to swing at the side and rear of the head and having a boss on its shank adapted to take into the recess, and a swivel pin connecting the stem, the head and the hook, and having its lower end smaller than its upper portion, subatantially as and for the purpose set forth. 25th. In a car coupler, a swinging hook adapted to engage with the hook of an opposing coupler, and a supplemental hook adapted to engage with a catch or jaw upon the guide arm of an opposing coupler, substantially as and for the purpose set forth. 26th. In a car coupler, a swinging hook adapted to engage with the hook of an opposing coupler, and a supplemental hook swinging therewith adapted to engage with a catch or jaw upon the guide arm of an opposing coupler, substantially as and for the purpose set forth. 27th. The combination in a car coupler, of a draft stem, a coupling head, and projections from the head adapted to take over and under the guide arm of an opposing coupler, particularly as and for the purpose set forth. 28th. The combination, in a car coupler, of a draft stem, a coupling head, a coupling hook, one or more projections from the hook adapted to take over or under the hook of an opposing coupler, and a shoulder or stop on the head adapted to engage the projections or projection from the hook, substantially as and for the purpose set forth. 29th. The combination, in a car coupler, of a draft stem, a coupling head, a coupling hook, one or more projections from the hook adapted to take over or under the hook of an opposing coupler, and projections from the head adapted to take over or under the head of an opposing coupler, substantially as and for the purpose set forth.

No. 68,185. Automatic Air Brake. (*Frein à air.*)



William Gordon MacLaughlin, Independence, Missouri, U.S.A., 23rd July, 1900; 6 years. (Filed 10th July, 1900.)

Claim.—1st. In a fluid pressure apparatus, the combination of a brake cylinder, a piston therein, a brake mechanism connected to said piston, a fluid reservoir, a fluid pressure mechanism connecting said reservoir to the brake cylinder and normally maintaining a fluid under pressure on both sides of the piston in said brake cylinder and holding the brakes in their released position, means for permitting the fluid from one end of the brake cylinder to expand into said reservoir, whereby the fluid in the other end of said cylinder will move the piston therein, and means for forcing said fluid into the said end of the brake cylinder thereby returning the piston to its normal position. 2nd. In a fluid pressure brake, the combination of a brake cylinder, a brake operating piston therein, a brake mechanism connected to said piston, an air reservoir, a fluid pressure mechanism connecting said air reservoir to the brake cylinder and normally maintaining a fluid under pressure on both sides of the brake piston and holding the brakes in their released position, reciprocating means connected to the air reservoir, which means by its reciprocation will cause air to flow from the fluid pressure mechanism into said reservoir or to flow from said reservoir into the mechanism, and valves in the fluid pressure mechanism to permit air to flow from only one end of the brake cylinder into the air reservoir. 3rd. In a fluid pressure brake, the combination of a brake cylinder, a brake operating piston therein, a brake mechanism connected to said piston, a fluid pressure mechanism connected to the brake cylinder and adapted to normally maintain a fluid under a pressure on both sides of the brake operating piston and hold the brakes in their released position, and air reservoir connected to said fluid pressure mechanism, a piston therein which by its movement in one direction reduces the pressure on one side of the brake applying piston and permits the fluid on the other side of the said piston to expand and move the said brake applying piston, and by its movement in the other direction restores the normal pressure in the brake cylinder and returns the brake applying piston to its normal position, and means for reciprocating the piston in the air reservoir whereby the brakes may be operated without releasing any of the

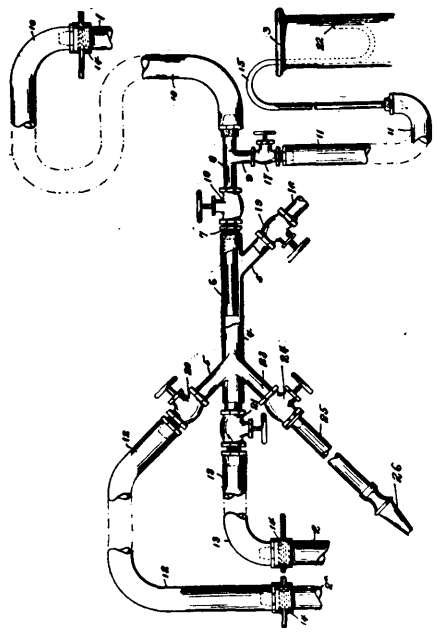
fluid from the reservoir. 4th. In a fluid pressure brake, the combination of a brake cylinder, a brake operating piston therein, a brake mechanism connected to said piston, a fluid pressure mechanism connected to the brake cylinder and adapted to normally maintain a fluid under a pressure on both sides of the brake operating piston, and hold the brakes in their released position, an air reservoir connected to said fluid pressure mechanism, a piston therein which by its movement in one direction reduces the pressure on one side of the brake applying piston and permits the fluid on the other side of the said piston to expand and move the said brake applying piston, and by its movement in the other direction restores the normal pressure in the brake cylinder and return the brake applying piston to its normal position, and a steam actuated device for reciprocating the piston in the air cylinder. 5th. The combination of a brake cylinder, a brake mechanism operated from said cylinder, a main fluid pressure tank, an auxiliary pressure tank, a valved train pipe connecting the main tank to one end of the brake cylinder and to the auxiliary tank, a pipe connecting the auxiliary tank to the other end of the brake cylinder, a valve adjacent the auxiliary tank for permitting fluid to pass from the train pipe to the auxiliary tank and from the auxiliary tank, means connected to the main pipe to prevent it passing back to the train pipe for reducing the pressure therein and in the connected end of the brake cylinder, whereby the fluid in the auxiliary tank will be permitted to expand into the other end of the brake cylinder, said means consisting of an air cylinder, a piston therein, and means for reciprocating said piston. 6th. In a fluid pressure brake, the combination of a brake cylinder, a brake operating piston therein, an auxiliary air reservoir, pipe H connecting the main reservoir to the other end of the brake cylinder, a pipe L connecting pipe H to the auxiliary reservoir, valve F in said pipe L, air cylinder N, a piston therein, a pipe H^1 connecting pipe H to said cylinder, valve F^2 in said pipe H^1, pipe H^2 extending around valve F^2 and connected at its ends to pipe H^1, valve T^2 in pipe H^2, a pipe *n* connecting air cylinder N to the main reservoir, valve F^1 in said pipe H^2, valve F^3 in pipe H, and means for reciprocating the piston in the air cylinder. 7th. In a fluid pressure brake, the combination of a brake cylinder, a brake operating piston therein, an auxiliary air reservoir connected to one end of said brake cylinder, a main reservoir, pipe H connecting main reservoir to the other end of the brake cylinder, pipe L connecting pipe H to the auxiliary reservoir, valve F in said pipe H, air cylinder N, piston therein, pipe H^1 connecting pipe H to said cylinder, valve F^2 in said pipe H^1, pipe H^2 extending around valve F^2 and connected at its ends to pipe H^1, and means for reciprocating the piston in cylinder N. 8th. In a brake, the combination of a rotatable sleeve, a cylindrical support therefor, said support being formed with a spiral groove, a lug on the sleeve entering the groove, a brake-operating rod for forcing the sleeve over its support, a hollow cap on the end of said sleeve, means for rotatively connnecting the brake operating rod to said cap, and means for reciprocating the brake operating rod. 9th. In a brake, the combination of a rotatable sleeve formed with a solid outer head, a cylindrical support therefor, said support being formed with a spiral groove, a lug or pin on the sleeve entering said groove, a brake operating rod for forcing the sleeve over its support, a hollow cap on the end of the rotatable sleeve, the brake operating rod extending through the cap and bearing against the solid head of the rotatable sleeve, means for rotatably connecting said rod to the cap, and a brake push rod passing loosely through the support and bearing against the inner side of the solid head of the sleeve. 10th. In a fluid pressure brake, the combination of the brake cylinder, a brake operating piston therein, a brake mechanism connected to said piston and air reservoir, a fluid pressure mechanism connecting said air reservoir to the brake cylinder and normally maintaining a fluid under pressure on both sides of the brake piston and holding the brakes in their released position, positively driven means connected to the air reservoir, which means by its action draws air from the fluid pressure mechanism into said air reservoir to apply the brakes, and forces it from said reservoir to release the brakes, and valves in the fluid pressure mechanism to permit the air to flow from only one end of the brake cylinder into the air reservoir.

No. 68,186. Device for Cleaning Locomotive Boilers.

(Appareil à nettoyer les chaudières de locomotives.)

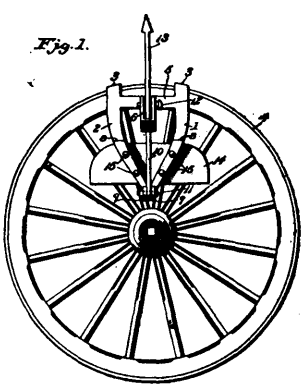
Thomas J. Rossell, New Haven, Connecticut, U.S.A., 23rd July, 1900; 6 years. (Filed 9th July, 1900.)

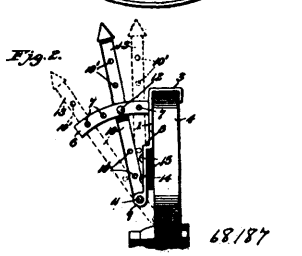
Claim.—1st. In a device of the character described, the combination with a central tube member having independent inlet means for admitting a stream of water and a jet of steam at one end thereof, of one or more flexible connections attached to the opposite end of said central tube member and adapted to convey the said water and steam to the points of distribution, substantially as described. 2nd. In a device of the character described, a central tube having auxiliary branches connected therewith, and a steam pipe within said tube, the combination therewith of flexible hose connections between the said steam pipe and a source of steam supply, and flexible outlet connections leading from the said central tube and adapted to be attached to the injectors of a locomotive, substantially as described. 3rd. In a device of the character described, a central tube, a steam pipe within said tube and a flexible connection between said steam pipe and a source of steam supply, the combination therewith of an intermediate pipe between the said steam pipe and flexible connection, a stack tube and a



flexible connection between the said intermediate pipe and stack tube, substantially as described. 4th. In a device of the character described, a central tube having branches radiating therefrom, a steam pipe within said tube and a flexible connection between said steam pipe and a source of steam supply, a flexible hose connection with each of said branches, whereby water is admitted into the said central tube through one of said branches and hot water ejected through the other branches, substantially as described.

No. 68,187. Lumber Jacks. (*Cric.*)



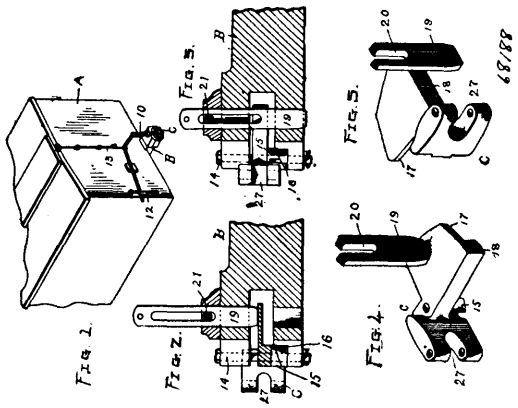


Fred. W. Reitz, Evansville, Indiana, U.S.A., 23rd July, 1900; 6 years. (Filed 9th July, 1900.)

Claim.—1st. In a lumber jack, the combination with a frame having engaging devices for sustaining the same, of a lumber rest on the frame, said frame having offset portions, and a bearing board fitted in the offset portions of the frame and secured to the same. 2nd. In a lumber jack, the combination with a frame having engaging devices for sustaining the same, of an upwardly extending lumber bar pivoted at its lower portion to the frame so as to be capable of swinging to assume positions at different angles to the frame,

and means for locking said bar in different positions, said bar having its upper swinging end free and adapted for services as a lumber rest. 3. In a lumber jack, the combination with a frame having engaging devices for sustaining the same, and a member which is provided with a series of aperatures or holes, of a lumber rest comprising a bar which is pivoted to the frame and has a free portion adapted to swing along the said apertured member, and a removable fastening adapted to be passed through any aperture of the member and the pivoted bar to secure it to the frame at different angles. 4th. In a lumber jack, the combination with the frame having engaging devices for sustaining the same, of a lumber rest comprising a member pivoted to the frame and adapted for adjustment to different angles and also adjustable longitudinally of itself to different heights. 5th. In a lumber jack, the combination with a frame having engaging devices for sustaining the same, of a lumber rest comprising a bar having a row of apertures along its length, a member on the frame having a row of apertures, a removable pivot bolt passed through one of the apertures of the bar and connecting the latter to the frame, and a removable bolt passed through the bar and the apertures on the member of the frame, whereby the bar can be adjusted high or low or at any desired angle relatively to the frame. 6th. In a lumber jack, the combination with a frame having engaging devices for sustaining the same, and composed of a pair of arms or hangers having a cross or connecting piece formed into or provided with an arc shaped loop whose sides are provided with apertures or holes, and said arms or hangers converging toward each other, of a pivot bar having its end pivoted between the sides of the loop and its upper ends located between the sides of the loop and extending above the frame, and a removable pin passed through said apertures and the pivot bar. 7th. In a lumber jack, the combination with a frame composed of a pair of hangers having hooks at their upper ends and converging at their lower ends, with their lower portions offset, and having a cross or connecting piece provided with an arc shaped loop provided with apertures in its sides, of a pivot bar having its lower end pivoted between the converged ends of the hangers and its upper portion lying between the sides of the loop, and extending thereabove to constitute a lumber rest, a removable pin passing through the apertures and the pivot bar, and a bearing board lying in the offset portions of the hangers and secured thereto.

No. 68,188. Car Coupling. (*Attetage de chars.*)



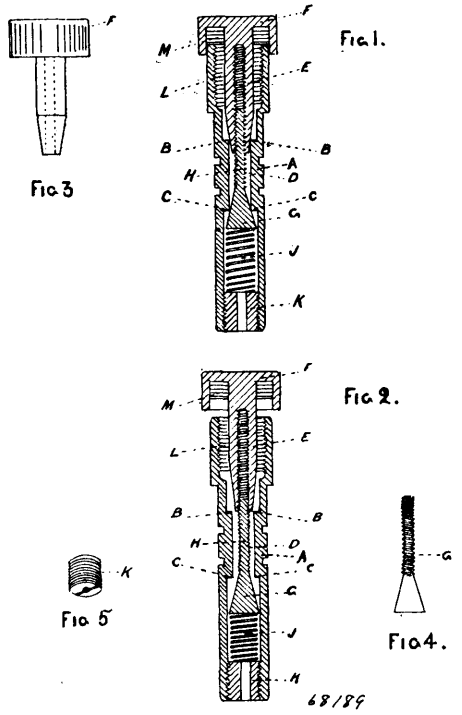
James E. Cunningham, Worcester, Massachusetts, U.S.A., 23rd July, 1900; 6 years. (Filed 9th July, 1900.)

Claim.—1st. In a car coupling, the combination of a draw head, a knuckle or coupling head pivotally mounted therein, and a gravity locking din, the knuckle being provided with a plate or sector upon which the lower end of the locking pin rests when in its uncoupled position, and a thickened portion for engaging behind the locking pin when in its coupled position, and with an incline or cam resting on a corresponding incline or cam in the coupling head for normally turning the knuckle to its uncoupled position when the locking pin is withdrawn, substantially as described. 2nd. In a car coupling, the combination of a draw head B, a knuckle or coupling head C pivotally mounted therein, and a longitudinally slotted flat faced gravity locking pin 19 secured on a stud or bolt in the draw head, the knuckle or coupling head being provided with a plate or sector 17 upon which the lower end of the locking pin 19 rests when in its uncoupled position, with a thickened portion 18 for engaging behind the locking pin, and with an inclined or cam section 15 resting upon a corresponding inclined or cam section 16 in the draw head for normally swinging the knuckle to its uncoupled position when the ocking pin is withdrawn, substantially as described.

No. 68,189. Valve for Taps. (*Soupape.*)

Henry Alfred Wood, Kingston, Ontario, Canada, 23rd July, 1900; 6 years. (Filed 28th December, 1899.)

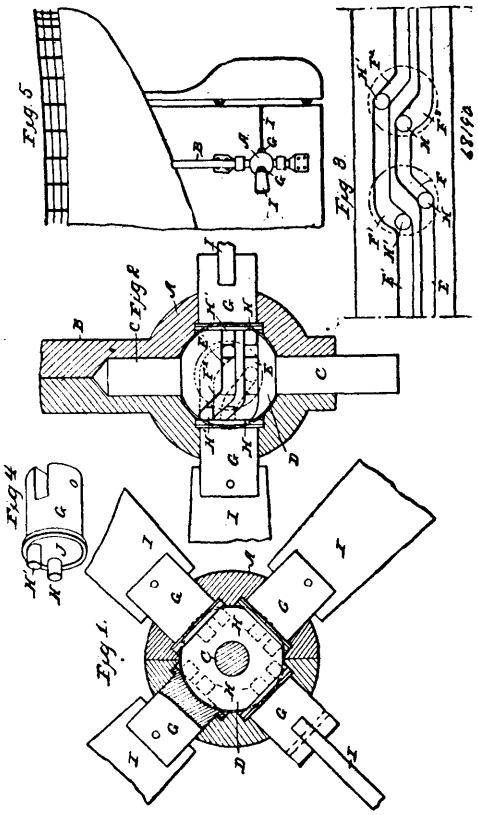
Claim.—1st. In a valve or tap, the combination of two conical or tapered valves proper or plugs, adapted to simultaneously approach and recede from each other, with a valve casing or shell having an inlet and an outlet and bearing a circular valve seat interposed between said valves proper or plugs and adapted to present to each



of them one of its inner circular edges or lips and to have contact with each of them only along the lines of such circular edges or lips, and devices for moving said valves proper or plugs onto and from their seats, substantially as and for the purposes set forth. 2nd. In a valve or tap, the combination with a valve shell or casing bearing a valve seat adapted to present only its inner edges or lips to the valves proper or plugs, of two conical or tapered valves proper or plugs adapted to be moved simultaneously towards each other on opposite sides of the said seat, and adapted to have contact with the said seat only along the lines of said edges or lips, lugs or projections working in the channels or grooves to prevent the lower valve from turning, a stem upon the lower valve screw threaded and engaging with a screw threaded opening in the centre of the upper valve, a stem upon the upper valve cut for part of its length with a screw thread of smaller size than that on the first-named stem, an external detachable handle thereon, a cap adapted to press upon and close the end of the said casing, a central aperture in the said cap screw threaded to correspond with the stem upon said outer valve, a cap or rim adapted to screw upon the said casing and hold said first cap in place, and a washer or packing device at the handle connections, substantially as and for the purposes set forth. 3rd. In a valve or tap, the combination with a valve shell or casing bearing a valve seat adapted to present only its inner edges or lips to the valves proper or plugs, directed towards each other on opposite sides of the said seat and adapted to have contact with the said seat only along the lines of such edges or lips, an opening and a cap or plug to allow of the insertion within the casing of the inner valve, lugs or projections working in channels or grooves to prevent the inner valve from turning, a stem upon the inner valve screw threaded and engaging with a screw threaded opening in the apex of the outer valve, a stem upon the head of the outer valve cut for part of its length with a screw thread of smaller size than that on the first-named stem, an external detachable handle thereon, a cap adapted to press upon and close the end of said casing, a central aperture therein screw threaded to correspond with the said stem upon said outer valve, a cap adapted to screw upon said casing and hold the said first cap in place, and a washer or packing device at the handle connections, all substantially as and for the purposes set forth. 4th. In a valve or tap, the combination of a valve casing or shell having an inlet and an outlet and a circular valve seat interposed between them so formed as to present merely its inner circular edge or lip to the valve proper or plug and to have contact therewith only along the line of such circular edge or lip, with a conical or tapered valve proper or plug, adapted to be raised from or depressed into the said seat, lugs or projections thereon working in grooves or channels to prevent the rotation of the said valve or plug, a screw threaded stem upon the said valve, a circular ledge or shelf within at one end of the said casing or shell, a block or nut adapted to receive the said screw threaded stem and having a conical or tapered surface to press against the edge or lip of the said ledge or shelf and to so close the end of the said casing or shell, a cap adapted to screw upon the said casing and an exterior

handle connecting through the said cap by a stem with the said interior block or nut, substantially as and for the purposes set forth. 5th. In a valve, the combination with a valve shell or casing having a central cylindrical opening connecting its inlet and its outlet, of two conical or tapered valves proper or plugs directed towards each other within the ends of the said casing at opposite ends of the said cylindrical opening and adapted to be moved simultaneously toward and away from each other, valve seats formed by the edges or lips of the ends of the said cylindric opening, a screw threaded stem upon the inner valve or plug, a corresponding screw threaded opening in the apex of the outer valve or plug, a cap formed in one piece with the outer valve and adapted to cover the end of said casing, means for attaching an air pump to that end of said casing, a spring to keep the inner valve in position, and a device to form a rest for the said spring, all substantially as and for the purposes set forth. 6th. In a valve, the combination with a valve shell or casing, having a central cylindrical opening connecting its inlet and its outlet, of two conical or tapered valves proper or plugs adapted to be moved simultaneously towards and away from each other within the ends of the said casing at opposite ends of the said cylindrical opening, valve seats formed by the edges or lips of the ends of the said cylindrical opening, a screw threaded stem upon the inner valve or plug, a corresponding screw threaded opening in the apex of the outer valve or plug, a cap formed in one piece with the said outer valve and adapted to cover the end of said casing, an annular washer or cushion of rubber to be inserted around the said stem inside the said cap, means for attaching an inflating device to the said casing, a spring to keep the inner valve in position, all substantially as and for the purposes set forth. 7th. In a valve, the combination of a valve casing or shell, with valve seats, two tapered valves or plugs, a cap made in one piece with one of the valves or plugs, a screw threaded stem between the valves or plugs, and a washer within said cap adapted to form a third barrier when the valves are closed, substantially as and for the purposes set forth. 8th. In a valve, the combination of a valve casing or shell adapted for attachment by an external screw thread to a neck or collar upon the confining chamber or receptacle, with valve seats, two tapered valves or plugs, a screw threaded stem between the valves or plugs, a cap made in one piece with one of the valves or plugs, a washer within said cap, a spring to hold the inner valve in place, and means for attaching an inflating device, substantially as and for the purposes set forth.

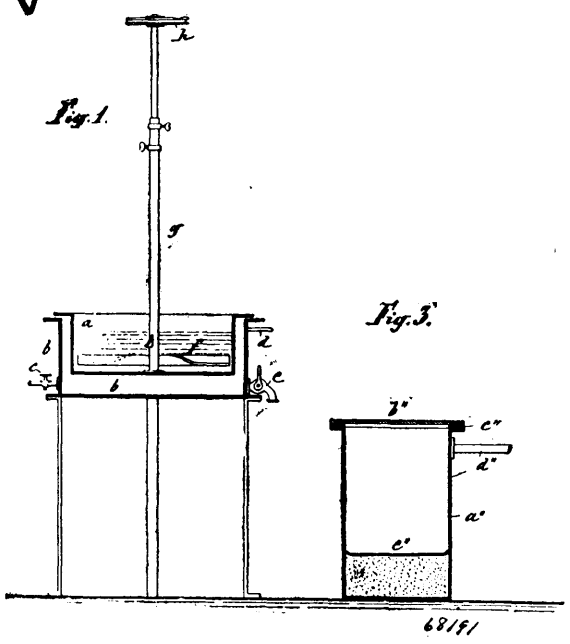
No. 68,190. Submerged Feathering Propellers for Marine Purposes. (*Helice.*)



Edward Francis Gorman and Penfield Fletcher Yost, both of Philadelphia, Pennsylvania, U.S.A., 23rd July, 1900; 6 years. (Filed 20th July, 1899.)

Claim.—In combination, a hollow hub B adapted to be rotated, a stationary shaft C upon which the hollow hub revolves, a spherical cam E rigidly secured to the shaft, two continuous parallel grooves formed around said cam, said grooves having deflections therein, spindles G journalled within the hub, pins H and H' projecting from the inner ends of the spindles into said grooves in such manner that when the hub is revolved the spindles will be oscillated through the medium of the pins travelling in the grooves, and propeller blades I secured to the spindles, said propeller blades being feathered by the side oscillations of the spindles, as and for the purpose set forth.

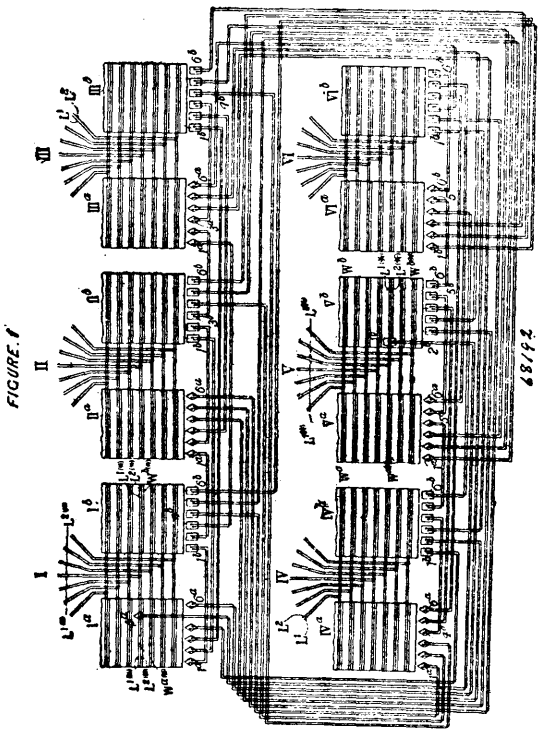
No. 68,191. Manufacture, of Cocoa, Chocolate, Etc. (*Fabrication de coco, de chocolat, etc.*)



Alphonse Denaeyer, 3 Place Liedls, Brussels, Belgium, 23rd July, 1900; 6 years. (Filed 18th August, 1899.)

Claim.—1st. The herein described process of manufacturing lacteous cocoa and chocolate preparations consisting in condensing to a syrup-like mass a mixture of milk and sugar, adding thereto a proper amount of pulverized cocoa or chocolate, and then subjecting said mass to the action of a suitable vacuum evapourating apparatus, substantially as described. 2nd. The herein described process of manufacturing lacteous cocoa and chocolate preparations consisting in condensing a mixture of milk and sugar to a syrup-like mass, adding thereto a proper amount of pulverized cocoa or chocolate, subjecting said mass to the action of a suitable vacuum evapourating apparatus and finally desicating said mass, substantially as described. 3rd. In combination, the jacketed evapourating vessel, a heating coil within said jacket, means for supplying to said jacket and a plurality of pans located within said vessel and open to the interior thereof, substantially as described. 4th. In combination, the evapourating vessel having a jacket, a heating coil surrounding same, and a plurality of pans located within said vessel, each of said pans having handles serving as supports for the next superposed pan, substantially as described. 5th. In combination, the evapourating vessel, the jacket surrounding same, a heating coil within said jacket, a removable cover for said vessel, a plurality of removable pans within said vessel, a condenser having a reservoir for the condensed products, and a pipe connection between said evapourating vessel and condenser, substantially as described. 6th. In combination the jacketed evapourating vessel, a heating coil surrounding same, a condenser connected with said evapourating vessel, and a coil of pipe within said condenser, substantially as described. 7th. In combination the jacketed evapourating vessel, a heating coil surrounding same, a condenser connected with said evapourating vessel by means of pipe connection, and a water inlet and discharge opening in said condenser, substantially as described. 6th. In a dessicating apparatus the combination with an air tight cylinder having a transparent cover, of a false bottom and a space below said false bottom for receiving blocks of moisture absorbing material, substantially as described.

No. 68,192. System of Automatic Telephone Exchange.
(*Système d'échange de téléphone.*)



The Automatic Telephone Company, Limited, London, England, assignee of Gustave Sehgmann-Luè, 78 Rue Mozart, Paris, France, 23rd July, 1900; 6 years. (Filed 23rd May, 1899.)

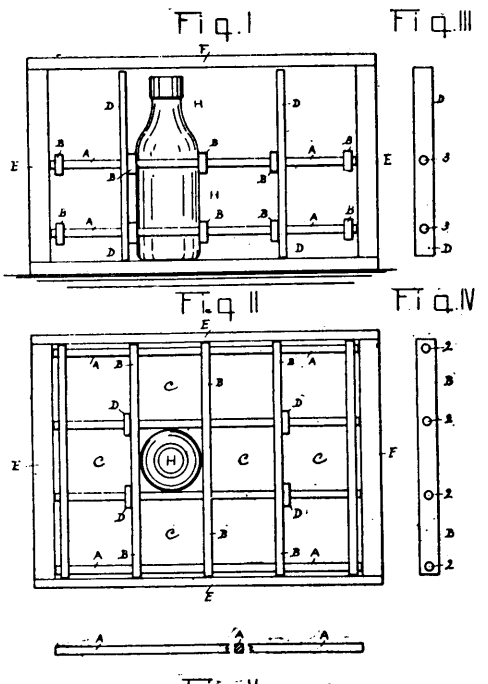
Claim.—1st. In an automatic telephone exchange system, the following instrumentalities in operative combination, viz.: subscribers' lines divided into groups, the lines of each group being presented on its own coupling board or boards having calling and called line contacts in pairs whose members correspond to the two members of a line, and service contacts for the service of the exchange mechanism, said line and service contacts being regularly arranged in series of rows so as to be accessible by a plurality of suitably located coupling devices, a plurality of coupling devices, each comprising two independently movable, electrically propelled, and electrically associated mechanism termed couplers, said couplers being respectively appropriated, the one for making connection with a called line, and the other for making connection with a calling line, each coupler being adapted to move across its board, the said couplers comprising a plurality of sets of line and service contact fingers, said sets respectively corresponding to the several series of rows of contacts on the coupling board, each set comprising a pair of line fingers whose members are appropriated to make contact respectively with the members of a pair of line contacts, and a service finger appropriated to make contact with the service wire corresponding to such pair of line contacts so that each set of line and service fingers is adapted to make contact with the line and service contacts of one or another row of contacts of the series to which that set corresponds, all the fingers of like function in the one coupler being in electrical connection with each other, and a magnetically operated multiple switch or distributor in connection with the called line coupler for connecting the same at predetermined moments with the fingers of corresponding function of the associated coupler, there being as many couplers of each function located at each coupling board of similar function as there are groups of lines, and the couplers of the kind appropriated to make connection with calling lines, which are located at any one calling line coupling board, being electrically associated with couplers, of the kind appropriated to make connection with called lines, which are severally located at called line coupling boards severally appertaining to different groups of lines, so that each said coupling device is adapted to telephonically couple together any two lines on the coupling boards at which the two couplers, forming said coupling device, are respectively situated. 2nd. In an automatic telephone exchange system, the combination of subscribsrs' lines divided into groups, the lines of each group being presented by line and service contacts, coupling boards or pairs of coupling boards respectively representing different groups of lines, coupling devices for connecting the subscribers' lines for conversation, the location of their constituent couplers relatively to the coupling boards being such that those couplers which appertain to any one group of lines are electrically associated with couplers which severally appertain to different groups of lines, and comprising in their structure two electrically operated couplers, respectively distinguished as called line coupler and calling line coupler, said couplers being independently movable each across a coupling board, and each comprising a plurality of sets of electrically controlled contact fingers, the fingers of like function of all the sets comprised in each coupler being electrically connected and the fingers of the called line coupler being electrically connected at predetermined moments with the fingers of like function, of the calling line coupler, and a multiple switch or distributor for effecting such connection and by which also the movements of the called lines coupler as a whole are controlled, an electrically operated selector for controlling the sets of fingers of the called line coupler, electro-magnetic mechanism in the circuit of the service finger of each set for controlling the sets of fingers of the calling line coupler, each such electro-magnet mechanism being dependent for its action (on the one hand) on the action of the distributor of the called line coupler and (on the other hand) on the completion of its own circuit, by the service finger of the corresponding set of fingers of the calling line coupler making contact with the service contact (of the calling line) which has been earthed, through the operation of an electro-magnetic commutator or connector appertaining to that line, there being such a commutator in connection with each line. 3rd. In an automatic telephone exchange system, the combination of subscribers' lines divided into groups, the lines of each group being presented by line and service contacts, a plurality of coupling devices each composed of two electrically associated mechanisms independently and electrically movable across the line and service contacts of a group of lines, one of such associated couplers being appropriated for making connection with a called line, and the other for making connection with a calling line, each such coupler being provided with a plurality of sets of line and service contact fingers, electrical connections between the fingers of like function of all the sets of the one coupler and means for connecting the same at predetermined moments with the fingers of like function of all the sets of the associated coupler, electrically operated or controlled contact fingers' selecting mechanism, said mechanism being constituted by a plurality of members, the operations of the several members being so co-ordinated that by their conjoint action one only of the several sets of contact fingers will be enabled at one time to make operative contact with a set of line and service contacts. 4th. In an automatic telephone exchange system, the combination of subscribers' lines divided into groups, the lines of each group being presented by line and service contacts, a plurality of coupling devices each composed of two electrically associated mechanisms or couplers independently and electrically movable across the line and service contacts of a group of lines, one of such associated couplers being appropriated for making connection with a called line and the other for making connection with a calling line, each such coupler being provided with a plurality of sets of line and service contact fingers, the electrical connections between the fingers of like function of all the sets of the one coupler, and means for connecting the same at predetermined moments with the fingers of all the sets of the associated coupler, a multiple switch or distributor in connection with the called line coupler for effecting such predetermined connection, contact fingers' selecting mechanism for the called line coupler, the said selecting mechanism being constituted by a pair of cam like retaining plates for each set of contact fingers, the plates of each acting independently on the contact fingers of a set, and independently operated cam shafts common to all the pairs of plates of a coupler to operate the same, with means for so co-ordinating the operation of the cams that by their conjoint action one only of the several sets of contact fingers will, at one time, be enabled to make operative contact with a row of line and service contacts. 5th. In an automatic telephone exchange system, the combination of subscribers' lines grouped on coupling beards substantially as described, a plurality of coupling devices each composed of two electrically associated mechanism or couplers independently and electrically movable each across a coupling board and provided each with a plurality of sets of contact fingers electrically associated as described, the two couplers of a coupling device being adapted, the one to make contact with called lines and the other with calling lines, the electrically operated contact fingers' selector for controlling the contact fingers of the coupler for making contact with a called line being under electrically operated combined escapement and propelment mechanism, the escapement mechanism being adapted to throw the propelment mechanism out of action and to permit the said coupler to move step by step across the coupling board in the one direction, and to control the extent of such movement, and the propelment mechanism being adapted to cause the said coupler to return step by step in the opposite direction. 6th. In an automatic telephone exchange system, the combination of subscribers' lines on a coupling board or boards as described, a plurality of coupling devices combined with said coupling board or boards, each such coupling device being constituted by two electrically operated couplers respectively distinguished as called line coupler and calling line coupler, with electrical means for moving the said couplers each across a coupling board, each coupler comprising a plurality of sets of electrically controlled contact fingers, the fingers of like function of all the sets comprised in each coupler being electrically connected, a rotary multiple switch or distributor associated with each coupler appropriated to make contact with called lines, a combined escapement and

propelment mechanism associated with the called line coupler, circuit connections such that the movement of the coupler as a whole will be controlled by said distributor, a contact fingers' selector, circuit connections of the said distributors with the respective members or operative mechanisms of the contact fingers selector adapted to determine the bringing into operative position of any one set of contact fingers of the called line coupler, the circuit connections being such that the co-ordinated operation of the mechanisms of the said contact fingers' selector will also be controlled by said distributor, and circuit connections of the said distributor with the service contact finger with the actuating mechanism of the line contact fingers of the calling line coupler, associated with the called line coupler, to which said distributor appertains, the connections being such that the fingers of the called line coupler will be electrically connected at predetermined moments with the corresponding fingers of the calling line coupler. 7th. In an automatic telephone exchange system, the combination of subscribers' lines grouped on coupling boards as described, a plurality of coupling devices combined therewith, each composed of two electrically associated couplers independently and electrically movable across coupling board and provided each with a plurality of sets of contact fingers electrically associated as described, the two couplers of a coupling device being respectively adapted to make contact with called and calling lines, an electrically operated contact finger's selector controlling the contact fingers of the coupler adapted for making contact with a called line, electrically operated mechanism associated with each such calling line coupler and adapted to set the calling line coupler in motion across the coupling board when actuated by a current, a distributor appertaining to the associated called line coupler, a selector and service circuit by which the associated couplers are connected, said distributor and said selector and service circuit forming a path for the passage of a current to actuate the mechanism for setting the calling line c upler in motion, and electrically operated arresting mechanism adapted to arrest the motion of the calling line coupler, actuated by a current transmitted to such mechanism through the service finger circuit of the calling line coupler, on the completion of said circuit by a service finger of the calling line coupler meeting a service wire which has been put to earth, and an electro-magnetic commutator or contractor appertaining to the line to which such service wire belongs for putting said service wire to earth. 8th. In an automatic telephone exchange system, the combination of subscribers' lines divided into groups, the lines of each group being presented by line and service contacts to coupling devices composed of pairs of electrically operated coupler mechanisms each having sets of contact fingers, those of the one coupler being selectively controlled and being electrically associated at predetermined moments with those of the other coupler, a multiple switch or distributor for effecting such control and association, the several pairs of associated couplers being located with regard to the groups of lines in the manner described, an electro-magnetic multiple commutator or connector connected with each subscriber's line and adapted to establish at the required moment temporary connections of the line wires and service contacts (of the line to which it appertains) with the various elements of electro-magnetic apparatus at the central station, a combination of electro-magnetic apparatus for each group of lines for use in common by all the lines of a group, such combination comprising an electro-magnetically actuated rotary main distributor or multiple switch, formed of a plurality of sets of pairs of contacts and of a plurality of brushes revolved together as one over the pairs of contacts, whereby to effect a plurality of circuit changes at each step made by the brushes, a propelment mechanism to actuate the brushes responsive to successive signals of one kind, a main selector comprising a plurality of circuits and a plurality of movable contacts, a plurality of electro-magnetically operated mechanisms, controlling groups of movable contacts of the selector, to each of which mechanisms the signals sent are switched in turn by the main distributor, the individual action of each such mechanism depending on the nature of the signals, and the action of the several mechanisms being so co-ordinated that their conjoint action will be effective to complete one out of a number of selector circuits respectively connected to the operative mechanisms of different coupling devices, and a manipulator formed of relays and batteries adapted to transmit through the selector circuit completed, local currents corresponding to the signals which the manipulator receives through the main distributor, substantially as herein specified. 9th. In an automatic telephone exchange system, the combination of groups of subscribers' lines with service wires, coupling devices operatively arranged with respect to the groups of lines, said coupling devices being composed of pairs of electrically operated couplers, having sets of electrically associated and selectively controlled contact fingers, a set of electro-magnetic apparatus for common use by the lines of a group, an electro magnetic multiple commutator or connector for each line for connecting the line wires and service contacts, of the line to which it appertains, with the various elements of the said set of electro-magnetic apparatus for common use by the lines of a group, a main distributor, main selector, and manipulator for common use by a group, a rotary return-to-rest distributor or multiple switch formed of a plurality of sets of pairs of contacts and of brushes electro-magnetically revolved together as one, whereby to concurrently effect various circuit changes, and electro-magnetically operated mechanisms to which local currents are sent through said return-to-rest distributor, said mechanisms being respectively adapted to return to initial position the line connector which has been operated, and the main distributor, main selector and manipulator of the group to which that line belongs. 10th. In an automatic telephone exchange system, the combination of subscribers' lines divided into groups, and presented by line and service contacts to coupling devices composed of pairs of electrically operated couplers, having sets of contact fingers selectively controlled and electrically associated at predetermined moments as described, the several pairsof associated couplers being located with regard to the groups of lines in the manner described, and connectd with each subscriber's line an electro-magnetic multiple communicator designated a connector adapted to act as described, and combined with each group of lines a set of electro-magnetic apparatus (for use in common by all the lines of the group) comprising an electro-magnetically actuated rotary main distributor or multiple switch, constructed and adapted to act as described, a main selector comprising electro-magnetically operated mechanisms, to each of which in turn the signals sent are switched by the main distributor, the action of the said mechanisms being so co-ordained that their conjoint action will have for its effect to complete one out of a number of selector circuits, and a manipulator formed of relays and batteries adapted to transmit through the selector circuit completed, local currents corresponding to the signals which the manipulator receives through the main distributor, and the following devices combined with each circuit controlled by the main selector, viz. : a double polarized receiver, two rotary distributors or multiple switches, and two different called line couplers designated twin couplers, located at different coupling boards and each provided with electro-magnetically operated mechanism controlling its motion across the coupling board, and with a contact fingers' selecting mechanism, determining the bringing into operation of one or the other of its sets of contact fingers, and circuit connections of the double polarized receiver with the distributors, and of the distributors with the mechanisms of the respective couplers of such a character that one or the other distributor and one or the other coupler will be actuated according to the polarity of the first current by which the polarized receiver is influenced, whilst the other distributor and the other coupler are blocked in position of rest. 11th. In an automatic telephone exchange system, the combination of subscribers' lines divided into groups, and presented by line and service contacts, to coupling devices composed of pairs of electrically operated couplers having sets of contact fingers, selectively controlled and electrically associated at predetermined moments as described, the several pairs of associated couplers being located with regard to the groups of lines in the manner described, an electro-magnetic multiple commutator or connector connected with each subscriber's line adapted to act as described, and combined with each group of lines a set of electro-magnetic apparatus (for use in common by all the lines of the group) comprising an electro-magnetically actuated rotary main distributor or multiple switch, constructed and adapted to act as described, a main selector comprising electro-magnetically operated mechanisms, whose action is so co-ordained as to complete one out of a number of selector currents, and a manipulator adapted to transmit through the selector circuit completed, local currents corresponding to the signals which it receives, and combined with each such circuit a double polarized receiver, two rotary distributors or multiple switches, and two different called line couplers (designated twin couplers) located at different coupling boards and each provided with electro-magnetically operated actuating mechanism and with a contact fingers' selecting mechanism, the circuit connections of the double polarized receiver with the distributors and mechanisms of the twin couplers being such that one or the other will be actuated according to the polarity of the first current by which the polarized receiver is influenced, and the following elements combined with each of the twin called line couplers controlled through the same selector circuit, viz. : a calling line coupler, each of such two calling line couplers (designated "quasi-twins") being provided with electrically operated mechanism adapted to set the coupler in motion by a current transmitted to said mechanism through the distributor appertaining to the associated called line coupler, and through the line circuit of the associated couplers, and means for affecting such action, each calling line coupler being also provided with electrically operated mechanisms adapted to arrest the motion of the coupler by the action of a current transmitted to such mechanism through the service finger circuit of the calling line coupler, on the completion of said circuit by a service finger of the calling line coupler meeting a service wire which has been put to earth by the previous operation of the connector appertaining to the line to which service belongs. 12th. In an automatic telephone exchange system, the combination of subscribers' lines divided into groups, and presented by line and service contacts, coupling devices to which said subscribers' lines are presented, composed of pairs of electrically operated couplers having sets of contact flanges with means for selectively controlling and electrically associating the same at predetermined moments as described, the several pairs of associated couplers being located with respect to the groups of lines in the manner described, a connector comprising an electro-magnetic multiple commutator connected with each subscriber's line, a set of electro-magnetic apparatus combined with each group of lines (for use in common by all the lines of the group) comprising an electro-magnetically actuated rotary main distributor or multiple switch, constructed and adapted to act as described, a main selector comprising electro-magnetically operated mechanisms to each of which in turn the signals sent are switched by the main distributor,

the action of the said mechanism, being so co-ordinated that their conjoint action will have for its effect to complete one out of a number of selector circuits, and a manipulator formed of relays and batteries adapted to transmit through the selector circuit completed, local currents corresponding to the signals which the manipulator receives through the main distributor, and with each such circuit a double polarized receiver, two rotary distributors, and two called line couplers (designated twin couplers) located at different coupling boards, the circuit connections of the double polarized receiver with the distributors and mechanisms of the twin couplers being such that one or the other will be actuated according to the polary of the first current by which the polarized receiver is influenced, and a calling line coupler combined with each of the twin called line couplers controlled through the same selector circuit, each of such two calling line couplers (designated quasi-twins) being adapted to be set in motion by a current transmitted to its mechanisms through the distributor appertaining to the associated called line coupler, and through the line finger circuit of the associated couplers, such calling line coupler being also adapted to be arrested by the action of a current transmitted to its mechanism through the service finger circuit of the calling line coupler, and the following instrumentalities combined with the line connectors, and with the main distributor, main selector, and manipulator common to the group, and with the mechanisms of the called line couplers (designated twins) that are controlled through the same selector circuit, viz:—two return-to-rest rotary distributors each formed of a plurality of brushes electro-magnetically revolved over a plurality of sets of pairs of contacts, of which the circuit connections (with the mechanisms of the called line couplers, with the connectors of the lines of the group, and with the main distributor, the main selector, and the manipulator common to the group) are such that the action of one or the other return-to-rest distributor will be dependent on the previous operation of the distributor of the twin called line coupler with which such return-to-rest distributor is associated, and will have for its effect to transmit local currents to the several mechanisms with which it is combined whereby to return to initial position the line connector, main distributor, main selector, and manipulator appertaining to the group.

No. 68,193. Bottle Packing Cases.

(*Caisse d'emballage pour bouteilles.*)

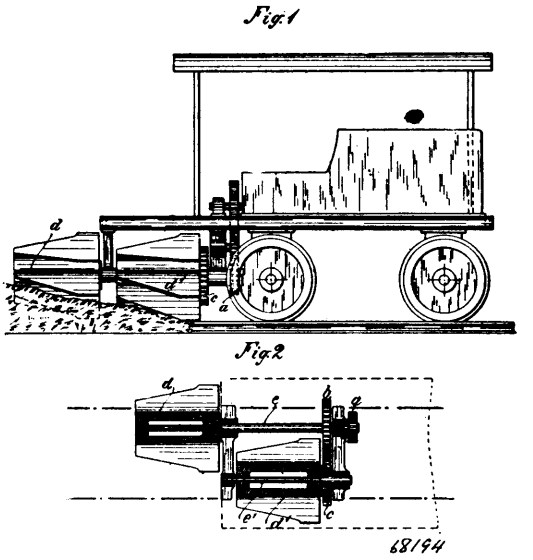


John B. Freed and Thomas Booker, both of Hamilton, Ontario, Canada, 24th July, 1900; 6 years. (Filed 11th July, 1900.)

Claim.—1st. A bottle casing comprising parallel rectangular strips, parallel transverse bars, equally divisioned circular apertures through said bars to admit said strips, rectangular openings formed between the strips and the bars, one set of said formed openings located near to the bottom of bottles and the casing, and the other set of formed openings located in vertical line above the lower set of openings, said openings to hold and steady the bottles in a casing, as described. 2nd. In a bottle casing rectangular strips, transverse bars, circular apertures through said bars for said strips, rectangular openings formed between the strips and the bars, one set of said formed openings located near to the bottom of the casing, the other set of said formed openings located in vertical line above the said lower set to hold and steady the bottles in the casing, vertical standards on the bottom of the casing and extending to the top thereof, circular apertures in the standards to admit and hold said strips in located position, as described.

No. 68,194. Snow Plough for Railway Cars.

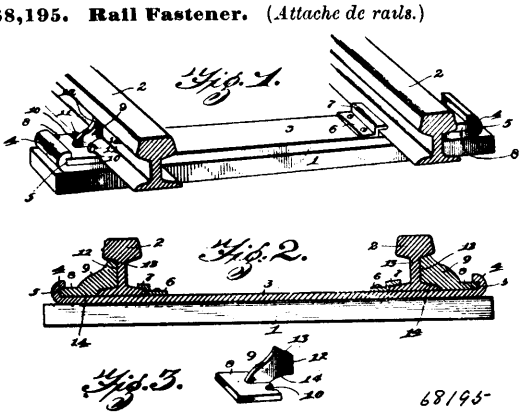
(*Charrue à neige pour chemins de fer.*)



Johann Georg Weniger, Mambach, near Zell, in the Grand-Duchy of Baden, Germany, 24th July, 1900; 6 years. (Filed 11th July, 1900.)

Claim.—1st. In snow plows for railway cars, the combination with a revolving wheel *d*, provided with scoops, fixed to the shaft *e*, with a second revolving scoop wheel *d*, fixed to the shaft *e*, the said second scoop wheel lying in the direction of the shafts behind the first scoop wheel, for the purpose as described.

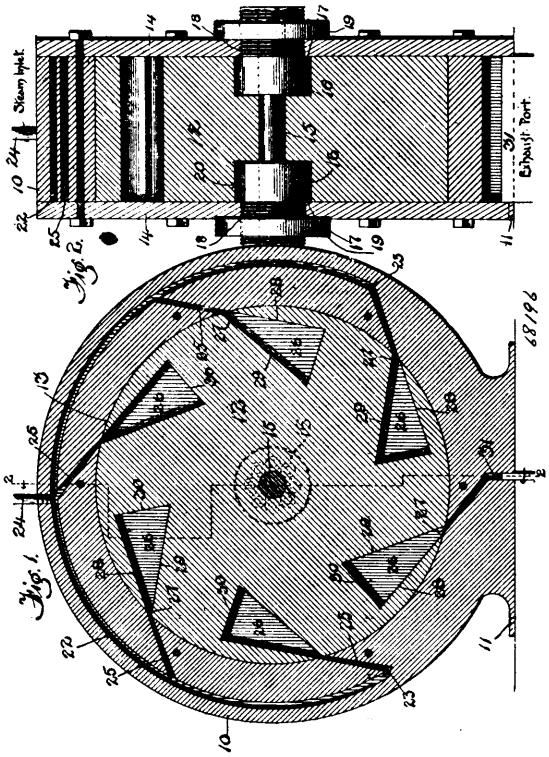
No. 68,195. Rail Fastener. (*Attache de rails.*)



Alex. Learnard Anderson, of Beatrice, Nebraska, U.S.A., 24th July, 1900; 6 years. (Filed 10th July, 1900.)

Claim.—1st. In a track fastening of the class described, the combination with a base bar having its opposite ends provided with overhanging flanges adapted to form sockets, and fixed substantially L-shaped clamping plates provided upon the upper face of the base bar and adjacent to the respective ends thereof, of detachable clamping plates, each of which comprises a flat base plate having an upstanding shoulder projecting out beyond one end of the plate and provided with openings in the shouldered edge of the plate and at opposite sides of said shoulder, said clamping plates being adapted to be seated in the sockets of the respective ends of the base bar and the shoulders to engage the flanges, webs, and threads of the respective rails, and spikes or similar fastenings adapted to be driven through the openings in the edges of the plates, the base bar, and into a wooden cross tie, whereby the base bar, is connected to the latter, the detachable clamping plates are held in position upon the bar, and the heads of the spikes engage over the top of the flanges of the rails, substantially as shown and described.

No. 68,196. Rotary Engine. (*Machine rotatoire.*)



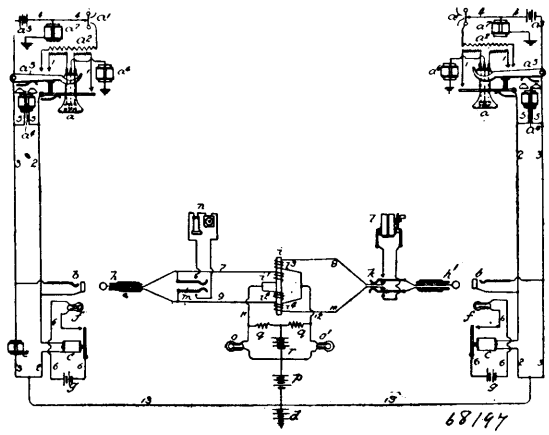
Robert Reid, of Cypress River, Manitoba, Canada, 24th July, 1900; 6 years. (Filed 11th July, 1900.)

Claim.—1st. In a rotary engine, a revoluble piston provided with a series of working chambers, each having a radial wall, and the converging walls forming an inlet port, in combination with a casing or cylinder having a plurality of supply passages arranged to communicate with the series of working chambers in the piston simultaneously, substantially as and for the purposes described. 2nd. In a rotary engine, a casing or cylinder provided with a pressure chamber terminating at its ends on opposite sides of the plane of the vertical axis of the engine, a series of inclined supply passages opening into said pressure chamber, and an exhaust channel non-communicating with the pressure chamber, in combination with a piston having a series of working chambers arranged to communicate simultaneously and individually with the supply and exhaust passages, substantially as described. 3rd. In a rotary engine, the combination of a casing having the heads, the shouldered cages fitted in the heads and clamped thereto by the collars, the bearing rolls or balls within the cages, a piston within the casing, and a shaft fast with the piston and passing through the cages to engage with the rolls or balls therein, substantially as described.

No. 68,197. Telephone Exchange Apparatus.
(Appareil de change de téléphone.)

The Bell Telephone Company of Canada, Limited, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 24th July, 1900; 6 years. (Filed 5th January, 1897.)

Claim.—1st. The combination with a metallic circuit telephone line extending from a sub-station to a central office, of a source of current at the central office inclined in a branch from both limbs of the line in multiple to a return conductor, a signal controlling instrument included in one limb of the line at the central office, a local storage battery at the sub-station included in a branch from the other limb of the line to the return conductor, and a switch at the substation for controlling the flow of current through the limb which includes the signal controlling instrument, substantially as and for the purpose set forth. 2nd. The combination with a metallic circuit telephone line, of a central source of current in a circuit composed of both limbs of the line in multiple in conjunction with a return circuit, a local storage battery at the sub-station of the line in the circuit, a signal controlling instrument in one line conductor, said line conductor or signalling instrument being of high resistance, the other line conductor being of comparatively low resistance, whereby the operation of the signal controlling instrument by the normal charging current is prevented. 3rd. The combination with a metallic circuit telephone line, of a central source of current in a circuit formed of the line conductors thereof in multiple and a return conductor, of a signal controlling instrument and a conductor of



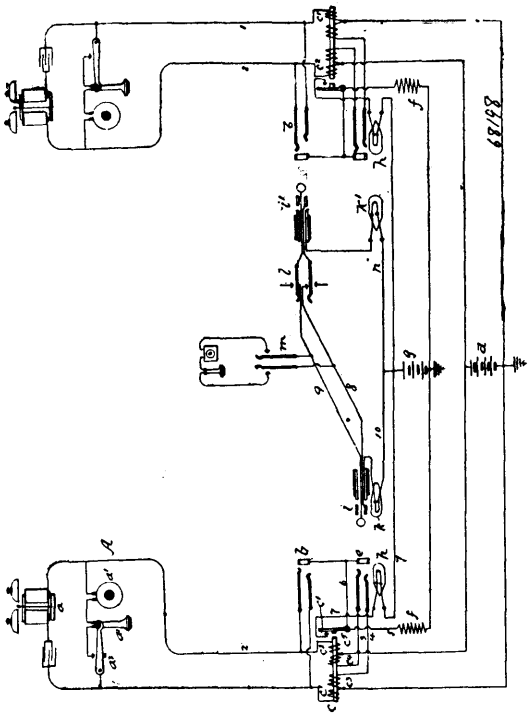
high resistance in one of the line conductors, a local storage battery in the other of the line conductors, and a switch at the sub station adapted to cut out the said conductor of high resistance, whereby the signal may be operated from the sub-station, as described. 4th. The combination with a telephone line connected with a source of current at the central office, including a signal controlling magnet, and provided with a switch controlling the current in the line from the said source, and a terminal socket of the line, of a plug and cord for making connection with the line, a conductor terminating in the plug adapted to be brought into shunt of the magnet when the plug is in the socket, and a second source of current in the conductor of proper polarity and strength to produce a condition of no difference of potential between the terminals of the magnet when the said shunt is complete, substantially as described. 5th. The combination with a metallic circuit telephone line and the telephone thereof at the sub-station, of a return circuit for the line connected with the central point of the winding of the sub-station telephone, and an impedance coil in the return circuit, a bridge of the line circuit at the central office, a signalling instrument associated with the line to respond to current therein, and a source of current in the return circuit for operating the said signalling instrument, as described. 6th The combination with a telephone line and a switch controlling the continuity of the line at the sub-station, of a relay and a source of current in the line at the central office, a spring jack connected with the line, a plug for making connection with the spring jack, a conductor attached thereto, adapted to be brought into parallel circuit with the relay when connection is made with the line, a source of current in that conductor of proper strength and polarity to reduce the difference of potentential between the terminals of the relay to substantially zero, a supervisory lamp signal in the conductor, a shunt about the signal and a source of current in the shunt adapted to reduce the difference of potential about the supervisory lamp substantially to zero, while the line circuit is complete, as described

No. 68,198. Telephone Exchange System.
(Systeme d'échange de téléphone.)

The Bell Telephone Company of Canada, Limited, Montreal, Quebec, Canada, assignee of Frank Robert McBerty, Downer's Grove, Illinois, U.S.A., 24th July, 1900; 6 years. (Filed 5th January, 1897.)

Claim.—1st. The combination with two telephone lines extending from substations and adapted to be connected together at a central office to form a complete circuit, of switches, one at each substation, for controlling the continuity of the circuit, a signal controlling electro-magnet associated with one of the lines, said electro-magnet having a winding c^1 c^3 included in series in the circuit of the united lines, a bridge circuit including a source of current, extending from a point within said winding to the other side of the circuit, and a second signal controlling electro-magnet associated with the other line and having a winding connected in a parallel branch of the bridge circuit, whereby the first mentioned signal controlling electro-magnet is controlled by the switches at both substations, and the other electro-magnet is controlled by the switch of one substation alone, substantially as set forth. 2nd. The combination with two united telephone lines forming a complete circuit and switches at the substation for controlling the continuity of such circuit, of a repeating coil associated with one of the lines at the central office and having two windings c^1 c^3 and c^2 c^4 connected one in each side of the circuit, an armature for said repeating coil controlling a signal, a source of current connected in a bridge circuit between points within the windings, and a signal controlling electro-magnet as-

sociated with the other line and having a winding connected in a branch of the bridge circuit, forming a bridge including the source



of current and connecting said electro-magnet in parallel with one of the windings of the repeating coil, substantially as described. 3rd. In combination, two telephone lines, a repeating coil for each line having having its primary and its secondary windings united, a source of current and a bridge of each circuit from the point of junction of the said windings including the source of current, a spring jack connected with the primary circuit of one line, a spring jack connected with the secondary circuit of the other line, and plugs and a plug circuit uniting the said spring jacks, an armature and switch contacts controlled thereby for each line, and a supervisory signal for each line in a local circuit controlled by the corresponding switch contacts, substantially as described. 4th. In combination, two telephone lines each with a switch adapted to close the circuit at the substation during the use of the telephone, a repeating coil each line, the primary and secondary windings of the repeating coil being united, a bridge of each line circuit, and a common source of current in the said bridge, a line spring jack connected with the primary winding of each repeating coil and an answering jack connected with the secondary winding of each repeating coil, plug circuit for uniting any answering jack with any line jack, an armature and switch contacts controlled thereby for each repeating coil, a subsidiary line signal for each line in a circuit controlled by the corresponding switch contacts, a supervisory signal for each plug, and means for bringing the supervisory signal into a circuit controlled by the corresponding repeating coil when a plug is inserted into the spring jack of that line, substantially as described. 5th. The combination with two telephone lines, of a switch at each station for closing the line circuit to produce a flow of current in the line during the use of the telephone, an answering jack and a line jack for each line, plugs for uniting any answering jack with any line jack, a signal controlling instrument associated with each line, circuit connections between the instrument and one of said spring jacks adapted to bring the signal controlling magnet into circuit with both, and other circuit connections between the said instrument and the other spring jack of the line adapted to bring it into circuit with that line alone, a bridge of the plug circuit and a source of current therein adapted to operate the said signal controlling instruments, as described, whereby one signal is controlled by currents in both lines and the other is responsive to current in one line only.

No. 68,199. Automatic Offsetting Mechanism for Saw-Mill Carriages. (*Mécanisme de compensation pour chariot de scirie.*)

The Union Iron Works, assignee of Edwin E. Thomas, both of Minneapolis, Minnesota, U.S.A., 24th July, 1900; 6 years. (Filed 9th July, 1900.)

Claim.—1st. The combination, with a saw mill carriage capable of lateral movement upon its supporting axles, of a friction shoe arranged to slide upon and to engage one of the rails upon which the carriage travels, a pivoted lever and a sliding weight upon said lever for regulating the friction between said shoe and said rail, and

FIG. 1.

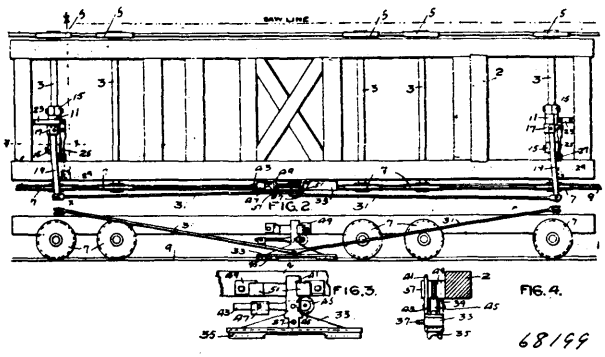


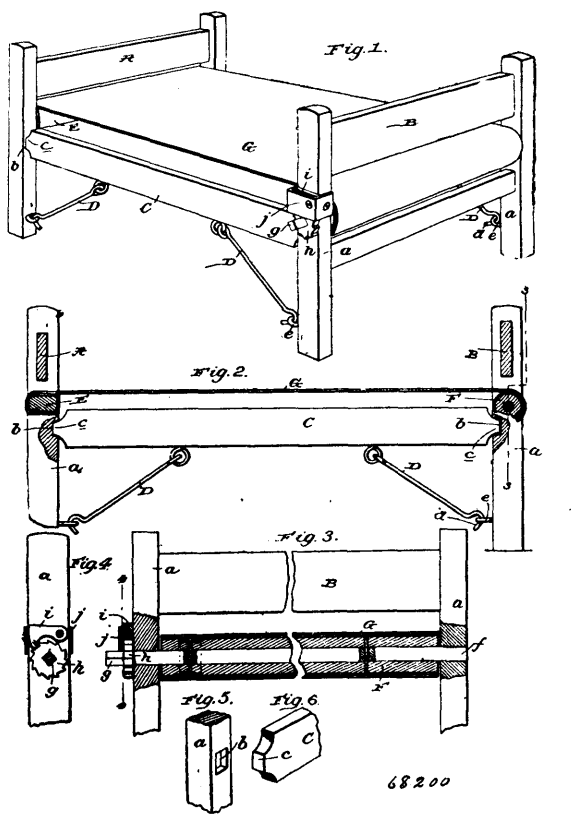
FIG. 2.

FIG. 3. FIG. 4.

68199

means connecting said shoe with said carriage and causing said carriage to move laterally at the commencement of its travel in each direction. 2nd. The combination, with a saw-mill carriage capable of lateral movement upon its supporting axles, of a friction shoe arranged to slide upon and to engage one of the rails upon which the carriage travels, a pivoted lever and a movable weight upon said lever for regulating the pressure of said shoe upon said rail and thereby increasing or decreasing the friction between the shoe and the rail, and means connecting said shoe with said carriage whereby said carriage is caused to move laterally at the commencement of its travel in each direction, for the purpose set forth. 3rd. The combination, with the sawmill carriage and the offsetting mechanism thereof, of the bracket 49 arranged upon said carriage and provided with projections 31, the friction shoe connected with said offsetting mechanism, the lever 43 pivoted upon said shoe and provided with the adjustable weight 47 and with the roll 45 that is adapted to engage the under surface of the bracket 49, for the purpose set forth.

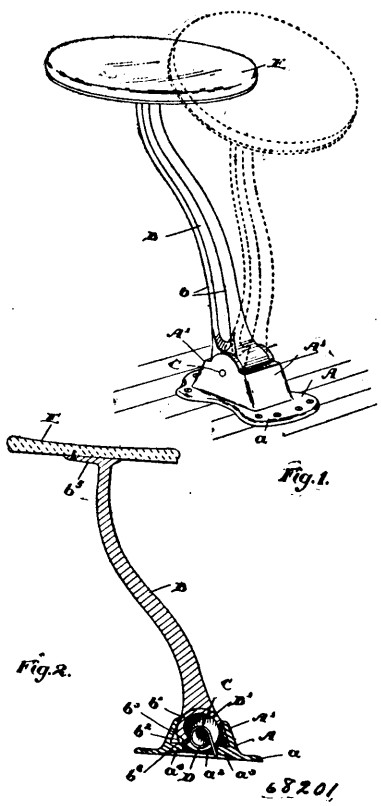
No. 68,200. Portable Bed. (*Lit portatif.*)



Jacob Seitters and Robert B. McDonald, both of McMinnville, Oregon, U.S.A., 24th July, 1900; 6 years. (Filed 10th July, 1900.)

Claim.—The herein described portable end knockdown bed comprising the head board having the cross bar E, and also having the shallow sockets *b* in the inner sides of its posts below the bar E, and the keepers *e* below the sockets, the foot board having the shallow sockets *b* in the inner sides of its posts at an intermediate point of its height, and also having the keepers *e* below said sockets, the side rails having reduced ends *c* arranged in the sockets *b* of the head and foot boards whereby said boards are enabled to rock on the side rails, the brace rods loosely connected to the side rails and having hooks adapted to engage the keepers on the head and foot boards, the roller journalled in the foot board above the sockets therein and provided with a ratchet and an angular portion for the engagement of a wrench, a pawl connected to the foot board and arranged to engage the ratchet, and a flexible bed bottom disposed above the side rails and connected to the bar E and the roller and adapted to be wound upon the latter, substantially as and for the purpose set forth.

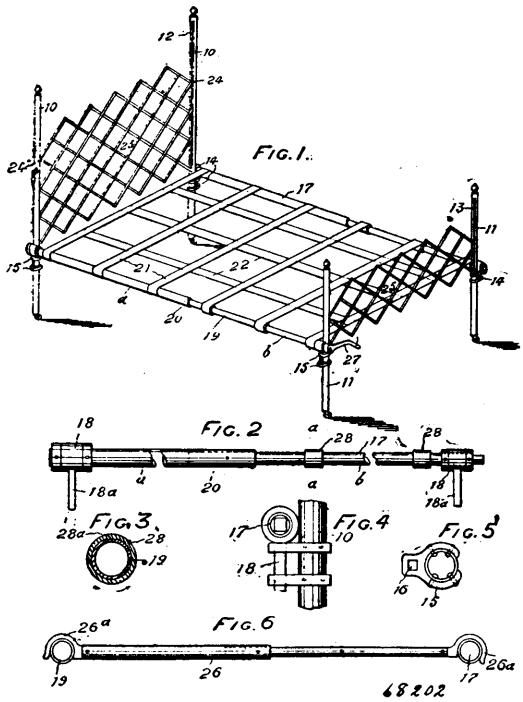
No. 68,201. Automatically Adjustable Stools or Seats.
(*Tabouret ou siége,*)



Frank Yesbera, Toledo, Ohio, U.S.A., 24th July, 1900; 6 years. (Filed 9th July, 1900.)

Claim.—1st. A seat or stool comprising a socket, a leg spring held normally substantially vertical above the socket and a seat secured on the top of the leg, said leg being provided with a stop whereby the downward movement of the seat is limited, so as to hold the seat proper in a horizontal position when in use, as and for the purpose specified. 2nd. The combination with the socket having the bottom open and inner front and rear flanges, of the leg having double disc shaped lower ends, a pin extending through the same, stops formed substantially diametrically opposite each other at the periphery of the discs and designed to abutt the inner flanges and a seat secured on the top of the leg, as and for the purpose specified. 3rd. The combination with the socket having the bottom open, and inner front and rear flanges, of the leg having double disc shaped lower ends, a pin extending through the same, stops formed substantially diametrically opposite each other at the periphery of the discs and designed to abutt the inner flanges, a seat secured on the top of the leg, a spiral spring encircling the pivot pin and having one end projecting into the groove at the rear of the leg and the other end abutting the front flange, as and for the purpose specified.

No. 68,202. Folding Bed. (*Lit pliant.*)



Andrew Russell and Cornelius Isaac Cunningham, both of Vancouver, British Columbia, Canada, 24th July, 1900; 6 years. (Filed 9th July, 1900.)

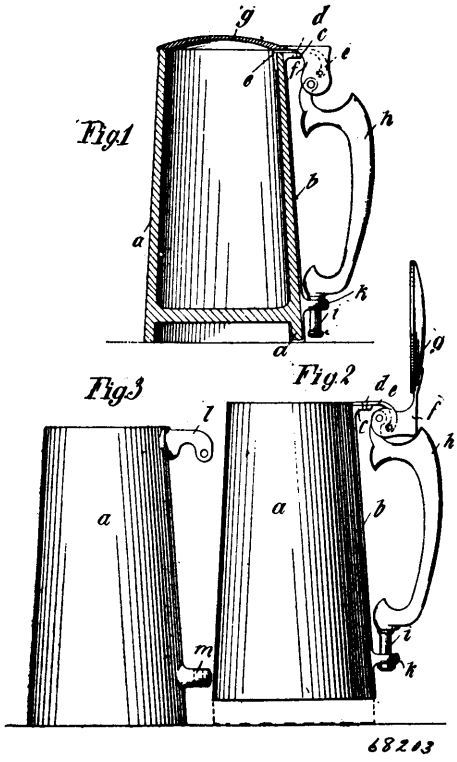
Claim.—1st. In a folding bed having corner posts of tubular form with slots on the inner sides thereof, clip brackets 14 and 15, fixed to such posts at an even distance from their lower ends and sockets in such brackets, a telescopic side bar 17, on the rear side of the bed frame, having castings 18, fixed to its opposite ends, downwardly disposed tongues on such castings designed to lie in the sockets aforesaid, a telescopic bar 19, on the other side of the bed frame having castings loosely mounted on its ends with the tongues to take into the recesses in the brackets on the front side of the head and foot posts, straps 21, connecting the telescopic side bars at intervals, and means for turning the front side bar, whereby the bed frame will be contracted, as and for the purposes set forth. 2nd. In combination with a bed frame having its corner posts of tubular material, the head and foot corner posts being respectively connected by adjustable lattice 23 and 25, the opposite lower sides of which are arranged to slide up and down in slots on the inner sides of said posts above the plane of the bed frame support, clip brackets 14 and 15, having vertical sockets therein, fixed to the posts below the slots therein, and at an even distance from their lower ends, telescopic side bars 17 and 19, forming each side of the bed frame, having tongued castings therein designed to lie in the sockets in the brackets, the rear side bar 17, being fixed and the front side bar being rotatable, and telescopic tie rods 26, having downwardly bent hooks 26^a, on the opposite ends thereof to engage the side bars, substantially as and for the purposes set forth.

No. 68,203. Means for Automatically Opening and Closing the Lids of Vessels. (*Moyen d'ouvrir et fermer les couvercles de gobelets.*)

George Walter and Wilhelm Ernest Deppermann, both of Hanover, Germany, 24th July, 1900; 6 years. (Filed 10th July, 1900.)

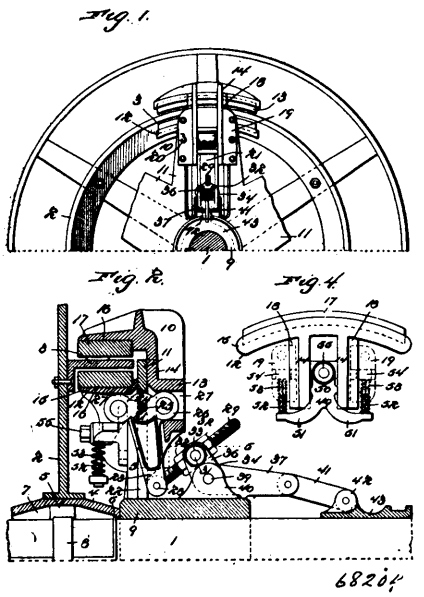
Claim.—The combination with a vessel, the lid thereof and a separate handle of a bracket at the upper end and a vertically bored guide piece at the lower end of the vessel, either integral therewith of the lid pivoted to the aforesaid bracket and to the handle, the

pivot of the latter being situate slightly below and inwards of the pivot of the bracket, and a stud at the lower end of the handle



adapted to move in the vertical bore in the guide piece at the lower end of the vessel, substantially as described and shown.

No. 68,204. Friction Clutch. *(Embrayage à friction.)*



Noah Shaw, of Eau Claire, Wisconsin, U.S.A., 24th July, 1900; 6 years. (Filed 18th May, 1900.)

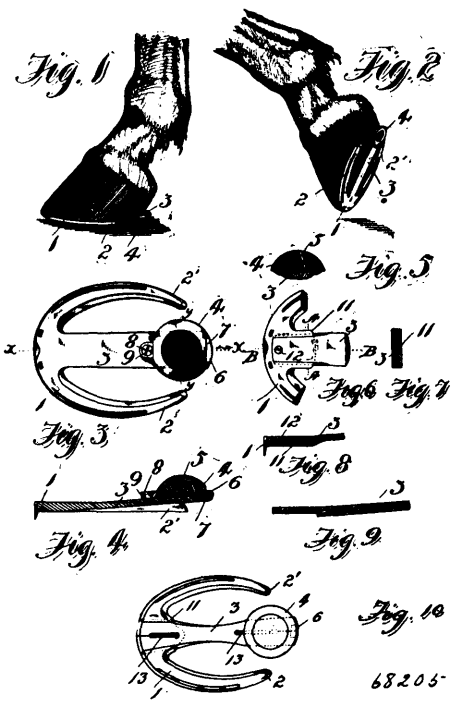
Claim.—1st. In a friction clutch, a pair of inversely and radially movable clutch jaws, a pivotally supported T lever having a pivotal connection with each of said jaws and provided with a straight lever arm, a suitably supported angled toggle lever having a short arm disposed in an outward direction, a straight toggle link having a connection with the inner extremity of the T lever, a pivotal knuckle connection with the outwardly disposed arm of said toggle lever, a slide block, means for adjusting the toggle link longitudinally within its knuckle connection, and a toggle link connection between the slide block and the other arm of the toggle lever, thereby completing a system of levers providing for imparting a variable motion to the straight lever arm of the T lever, substantially as set forth. 2nd. In a friction clutch, the combination with a shaft and a pulley having a clutch rim, of a clutch frame having a longitudinally slotted frame arm inner and outer oppositely movable clutch jaws mounted to slide on opposite slides of the frame arm and each provided with a shank portion having therein a bearing pocket or recess, a T shaped adjusting lever having a straight lever arm and a cross head at the outer end of said lever arm, said cross head being centrally pivoted in the slotted frame arm and provided with rounded ends having a peripheral pivotal bearing in the bearing pockets or recesses of said jaw shanks, a suitably supported angled toggle lever, a toggle link a connection with the straight lever arm of the T lever and a knuckle connection with one end of said toggle lever, a slide block, and a toggle link connection between said slide block and the other end of said toggle lever, substantially as set forth. 3rd. In a friction clutch, the combination with a shaft and a pulley having a clutch frame having a frame arm, the inner and outer oppositely movable clutch jaws, a T lever pivoted at the center of its cross head to the frame arm and having a pivotal connection with each of said jaws in recesses thereof, a suitably supported angled toggle lever, a knuckle collar pivotally mounted at one end of the outwardly disposed arm of said toggle lever, a toggle link having an adjustment throughout its entire length within said knuckle collar and having a pivotal connection at one end with the inner extremity of said T lever, a slide block, and a toggle link connection between said slide block and said toggle lever, substantially as set forth. 4th. In a friction clutch, the combination with a shaft and a pulley having a rim; of a clutch frame having a frame arm, inner and outer oppositely movable jaws, a T shaped adjusting lever pivoted at the center of its cross head to the frame arm and having the opposite ends of its cross head pivotally engaging with said jaws in recesses thereof, a suitably supported angled toggle lever comprising a pair of twin spaced members angled to form short and long arms, a knuckle collar having an unthreaded opening there through and oppositely disposed trunnions pivotally engaging the short outwardly disposed arms of the angled toggle lever, a straight toggle link threaded from end to end and extending through the opening in the knuckle collar, said threaded toggle link having a pivotal connection with the inner extremity of T shaped lever, locking nuts mounted on the threaded link at opposite sides of the knuckle collar, a slide block and a toggle link connection between the slide block and said toggle lever, substantially as set forth. 5th. In a friction clutch, the combination with a shaft and a pulley having a clutch rim; of a clutch frame having a frame arm provided with a pair of offstanding projections, the inner and outer oppositely movable jaws, a separate yoke plate fixedly secured to the inner jaw and provided with a pair of oppositely extending arms, and springs fitted to the separate arms of the yoke plate and bearing against the projections of the frame arm, substantially as set forth. 6th. In a friction clutch, the combination with a shaft and a pulley having a clutch rim, of the clutch frame having a frame arm provided with outwardly projected shoulder flanges, the inner and outer oppositely movable jaws, separate yoke fixedly secured at its outer end to the inner jaw and provided with a pair oppositely extending arms having at their extremities outwardly disposed studs or pins, springs arranged over said studs or pins and bearing at one end against said shoulder flanges, and means for adjusting the jaws toward and and against said rim, substantially as set forth. 7th. In a friction clutch, the spider clutch frame provided in the opposite edges of each radial arm with weight pockets disposed in the plane of rotation of the frame, said pockets partially piercing the side portions of the arms, and having their open sides facing the spaces between the arms, and soft metal weights filling and concealed within said pockets, to provide for balancing the weight of each arm and of the clutch devices carried thereby, substantially as set forth.

No. 68,205. Horse Shoe. *(Fer à cheval.)*

William Enos Shaw, San Francisco, California, U.S.A., 24th July, 1900; 6 years. (Filed 10th July, 1900.)

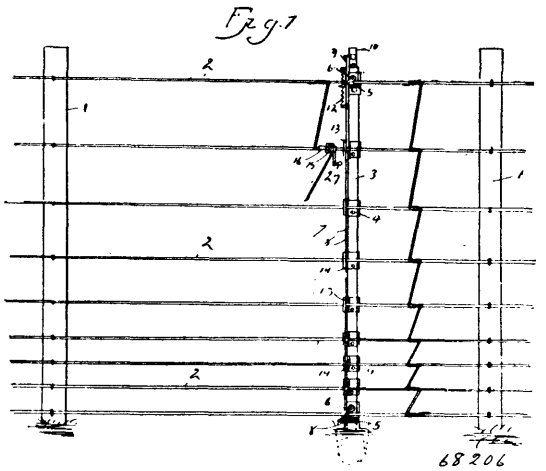
Claim.—1st. In combination with a horse shoe, a spring web formed independent of said shoe and a tapered dovetailed groove in said shoe adapted to receive one extremity of said web, said extremity being split in order to yield as it is driven home, for the purpose set forth. 2nd. In combination with a horse shoe, a spring web formed independent of said shoe and a tapered dovetailed groove in said shoe adapted to receive one extremity of said web, as set forth. 3rd. A horse shoe, provided with a central spring web, and a non-slipping surface formed independent thereof but secured to said web and adapted to come in direct contact with the ground. 4th. A horse shoe provided with an independently formed central spring web, a non-slipping surface removably secured to said web, said shoe being widened at its point of union with said web, for the purpose set forth. 5th. A non-slipping member for horse shoes adapted for contact with the ground or pavement, consisting of an outer shell having an inwardly flaring mouth, an inner body of rubber moulded

within said shell, a headed pin within said shell and a cavity in the underside of said shell, substantially as set forth. 6th. In combi-



nation with an ordinarily formed horse shoe, of a central spring web leading backward from the toe and at an angle with the plane of the legs of the shoe, for the purpose set forth.

No. 68,206. Wire Fence Spacing Devices.
(Appareil à espacer pour clotures de fil de fer.)



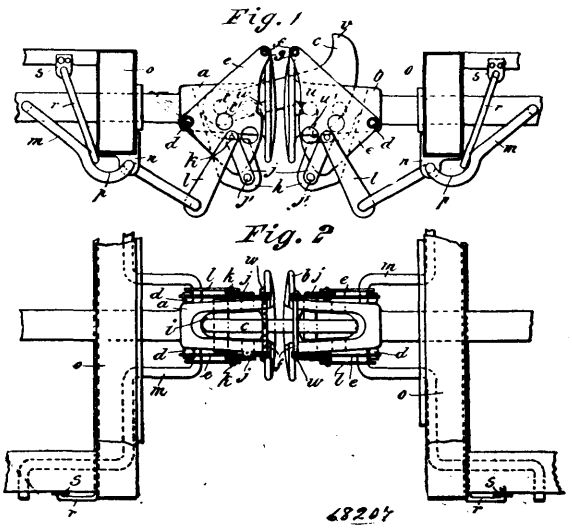
John T. Collins, of Kokamo, Indiana, U.S.A., 24th July, 1900; 6 years. (Filed 10th January, 1900.)

Claim.—1st. In a device of the class described, the spacing bar 3, the guide shoes 4 formed with the jaw 5, and the co-acting cam lever 6 pivoted thereto, in combination with the guide bar 7 having a sliding engagement with said spacing bar, the cam lever 10 fulcrumed on said guide bar and in operative contact with the contiguous end of the spacing bar, the retractile spring 12 co-acting with the guide and spacing bar and the hooked plates 13 carried by said guide bar, substantially as shown and described.

No. 68,207. Apparatus for Coupling and Uncoupling Railway Rolling Stock. *(Attelage de chars.*

Joseph Lowden, Eglington Road, Mornington, in the City of Dunedin, New Zealand, 24th July, 1900; 6 years. (Filed 11th July, 1900.)

Claim.—1st. In apparatus for the purpose described, a loop or bridle pivoted upon a buffer of one vehicle, and a coupling hook pivoted upon an opposing buffer, which also carries a coupling pin, the hook being curved in its forward upper end to cause it to lift



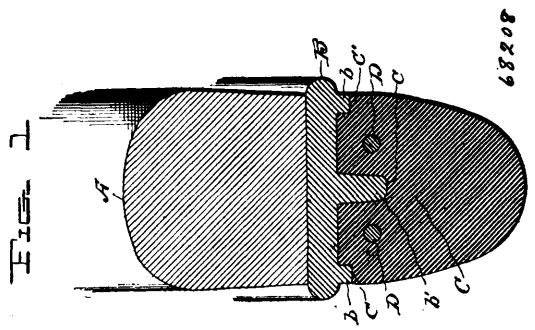
said bridle, and curved at its lower end to cause it to rise when it contacts with the opposing buffer, substantially as and for the purpose specified and illustrated. 2nd. The combination in apparatus for the purpose described, of a bridle pivoted upon one buffer and a coupling hook pivoted upon an opposing buffer, said hook having a horn upon its upper end, over which a locking bar of said bridle passes for the purpose of locking said hook in engagement with a coupling pin, said bridle being connected by a link or links with a lever, by which it may be operated, substantially as and for the purposes herein described and illustrated in the drawings. 3rd. The combination in apparatus for the purpose described, of a bridle pivoted upon a buffer and a coupling hook pivoted upon an opposing buffer, a tongue working in an opening in the buffer, upon which the bridle is pivoted, being operated simultaneously with said bridle and engaging with and releasing the coupling hook from the coupling pin, substantially as and for the purposes specified and illustrated. 4th. The combination in apparatus for the purpose described, of a bridle, consisting of two corresponding cheeks, one upon each side of the buffer behind the buffer head, said cheeks being connected at their upper ends by a locking bar and pivoted by a bolt passing through the buffer, a stud projecting from each cheek, and links pivoted thereon connecting said bridle with a lever fulcrumed upon the vehicle by which said bridle is operated, substantially as and for the purposes described and illustrated. 5th. The combination in apparatus for the purpose described, of a bridle pivoted upon the buffer, a link or links connecting said bridle with a lever fulcrumed upon the vehicle, and a swing link pivoted upon the vehicle above the operating arm of said lever for the purpose of locking said lever when the bridle has been raised, substantially as and for the purposes herein described and illustrated. 6th. In apparatus for the purpose described, the arrangement for connecting a safety hook upon one vehicle, with a chain upon another vehicle, consisting of a safety hook linked into an eye bolt upon one vehicle, and supported upon a stud projecting from a tongue working in a recess in a buffer, said tongue being connected to a bridle pivoted upon said buffer, in combination with a chain linked at one end to an eye bolt upon another vehicle and supported upon a stud projecting from a tongue working in a recess in a buffer, said last mentioned buffer carrying a coupling hook, substantially as and for the purposes herein described and illustrated. 7th. The combination in apparatus for the purpose described, of the means for compressing the springs of the buffers, of a double buffer vehicle, consisting of a rocking shaft extending across the vehicle, having cams each engaging with a hinged plate upon a buffer shank, said hinged plate bearing against a nut upon the end of the buffer shank, with means for operating said rocking shaft, substantially as and for the purposes herein described and illustrated. 8th. The improved apparatus for coupling and uncoupling rolling stock, consisting of the mechanical parts arranged, combined and operating, substantially as herein described and illustrated in the drawing.

No. 68,208. Rubber Tired Wheels.
(Bandage de roue en caoutchouc.)

Walter Draper Gregory, of New York, U.S.A., 24th July, 1900; 6 years. (Filed 12th July, 1900.)

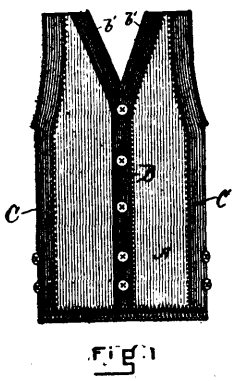
Claim.—1st. In an elastic tread wheel, a wooden rim, a metallic tire provided with an annular web arranged intermediate the edges of the tire, an elastic tread fitted to the said tire, and wires located in said elastic tread arranged on opposite sides of the web and equidistant between the plane of the tire and the periphery of the web,

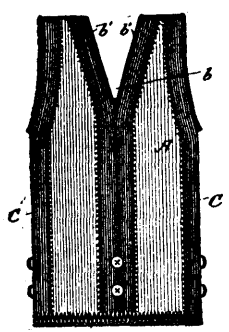
substantially as and for the purpose set forth. 2nd. In an elastic tread wheel, a wooden rim, a metallic tire provided with an annular



web arranged intermediate the edges of the tire and with marginal annular ribs or beads, a rubber or other elastic tread fitted to said tire, and wires located in said tread on opposite sides of the web and equidistant from the plane of the tire and the outer periphery of the web, substantially as and for the porpose set forth. 3rd. In an elastic tread wheel, the combination with the wooden rim, of a metallic tire provided with marginal inwardly projecting ribs or beads and intermediate projecting annular web or webs that project beyond the ribs or beads, an elastic tread of rubber or other elastic material having recesses to receive the web or webs and the ribs or beads, or without recesses for the ribs or beads, and arranged so that the elastic material is no wider than the distance between the ribs or beads, and securing wires imbedded in said elastic tread and arranged on either side of the web and equidistant from the plane of the tire and the outer periphery of the web, substantially as and for the purpose set forth.

No. 68,209. Waist for Women and Children.
(Camisole pour femmes et enfants.)

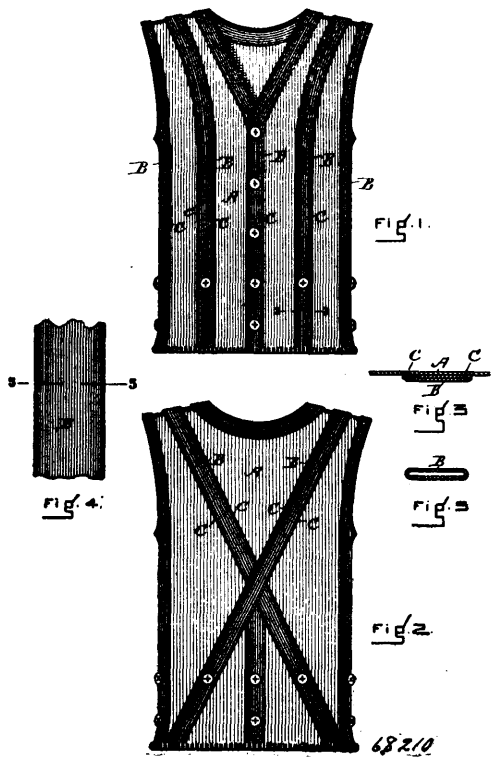




Thomas Bernard Fitzpatrick, Newton, Massachusetts, U.S.A., 24th July, 1900; 6 years. (Filed 12th July 1900.)

Claim.—An underwaist consisting of an elastic body portion, the front and back of which are of equal size and one of which is open and provided with buttons or other attaching devices, said waist being thus reversible so as to be adapted to be at the front or back of the wearer, the said body portion of said waist having an elastic reinforcing strip extending continuously from top to bottom of both the front and back of said body portion and diverging so as to extend about the said neck opening thereof, the diverging portion of said strip serving to reinforce both sides of the open part of the waist, substantially as and for the purposes set forth.

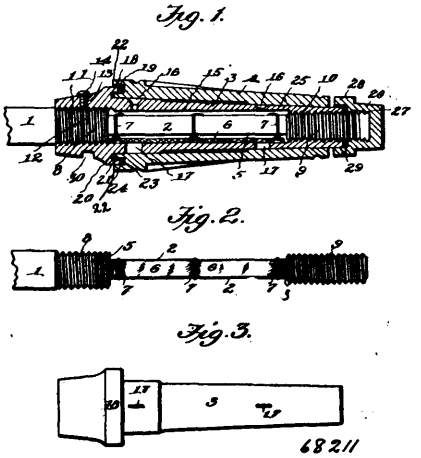
No. 68,210. Children's Waists. (*Camisole pour enfants.*)



Thomas Bernard Fitzpatrick, Newton, Massachusetts, U.S.A., 24th July, 1900; 6 years. (Filed 12th July, 1900.)

Claim.—The underwaist for supporting nether garments as herein described, the same comprising a body portion of elastic fabric, said body portion having secured thereto reinforcing strips on lines of the garment's greatest stress, said strips consisting each of an elastic, seamless, flattened tube secured to the said body portion by stitches which pass through the garment and through the strip near its edges as set forth, whereby a garment of elastic structure throughout its entire extent is provided, the reinforced strips of which have uniform unbroken edges and are of increased strength.

No. 68,211. Lubricating Axle. (*Graissage des essieux.*)

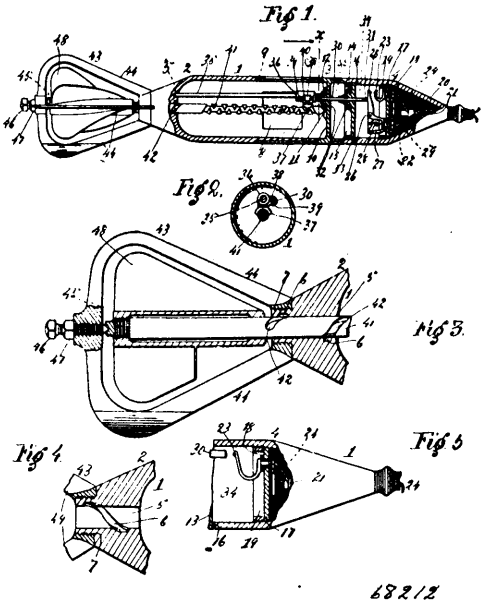


William Henry Hoell, Grand Cane, Louisiana, U.S.A., 24th July, 1900; 6 years. (Filed 17th May, 1900.)

Claim.—1st. The combination with a metallic axle spindle reduced between its ends to form an annular oil chamber, of an axle skein

fitted over the enlarged ends of the spindle and provided with elongated slits in its under side through which the oil is fed by gravity, an oil pad disposed in said chamber between the spindle and axle skein and over said slits, said pad being clamped on the spindle, and means for locking the axle skein on the spindle to prevent the former from turning independently of the latter, substantially as described. 2nd. The combination with a metallic axle spindle reduced between its ends to form an annular oil chamber, of an axle skein fitted over the enlarged ends of the spindle and provided with elongated slits in its under side through which the oil is fed by gravity, and provided on its upper side with oil fed openings, a fibrous oil pad disposed longitudinally in the bottom of said chamber between the spindle and axle skein and over said slits, attaching bands clamped about the pad and spindle, and means for locking the axle skein on the spindle to prevent the former from turning independently of the latter, substantially as described. 3rd. The combination with a metallic axle spindle reduced between its ends to form an annular oil chamber, of an axle skein fitted over the enlarged ends of the spindle and provided with elongated slits in its under side through which the oil is fed by gravity and provided on its upper side with oil fed openings, an oil pad disposed longitudinally in the bottom of said chamber between the spindle and axle skein and over said slits, wires tightly encircling said pad and spindle and secured together at their ends, and a screw passing through the inner end of the axle skein and engaging a socket at the inner enlarged end of the spindle, substantially as described.

No. 68,212. Ship's Log. *(Loch.)*



John Colby Coombs and Arthur Nehemiah McGray, both of Boston, Massachusetts, U. S. A., 24th July, 1900; 6 years. (Filed 21st May, 1900.)

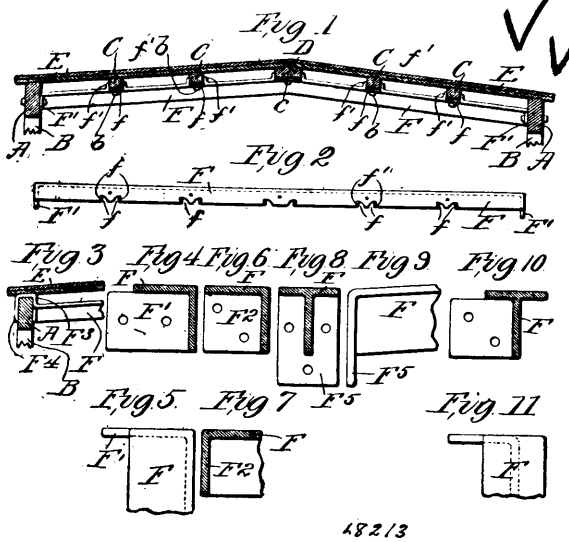
Claim.—1st. A ship's log comprising an electric circuit breaker, a reverse threaded screw shaft revolving by a rotator, and means in contact with said screw shaft for actuating the said circuit breaker, and the log casing designed to prevent short circuiting of the parts within. 2nd. A ship's log consisting of a cylindrical shell having steadying vanes, a towing cable firmly secured to the front end of the log, watertight compartments in the front end of the log, a spring controlled circuit breaking and closing lever, and a contact point supported and posited in electrical association with each other within a watertight compartment, insulated electric wires within the towing cable, one in circuit with the circuit breaking and closing lever, and the other wire in circuit with the contact point, the wires, the circuit lever, and the contact point efficiently insulated from the other conducting parts of the log, means in operative association with a reverse threaded screw shaft and the interior of the log shell adapted to swing the circuit breaking and closing lever out of contact with the contact point, a reverse threaded screw shaft, and a rotator efficiently secured to the outside end of the reverse threaded screw shaft, as specified. 3rd. In a ship's log, a glass log casing having watertight compartments and steadying vanes, a towing table firmly secured to the front end of the log, a spring controlled circuit lever, and a contact point supported and posited in electrical association with each other within the first front and watertight compartment, two insulated electric wires within the towing cable, one wire in circuit with the circuit ever, and the other wire in circuit with the contact point, and the wires the lever and the contact point efficiently insulated from the other conducting parts of the log, a spring controlled horizontal push rod supported in guideways and passing through the vertical walls of the watertight compartments, and having its end provided with a non-conductive cap, close to and opposite the circuit lever, flexible and waterproof sleeves having their respective ends secured and watertight to the said walls and to the horizontal push rod, a carriage guide rod, a carriage, a reverse threaded screw shaft finger movably fitted to the carriage and in mesh with a reverse threaded screw shaft, adjustable means provided on the carriage to move the horizontal push rod, a reverse threaded screw shaft, suitable bearings provided on the log casing to support the reverse threaded screw shaft, and a rotator efficiently secured to the outside end of the reverse threaded screw shaft, as described. 4th. In a ship's log, a log casing having watertight compartments and steadying vanes, a towing cable firmly secured to the front end of the log, a circuit contact point positioned and posited within a watertight compartment of the log casing, an insulated electric wire within the towing cable in circuit with the contact point and adapted to be in circuit with electrically operated recording mechanisms on board of a vessel, the wire and the contact point insulated from the other conducting parts of the log, a spring controlled horizontal push rod supported in guideways and passing through the vertical walls of the watertight compartments and having its end close to and opposite the electric contact point, and such red end being an electric conductor and in circuit with the log casing and its exterior parts, flexible and waterproof sleeves having their ends respectively secured and watertight to the said walls and to the horizontal push rod, a carriage guide rod, a carriage, a reverse threaded screw shaft finger movably fitted to the carriage and in mesh with a reverse threaded screw shaft, reverse threaded screw shaft, suitable bearings provided on the log casing to support the reverse threaded screw shaft, and a rotator efficiently secured to the outside end of the reverse threaded screw shaft, as described. 5th. In a ship's log, a cylindrical casing having watertight compartments, and a shaft opening through its back end, and a spiral channel provided in said shaft opening having its ends terminating a short distance from the outer and inner end of the shaft opening, steadying vane arms extending from the back end of the log casing to a point back of the log rotator and respectively united to each other, a rotator shaft bearing provided in the union of the steadying vane arms, a towing cable rigidly secured to the front end of the log, means adapted to open and close an electric circuit in a watertight chamber of the casing, an insulated electric wire provided within the towing cable in circuit with said circuit closing and opening means, a carriage supported on the guide rod and in mesh with a reverse threaded screw shaft, a guide rod, and means adapted to operate the circuit breaking and closing means in the watertight chamber to open and close the circuit by the action of the carriage, a reverse threaded screw shaft, spiral channels provided on that part of said shaft that passes through the log casing, the channels independent of each other and having their respective outer ends respectively terminating in the inside of the log and the outside of the log casing, and their respective inner ends terminating opposite to and overlapping the outer ends of the spiral channel in the shaft opening of the back end portion of the log, so as to attain a communication from the interior to the exterior of the log when said channels are in this said opposite position, said shaft supported on the steadying arm bearing and a bearing on the interior of the log, and a rotator secured to the reverse threaded screw shaft rotating within and free from the steadying vane arms of the log casing, as described. 6th. In a ship's log, a steadying vane arm extending from the end of the log casing to a point back of the log rotator, said arm provided with a rotator shaft bearing and designed to not contact the blades of the rotator secured to a rotator shaft and the shaft supported at its outer end in the steadying vane arm shaft bearing. 7th. In a ship's log, means adapted to open and close an electric circuit between the log and a vessel and a log rotator secured to a shaft, the shaft, and means operated by the shaft to actuate the circuit closing an opening mechanism, all arranged, operatively supported, posited, and efficiently insulated in a glass casing, having a watertight compartment for the circuit opening and closing means, steadying vanes, and suitable rotator shaft bearings, as specified. 8th. In a ship's log, comprising a rotator secured to a rotator shaft, supported in bearings on the log casing, means adapted to open and close an electric circuit operatively posited in the casing and efficiently insulated, the circuit being between the leg and a vessel, and means adapted to actuate the circuit breaking and closing means operated by the rotator shaft, a pump consisting of a spiral channel provided in the en l of the log casing, and spiral channels provided on the rotator shaft, adapted to alternatively make a communication from the interior of the log to the exterior thereof and break said communication in each successive revolution of the rotator shaft, whereby water that may be within the log is withdrawn therefrom.

No. 68,213. Carlines. *(Carlinques)*

Henry W. Gays, Ottawa, Ontario, Canada, 24th July, 1900; 6 years. (Filed 10th May, 1899.)

Claim.—1st. A carline, comprising a commercially rolled form having suitable horizontal and vertical members integral with each other, said vertical member at each end being bent at right angles,

said bent portions at each end being formed with bolt openings, and said horizontal portions at each end of the carline being extended across and then bent downwardly, said last-named or downwardly extending portions being formed with bolt openings, substantially as described. 2nd. The combination with a carline, comprising a metal bar suitably cambered, and having horizontal and vertical members integral with each other, the horizontal member having lugs or projections struck up therefrom in pairs and provided with a hole in the horizontal portion between the lugs of each pair, of purlins held between said lugs and secured by securing devices passed through the holes in the horizontal portion. 3rd. A carline, comprising a horizontal member and a vertical member integral therewith, suitably cambered to conform to the pitch of the car roof, said horizontal member being scored and struck up to form pockets for the reception of purlins and ridge pole, the ends of said carline being cut and bent to afford securing means to the side plates, substantially as described. 4th. A carline, comprising a commercially rolled form bent longitudinally at or near the centre to form an integral, horizontal and vertical member and cambered throughout its length, the horizontal portion having lugs or buttresses struck up therefrom in sets and provided with a bolt hole between said sets of lugs or buttresses, and the extreme ends of the carline bent laterally and perforated to receive a bolt or other securing means for fastening the carline in place.

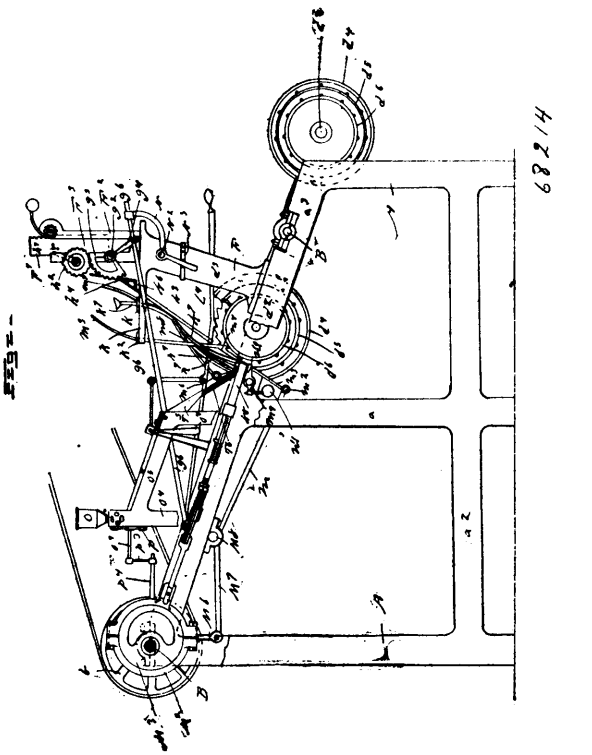


No. 68,214. Fruit Basket Machines.

(Machine pour faire les paniers à fruits.)

Warren Rensalaer Van Vliet, of East Stroudsbury, Pennsylvania, U.S.A., 24th July, 1900; 6 years. (Filed 9th May, 1900.)

Claim.—1st. In a machine for making baskets, the combination with a suitable frame, of a revoluble form carrier, and suitable forms connected therewith, a stave hopper, which is vertically movable, and provided with devices for removing the staves therefrom, and placing them upon the forms, hoop tubes through which the tubes are fed, nail hoppers which are adapted to receive nails, and which are provided with means for feeding the same therefrom and into position, to be driven into said hoops and staves, and devices for driving said nails, substantially as shown and described. 2nd. In a machine for making baskets, the combination with a suitable frame of a revoluble form carrier, and suitable forms connected therewith, a stave hopper, which is vertically movable, and provided with devices for removing the staves therefrom, and placing them upon the forms, hoop tubes through which the hoops are fed, nail hoppers which are adapted to receive nails, and which are provided with means for feeding the same therefrom, and into position, to be driven into said hoops and staves, and devices for driving said nails, said forms being composed of circular heads, which are mounted on a revoluble shaft, and which are provided with spacing ribs or flanges, between which the staves are placed, substantially as shown and described. 3rd. In a machine for making baskets, the combination with a suitable frame, of a revoluble form carrier, and suitable forms connected therewith, a stave hopper which is vertically movable, and provided with devices for removing the staves therefrom, and placing them upon the forms, hoop tubes through which the hoops are fed, nail hoppers which are adapted to receive nails, and which are provided with means for feeding the same therefrom, and into position to be driven into said hoops and staves, and devices for driving said nails, said forms being composed of circular heads, which are mounted on a revoluble shaft, and which are provided with spacing ribs or flanges, between which the staves are placed, and said heads being also provided with annular grooves into which the nails are driven, and by which they are clenched, substantially as shown and described. 4th. In a machine for making



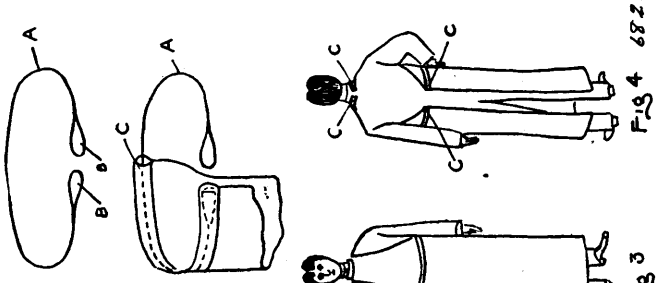
baskets, the combination with a suitable frame, of a revoluble form-carrier, and suitable forms connected therewith, a stave hopper with devices for removing the staves therefrom, and placing them upon the forms, hoop tubes through which the hoops are fed, nail hoppers which are adapted to receive nails, and which are provided with means for feeding the same therefrom, and into position, to be driven into said hoops and staves, and devices for driving said nails, said forms being composed of circular heads, which are provided with spacing ribs or flanges, between which the staves are placed, and said heads being also provided with annular grooves into which the rails are driven, and by which they are clenched, and the shaft on which the heads are mounted being adapted to receive at one end, a disc or plate which constitutes the bottom of the basket, and into which nails are also driven, substantially as shown and described. 5th. A machine for makieg baskets, comprising a suitable frame, a revoluble shaft mounted therein, forms connected with said shaft, devices for giving said shaft intermittent motion, a stave hopper mounted on said frame, devices connected with said hopper, and said frame for placing the staves in position in said forms, devices for supplying hoops to the forms, nail hoppers suitably supported on said frame, and provided with perforated diaphragms, and devices connected with said hoppers and with said frame for feeding said nails into position, to be driven into said hoops and staves, consisting of driving rods which are in operative connection with the power shaft of the machine, and with a sliding cross-head mounted thereon, and driving rods provided with driving pins which operate in connection with driving tubes into which the nails are fed, substantially as shown and described. 6th. A machine for making baskets comprising a suitable frame, a revoluble shaft mounted therein, forms connected with said shaft, devices for giving said shaft intermittent motion, a stove hopper mounted on said frame, devices connected with said hopper and said frame for placing the staves in position on said forms, nail hoppers suitably supported on said frame, and provided with centrally perforated and slotted diaphragms in which are formed radial slots communicating with said central perforations or partitions, and devices connected therewith and with said frame, for feeding said nails into position to be driven into said hoops and staves, substantially as shown and described. 7th. In a machine for making baskets, the combination with a suitable frame, a revoluble form carrier, revoluble shafts connected therewith, and provided with suitable forms, a ratchet wheel mounted on said shafts, and means for giving the same an intermittent motion a suitable stave hopper and means for giving the same a vertical intermittent motion, devices connected with said stave hopper for removing the staves therefrom, and placing them on the forms, hoop tubes through which the hoops are passed, nail hoppers suitably mounted on frame, and provided with chutes through which the nails are fed, and means for giving said hoppers an oscillating or lateral motion, and devices for removing the nails, one at a time, from said chutes, and depositing them in a driving tube, and driving rods connected

with a sliding cross head which is operated by eccentrics mounted on the power shaft, said driving rods being provided with driving pins which pass through said driving tubes, and by which the nails are driven through the hoops and staves, substantially as shown and described. 8th. In a machine for making baskets, the combination with a suitable frame, of a revoluble form carrier, revoluble shafts connected therewith, and provided with suitable forms, a ratchet wheel mounted on said shafts, and means for giving the same a vertical intermittent motion, devices connected with said stave hopper for removing the staves therefrom, and placing them on the frames, hoop tubes through which the hoops are passed, nail hoppers suitably mounted on said frame, and provided with chutes through which the nails are fed, and means for giving said hoppers an oscillating or lateral motion, and devices for removing the nails, one at a time, from said chutes, and depositing them in a driving tube, and driving rods connected with a sliding cross head which is operated by eccentrics mounted on the power shaft, said driving rods being provided with driving tubes, and by which the nails are driven through the hoops and staves, said forms being composed of circular heads having spaced ribs or flanges between which the staves are placed, and being also provided with annular grooves into which the nails are driven, and the shaft on which said heads are placed, being adapted to receive a disc or plate which constitutes the bottom of the basket, and into which nails are also driven, substantially as shown and described. 9th. In a machine for making baskets, the combination with a suitable frame, of a revoluble from carrier, revoluble shafts connected therewith, and provided with suitable forms, a ratchet wheel mounted on said shafts, and means for giving the same an intermittent motion, a suitable stave hopper, and means for giving the same a vertical intermittent motion, devices connected with said stave hopper for removing the staves therefrom, and placing them on the frames, hoop tubes through which the hoops are passed, nail hoppers suitably mounted on said frame, and provided with chutes through which the nails are fed, and means for giving said hoppers an oscillating or lateral motion, and devices for removing the nails, one at a time, from said chutes, and depositing them in a driving tube, and driving rods connected with a sliding cross head which is operated by eccentrics mounted on the power shaft, said driving rods being provided with driving pins which pass through said driving tubes, and by which the nails are driven through the hoops and staves, said forms being composed of circular heads, having spacing ribs or flanges between which the staves are placed, and being also provided with annular grooves into which the nails are driven and the shaft on which said heads are placed, being adapted to receive a disc or plate which constitutes the bottom of the basket, and into which nails are also driven, and means connected with the power shaft for holding said staves into position on said forms, while the nails are being driven through the hoops and staves, substantially as shown and described. 10th. In a machine for making fruit baskets, the combination with a suitable frame, of a form carrier mounted therein, and provided with a plurality of forms which consist of circular heads of different diameters, which are mounted on a revoluble shaft, a ratchet wheel mounted on each of said shafts, and means connected therewith, for giving said shafts an intermittent revoluble motion, consisting of a ratchet bar or lever which is pivotally connected with a sliding cross head which is connected with the power shaft of the machine, by means of an eccentric, and devices connected with said frame for feeding or placing the staves in position on said forms, and also for placing the hoops in position, said machine being also provided with nail hoppers, and means for feeding the nails from said hoppers into position to be driven through said hoops, and said staves, said nails being fed into driving tubes, and devices connected with the power shaft for driving said nails into position, substantially as shown and described. 11th. In a machine for making fruit baskets, the combination with a suitable frame, of a form carrier mounted therein, and provided with a plurality of forms with consist of circular heads of different diameters, which are mounted on revoluble shafts, a ratchet wheel mounted on each of said shafts, and means connected therewith, for giving said shafts an intermittent revoluble motion, consisting of a ratchet bar or lever which is pivotally connected with sliding cross head which is connected with the power shaft of the machine, by means of an eccentric and devices connected with said frame for feeding or placing the staves in position on said forms. and also for placing the hoops in position, said machine being also provided with nail hoppers, and means for feeding the nails from said hoppers into position to be driven through said hoops, and said staves, said nails being fed into driving tubes and devices connected with the power shaft for driving said nails into position, consisting of eccentrics mounted on said power shaft, which are connected with a sliding cross head, and driving rods also connected with said cross head, and with the feeding tubes into which the nails are fed, said driving rods being provided with driving pins which are adapted to be driven into or through said driving tubes, substantially as shown and described. 12th. In a machine for making fruit baskets, the combination with a suitable frame, of a form carrier mounted therein, and provided with a plurality of forms each consisting of circular heads of different diameters, mounted on a revoluble shaft, a ratchet wheel on said shaft, and means connected therewith, for giving said shaft, an intermittent revoluble motion, consisting of a ratchet bar or lever which is pivotally connected with a sliding cross head which is connected with the power shaft of the machine, by means of an eccentric and devices connected with said frame for feeding or placing the staves in position on said forms, and also for placing the hoops in position, said machine being also provided with nail hoppers, and means for feeding the nails from said hoppers into position to be driven through said hoops, and said staves, said nails being fed into driving tubes and devices connected with the power shaft for driving said nails into position consisting of eccentrics mounted on said power shaft which are connected with a sliding cross head, and driving rods also connected with said cross head, and with the feeding tubes into which the nails are fed, said driving rods being provided with driving pins which are adapted to be driven into or through said driving tubes, said driving rods being spring operated and means connected with the power shaft for holding the staves in position on said forms, substantially as shown and described. 13th. In a machine for making baskets, the combination with a suitable frame, of vertically revoluble forms which are mounted on a revoluble carrier, devices for giving said forms an intermittent revoluble motion, a suitable stave hopper also mounted on said frame, and capable of vertical intermittent movement, pickers and other devices for removing the staves from the hopper, and depositing them on the forms, feeding tubes through which the hoops are passed, which terminate adjacent to said forms, nail hoppers suitably supported on said frame, and in operative connection with the power shaft of the machine, and provided with devices whereby they are given a lateral or oscillating motion, chutes connected with said hoppers, through which the nails are fed, and provided with extensions, each of which is provided with a slot in the bottom thereof, means for feeding the nails successively from said slots into other chutes, which are provided with tubes which communicate with driving tubes, and suitable driving devices connected with the power shaft of the machine, and with a sliding cross head whereby the nails are driven through said driving tubes into and through said hoops and staves, substantially as shown and described. 14th. In a machine for making baskets, the combination with a suitable frame, of vertically revoluble forms which are mounted on a revoluble carrier, devices for giving said forms an intermittent revoluble motion, a suitable stave hopper also mounted on said frame, and capable of vertical intermittent movement, pickers and other devices fo, removing the staves from the hoppers, and depositing them on the forms, feeding tubes through which the hoops are passed, which terminate adjacent to said forms, nail hoppers suitably supported on said frame, and in operative connection with the power shaft of the machine, and provided with devices whereby they are given a lateral or oscillating motion, chutes connected with said hoppers, through which the nails are fed, and provided with extension, each of which is provided with a slot in the bottom thereof, means for feeding the nails successively from said slots into other chutes, which are provided with tubes which communicate with driving tubes and suitable driving devices connected with the power shaft of the machine, and with a sliding cross head whereby the nails are driven through said driving tubes and into and through said hoops and staves, said driving devices consisting of driving rods which are connected with a sliding cross head, and of eccentrics connected with the power shaft, and with the said cross head, said driving rods being provided with driving pins, which extend into and through said driving tubes, substantially as shown and described. 15th. In a machine for making baskets, the combination with a suitable frame, of revoluble forms which are mounted on a revoluble carrier, devices for giving said forms an intermittent revoluble motion, a suitable stave hopper also mounted on said frame, and capable of vertical intermittent movement, pickers and other devices for removing the staves from the hopper and depositing them on the forms. feeding tubes through which the hoops are passed, which terminate adjacent to said forms, nail hoppers suitably supported on said frame, and in operative connection with the power shaft of the machine, and provided with devices whereby they are given a lateral or oscillating motion, chutes connected with said hoppers, through which the nails are fed, and provided with extensions, each of which is provided with a slot in the bottom thereof, means for feeding the nails successively from said slots into other chutes, which are provided with tubes which communicate with driving tubes, and suitable driving devices connected with the power shaft of the machine, and with a sliding cross head, whereby the nails are driven through said driving tubes into and through said hoops and staves, said driving devices consisting of driving rods which are connected with a sliding cross head, and of eccentrics connected with the power shaft, and with said cross head, said driving rods being provided with driving pins, which extend into and through said driving tubes, and devices connected with the power shaft for holding the staves in position on the forms, while the nails are being driven, and said forms also adapted to receive a disc or plate which constitutes the bottom of the basket, and into which nails are driven through the hoops and staves, substantially as shown and described. 16th. In a machine for making baskets, the combination with a suitable frame, of a revoluble form carrier, said form carrier being provided with revoluble spindles or rods, on which are mounted circular heads which constitute the form proper, said circular heads being provided with flanges or ribs by which the staves of the baskets are spaced, and with annular grooves formed therein, and each of said spindles being also provided with a ratchet wheel, and means connected therewith for giving the same an intermittent revoluble motion, suitable means for feeding staves into position on said forms and for holding them

thereon, while being nailed, hoop tubes through which hoops are passed into position to be nailed onto said staves, nail hoppers suitably mounted upon said frame, and provided with means for feeding the nails into position to be driven into said hoops and staves, spring operated driving rods which pass through suitable keepers, and into driving tubes into which the nails are fed, said driving rods being connected with a sliding cross head, which is in operative connection with eccentric mounted on the power shaft, substantially as shown and described. 17th. A machine for making baskets comprising a frame, a form carrier connected therewith, forms connected with said carrier, devices for giving said carrier intermittent motion, a stave hopper mounted on said frame, and devices connected therewith for placing the staves upon the respective forms, tubes adjacent to said stave hopper through which the hoops are passed, nail hoppers which are suitably mounted and provided with means for giving the same a lateral and oscillating motion, devices for feeding the nails into position to be driven into said hoops and staves, and drivers by which the nails are driven into said hoops and staves, said drivers consisting of a sliding cross head, which is connected by means of eccentrics with the power shaft of the machine and driving rods connected with said cross heads, said nails being fed from said hoppers into a tube which is connected with said driving rods, and through which passes a driven pin, substantially as shown and described. 18th. A machine for making baskets, comprising a suitable frame, a form carrier connected therewith, forms connected therewith, a stave hopper also mounted on said frame, and devices connected therewith for placing the staves on the respective forms, hoop tubes adjacent to said stave hopper through which the hoops are passed, nail hoppers which are suitably mounted on said frame, and provided with means for giving the same an oscillating or lateral motion, devices for feeding the nails into position to be driven into said hoops and staves, and drivers by which the nails are driven into said hoops and staves, consisting of a sliding cross head which is connected by means of eccentrics with the power shaft of the machine, and driving rods connected with said cross head, said nails being fed into a tube which is connected with said driving rods, and through which passes a driving pin, and devices for operating the form carrier and revolving the same as each stave is placed in position, substantially as shown and described. 19th. A machine for making baskets, comprising a frame, a form support carried by said frame, a plurality of forms connected with said support, means for placing staves and hoops in position upon the respective forms, mechanism for applying securing devices to the staves and hoops, and mechanism operating to throw one form into operative position with relation to said securing devices as the other form is withdrawn from said operative position, substantially as and for the purpose set forth. 20th. A machine for making baskets, comprising a frame, a form support carried by said frame, a revoluble form connected with said support, and means for moving said support to and from the stave and hoop applying and nailing mechanism, in combination with means for placing said staves and hoops upon the form, mechanism for feeding nails into position with relation to the staves and hoops when the same are upon the revoluble form, and driving devices operating with respect to the action of the nail feeding mechanism to drive said nails through the staves and hoops when the same are carried into a relative position by the movement of the revoluble form, substantially as shown and described.

No. 68,215. Apron or Bib Fasteners.

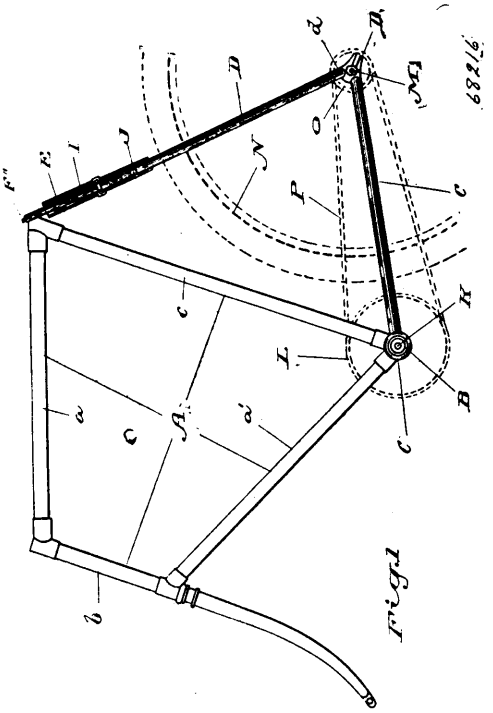
(Attache pour tabliers ou bavettes.)



Frederick C. Scadding, Cleveland, Ohio, U.S.A., 24th July, 1900; 6 years. (Filed 16th March, 1900.)

Claim.—As an article of manufacture, an apron, bib or garment holder comprising a spring metallic band A, substantially as and for the purpose hereinbefore set forth.

No. 68,216. Frames for Bicycles, Etc. *(Cadre de bicycles.)*



Henry Dixon, Collingwood, Ontario, Canada, 24th July, 1900; 6 years. (Filed 9th April, 1900.)

Note.—Patent No. 68,216 is a reissue of Patent No. 59,032.

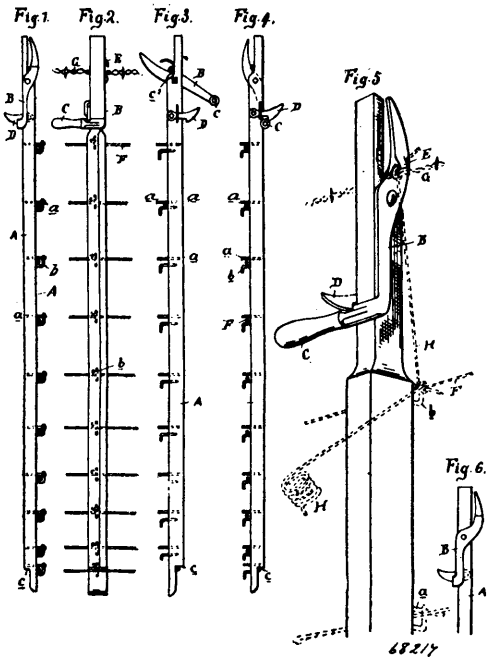
Claim.—1st. In a frame for foot propelled vehicles, the combination of the crank axle bracket, the side bars and an oscillating connection between the crank axle bracket and side bars consisting of a strap for each side bar encircling loosely its respective end of the crank axle bracket, a brace for the side bars consisting of a stay one end of which is connected to one of the side bars and crosses diagonally to the opposite side of the frame between the crank axle bracket and driving wheel, and has its opposite end connected to the other side bar, a slot in each of the crossed projections and a bolt passing through the slots and clamping the projection together, substantially as specified. 2nd. A bicycle embracing in its construction the upper side bars of the rear forks, each consisting of two sets of telescopic members, the lower telescopic members pivotally connected to the rear ends of the lower side bars, the upper ends of the upper telescopic members connected to the standard of the main frame, the upper telescopic members movable within the lower telescopic members, a permanent stop in each of the lower telescopic members, an adjustable stop in each of the upper telescopic members, a spring within each set of telescopic members pressing against the permanent and adjustable stops to hold their members in their normal positions, an air cushion consisting of a cylinder rigidly connected to the upper telescopic members, a plunger rigidly connected to the lower telescopic members having a piston working within the cylinder to cushion the telescoping action of the section, substantially as specified.

No. 68,217. Spacing Bar. *(Barre d'espacement.)*

The McCloskey Wire Fence Company, Limited, assignee of William McCloskey, both of Windsor, Ontario, Canada, 26th July, 1900; 6 years. (Filed 26th February, 1900.)

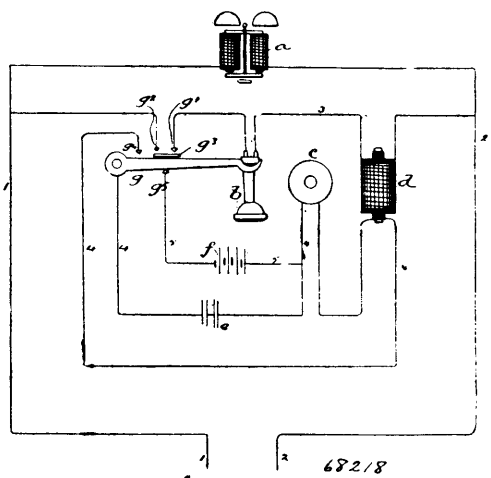
Claim.—1st. The spacing bar having wire guides formed by means of straight and bent pins secured to the bar, the bent pins being rotatable for the purpose of forming open or closed wire guides. 2nd. The spacing bar formed with a jaw at its upper end composed of the upper end of the bar as the stationary member and of a lever pivotally secured thereto and forming with its upper arm the movable member adapted to be extended rearwardly beneath the top wire of the fence and to be locked in position against the stationary member to confine the top wire between the members of the jaw, said lever extending with its lower arm in front of the bar and having a handle for operating it, and an automatically operating locking latch for said lever adjacent to said handle. 3rd. The spacing bar formed with a jaw at its upper end composed of the upper end of said bar as the stationary member and of a lever pivotally secured thereto and forming with its upper arm the movable member adapted to be extended rearwardly below the top wire of the fence, a handle on said lever extending in front of the spacing bar, an automatic locking latch for locking said lever to the bar

when the jaw is closed and means on said lever adjacent to the top wire of the fence for holding the end of the stay wire in position



when the lever is locked and to release the same by the operation of said lever. 4th. In a spacing device, the combination with the spacing bar and its wire guides for spacing the fence wires thereon, of the jaw on the upper end of the spacing bar and the shoulder *c* on the lower end thereof opposite the lower wire guides, said jaw and shoulder co-operating to hold the bar removably in position on the fence irrespective of the wire guides. 5th. In a spacing device, the combination of the bar A, the lever B pivotally secured to the upper end of the bar and forming in connection therewith means for engaging and locking the bar to the top wire, the wire guides formed of the straight pins *a*, and bent pins *b*, and the shoulder *c* on the bar opposite the lowest wire guide.

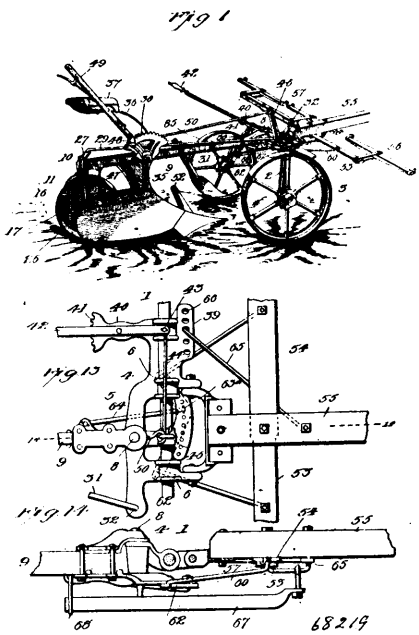
No. 68,218. Telephone Appliance. (*Appareil de téléphone.*)



The Bell Telephone Company of Canada, Limited, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, of Chicago, Illinois, U.S.A., 26th July, 1900; 6 years. (Filed 22nd October, 1898.)

Claim.—The combination at a sub-station of a telephone exchange of a transmitting telephone of low resistance and a supply storage battery therefor, a primary battery, a circuit of the storage battery through the telephone, a circuit of the primary battery through the storage battery, and a telephone switch adapted to break the connection of the primary battery with the storage battery and to close the circuit of the storage battery with the telephone, the normal electro-motive force of the primary battery being substantially equal to the maximum electro-motive force of the storage battery, substantially as described.

No. 68,219. Riding Plough. (*Charrue à siège.*)

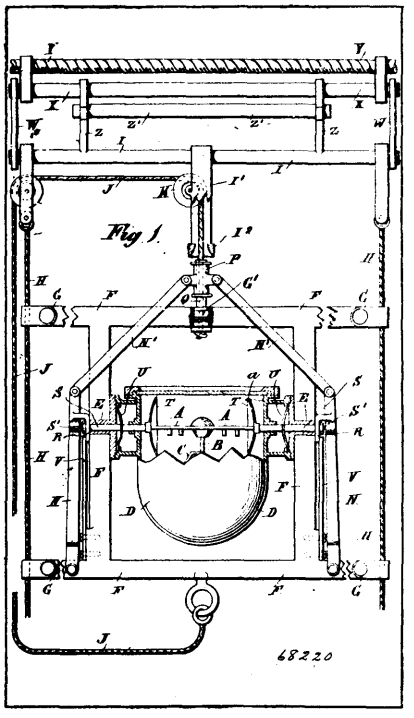


John R. Lavell, assignee of William Albert Baldwin, both of Smith's Falls, and Thomas Johnston, of Kemptville, all of Ontario, Canada, 26th July, 1900; 6 years. (Filed 14th March, 1899.)

Claim.—1st. A riding plough, comprising a wheeled axle, a beam adjustably connected thereto, means carried by said axle for adjusting the position of said beam laterally on said axle, said beam retaining its normal angular alignment in each of its adjusted positions, and means for locking said beam against movement in one direction. 2nd. A riding plough, comprising a wheeled axle, a plough beam slidably mounted thereon, the normal position of said beam being at right angles to said axle, means for adjustably moving the front end of said beam on said axle whereby the angle will be varied, and means operated by the movement of said front end of the beam for automatically steering the rear end of said beam to its normal position. 3rd. A riding plough, comprising a wheeled axle, a plough beam slidably connected thereto, the normal position of said beam being at right angles to said axle, means for adjustably moving the front end of said beam on said axle whereby the angle will be varied, means operated by the movement of said front end of the beam for automatically steering the rear end of said beam to its normal position, and means for locking said beam in its normal position against movement in one direction. 4th. A riding plough, comprising a wheeled axle, a plough beam slidably mounted thereon, means, including a lever and connections, for adjustably moving the front end of said plough beam on said axle, and means for automatically moving the rear end of said beam to its adjusted position during the forward movement of the plough. 5th. A riding plough, comprising a wheeled axle, a plough beam slidably mounted thereon, the normal position of said beam being at right angles to said axle, means, including a lever and connections, for adjustably moving the front end of said beam on said axle whereby the angle will be varied, and means for automatically moving the rear end of said beam to its normal position during the forward movement of the plough. 6th. A riding plough, comprising a wheeled axle, a plough beam slidably mounted thereon, the normal position of said beam being at right angles to said axle, means, including a lever and connections, for adjustably moving the front end of said beam on said axle, whereby the angle will be varied, and means, operated by the movement of said front end of the beam for automatically steering the rear end of said beam to its normal position. 7th. A riding plough, comprising a wheeled axle, plough beam slidably mounted thereon, the normal position of said beam being at right angles to said axle, means, including a lever and connections, for adjustably moving the front end of said beam on said axle, whereby the angle will be varied, means operated by the movement of said front end of the beam for automatically steering the rear end of said beam to its normal position, and means for locking said beam in its normal position against movement in one direction. 8th. A riding plough, comprising a wheeled axle, a plough beam adjustably mounted thereon, and means, including a

lever and connections, for adjusting the position of said beam laterally on said axle, said beam retaining its normal angular alignment in each of its adjusted positions. 9th. A riding plough, comprising a wheeled axle, a carriage loosely mounted thereon and normally held in a relative fixed position, means for adjustably moving said carriage laterally on said axle, said carriage being held in its adjusted position, a plough beam pivotally connected to said carriages, means for automatically moving the rear end of said plough to its proper position during the forward movement of the plough, and means for locking said beam against movement in one direction. 10th. A riding plough comprising a wheeled axle, a carriage loosely mounted thereon to have a sliding movement, means, including a lever and connections, for adjustably moving said carriage on said axle, said carriages being held in its adjusted position, and means for automatically moving the rear end of said plough to its proper position during the forward movement of the plough. 11th. A riding plough comprising a wheeled axle, a carriage loosely mounted thereon to have a sliding movement, means, including a lever and connections, for adjustably moving said carriage on said axle, said carriage being held in its adjusted position, means for automatically moving the rear end of said beam to its proper position during the forward movement of the plough, and means for locking said beam against movement in one direction. 12th. A riding plough comprising a wheeled axle, a carriage slidably mounted thereon, a lever having one of its ends operatively connected to a stationary fulcrum point on said axle, said lever serving to adjustably regulate the position of said carriage on said axle, a plough beam pivotally connected to said carriage, and means for automatically moving the rear end of said beam to its proper position during the forward movement of the plough. 13th. A riding plough comprising a wheeled axle, a carriage slidably mounted thereon, a lever mounted on said carriage and having one of its ends operatively connected to a stationary fulcrum on said axle, said lever serving to adjustably regulate the position of said carriage on said axle, a plough beam pivotally connected to said carriage, and means for automatically moving the rear end of said beam to its proper position during the forward movement of the plough. 14th. A riding plough comprising a wheeled axle, a carriage slidably mounted thereon, a lever mounted on said carriage and having one of its ends operatively connected to a stationary fulcrum on said axle, said lever serving to adjustably regulate the position of said carriage on said axle, a plough beam pivotally connected to said carriage, means for automatically moving the rear end of said beam to its proper position during the forward movement of the plough, and means for locking said beam against movement in one direction. 15th. A riding plough comprising a wheeled axle, a carriage slidably mounted thereon, a stationary standard secured on said axle, a lever mounted on said carriage and having one of its ends operatively connected to said standard, for adjustably regulating the position of said carriage on said axle, a plough beam pivotally connected to said carriage, and means for automatically moving the rear end of said beam to its proper position during the forward movement of the plough. 16th. A riding plough comprising a wheeled axle, a carriage slidably mounted thereon, a stationary standard secured on said axle, a lever mounted on said carriage and having one of its ends operatively connected to said standard for adjustably regulating the position of said carriage on said axle, a plough been pivotally connected to said carriage, means for automatically moving the rear end of said beam to its proper position during the forward movement of the plough, and means for locking said beam against movement in one direction. 17th. A riding plough comprising a wheeled axle, a carriage slidably and adjustably mounted thereon, a plough beam pivotally connected to said carriage, a rolling land side pivotally connected to the rear end of said plough beam, and a rod connected to said land side and to said carriage adapted to automatically adjust the pivotal movement of said rolling land side when said carriage is moved on said axle. 18th. A riding plough comprising a wheeled axle, a carriage slidably and adjustably mounted thereon, a plough beam pivotally connected to said carriage, a rolling land side pivotally connected to the rear end of said beam, a rod connected to said carriage and to said plough beam for automatically adjusting the position of the rear end of said beam relative to the front end, and means for locking said beam against movement in one direction. 19th. A riding plough comprising a wheeled axle, a carriage slidably and adjustably mounted thereon, said carriage having a lateral movement, a plough beam pivotally connected to said carriage, said plough beam being automatically held at an approximate right angle to said axle, a rolling land side pivotally connected to the rear end of said beam, means for adjustably moving said carriage on said axle, whereby the angle of the beam may be varied, and a rod connected to said carriage and to said land side for automatically adjusting the position of the rear end of said beam relative to its front end. 20th. A riding plough comprising a wheeled axle, a carriage slidably and adjustably mounted thereon, said carriage having a lateral movement, a plough beam pivotally connected to said carriage, said beam being automatically held at an approximate right angle to said axle, a rolling land side pivotally connected to the rear end of said beam, means for adjustably moving said carriage on said axle, whereby the angle of said beam will be varied, a rod connected to said carriage and said land side for automatically adjusting the position of the rear end of said beam relative to its front end, and means for locking said beam against movement in one direction. 21st. A riding plough comprising a wheeled axle, a plough beam pivotally and slidably connected thereto, a rolling land side pivotally connected to said beam for automatically regulating the position of said beam relative to the axle, means for automatically moving said land side on its pivot, and means for locking said land side against pivotal movement in one direction. 22nd. A riding plough comprising a wheeled axle, a plough beam pivotally and slidably connected thereto, a rolling land side pivotally connected to said beam, said land side automatically regulating the position of the beam relative to the axle, means for automatically moving said land side on its pivot, and means for locking said land side against pivotal movement in one direction, said land side being free to move in the opposite direction. 23rd. A riding plough comprising a wheeled axle, a plough beam pivotally and slidably connected thereto, means for imparting an adjustable rotary movement to said axle, whereby the depth of the furrow may be regulated, and means for adjusting the position of the beam laterally on said axle, said beam retaining its normal angular alignment in each of its adjusted positions. 24th. A riding plough comprising a wheeled axle, a plough beam pivotally and slidably connected thereto, means for imparting an adjustable rotary movement to said axle to regulate the depth of the furrow, and independent means for adjusting the position of the beam laterally on said axle, said beam retaining its normal angular alignment in each of its adjusted positions. 25th. A riding plough comprising a wheeled axle, a plough beam pivotally and slidably connected thereto, means for imparting an adjustable rotary movement to said axle to regulate the depth of the furrow, independent means for adjusting the position of the beam laterally on said axle, said beam retaining its normal angular alignment in each of its adjusted positions, and means for locking said beam against movement in one direction. 26th. A riding plough comprising a wheeled axle, a plough beam slidably and adjustably mounted thereon, means for imparting an adjustable rotary movement to said axle to regulate the depth of the furrow, and means for adjustably moving the position laterally of said beam on said axle and retaining its normal angular alignment in each of its adjusted positions, whereby the distance between the furrow wheel and the line of the furrow may be varied regardless of the vertical position of the plough.

No. 68,220. Ship's Compass. *(Compas de mer.)*

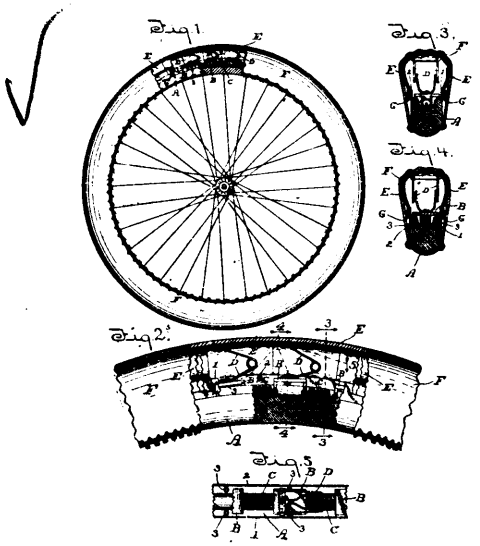


The Evoy Patent Adjustment Compass (British and Colonial) Limited, assignee of Wallace John Reynolds, both of London, England, 26th July, 1900; 6 years. (Filed 17th May, 1900.)

Claim.—1st. In or to overhead self adjusting compasses, the combination with a compass card A and bowl D, the discs T having pins S carrying heads or nuts S^1 in engagement with spurs R of arms N, springs V, links N^1, thimble or sleeve P, framework F having projections G^1, as set forth. 2nd. In overhead self adjusting compasses, the suspension appliances consisting of jumper stay Y carrying by links the rod X, and by other links W, the weighted rod I, which rod I has quadrant shaped links Z attached, these carrying a weighted bar Z^1, the quadrant Z engaging the rod X, depending

bar I^1 from rod I carrying springs L having abutment shoulders M, as set forth. 3rd. In overhead self adjusting compasses, the combination of compass card A, bowl B, discs T, pins S carrying heads or nuts S^1, frame F, arms N pivoted to frame G and carrying spurs R for engaging nuts S^1, springs V, links N^1, thimble P, projections G^1 on frame G, tube Q, bar I, rod I^1 depending from bar I and carrying guide roller K, springs L having abutment shoulders M, quadrant links Z, weighted bar Z^1, links W, bar X, and jumper stay Y, all substantially as set forth.

No. 68,221. Vehicle Wheel. *(Roue de voiture.)*



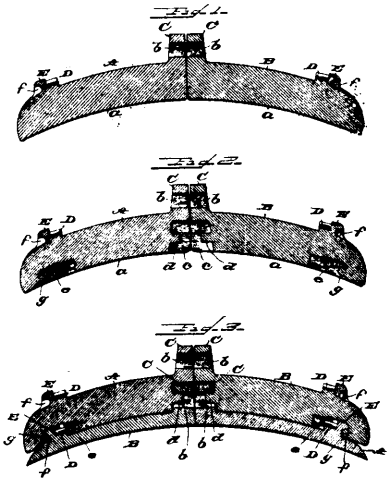
Israel W. Gregg and John F. Rodifer, both of Elmwood, Indiana, U.S.A., 26th July, 1900; 6 years. (Filed 21st May, 1900.)

Claim.—1st. The combination, in a wheel, of a felly having pockets therein, springs in said pockets, overlapping metal sections arranged outside of said fellies, angle plates attached to said sections and extending in and resting upon said springs, saddles arranged at intervals around the felly, springs uniting the several saddles, and other springs carried by said saddles and supporting the overlapping metal sections. 2nd. The combination, in a wheel, of the felly, the sheath or tread, overlapping metal sections within said sheath or tread, saddles carried by the felly, springs uniting the several saddles, and other springs interposed between the saddles and the overlapping metal sections whereby the latter are supported from the formed, substantially as shown and described. 3rd. The combination, in a vehicle wheel, of the felly, the sheath or tread, saddles arranged at intervals around the felly, springs uniting the several saddles arranged in a groove in said felly, and springs supported by and extending from said saddles to said overlapping metal sections. 4th. The combination, in a vehicle wheel, of a felly having grooves around its peripheral edges, annular rings set in said grooves and extending up and forming bearing surfaces for metal sections, said metal sections being constructed and arranged to overlap each other and substantially U shaped in form with their edges resting against said rings, suitable springs carried from the felly and supporting said metal sections, and a suitable sheath or tread surrounding the whole, substantially as shown and described.

No. 68,222. Railway Brake Shoe. *(Sabot de frein.)*

Gardiner W. Chipley and Charles W. Armbrust, both of Chicago, Illinois, U.S.A., 26th July, 1900; 6 years. (Filed 6th July, 1900.)

Claim.—1st. A brake shoe, composed of two independent halves abutting together on a transverse line at the middle of the shoe and each provided with means for attaching it to the brake head, substantially as described. 2nd. A brake shoe, composed of two independent halves separated from each other on a transverse line at the middle of the shoe and each provided with a guiding lug and with one-half of a two part attaching lug, substantially as described. 3rd. The herein described divided brake shoe, composed of the two halves A B separated from each other on a transverse line at the middle of the shoe and each provided with a guiding lug D E and with one-half of a two part attaching lug C, having a keyway *b*, substantially as described. 4th. A brake shoe provided in its wearing face with recesses adapted to receive the attaching and guide lugs upon the back of another shoe, substantially as described. 5th. A brake shoe provided in its wearing face with recesses adapted to receive the attaching and guide lugs on the back of another shoe, and with means for securing the shoes together, substantially as described. 6th. A brake shoe, having its wearing face and its back formed in parallel planes, so that the back of one shoe will fit the



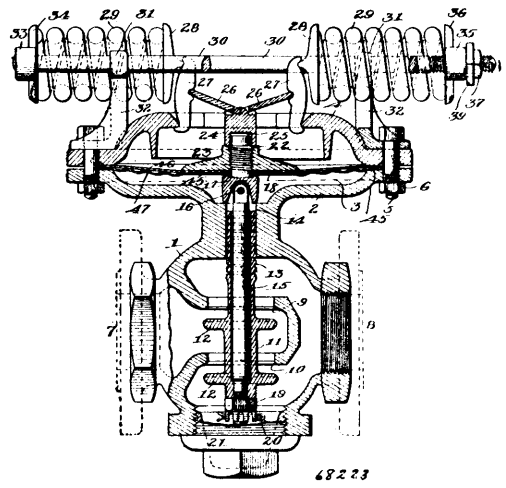
face of another shoe, and provided in its wearing face with recesses adapted to receive the attaching and guide lugs upon the back of another shoe, substantially as described. 7th. A two part or divided brake shoe, composed of two halves separated transversely at the middle of the shoe, and adapted to have the back of another shoe secured to its face, substantially as described. 8th. A two part or divided brake shoe, composed of two halves separated upon a transverse middle line, and provided in its wearing face with recesses adapted to receive the attaching and guide lugs upon the back of another shoe, substantially as described. 9th. A two part or divided brake shoe, composed of two halves separated upon a transverse middle line and provided in its wearing face with recesses adapted to receive the attaching and guide lugs upon the back of another shoe and with means for securing the two shoes together, substantially as described. 10th. A two part or divided brake shoe, composed of two valves separated upon a transverse middle line, and provided with recesses in its wearing face adapted to receive the attaching and guide lugs upon the back of another shoe, and with lugs projecting into said recesses and adapted to co-operate with the lugs upon the back of the other shoe to lock the two shoes together, substantially as described. 11th. A two part or divided brake shoe separated upon a transverse middle line and having its wearing face and back formed in parallel planes, so that the back of one shoe will fit the face of another shoe, and having its wearing face provided with recesses adapted to receive the attaching and guide lugs upon the back of the other shoe, substantially as described. 12th. A two part or divided brake shoe separated upon a transverse middle line and having its wearing face and back formed in parallel planes, so that the back of one shoe will fit the face of another shoe, and having its wearing face provided with recesses adapted to receive the attaching and guide lugs upon the back of the other shoe and with lugs projecting into such recesses and adapted to co-operate with the attaching and guide lugs upon the back of the other shoe, substantially as described. 13th. The herein described two part or divided brake shoe, composed of the halves A, B, provided in their wearing faces with the recesses *c*, *c*, and the lugs *d*, *g* projecting into said recesses, and provided upon their backs with the attaching lug C having the keyway *b*, and with the guide lugs D, E, having the recesses *f*, substantially as and for the purpose specified. 14th. A brake shoe adapted to engage a wheel and composed of two independently substantially like halves abutting together on a transverse line at the middle of the shoe, substantially as described.

No. 68,223. Automatic Fluid Pressure, Regulator and Governor. *(Regulateur de pression à fluide.)*

The Foster Engineering Company, assignee of Arthur Wise Cash, both of Newark, New Jersey, U.S.A., 26th July, 1900; 6 years. (Filed 10th July, 1900.)

Claim.—1st. A pressure regulator having a valve chamber containing a balanced valve, a fluid pressure chamber containing a flexible diaphragm, a loose connection between said valve and diaphragm, spring mechanism to counteract the fluid pressure on the diaphragm, means for adjusting the spring mechanism, and a port through which the valve chamber and the diaphragm chamber communicate, substantially as described. 2nd. A pressure regulator having a diaphragm and a chamber for the fluid pressure to act on said diaphragm, a valve chamber containing a balanced valve, a loose connection between said diaphragm and valve, a port through which the valve chamber and the diaphragm chamber communicate, and means for controlling said port, substantially as described.

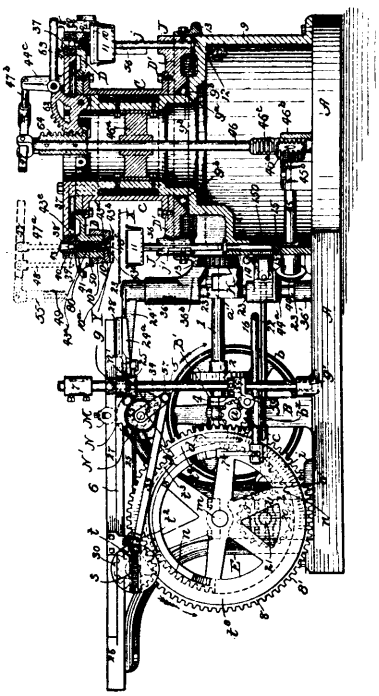
3rd. A pressure regulator having a diaphragm, a chamber in which said diaphragm is located for the fluid pressure to act thereon, a valve



chamber or casing containing a balanced valve, means for connecting said diaphragm and valve, spring mechanism to counteract the fluid pressure on the diaphragm, means for adjusting said spring mechanism, a port through which the diaphragm chamber and the valve casing communicate, and means controlled from the outside for restricting or closing said port, substantially as described. 4th. A pressure regulator having a diaphragm subjected to fluid pressure on one side mechanism acting on the opposite side of said diaphragm to counteract the fluid pressure, a valve casing containing a balanced valve, a loose connection between the said diaphragm and valve, and a port connecting the diaphragm chamber and the valve chamber, substantially as described. 5th. A pressure regulator having a diaphragm and a valve subjected to the action of delivery pressure, a loose connection between said valve and diaphragm, and mechanism for counteracting the pressure on the diaphragm, substantially as described. A pressure regulator having a valve chamber or chamber containing a valve, a diaphragm arranged to be subjected to the action of a delivery pressure, a loose connection between said diaphragm and valve, and means for counteracting the pressure on the diaphragm, substantially as described. 7th. A pressure regulator having a valve chamber or casing provided with seats for a balanced valve contained in said chamber or casing, a diaphragm arranged to be subjected to the action of delivery pressure, a loose connection between said valve and diaphragm, and means for automatically counteracting the pressure on said diaphragm, substantially as described. 8th. A pressure regulator provided with a diaphragm arranged to be subjected to action of a delivery pressure, a valve chamber or casing containing a balanced valve, a loose connection between said diaphragm and valve, and means for counteracting the pressure on the diaphragm, substantially as described. 9th. A pressure regulator having a flexible diaphragm composed of an imperforate lower plate and a radially slotted upper plate, a valve chamber containing a balanced valve mechanically connected with said diaphragm, a chamber in which the diaphragm is located, a port through which the valve chamber or casing and the diaphragm chamber are adapted to communicate, means for controlling said port, and means for counteracting the pressure on the diaphragm, substantially as described. 10th. A pressure regulator having a valve chamber containing a balanced valve, a diaphragm chamber containing a flexible diaphragm, a port through which the valve chamber or casing and the diaphragm chamber are adapted to communicate, means for mechanically connecting the said valve and diaphragm, and compression mechanism to counteract the pressure on the diaphragm, said compression mechanism comprising a pair of rods having guide supports on the regulator, compression springs, bearing discs for said springs, link and toggle mechanism intermediate the springs and the diaphragm and means for adjusting the tension of said springs, substantially as described. 11th. A pressure regulator having a valve chamber or casing containing a balanced valve and seats therefor, said balanced valve being provided with a tubular stem or sleeve, a diaphragm chamber, a loose centre or support located in said diaphragm chamber. a swinging valve stem pivotally supported from said centre and extended through the balanced valve and its sleeve, a nut detachably connected with said stem below the balanced valve, a port through which the valve chamber and the diaphragm chamber communicate, and means for counteracting the pressure on said diaphragm, substantially as described. 12th. A pressure regulator comprising a valve chamber or casing, a diaphragm chamber, a balanced valve provided with a tubular stem, a flexible diaphragm located in the diaphragm chamber, a swinging valve stem connected with said diaphragm through a loose centre, means for detachably connecting the balanced valve with the lower end of said stem, a port through which the valve chamber and the diaphragm chamber communicate, and compression mechanism for counteracting the pressure on said diaphragm, substantially as described. 13th. A pressure regulator comprising a valve chamber or casing, a diaphragm chamber, a balanced valve provided with a tubular stem, a flexible diaphragm located in the diaphragm chamber, a swinging valve stem loosely connecting said diaphragm and valve, means for detachably securing the balanced valve to the lower end of said stem, a port through which the valve chamber and the diaphragm chamber communicate, compression springs, link and toggle mechanism intermediate said springs and the diaphragm, nuts for adjusting the tension of said springs and locking mechanism for said nuts, substantially as described. 14th. In a pressure regulator, a diaphragm composed of an inner flexible plate of thin metal corrugated, and an outer flexible plate of metal non corrugated but slightly bulged or dish shaped and provided with a number of radial slots extended from a centrally clamped portion of the diaphragm to points near its periphery, said plates being secured together in close juxtaposition, whereby the inner corrugated diaphragm plate forms the seal and the outer radially slotted diaphragm plate gives the strength and flexibility to resist the fluid pressure acting against the inner plate and prevent bucking, substantially as described. 15th. In a pressure regulator, a diaphragm composed of an inner flexible plate of thin metal provided with annular corrugations, and an outer flexible plate of metal having a plurality of radial slots extended from a centrally clamped portion of the diaphragm to points near its periphery, said plates being secured together in close juxtaposition, whereby the inner corrugated diaphragm plate forms the seal and the outer radially slotted diaphragm plate imparts the required flexibility and strength to resist fluid pressure acting against the inner plate and prevent buckling, cracking and strain, substantially as described.

No. 68,224. Basket Making Machine.

(*Machine à faire les paniers.*)



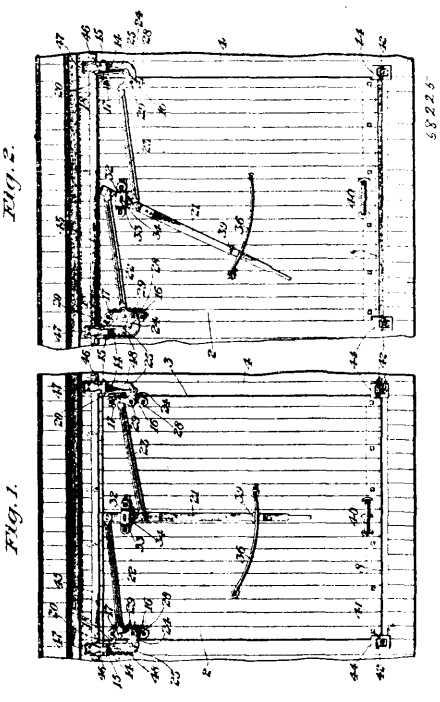
Andrew Devine, New York City, assignee of Emmet Horton, Elmira, both in New York, U.S.A., 26th July, 1900; 6 years. (Filed 12th March, 1900.)

Claim.—1st. In a basket making machine, a plurality of shaping dies arranged to travel collectively and bodily around a common centre, in combination w th means for revolving the dies individually while moving bodily, substantially as described. 2nd. In a basket making machine, a revolving frame carrying two or more pairs of shaping dies adapted to receive between them the planks composing the body portion of the basket, in combination with means for feeding and placing said blanks cross-wise between the dies, and means for actuating each pair of dies relatively to each other. 3rd. In a basket making machine, a revolving frame or support carrying two or more sets of shaping dies arranged and adapted to travel around a common centre, in combination with means for periodically arresting the dies, means for feeding bands to the dies, a stationary feed table adjacent to the path of the dies, and means for feeding and crossing the blanks for the body portions of the basket in position to be operated on by the dies, substantially as described. 4th,

In a basket making machine, the combination of a series of forms and formers arranged to revolve about a common axis, means for thus revolving the forms and formers, means for revolving each form about its own individual axis, and means for operating the formers. 5th. The combination of a series of forms and formers arranged to revolve about a common axis, means for revolving each form about its own individual axis, means for operating the formers, and means for supplying blanks and bands to the forms. 6th. In a basket making machine, the combination with a series of dies arranged and adapted to travel bodily around a common axis, means for alternately stopping the rotation and travel of the dies, means for feeding the blanks composing the body portion of the basket to the dies, and means for feeding and applying bands to the inner and outer edges of the basket, substantially as described. 7th. In a basket making machine, the combination with a pair of shaping dies, of a table adapted to receive uncut sheets of veneer, cutting means adapted to cut blanks of the required size from the stock, and a conveyer adapted to receive a cut blank and carry it in the arc of a circle into a position substantially at right angles to the position it occupied on the said table. 8th. The combination with basket forming mechanism, of mechanism for conveying and delivering blanks thereto, said mechanism comprising means for crossing the blanks. 9th. The combination with basket forming mechanism, of mechanism for conveying and delivering blanks thereto, said mechanism comprising means for changing the angular relation of the blanks. 10th. In a basket making machine, a pair of shaping dies, and means for opening and closing them, in combination with a feed table, means for feeding sheets of veneer together toward the dies, means for cutting out of said sheets a pair of blanks for the body portion of the basket, means for separating said cut blanks and means for conveying them to and placing them cross-wise of each other between the shaping dies. 11th. The combination of a pair of shaping dies, means for opening and closing them, means for feeding sheets of veneer towards the dies, means for cutting out of said sheets blanks for the body portion of the basket, and means for conveying the blanks to and placing them crosswise between the shaping dies. 12th. In a basket making machine, the combination with a pair of shaping dies, of a feed table adapted to receive uncut sheets of veneer, a pair of feed rolls between which the veneer passes, a cutter adapted to cut blanks of the required size from the stock issuing from the rolls, and a hinged conveyer adapted to receive a cut blank and convey it in the arc of a circle into a position substantially at right angles to the position it occupied on the feed table. 14th. The combination of a pair of shaping dies, means for opening and closing them, a feed table, common means for feeding a pair of superposed sheets of veneer towards the ties, common means for cutting out of said sheets a pair of blanks for the body portion of the basket, means for separating said cut blankets, and means for conveying them to and placing them cross-wise between the shaping dies. 14th. In a basket making machine, the combination with blank bending mechanism, of mechanism for conveying and delivering the bottom and sides forming blanks thereto, said mechanism comprising means for crossing the blanks flat-wise to be operated upon in such condition by said bending mechanism. 15th. In a machine of the class described, the combination with bending mechanism of feed mechanism for carrying the blanks forming the bottom and body of the basket into the zone of action of the bending mechanism, and also causing the blanks to cross each other, said feed mechanism comprising a pair of independent feeders for respectively carrying the separate blanks. 16th. The combination of blank bending devices, a conveyer moving in the arc of a circle to convey a blank to the blank bending devices, another conveyer to feed another blank thereto, the two conveyers being so arranged and operated as to place one blank crosswise of the other. 17th. The combination of the bending devices and conveyers for transferring blanks separately and placing them crosswise between the bending devices. 18th. In a basket making machine, the combination with a pair of shaping dies, and means for opening and closing them, of a blank feeding crossing device, consisting of means for feeding one blank forward to the dies in a straight line, and a conveyer travelling in the arc of a circle for feeding a second blank forward to the dies so that the two will lie crosswise of each other. 19th. The combination of bending devices, a conveyer having a horizontally arranged seat or holder for a basket blank, means for moving said holder horizontally in the arc of a circle to convey a blank into position between the bending devices, and means for conveying another blank and placing it crosswise of the first mentioned blank between the bending devices. 20th. The combination of blank bending devices, a feed table, a conveyer moving in the arc of a circle to convey a blank to the blank bending devices and another conveyer moving in a straight line to feed another blank thereto and place it between the bending devices crosswise of the first-mentioned blank. 21st. The combination of the bending devices, the feed table, means for feeding the stock over the table, a knife for cutting the stock into blanks, the conveyer for the lower blank, the conveyer for the upper blank, the wedge shaped blocks for separating the upper blank from the lower blank and for guiding the upper blank into position on the upper conveyer, means for moving one of the conveyers to feed a blank between the bending devices, and means for operating the other conveyer to move a blank to the bending devices and place it between them crosswise of the first mentioned blank. 22nd. The combination of the feed table, the vertically reciprocating knife, means for operating it, the feed rolls, means for intermittently actuating the feed rolls, blank bending devices and conveyers for transferring blanks from the feed table and placing them crosswise between the blank bending devices. 23rd. The combination of a rotary form, a device on the form for holding the end of a band, means for turning the form to wrap the band once around it, means for assembling about the form the other parts of the basket, and means for then turning the form to wrap said band around the outside of the basket, and means for securing the band in place. 24th. The combination of a form, band feeding mechanism, means for supplying the other parts of the basket, means for wrapping the band once around the form before the other parts of the basket are assembled, means for wrapping said band around the basket after said other parts are assembled, and means for securing the band in place. 25th. The combination of the revolving frame, a form carried thereby and adapted to revolve about its axis while being carried around the axis of the frame, and a pivoted wrapping arm the outer end of which moves toward and from the form for holding a band while being wrapped around the form during the rotation thereof. 26th. The combination of a revoluble form, a wrapping arm for holding a band while being wrapped around the form during its rotation, and means for automatically tripping and opening the arm to receive a band. 27th. The combination of a revolvable form, a pivoted arm, the outer end of which is movable towards and from the form, and which holds the band while it is being wrapped around the form during the rotation thereof, a roller carried by the arm for guiding the band, and means for automatically feeding the bands successively to the arm. 28th. The combination of a spiral screw for separating and feeding a portion of the stock from which the basket is made, means for assembling the remaining parts of the stock and means for securing the parts together. 29th. In a basket making machine, the combination with a form, of means for holding a portion of the stock of which the basket is made, and a spiral screw for feeding the stock toward the form. 30th. In a basket making machine, the combination of a form, means for supporting a portion of the stock from which the basket is made, a screw for feeding the stock toward the form, and a plunger for moving the stock fed by the screw into engagement with the form. 31st. The combination of a form provided with a band holder, means for supporting a series of bands, a screw engaging the bands and separating and feeding them toward the form, and means for causing the bands to engage with the holder on the form. 32nd. The combination of a rotary form, a band holder carried thereby, means for supporting a series of bands, a screw engaging the bands and separating and feeding them toward the form, and means for guiding or directing the bands into engagement with the form. 33rd. The combination of a form, a feed screw, means for separating a bunch of bands and means for directing the bands from the feed screw to the form. 34th. The combination of a form, a support for a part of the stock from which the basket is made, a screw provided with a free end adapted to enter between adjacent blanks and separate them from the main supply, means for operating the screw to separate the blanks and feed them toward the form, and means for directing the blanks thus separated to the form. 35th. The combination of a form, means for supporting a bunch of bands, and a screw for feeding the bands, the axis of which is arranged at an angle to the axis of the form. 36th. The combination of a form, a feed screw, the axis of which is at right angles to the axis of the form, and means for directing the bands from the feed screw to the form. 37th. The combination of a band reservoir having a horizontally arranged bottom on which the blanks are arranged vertically, edgewise, a spirally arranged screw blade engaging the bands and having a horizontal shaft, means for operating the shaft to actuate the screw blade to separate and feed the blanks forward, one at a time, a basket form, the axis of which is arranged at substantially right angles to the axis of the screw blade, and means for directing each blank separated by the screw blade to the form. 38th. The combination of a band reservoir, a spirally arranged screw blade adapted to engage the bands, one at a time, to feed them forward, a shaft on which the screw blade is mounted and which is provided with a squared or flattened end, a pinion on the shaft, a slotted frame into which the squared end of the shaft projects, and a rack carried by the frame engaging the pinion. 39th. The combination of a band reservoir having a horizontal bottom on which the blanks are arranged vertically, edgewise, a screw blade engaging the bands and adapted to separate them and feed them forward, one at a time, a horizontal shaft on which the screw blade is mounted, means for operating the shaft, a follower feeding the bands beneath the blade, a form, the axis of which is arranged at substantially right angles to the axis of the screw blade, and means for directing each band as it is fed from the reservoir to the form. 40th. The combination of a reservoir having a horizontal bottom for supporting a series of blanks, and having a discharge opening for the exit of blanks, a screw blade in the reservoir engaging the blanks and separating and feeding them forward, one at a time, to the discharge opening, a horizontal shaft on which the screw blade is arranged, means for operating the shaft, a form, the axis of which is at substantially right angles to the axis of the screw blade, and a plunger for forcing the blanks through the discharge opening to the form. 41st. The combination of a rotary form having a holding device for a band, a band reservoir having a holding device for a band, a band reservoir having a horizontal bottom for supporting the bands vertically, edgewise, a screw blade arranged in the reservoir, a horizontal shaft to which the screw

blade is secured, a follower for feeding the bands to the screw blade, and a plunger for discharging a band separated by the screw blade, and causing it to enter the holding device on the form. 42nd. The combination of a rotary form provided with a band holding device, a band reservoir, a screw blade adapted to separate the bands, one at a time, from the supply, a plunger for discharging the separated band from the reservoir and causing it to enter the holding device on the form, and a guide arm engaging the band while held by the band holding device. 43rd. The combination of a revolving frame carrying shaping dies, blank feeding devices for feeding blanks to the dies while they are stationary, means for then causing the revolving frame to revolve about its axis, devices for causing the shaping dies to revolve after having received basket blanks and after the dies are closed, means for applying a band or bands to the inside and outside of the basket while the revolving frame is revolving and while the shaping dies rotate, and means for ejecting the completed basket after the form has completed a revolution and the basket has been completed.

No. 68,225. Car Door. *(Porte de chars.)*

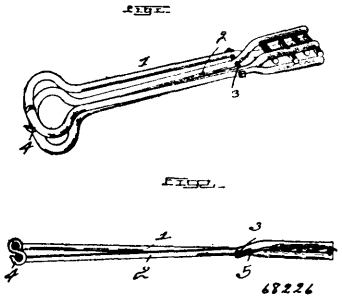


Sinclair Joseph Johnson, Nutley, New Jersey, U.S.A., 26th July, 1900; 6 years. (Filed 12th July, 1900.)

Claim.—1st. The combination, with a car body having a doorway, of a door therefor, one or more hangers shiftably supported on said body, crank mechanism connecting said hanger or hangers with said door, a bell crank in operative connection with said crank mechanism and having its direction of movement parallel to the plane of the door, and actuating means in connection with said bell crank and effective to move the door into position to be shifted away from the doorway. 2nd. The combination, with a car body having a doorway, of a door, one or more hangers shiftably supported on said body, each comprising a pair of hinged members, a crank connecting each of said hangers with said door, and actuating means for operating said crank or cranks thereby to move the door into position to be shifted away from the doorway. 3rd. The combination, with a car body having a doorway, of a door therefor, a pair of hangers supported on said body for shiftable movement relatively thereto and each having a movable connection with said door, a crank connecting each of said hangers with said door, and means for operating said cranks thereby to move the door into position to be shifted away from the doorway. 4th. The combination, with a car body having a doorway, of a door therefor, a track secured to said body, a pair of hangers mounted on said track for shiftable movement, said door having a movable connection with each of said hangers, a crank connecting each of said hangers with the door, and means including a floating actuator for operating said cranks to move the door into position to be shifted away from the doorway. 5th. The combination, with a car body having a doorway, of a door fitting therein, a track supported on said body, a pair of hangers mounted on said track for shiftable movement, each of said hangers comprising a pair of hinged members, said door having a movable connection with one member of each of said hangers, a supporting crank connecting said door with each of said hangers, a bell crank pivoted to each hanger and in operative connection with said supporting cranks, and actuating means for operating said bell cranks thereby to move the door into position to be shifted away from the doorway. 6th. The combination. with a car body having a doorway, of a door therefor, means for supporting said door for shiftable movement on said car body, means for moving said door into position to be shifted away from said doorway and including an actuator, and means for locking said actuator in position and comprising a notched member, a keeper, and a shiftable wedge effective to wedge the actuator into engagement with said notched member. 7th. The combination, with a car body having a doorway, of a door fitting therein, a track mounted on said body, a pair of hangers mounted on said track for shiftable movement, each of said hangers comprising a pair of hinged members, said door having a sliding and pivotal connection with each of said hangers, a supporting crank connecting each of said hangers with said door, a bell crank mounted on each of said hangers and having connection with said supporting cranks, an actuator having a pin-and-slot connection with said door, connectors pivoted to said bell cranks and actuator one above and one below said pin-and-slot connection, locking means for said actuator, comprising a notched member at the under side of said actuator, a keeper at the outer side thereof, and a shiftable wedge for maintaining said actuator in engagement with said notched member, and means for maintaining the bottom of the door in the doorway and for supporting the same when moved outwardly therefrom. 8th. The combination, with a car body having a doorway, of a door therefor, means including crank mechanism for supporting said door on said body for shiftable and also swinging movement, whereby it may be swung at an angle to the car body, said door also having a movable connection with said supporting means, and means for moving said door into position to be shifted away from the doorway. 9th. The combination, with a car body having a doorway and a track, of a door flush with the wall of said body and supported on said track for shiftable movement, and for swinging movement at an angle to the car body, and means for moving said door from its flush position outwardly and upwardly into position to be shifted on said track away from the doorway, and comprising a pair of members and equalizing means intermediate said members. 10th. The combination, with a car body having a doorway, of a door fitting flush therein, a stationary support secured to the car body, a carrier in permanent engagement with and shiftable on said support and embodying crank mechanism for supporting the door, and actuating means for shifting said door independently of any movement of the whole carrier upwardly and outwardly. 11th. The combination, with a car body having a doorway, of a stationary track secured to said body, a door means shiftable on said track for supporting said door for parallel movement independently of such track and effective to maintain such parallel movement during the shifting of the door, and means opertive to shift the door into position to be moved away from the doorway. 12th. The combination with a car body, having a doorway, of a door, a plurality of means for supporting said door on said body, and means operative to shift the door from its closed position into a position in readiness to be moved away from the doorway and embodying equalizing means in operative connection with one part of each of said supporting means. 13th. The combination with a car body having a doorway, of a door therefor, a pair of hangers shiftably supported on said body, crank mechanism connecting said hangers on the door, and actuating means for said crank mechanism and including an equalizer and effective to operate said crank mechanism and move the door into position to be shifted away from the doorway. 14th. The combination with a car body, having a doorway, of a door, a track, a hanger shiftably supported on said track for permanent engagement therewith, crank mechanism connecting said hanger with said door to permit movement of said door independently of said hanger, and means for actuating said crank mechanism to move the door outwardly and upwardly and into position to be shifted away from the doorway. 15th. The combination with a car body, having a doorway, of a door therefor, a track supported on said body, a hanger shiftable on said track, a plurality of parallely located cranks connecting said hanger and door thereby to maintain parallel movement of said door, and means for actuating said cranks to move the door into position to be shifted away from the door opening. 16th. In combination with a car body, having a doorway, a door fitting flush therein, a hanger supported by said car body, a pair of cranks pivotally carried thereby and secured to said door, means for actuating said cranks to shift the door into position to be shifted away from the doorway, such means including an actuator, and means for maintaining the same in its adjusted position. 17th. The combination with a car body, having a doorway, of a door therefor, one of said parts having a flanged bar, a stationary track secured to said body, means shiftable on said track for supporting the door for parallel movement independently of such track and effective to maintain such parallel movement during the shifting of the door, means for moving the door into position to be shifted away from the doorway, and means carried by the other of said parts and co-operating with such flanged bar to control the bottom of said door. 18th. In combination with a car body having a doorway, a hanger supported thereon and carrying crank mechanism having its journal parts horizontally disposed, and parallel to the plane of the door, a door hung on said crank mechanism above the pivotal axes thereof with said hanger, and means for actuating said crank mechanism thereby to shift the door outwardly and upwardly. 19th. The combination with a car body, having a doorway, of a door therefor, a pair of hangers shiftably supported on said body, a double crank connect-

ing each of said shiftable hangers with the door, and means for actuating said cranks to move the door into position to be shifted away from the doorway. 20th. The combination with a car body, having a doorway, of a door therefor, a track secured to said body, a pair of hangers shiftably supported on said track and in permanent engagement therewith, crank mechanism connecting said hangers with said door to permit movement of said door independently of said hangers, means for actuating said crank mechanism to move said door outwardly and upwardly, a flanged bar secured to said door, and brackets co-operating with said flanged bar to maintain the bottom of said door in position in the doorway and for supporting said door during the shifting thereof.

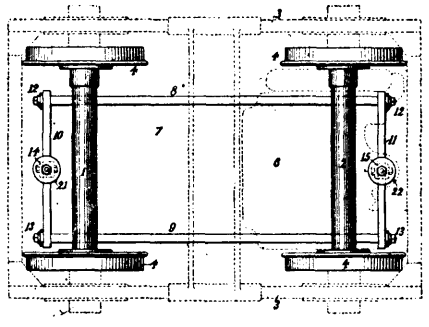
No. 68,226. Wire Tongs. *(Tenailles.)*

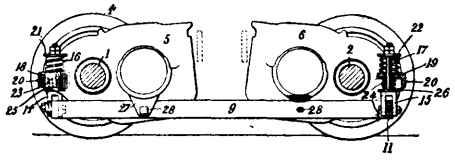


John Conrad, Watson, Missouri, U.S.A., 26th July, 1900; 6 years. (Filed 19th March, 1900.)

Claim.—A wire handling implement, comprising the counterpart numbers 1 and 2 pivotally united, and each member having its free ends connected by alternately arranged cross bars, and a locking hook 4 pivoted to one member and adapted to engage the opposite member to lock the jaws, substantially as shown and described.

No. 68,227. Electric Motor Suspender.
(Suspension de moteur électrique.)



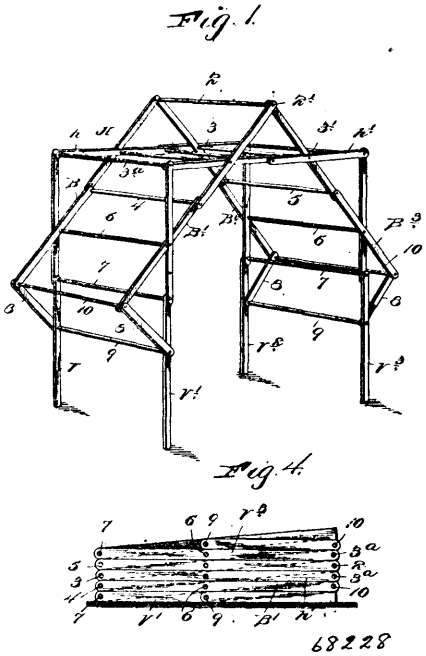


68227

George Gibbs, of Philadelphia, Pennsylvania, U.S.A., 26th July, 1900; 6 years. (Filed 22nd May, 1900.)

Claim.—1st. The combination with a car track, of a motor for propelling the same journalled upon the axle and geared thereto and having its field magnet upon one side thereof, an extension from said motor, or its casing, upon the other side of said axle, a cradle for the motor, and a spring suspension for supporting the other end of said cradle from said extension. 2nd. The combination of an electric car truck, two motors having their field magnets between the axles of the truck and respectively sleeved upon said axles, and a cradle for said motors flexibly supported at its respective ends from extensions of said motors outside the axles. 3rd. The combination of an electric motor, a car axle upon which the same is journalled, a supporting frame or cradle therefor, one or more extensions of said motor or its frame, outside the axle, hangers for supporting one end of the frame or cradle carried by said extension or extensions, and springs supporting said hangers from said extension, substantially as described. 4th. The combination of an electric motor, a car truck upon one of the axles on which the motor is sleeved, one or more supporting bars connected to said motor, spring suspensions for the bars from the axle to which the motor is sleeved through an extension of the motor on the side opposite the field magnet of the motor and supports for the other ends of said bars from the other axle. 5th. A balanced cradle for suspending a pair of axle mounted car motors, consisting of a quadrilateral frame on which the motor bodies normally rest, the frame being connected at the middle of two of its opposite sides to the rear or outer ends of the motors through the medium of springs acting in opposite directions. 6th. The combination with a pair of car motors sleeved to the truck axles, of a balanced cradle flexibly connected to the rear or outer ends of the motor at opposite ends of the cradle and midway of said ends. 7th. The combination with a pair of car motors sleeved to the truck axles, and respectively having bearings on the axles at or near the sides of the motors, of a balanced cradle flexibly connected to the rear or outer ends of the motors at points midway equidistant from the bearings.

No. 68,228. Clothes Rack. *(Sechoir à linge.)*



68228

John F. White, Bloomington, Illinois, U.S.A., 26th July, 1900; 6 years. (Filed 12th July, 1900.)

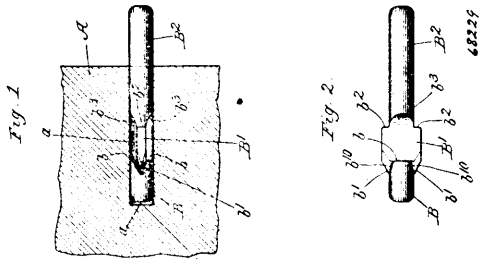
Claim.—1st. The combination of a horizontal portion consisting of sections provided with jointed bars, legs located at the corners of the horizontal portion and composed of jointed bars, braces disposed at opposite sides of and connected with the horizontal portion and with legs and jointed at a point above the said horizontal portion and diverging downwardly, supplemental braces connecting the said braces with the legs, and cross bars between the braces and legs and forming pivots for the same, substantially as described. 2nd. The combination with a horizontal portion consisting of side sections each comprising jointed bars, or legs of standards located at the corners of said horizontal portions and each leg or standard consisting of jointed bars, braces located at opposite sides of and connected respectively with said horizontal portion and vertical legs and jointed at a point above said horizontal portion and diverging therefrom and extending across and jointed to the legs, the ends of said braces being located at a point above the lower extremities of the legs, a brace connection for the ends of the said, and cross bars between the braces and the legs, substantially as described.

No. 68,229. Metal Dowel Pin or Tennon.
(Tampon métallique ou tenon.)

Emil Tyden, Hastings, Michigan, U.S.A., 26th July, 1900; 6 years. (Filed 26th January, 1900.)

Claim.—1st. A dowel pin made of metal rod or wire, having at opposite ends straight portions of unifrom cross section, and between such straight portions, a portion which is flattened to less than the cross dimension of the rod and widened to more than the other cross dimension to form thin fins which project at opposite sides

beyond the straight portions. 2nd. A dowel pin made of cylindrical metal rod or wire, having at the opposite ends cylindrical portions



and between such cylindrical portions, a portion which is flattened to a thickness less than the diameter of the cylindrical portion and widened so as to form fins protruding at both sides beyond such cylindrical portions, the lower edges of such protruding fins being acute, and the upwardly facing shoulders of the lower cylindrical portion, where the device is reduced in thickness to form the flattened portion, being abrupt. 3rd. A dowel pin made of cylindrical portions, and between such cylindrical portions, a portion which is flattened to a thickness less than the diameter of the cylindrical portions, and widened to form fins which project at both sides beyond such cylindrical portions, the edges of the lower ends of the protruding fins being acute and their upper ends constituting abrupt shoulders. 4th. A dowel pin made of cylindrical metal rod or wire having at the opposite ends cylindrical portions and between such cylindrical portions, a portion which is flattened to a thickness less than the diameter of the cylindrical portion and widened to form fins projecting at both sides beyond such cylindrical portions, the lower ends of such projecting fins being acute, their upper ends forming abrupt shoulders, the lower cylindrical portion presenting abrupt shoulders facing upward where the pin is reduced in thickness at the flattened part. 5th. A dowel pin made of cylindrical rod or wire, having at the opposite ends cylindrical portions, and between such cylindrical portions, a portion which is flattened to a thickness less than the diameter of the cylindrical portion and widened to form fins which project at both sides beyond such cylindrical portions, such fins extending down a short distance alongside the lower cylindrical portion and terminating acutely at their lower ends and abruptly at their upper ends, said lower cylindrical portion being relatively considerably extended beyond the acute terminals of the pins to constitute a pilot or steering portion for the dowel pin. 6th. A dowel pin made of cylindrical metal rod or wire having cylindrical end portions, and intermediate such cylindrical portions, a portion which is flattened to a thickness less than the diameter of the cylindrical portions and widened to form fins which extend at both sides beyond such cylindrical portions, the lower cylindrical portion being extended suitably to adapt it to serve as a pilot or steering portion for the pin, and having abrupt, upwardly facing shoulders at opposite sides where the thickness is reduced to form the flattened portion, the upper cylindrical portion having long, sloping, downwardly facing shoulders where said reduction in thickness occurs.

No. 68,230. Horse Shoe. (*Fer à cheval.*)

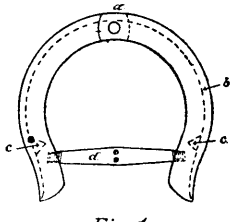


Fig. 1.

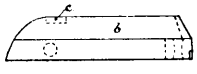


Fig. 2.

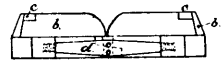


Fig. 3.

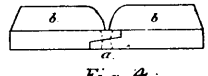


Fig. 4. 68230

Louis Napoleon Beauchemin, Gleichen, Alberta, North-West Territories, 26th July, 1900; 6 years. (Filed 3rd April, 1900.)

Claim.—A horse shoe comprising the sides having splayed flange *b*, spurs *c*, and double threaded bar *d*, all formed and combined as shown and described.

No. 68,231. Mechanism for Wiring Can Caps, etc.
(*Mécanisme pour ficeler les couvercles de boîtes en fer blanc.*)

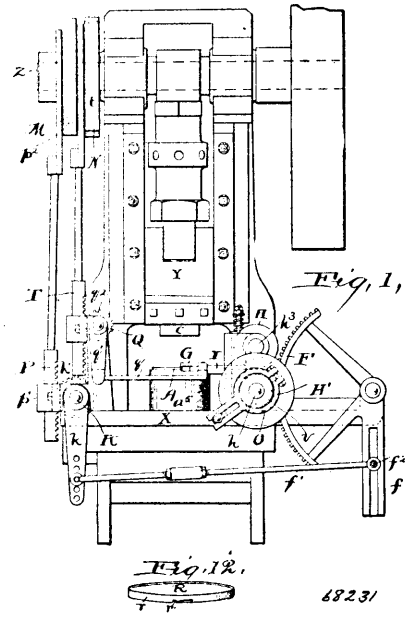


Fig. 1.

Fig. 12.

68231

George W. Vaillant, of Boston, Massachusetts, assignee of Herbert H. Hull, of Cleveland, Ohio, both in the U.S.A., 27th July, 1900; 6 years. (Filed 3rd October, 1899.)

Claim.—1st. The co-operating parts of a die adapted to curl the edge of an article similar to a cam cover around a wire, one of said die parts adapted to carry a wire tending to lie in the path of the edge of the article to be wired as the two are brought toward each other, combined with mechanism for moving such wire out of the way of said edge to be curled, substantially as and for the purpose specified. 2nd. The combination of the co-operating parts of a die adapted to curl the edge of an article similar to a can cover around a wire, and mechanism for shoving such wire into one of the die parts, and mechanism causing such wire to be pulled slightly backward after it is in the die to move it out of the way of the edge to be curled, substantially as and for the purpose specified. 3rd. The combination of the co-operating parts of a die adapted to curl the edge of an article similar to a can cover around a wire, and mechanism for pushing such wire into one of such die parts and then pulling it back slightly to draw it out of the way of the edge to be curled, and mechanism for cutting off the wire, substantially as and for the purpose specified. 4th. A die for curling the edge of a metallic article similar to a can cover around a wire which consists of an outer member having an internal curling groove and an inner expanding member having a flange adapted to extend over said groove, combined with mechanism for placing a wire in such curling groove and for drawing the same under the said flange and thereby out of the way of the article to be curled, and mechanism for holding said expanding ring in its expanded position while the article is being curled, and for thereafter contracting it, and mechanism for forcing said article into the disc to curl its edge around the wire, substantially as and for the purpose specified. 5th. A die for curling the edge of a metallic article similar to a can cover inwardly around a wire, which consists of an outer member having an internal curling groove and an inner expanding member having a flange adapted to extend over said groove, combined with mechanism for pushing a wire around the curling groove, mechanism for cutting off said wire some distance from the article in the die and for turning this projecting end outward, mechanism for holding the expanding member in its expanded position while the article is being curled, and for thereafter contracting it to release said wired article, and mechanism for forcing said article into the die to curl its edge inward around the wire, substantially as and for the purpose specified. 6th. The combination of a wiring die which includes an outer ring having an internal annular rib with a curling groove on its side, said ring having an opening through it entering said groove, an expanding ring having separable sections, each of which has an external annular flange adapted to extend over the said curling groove, means for expanding and contracting said ring, with wire feeding mechanism adapted to feed a wire into said groove and mechanism for cutting off the wire and bending its end outward, substantially as and for the purpose specified. 7th. The combination of a writing die, which includes an outer ring having an internal

annular rib with a curling groove on its side, said ring having an opening through one side, and an expanding ring made up of separable sections, each having an external flange, and mechanism for expanding and contracting said ring, with wire feeding mechanism, a wire guide, and a cut-off device pivoted on a vertical pivot and having a horizontal notch through which the wire passes in going from said wire guide to said opening, and means for oscillating said cut-off on its axis, whereby it cuts off the wire and bends its end outward, substantially as and for the purpose specified. 8th. The combination of a ring A, having the internal annular rib with a curling groove a^1, on its upper side, an expanding ring made up of sections, each of which has an external flange which extends over said rib whereby to hold a wire in said groove, and mechanism for expanding and contracting said ring, with wire feeding mechanism which pushes a wire through an opening in the ring A, into said curling groove, and around said ring and then pulls back upon said wire to tighten it in said groove, and a plunger for forcing a cap down in said ring A, whereby its edge is curled around said wire, substantially as and for the purposes specified. 9th. The combination, with an outer part of a die having an internal annular rib with a curling groove on its side, an opening from the outside of the die to said groove, an internal expanding ring having separable sections which have external flanges co-operating with said curling groove, mechanism for holding said inner ring in its expanded position, mechanism for then pushing a wire into said curling groove and around the same and for then drawing back on said wire slightly, mechanism for forcing an article similar to a can cover into said die and causing its edge to curl around said wire, mechanism for cutting off said wire, and mechanism for contracting said inner ring to release the article wired, substantially as and for the purpose specified. 10th. In a cap wiring apparatus, the combination of a wiring die having an external ring A, with an opening through its wall, wire feeding rolls, and a wire guide, with a cut-off device pivoted on a vertical axis between the end of the wire guide and the opening in the ring, said cut-off device having a horizontal slot through which the wire passes from the guide to the slot, and means for turning said cut-off on its axis to cut-off the wire and bend it outward, substantially as and for the purpose specified. 11th. In a cap wiring apparatus, the combination of a wiring die having an external ring A, with an opening through its wall, wire feeding rolls, and wire guide, with a cut-off device pivoted on a vertical axis between the end of the wire guide and the opening in the ring, said cut-off device having a horizontal slot through which the wire passes from the guide to the opening, said cut-off devices having a horizontal slot through which the wire passes from the guide to the opening, said cut-off device having a horizontal arm, a cam, a rack bar movable thereby, a pinion engaged by said rack bar, a crank arm rigidly connected with said pinion, and connections between said cut-off arm and crank arm, substantially as and for the purpose specified. 12th. The combination of an outer ring having an internal annular rib which has a curling groove in its side, an expanding inner ring having independently movable sections which have flanges adapted to extend above said rib and flanges adapted to extend below said rib and thereby prevent longitudinal movement of the ring sections, and radial guide pins and co-operating radial holes carried by the outer ring and the movable ring sections whereby said sections are allowed to move in radial directions, and means for expanding said inner ring, substantially as and for the purpose specified. 13th. The combination with a plunger, of a die composed of a pair of co-operating rings which have on their proximate faces an annular rib on one ring and a flange on the other, one of said rings having independently movable sections whereby it is adapted to approach or recede from the other ring, a sleeve movable axially in relation to such expanding ring and carrying inclined surfaces adapted to operate upon the ring sections and move them out or in as it moves in one direction or the other, a rod independently movable through said sleeve, a shoulder on said rod adapted to limit the independent movement of the rod through the sleeve and cause the sleeve to move with it, a plate moving with said rod and adapted to support an article similar to a can cover in position to be acted upon by said die, and means for causing said plate to move said article away from said die, substantially as and for the purpose specified. 14th. The combination of an outer ring having an internal rib which has a curling groove in its side, an expanding ring within the outer ring, and made up of independently movable sections, each having a flange adapted to extend over said rib, with a sleeve movable axially through said expanding ring carrying inclined surfaces to engage with the ring sections to move them out or in as it moves in one direction or the other through said expanding ring, a rod movable through the sleeve, an ejector plate on the end of the rod and a shoulder on said rod on the other side of said sleeve, and a spring adapted to move the rod in one direction, substantially as and for the purpose specified. 16th. The combination of an outer ring A, having an internal rib a, in which a curling groove a^1, is formed, an inner ring within this outer ring, said inner ring being expandable by means of movable sections, each section having (1) a flange adapted to extend over said rib and hold a wire in the curling groove, and (2) a conical surface on its upper side, with a sleeve which passes axially through said expanding ring and has bevelled surfaces for engaging with the ring sections to move them outward and inward, a longitudinally movable rod passing through said sleeve, an ejector plate on the end of said rod, and a shoulder on the rod on the other side of said sleeve, and a reciprocating plunger above said ejector plate, substantially as and for the purpose specified. 16th. The combination of the ring A having the internal annular rib a with a curling groove a^1 in its upper side and an expanding ring made up of independently movable sections, each of which has (1) an external flange adapted to extend over a rib a and to hold a wire in said groove, and (2) the bevelled surface b^5, with the sleeve D which passes axially through the expanding ring and has (1) a bevelled shoulder d^2, (2) a reduced neck d, and (3) a flange d^2 with the bevelled surface d^4 on its underside, a rod E movable through said sleeve, having an ejector plate on its end above the sleeve and a shoulder below the sleeve, and a spring for moving said rod upward, and a movable plunger, substantially as and for the purpose specified. 17th. The combination of a fixed ring having an internal annular rib which has a curling groove in its upper side, an expanding ring made up of independently movable sections each having a flange adapted to extend over said rib, and means for preventing longitudinal movement of said ring sections, with a sleeve movable axially through said expanding ring and carrying inclined surfaces for moving the ring sections out or in as it moves in one direction or the other, a rod movable through the sleeve, an ejector plate on the end of said rod, a shoulder on said rod below said sleeve, a spring for moving the rod in one direction, and a press plunger for moving it in the opposite direction, substantially as and for the purpose specified. 18th. The combination of a ring having an internal annular rib with a curling groove in its upper side, an expanding ring made up of independent sections each having a flange adapted to extend over said rib, radial guide pins secured to and radial holes formed in the outer ring and the co-operating ring sections, whereby said sections are caused to move in radial directions, with a sleeve movable axially through said expanding ring carrying inclined surfaces for moving the ring sections out or in as it moves in one direction or the other, a rod movable through the sleeve, an ejector plate on the end of said rod, a shoulder on said rod on the other side of said sleeve, a spring for moving the rod in one direction, and a reciprocating plunger for moving it in the opposite direction, substantially as and for the purpose specified. 19th. The combination of a ring A, secured upon the bed plate of the press beneath the plunger thereof, and having the internal annular rib with a curling groove on its upper side, and an expanding ring composed of independent sections each having (1) two external flanges adapted to project above and below said rib, and (2) the conical surface b^5, the sleeve D having (1) a reduced neck, (2) bevelled shoulder, and (3) an end flange with an inclined surface on its underside, a rod movable through said sleeve, an ejector plate secured thereto above the sleeve, a shoulder on the rod below the sleeve, a spring for moving the rod upward, and a reciprocating press plunger for moving it downward, substantially as and for the purpose specified.

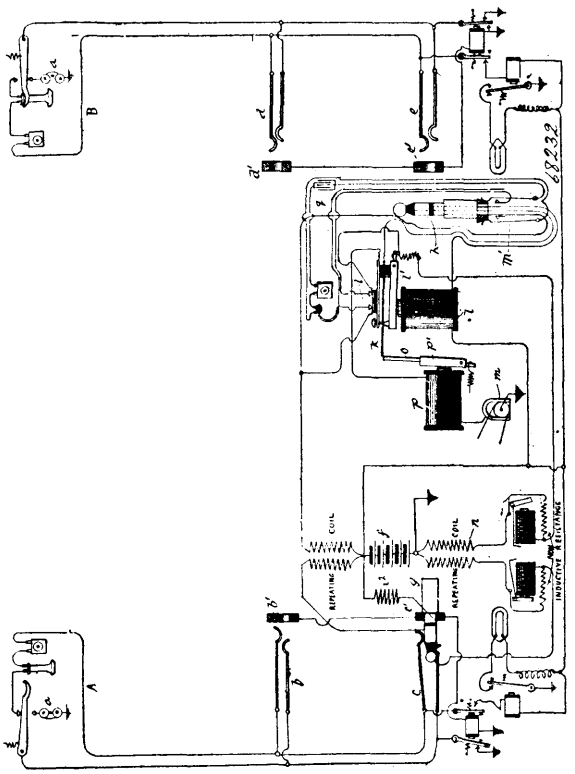
No. 68,232. Telephone Exchange System.

(Système d'échange de téléphones.)

The Bell Telephone Company of Canada, Limited, Montreal, Quebec, Canada, assignee of George Leakin Cragg, Chicago, Illinois, U.S.A., 27th July, 1900; 6 years. (Filed 5th October 1898.)

Claim.—1st. In an operator's generating and telephone switching apparatus for telephone exchanges, the combination with a single electromagnetic appliance, of suitable operator's generator and telephone circuit connections, and switching mechanism operated by said electromagnetic appliance for operatively changing the conditions of the operator's telephone circuit and for connecting the generator with and disconnecting it from a subscriber's line, substantially as described. 2nd. In an operator's generator and telephone switching apparatus for telephone exchanges, the combination with a single electromagnetic appliance, of a signal circuit, an operator's telephone circuit, and switching mechanism operatively associated with said electromagnetic appliance for changing the condition of the operator's telephone circuit and serving to include the signaling generator in and disconnect it from the signal circuit, substantially as described. 3rd. In an operator's generator and telephone switching apparatus for telephone exchanges, the combination with a suitable circuit connection and a signaling switch for connecting a signal generator with and disconnecting it from a signal circuit conductor, of an operator's telephone switch and a signal electromagnatic appliance for effecting the operation of said signaling and telephone switches, substantially as described. 4th. In a telephone exchange system, the combination with two telephone lines extending from subscribers' stations to an exchange, of a cord circuit for forming a continuation of one of said telephone lines, a connecting plug adapted to connect said cord circuit and telephone line with the remaining telephone line, a signal at the subscribers' station of the latter line, a generator with and disconnecting it from said signal, an operator's telephone switch for connecting the operator's telephone with said plug and disconnecting it therefrom, and a single electromagnetic appliance for operating said signaling and telephone switches, substantially as described. 5th. In a telephone exchange system, the combination with two telephone lines extending from subscribers' stations to an exchange, of a cord circuit for forming a continuation of one of said telephone lines, a connecting plug adapted to connect said cord circuit and telephone line with the remaining telephone line, a signal at the subscribers' station of the latter line, a generator, a signaling switch for connecting the generator with and disconnecting it from said signal, an operator's telephone, a

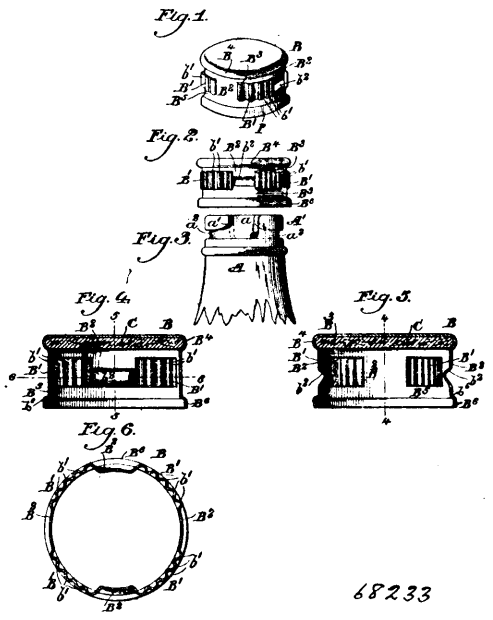
telephone switch for connecting the operator's telephone with the cord circuit to complete a telephonic circuit between the operator



and the subscriber at the station of the first aforesaid telephone line, said telephone switch serving to break said telephonic circuit when in an alternative position, and a single electromagnetic appliance for operating said signal and telephone switches, substantially as described. 6th. In a telephone exchange system, the combination with two telephone lines extending from subscribers' stations to an exchange, of a cord circuit for forming a continuation of one of said telephone line, a connecting plug for connecting the second telephone line with the cord circuit and the aforesaid telephone line, a signal at the subscribers' station of the second telephone line, a generator, a signaling switch for connecting the generator with and disconnecting it from said signal,'an operator's telephone, a telephone switch for connecting the operator's telephone with the cord circuit to complete a telephonic circuit between the operator and the subscriber at the station of the first aforesaid telephone line, said telephone switch serving to break said telephonic circuit when in an alternative position, a single electromagnetic appliance for operating said signal and telephone switches, and means controlled by said connecting plug for operating said electromagnetic appliance, substantially as described. 7th. In a telephone exchange system, the combination with two telephone lines extending from subscribers' stations to an exchange, of a cord circuit for forming a continuation of one of said telephone lines, a connecting plug for connecting the second telephone line with the cord circuit and the aforesaid telephone line, a signal at the subscribers' station of the second telephone line, a generator, a signaling switch for connecting the generator with and disconnecting it from said signal, an operator's telephone, a telephone switch for connecting the operator's telephone with the cord circuit to complete a telephonic circuit between the operator and the subscriber at the station of the first aforesaid telephone line, said telephone switch serving to break said telephonic circuit when in an alternative position, a single electromagnetic appliance for operating said signal and telephone switches, a connecting or spring jack switch for the second telephone line, in which the connecting plug is inserted upon establishing connection between the two telephone lines, means operated by said plug and connecting switch for operating said electromagnetic appliance to open the operator's telephone circuit, said electromagnetic appliance in the latter condition of use serving to include the generator in circuit with the signal at the station of the aforesaid second telephone line, and means operated by the subscriber at said second station for further actuating said electro magnetic appliance to remove the generator from circuit with said signal, substantially as described. 8th. In a telephone exchange system, the combination with two telephone lines extending from subscriber's stations to an exchange, of a cord circuit for forming a continuation of one of said telephone lines, a connecting plug for connecting the second telephone line with the cord circuit and the aforesaid telephone line, a signal at the subscriber's station of the second telephone line, a generator with and disconnecting it from said signal, an operator's telephone with the cord circuit to complete a telephonic circuit between the operator and the subscriber at the station of the first aforesaid telephone line, said telephone switch serving to break said telephonic circuit when in an alternative position, a single electro magnetic appliance for operating said signal and telephone switches, a connecting or spring jack switch for the second telephone line, in which the connecting plug is inserted upon establishing connection between the two telephone lines, means operated by said plug and connecting switch for operating said electro magnetic appliance to open the operator's telephone circuit, said electro magnetic appliance in the latter condition of use serving to include the generator in circuit with the signal at the station of the aforesaid second telephone line, means operated by the subscriber at said second station for further actuating said electro magnetic appliance to remove the generator from circuit with said signal, and a socket switch adapted through the agency of the connecting plug which engages the same when not in use to open the operator's telephone circuit, substantially as described. 9th. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second telephone line, an electro magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of said armature when unattracted, a circuit for said electro magnet, and means for closing said circuit controlled by the connecting plug and the line switch or spring jack engaging the same, whereby the armature is attracted and said telephone bridge conductor is broken by the switch controlled by the armature, substantially as described. 10th. In a telephone exchange system, the combination with two telephones lines, of a cord circuit for forming a continuation of one of said lines, a plug adapted to unite said cord circuit and telephone line with the second telephone line, an electro magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of the armature when unattracted, a circuit for said electro magnet, means for closing said circuit controlled by the connecting plug and the line switch engaging the same, whereby the armature is attracted and circuit through said bridge conductor and telephone is broken, and a socket switch adapted through the agency of the connecting plug normally engaging the same to effect an opening in said telephone bridge conductor, substantially as described. 11th. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second telephone line, an electro magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of the armature when unattracted, a circuit for said electro magnet, means for closing said circuit controlled by the connecting plug, whereby the armature is attracted and circuit through said bridge conductor and telephone is broken, and a mechanically actuable socket switch adapted to open and close another portion of said metallic telephone bridge conductor independently of the switch controlled by the armature, said switch being adapted through the agency of the connecting plug to open said bridge conductor, the opening or openings in said bridge conductor at said socket switch being closed thereby when relieved of the mechanical influence of the connecting plug, substantially as described. 12th. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second telephone line, an electro-magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch through the agency of the armature when unattracted, a mechanically suitable socket switch adapted to open and close another portion of said metallic telephone bridge conductor independently of the switch controlled by the armature, said switch being adapted through the agency of the connecting plug to open said bridge conductor, the opening or openings in said bridge conductor at said socket switch being closed thereby when relieved of the mechanical influence of the connecting plug, and a line or springjack switch for the said second telephone line in which the connecting plug is inserted in establishing connection between the two lines, the circuit including said electro-magnet being adapted to be closed by said plug and line switch, whereby the operator's telephone is cut out of circuit upon establishing connection between the two telephone lines, substantially as described. 13th. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second telephone line an electro-magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of the armature when unattracted, a mechanically actuable socket switch

adapted to open and close another portion of said metallic telephone bridge conductor independently of the switch controlled by the armature, said switch being adapted through the agency of the connecting plug to open said bridge conductor, the opening or openings in said bridge conductor at said socket switch being closed thereby when relieved of the mechanical influence of the connecting plug, a line or springjack switch for the said second telephone line in which the connecting plug is inserted in establishing connection between the two lines, the circuit including said electro-magnet being adapted to be closed by said plug and line switch, whereby the operator's telephone is cut out of circuit upon establishing connection between the two telephone lines, a signal at the subscriber's station of the said second telephone line, a signalling generator, and a ringing switch controlled by said electro-magnet adapted to effect the inclusion of said generator with said signal upon the establishment of connection between the two telephone lines, substantially as described. 14th. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second telephone line, an electro-magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of the armature when unattracted, a mechanically actuable socket switch adapted to open and close another portion of said metallic telephone bridge conductor independently of the switch controlled by the armature, said switch being adapted through the agency of the connecting plug to open said bridge conductor, the opening or openings in said bridge conductor at said socket switch being closed thereby when relieved of the mechanical influence of the connecting plug, a line or springjack switch for the said second telephone line in which the connecting plug is inserted in establishing connection between the two lines, the circuit including said electro-magnet being adapted to be closed by said plug and line switch, whereby the operator's telephone is cut out of circuit upon establishing connection between the two telephone lines, a signal at the subscriber's station of the said second telephone line, a signalling generator, a ringing switch actuated by the magnet when energized upon completion of connection between two telephone lines to include said generator in circuit with said signal, a telephone switch at said station, and means controlled thereby for effecting the removal of said generator, substantially as described. 15th. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second line, an electro-magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of the armature when unattracted, a mechanically suitable socket switch adapted to open and close another portion of said metallic telephone bridge conductor independently of the switch controlled by the armature, said switch being adapted through the agency of the connecting plug to open said bridge conductor, the opening or openings in said bridge conductor at said socket switch being closed thereby when relieved of the mechanical influence of the connecting plug, a line or spring jack switch for the said second telephone line in which the connecting plug is inserted in establishing connection between the two lines, the circuit including said electro-magnet being adapted to be closed by said plug and line switch, whereby the operator's telephone is cut out of circuit upon establishing connection between the two telephone lines, a signal at the subscriber's station of the said second telephone line, a signalling generator, a ringing switch actuated by the magnet when energized upon completion of connection between two telephone lines to include said generator in circuit with said signal, a telephone switch at said station, a second electro-magnet through which current from said generator is directed, and a path of low resistance for the current passing from said generator through said second electro-magnet, the said switch at the second subscriber's station upon the removal of the telephone receiver therefrom, effectively to energize said second eletro-magnet, which is thereupon adapted to effect the removal of the generator, substantially as described. 16th. The combination with two telephone lines, of a cord circuit for forming the continuation of one of said lines, a connecting plug for uniting said cord circuit and telephone line with the second line, a line or spring jack switch for the second telephone line in which said connecting plug is inserted upon establishing connection between said telephone lines, a signal at the subscriber's station of the second telephone line, a signalling generator, a ringing switch for including said generator in circuit with said signal and removing it from said circuit, an operator's telephone, a telephone switch for including said telephone in telephonic circuit with the telephone at the subscriber's station of the first telephone line and removing it therefrom, a single electro-magnetic appliance for operating said switches adapted to be operated through the agency of the connecting plug and its engaging line switch to open circuit through the operator's telephone and to include the signalling generator in circuit with the signal at the second subscriber's station, and a telephone switch at the latter station and a suitable circuit controlled thereby serving upon the removal of the telephone from said switch to operate said appliance to effect the removal of said generator, substantially as described. 17th. The combination with two telephone lines, of a cord circuit for forming the continuation of one of said lines, a connecting plug for uniting said cord circuit and telephone line with the second telephone line, a line or spring jack switch for the second telephone line, in which said connecting plug is inserted upon establishing connection between said telephone lines, a signal at the subscriber's station of the second telephone line, a signalling generator, a ringing switch for including said generator in circuit with said signal and removing it from said circuit, an operator's telephone, a telephone switch for including said telephone in telephonic circuit with the telephone at the subscriber's station at the first telephone line and removing it therefrom, a single electro-magnetic appliance for operating said switches, adapted to be operated through the agency of the connecting plug and its engaging line switch to open circuit through the operator's telephone and to include the signalling generator in circuit with the signal at the second subscriber's station, and a telephone switch at the latter station and a suitable circuit controlled thereby serving, upon the removal of the telephone from said switch, to operate said appliance to effect the removal of said generator, substantially as described. 18th. The combination with two telephone lines, of a cord circuit for forming the continuation of one of said lines, a connecting plug for uniting said cord circuit and telephone line with the second telephone line, a line or spring jack switch for the second telephone line, in which said connecting plug is inserted upon establishing connection between said telephone lines, a signal at the subscriber's station of the second telephone line, a signalling generator, a ringing switch for including said generator in circuit with said signal and removing it from said circuit, an operator's telephone, a telephone switch for including said telephone in telephonic circuit with the telephone at the subscriber's station of the first telephone line and removing it therefrom, a single electro-magnetic appliance for operating said switches, a circuit independent of the telephone circuit or circuits between the subscriber which includes a portion of said appliance adapted to be closed by the connecting plug and the line switch in which it is inserted to operate said appliance to open circuit through the operator's telephone, the said appliance and the ringing switch, including the signalling generator in circuit with the signal at the second subscriber's station, and a telephone switch at the latter station, a suitable circuit controlled thereby jointly with said telephone switch, upon the removal of the telephone from said switch, to operate said appliance to actuate said ringing switch in position to effect the removal of said generator, said appliance including means for preventing the re-operation of said ringing switch to operate said signal during the established connection, substantially as described. 19th. The combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug for uniting said cord circuit and telephone line with the second telephone line, a line or spring jack switch for the second telephone line with which said connecting plug is engaged upon establishing connection between said telephone lines, a signal at the subscriber's station of the second telephone line, a signalling generator, a ringing switch for including said generator in circuit with said signal and disconnecting it therefrom, an operator's telephone, a telephone switch for connecting said telephone with the aforesaid plug, a single electro-magnetic appliance for operating said switches adapted to be operated through the agency of the connecting plug and the engaging spring jack or line switch to disconnect the operator's telephone from the said plug and to include the signalling generator in circuit with the signal at the second subscriber's station, and a telephone switch at the latter station and a suitable circuit controlled thereby, serving, upon the removal of the telephone from said switch, to operate said appliance to effect the disconnection of said generator, substantially as described. 20th. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second telephone line, an electro-magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of said armature when unattracted, a circuit for said electro-magnet, and means for governing said circuit controlled by the connecting plug, whereby the armature is attracted and said telephone bridge conductor is broken by the switch controlled by the armature, substantially as described. 21st. In a telephone exchange system, the combination with two telephone lines, of a cord circuit for forming a continuation of one of said lines, a connecting plug adapted to unite said cord circuit and telephone line with the second telephone line, an electro-magnet having an armature, a switch controlled by the armature connected with a metallic bridge conductor of the cord circuit, an operator's telephone which is adapted to be connected in said bridge conductor by said switch, through the agency of the armature when unattracted, a circuit for said electro-magnet, means for governing said circuit controlled by the connecting plug, whereby the armature is attracted and circuit through said bridge conductor and telephone is broken, and a socket switch adapted through the agency of the connecting plug normally engaging the same to effect an opening in said telephone bridge conductor, substantially as described.

No. 68,233. Closure for Bottles and Similar Receptacles. *(Fermeture de bouteilles.)*



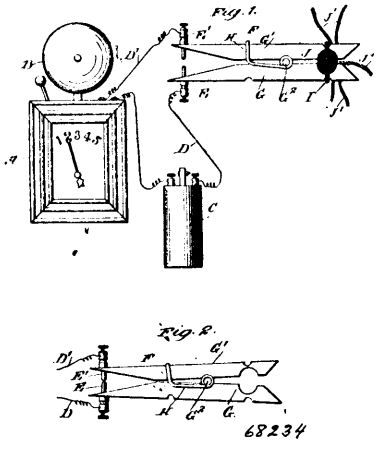
Edmund Hoffman, Charles Ewing Elmer Whiteley and Robert Porter Frist, all of Bridgeton, New Jersey, and Henry Whiteley and William Gustavus Whiteley, both of Wilmington, Delaware, all in the U.S.A., 27th July, 1900; 6 years. (Filed 12th July, 1900.)

Claim.—1st. A sheet metal cap for closing bottles and similar receptacles having the upper part of its sides indented with longitudinal crimps and formed also with inwardly extending locking lugs and having also a circumferential beading formed at the bottom of the sides of the caps below the crimps and lugs to prevent spreading. 2nd. A sheet metal cap closure for bottles and similar receptacles having its sides indented with two or more groups of longitudinal crimps separated by plain facets in some or all, of which facets are pressed inwardly extending lugs and a circumferential beading at the bottom of the sides of the cap below the crimps and facets to prevent spreading. 3rd. A sheet metal cap closure for bottles and similar receptacles having its sides indented with longitudinal crimps and inwardly extending lugs, a circumferential groove formed below said crimps and lugs and a circumferential convex beading below said groove to prevent spreading. 4th. A readily removable sheet metal cap stopper for closing bottles and similar receptacles having the upper part of its sides indented with longitudinal crimps and formed also with inwardly extending locking lugs and having a circumferential beading formed at the bottom of the cap below the crimps and lugs to prevent spreading of said sides. 5th. A readily removable sheet metal cap stopper for closing bottles and similar receptacles, having its sides indented with two or more groups of longitudinal crimps separated by plain facets, in some or all of which facets are pressed inwardly extending lugs, and a circumferential beading at the bottom of the sides of the cap below the crimps and facets to prevent spreading of said sides.

No. 68,234. Electric Fire Alarm. *(Avertisseur d'incendie électrique.)*

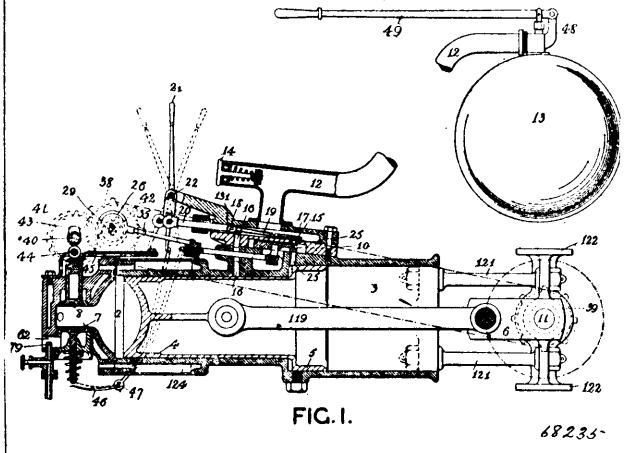
Jehan de Froment, of Notre Dame de Lourdes, Manitoba, Canada, 27th July, 1900; 6 years. (Filed 26th April, 1900.)

Claim.—1st. An electric fire alarm, comprising a controller normally locked in an open position and arranged for closing the circuit when unlocked, a charge of pyroxylin on the controller and in contact with the atmosphere and which, when ignited, unlocks the controller for the purpose mentioned, and threads of pyroxylin spun on a flexible support and loading from said charge in various directions, substantially as described. 2nd. A thermostatic apparatus, comprising an actuated device, an operating device therefor, said operating device comprising spring pressed members, a continuous locking cord engaging both members and having an unbroken stretch between them, and a charge of highly inflammable material independent of the locking cord, said charge being held between the said members and engaging the cord. 3rd. An electric fire alarm provided with a circuit closer having spring pressed members, a cord for locking the members in an open position, a charge of pyroxylin held on said members, with the cord in contact with the charge,



and threads of pyroxylin leading from said charge in different directions, as set forth.

No. 68,235. Internal Combustion Motor. *(Moteur.)*

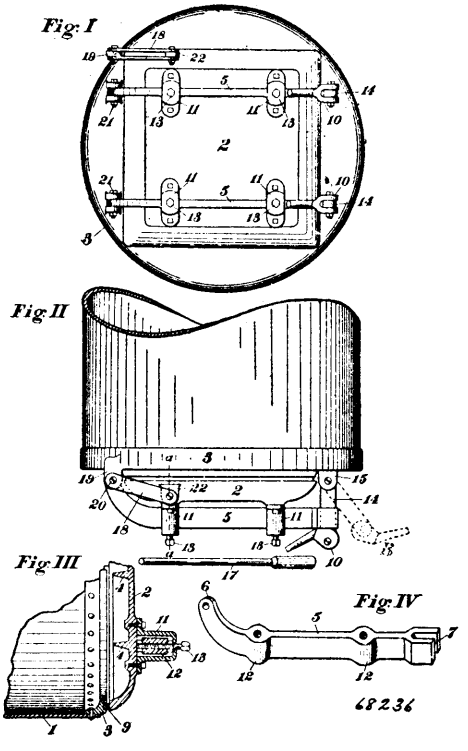


Henry Thomas Dawson and Henry Alfred Dawson, both of Canterbury, Kent, England, 27th July, 1900; 6 years. (Filed 11th December, 1899.)

Claim.—1st. In an internal combustion motor, the combination of a combustion cylinder, an air cylinder forming an enlarged continuation of the combustion cylinder, a combustion piston, an annular air piston in one with the combustion piston, a crank shaft, a piston rod connecting the piston and crank shaft, an admission valve, an exhaust valve, an ignition device, a valve box, a port opening from the valve box into the combustion cylinder, a port opening from the air cylinder into the valve box, an air reservoir communicating with the said valve box, a valve fitted to said reservoir normally adapted to admit air into said reservoir and prevent its return therefrom, a non-return valve located in the said valve box and adapted to open and close the port opening from the air cylinder into the valve box, means for moving the said non-return valve at half the speed of the crank shaft, and means for moving the said non-return valve by hand, substantially as and for the purposes set forth. 2nd. In an internal combustion motor, the combination of a combustion cylinder, an air cylinder forming an enlarged continuation of the combustion cylinder, a combustion piston, an annular air piston in one with the combustion piston, a crank shaft, a piston rod connecting the piston and crank shaft, an admission valve, an exhaust valve, an ignition device, a valve box, a port opening from the valve box into the combustion cylinder, a port opening from the air cylinder into the valve box, an air reservoir communicating with the said valve box, a valve fitted to said reservoir normally adapted to admit air into said reservoir and prevent its return therefrom, a non-return valve located in the said valve box adapted to open and close the port opening from the air cylinder into the valve box, an augmenting valve also located in the said valve box, connected to the non-return valve and adapted to open and close the port opening from the valve box into the combustion cylinder, and means for moving the said non-return and augmenting valves by hand, substantially as and for the purposes set forth.

3rd. In combination, the non-return valve 15, the augmenting valve 18, the tail 19 on the non-return valve jointed to the augmenting valve, the ports 16 and 25, the pivoted hand lever 21, and the rod 20 connecting the augmenting valve 18 and the hand lever 21, substantially as and for the purpose set forth. 4th. In combination, the valve box 17, the non-return valve 15, the augmenting valve 18, a recess 129 in the back of the augmenting valve, a blade spring 50 having one end turned over, a pin 128 on the said turned over end of the blade spring adapted to engage in said recess, and lateral guides 130 on the back of the said non-return valve adapted to receive the other end of the said non-return valve, substantially as and for the purpose set forth. 5th. In an internal combustion motor, the combination with the cylinder, piston, piston rod, crank shaft and valve, of a shaft rotatable at the same speed as the crank shaft, a non-circular portion of the said shaft set at an angle to the length of such shaft, a disc, a non-circular hole passing obliquely through said disc and adapted to receive the said non-circular portion of the shaft with a sliding fit, lateral guides for the said disc, a strap surrounding said disc, a rigid connection between said strap and the said valve, means for moving the said shaft in the direction of its length, and means for rotating the said shaft, substantially as and for the purpose set forth. 6th. In an internal combustion motor, the combination with the cylinder, piston, piston rod, crank shaft and admission valve, of a shaft rotatable at half the speed of the crank shaft, an exhaust valve, a spring adapted to close the said exhaust valve, a roller carried by the said spring and adapted to bear on the said exhaust valve, a cam mounted on the said shaft, having a limited backlash relatively to the crank shaft, and adapted to bear on the said roller, and means for rotating the said shaft, substantially as and for the purpose set forth. 7th. In an internal combustion motor, the combination with an automatic admission valve, of a pivoted lever, an elastic tongue carried by said lever and adapted to press open the said admission valve, and means for operating the said pivoted lever, substantially as and for the purpose set forth. 8th. In an internal combustion motor, the combination with an automatic admission valve, of a pivoted lever, an elastic tongue carried by the said lever and adapted to press open the said admission valve, and a pivoted hand lever adapted to operate on the said pivoted lever, substantially as and for the purpose set forth.

No. 68,236. Hermetically Closing Door.
(*Porte fermant hermétiquement.*)



Patrick F. Dundon, of San Francisco, California, U.S.A., 27th July, 1900; 6 years. (Filed 29th March, 1900.)

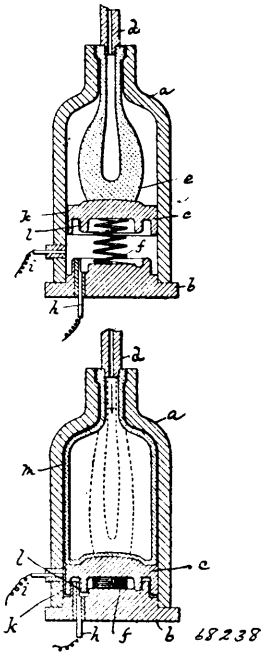
Claim.—1st. In a hermetically closing door, the pressing bars 5, connected to the frame on which the door closes, and the regulating screws 13, to bear upon four or more points against the door and distribute pressure thereon, substantially as specified. 2nd. In a hermetically closing door, the pressing bars 5, pivoted to the door frame and forming supporting hinges for the door, the adjusting screws 13, bearing upon the door and distributing the pressure thereon at four or more points, and the housings 11, to connect the doors and the pressing bars, combined and operating, substantially as specified. 3rd. In a hermetically closing door, pressing bars to force the door upon its seat, bearing at four or more points thereon, forming also hinges for the door, and in combination therewith the radius links 18, pivoted in the same axial line as the pressing bars, and holding the door to adjustment thereon, substantially as specified. 4th. In a hermetically closing door, the pressing bars 5, provided with the adjusting screws 13, to bear at four or more points on the door, forming also supporting hinges for the same, the housings 11, links 18, and cams to force the pressure bars against the door, combined and operating in the manner, substantially as specified.

No. 68,237. Method of Manufacturing and Finishing Leather. (*Méthode de fabriquer et finir le cuire.*)

Christian Eugene Lappe and Henry A. Lappe, both of Pittsburg, Pennsylvania, U.S.A., 27th July, 1900; 6 years. (Filed 23rd March, 1900.)

Claim.—1st. The herein described improved method of manufacturing and finishing leather which consists in stuffing and drying a tanned skin or hide, subjecting the same on the grain side to a composition of jet black colouring matter, then slicking, drying and staking the same, subjecting the skin or hide to a seasoning composition of blue stone, iron, logwood, ammonia, blood and nigrosine, then drying in a temperature of 120° to 180° Fahrenheit, and then suitably glazing to produce the finished product, substantially as herein set forth.

No. 68,238. Glass Mould. (*Moule à verre.*)



Heinrich Wilhelm Heerdt, Aussig, Austria, 27th July, 1900; 6 years. (Filed 10th March, 1900.)

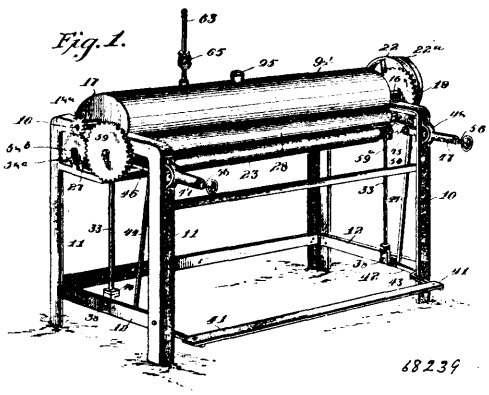
Claim.—1st. The combination with a glass mould of an electric circuit closed automatically by the glass ball. 2nd. The combination with a glass mould, of an insulated contact fastened to the mould wall, another insulated contact ending in the bottom of the mould, substantially as shown and described. 3rd. The combination with a glass mould of insulated contact in the wall and the bottom, a spiral spring fastened on top of the bottom and bearing a plate, substantially as shown and described.

No. 68,239. Leather Ironing Machine.
(*Machine à repasser le cuire.*)

William Philo Roberts, Portville, New York, U.S.A., 27th July, 1900; 6 years. (Filed 11th January, 1900.)

Claim.—1st. In a leather ironing machine, the combination of a heatable ironing roll, an elastic pressure roll, and a delivery roll, said pressure roll being in operative relation to the ironing and delivery rolls and driven to rotate in an opposite direction to the delivery roll, substantially as described. 2nd. In a leather ironing machine, the combination of a heatable ironing roll, an elastic pressure roll geared thereto for rotation in the same direction and arranged to co-act with said ironing roll, and a delivery roll geared

to the pressure roll to rotate in an opposite direction thereto and arranged in operative relation to the same, said pressure roll being



yieldable with relation to the ironing and delivery rolls, substantially as described. 3rd. In a leather ironing machine, the combination of a heatable ironing roll, a pressure roll co-acting therewith and rotating in the same direction therewith, means for permitting the pressure roll to move bodily with relation to the ironing roll, and a delivery roll co-acting with and rotating in an opposite direction to the pressure roll, said delivery roll being supported in yieldable relation to the pressure roll, substantially as described. 4th. In a leather ironing machine, the combination of a heatable ironing roll, a yieldable pressure roll co-acting with and rotating in the same direction with said ironing roll, a delivery roll co-acting with and rotating in an opposite direction to the pressure roll, slidable bearings in which the delivery roll is journalled, and tension devices for normally holding the delivery roll in active relation to the pressure roll, substantially as described. 5th. In a leather ironing machine, the combination of a heatable ironing roll, a delivery roll, an elastic pressure roll in active relation to and rotating in the same direction with the ironing roll, swinging arms for supporting the pressure roll in position, and tension devices for normally pressing said pressure roll toward the ironing roll, substantially as described. 6th. In a leather ironing machine, the combination with an ironing roll, of a delivery roll adjacent thereto, a pressure roll in constant contact with the delivery roll and movable into and out of contact with the ironing roll, the peripheries of the ironing and pressure rolls moving in opposite directions at the point of contact, and means for moving the pressure roll and for varying its pressure against the ironing roll. 7th. In a leather ironing machine, the combination with an ironing roll, of a delivery roll adjacent thereto, a pressure roll in variable contact with said rolls, a spring for holding the delivery and pressure rolls in yielding constant contact, and a treadle connected to the pressure roll by intermediate links for moving the pressure roll toward and from said ironing and delivery rolls, the periphery of the pressure and the ironing rolls moving in opposite directions at the point of contact. 8th. In a leather ironing machine, the combination of a set of ironing and pressure rolls, swinging bearings for said pressure roll, means for manually adjusting said bearings to move the pressure roll away from the ironing roll, and a tension device to normally hold the pressure roll in active relation to the ironing roll, substantially as described. 9th. In a leather ironing machine, the combination of a heatable ironing roll, swinging arms provided with journal bearings, a pressure roll journalled in said bearings to travel with said arms, wheel shoes movable with said bearings, and spring actuated plungers having the cam faces in the path of said shoes for the latter to ride thereon, substantially as described. 10th. In a leather ironing machine, the combination of a heatable ironing roll, adjustable bearings carrying a pressure roll, manually operative devices connected with said adjustable bearings, wheel shoes movable with the bearings and the adjusting devices therefor, and cam faced plungers engaging with the wheel shoes, for the purpose described, substantially as set forth. 11th. In a leather ironing machine, the combination of a heatable ironing roll, a pressure roll, swinging arms having bearings for said pressure roll, treadle mechanism connected with said swinging bearings, spring-actuated plungers contiguous to said bearings and provided with cam faces, and wheel shoes mounted to travel with the bearings and to ride against the cam faces of said plungers, substantially as described. 12th. In a leather ironing machine, the combination with an ironing roll, and a pressure roll, of adjusting bearings for said pressure roll, links secured to the bearings, the cam faced plungers slidably confined contiguous to said bearings, wheel shoes secured to the links and arranged to ride against the cam faces of said plungers, pusher springs to normally impel the plungers in one direction, tension regulating devices for said springs, and means for moving the wheel shoe over the cam faces to move the pressure roll in the direction of the ironing roll, substantially as described. 13th. In a leather ironing machine, the combination with a heatable ironing roll, and a pressure roll, of swinging bearings for said pressure roll, a treadle mechanism connected with said bearings, the fixed spring housings having the yokes, the plungers slidably confined in said housings and having the cam faces, wheel shoes movable with the bearings and riding against said plungers, the stop nuts adjustable on the plungers, tension springs confined within the housings and acting against the plungers, and the regulating screws mounted in the housings in active relation to the springs, substantially as described. 14th. In a leather ironing machine, the combination with a heatable ironing roll and a pressure roll, of adjustable bearings for said roll, swinging arms for supporting said bearings, a treadle having the upright arms, links connecting said upright arms with the pressure roll bearings, wheel shoes journalled on the upright arms, and spring actuated plungers having the cam faces against which the wheel shoes are adapted to ride, substantially as described. 15th. In a leather ironing machine, the combination with a heatable ironing roll, of a swinging pressure roll, bearings in which said pressure roll is journalled, pivoted foot pieces on the machine frame, threaded rods having adjustable connection with the bearings and foot pieces, and means for adjusting said bearings, substantially as described. 16th. In a leather ironing machine, the combination with a heatable ironing roll, of a burner contiguous to said roll, and a thermostatic regulator including an automatic valve and engaging operatively with said roll to automatically close and open the valve in unison with the expansion or contraction of said ironing roll, substantially as described. 17th. In a leather ironing machine, the combination with a heatable ironing roll, of a burner contiguous thereto, a supply pipe to said burner, an automatic valve in said supply pipe, and thermostatic regulator devices in active relation to the heatable ironing roll and connected operatively with said automatic valve to open or close the latter according to the expansion or contraction of the ironing roll, substantially as described. 18th. In a leather ironing machine, the combination of a burner and a heatable ironing roll in the zone of heat of the burner, of a supply pipe to said burner, an automatic valve in said supply pipe, a non-expansible support adjacent to the ironing roll, and levers mounted on said non-expansible support for active engagement with the ends of the heatable roll and connected operatively with the automative valve to open and close the latter in unison with the expansion and contraction of said roll, substantially as described. 19th. In a leather ironing machine, the combination with a heatable ironing roll and a burner contiguous thereto, of a supply pipe, an automatic valve therein, a non-expansible rod, levers mounted on said rod and having shoes arranged to ride against the ends of said heatable roll, and link connections between said levers and the automatic valve, substantially as described. 20th. In a leather ironing machine, the combination with a heatable roll and a burner contiguous thereto, of a supply pipe, an automatic valve therein, rods connected to the valve casing and the valve head and extending in opposite directions therefrom, a spring connected to one of said rods and operating to normally open the valve, a non-expansible rod, and levers supported by said non-expansible rod and connected with the valve rods, said levers having their free ends contiguous to the ends of the heatable roll, substantially as described. 21st. In a leather ironing machine, the combination with a heatable roll and a burner contiguous thereto, of a supply pipe connected to said burner, an automatic valve in said supply pipe, a non-expansible rod, levers mounted on said non-expansible rod and connected with the automatic valve, and a tension device between one of said levers and the non-expansible rod to normally separate the levers, substantially as described. 22nd. In a leather ironing machine, the combination with a heatable roll, a burner, and a supply pipe therefor, of an automatic valve in said pipe, a stationary and a longitudinally movable rod connected with said valve, a non-expansible rod, a threaded rod attached to said non-expansible rod, levers mounted at their ends on the stationary and longitudinally movable rod and at their intermediate portions on the non-expansible rod and the threaded stem thereof respectively, a spring fitted on said stem to bear against one of said levers, independently adjustable nuts fitted on the threaded stem and bearing against one lever and the spring respectively, and a thermostatic element in operative relation to the levers and lying in the zone of heat of the burner to be operated thereby, substantially as described. 23rd. In a leather ironing machine, the combination with a heatable roll, a burner contiguous thereto, and a supply pipe for said burner, of an automatic valve in said supply pipe, a diaphragm casing coupled to said valve, a rod connected to the valve shell, another rod passing through the diaphragm casing and having a valve head, a collar or nut on the last named rod, a spring acting against said collar to open the valve, a non-expansible rod having a jacket and a tip at one end, a threaded stem connected to the other end of said non-expansible rod, levers fitted to the tip and threaded stem respectively and having the wheel shoes engaging with the roll and connected with the rod of the valve, a spring on the threaded stem, and adjustable nuts screwed on the said stem and engaging with the spring and one lever respectively, substantially as described. 24th. In a leather ironing machine, the combination with a heatable roll, a burner, and a gas pipe connected to said burner, of a thermostatic regulator including an automatic valve in operative relation to the ends of said heatable roll, and a by pass around the automatic valve, substantially as described. 26th. In a leather ironing machine, the combination with a heatable roll, a burner, a supply pipe, and an automatic valve, of a thermostatic regulator connected with said valve and in operative relation to said

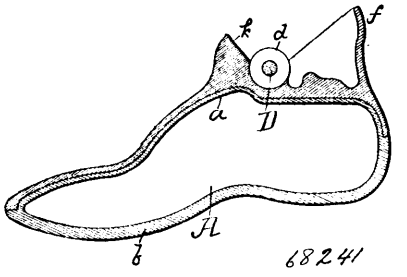
roll, and a valved by-pass connected to said pipe on opposite sides of the automatic valve, substantially as described. 26th. In a leather ironing machine, the combination of a heatable roll, pressure and delivery rolls co-acting with the heatable roll and with one another, a casing partly inclosing the heatable roll and having vent, and a burner partly inclosed by said apron and arranged contiguous to the heatable roll, substantially as described. 27th. In a leather ironing machine, the combination of a heatable ironing roll, a pressure roll co-acting therewith, a delivery roll in active relation with the pressure roll means for driving the pressure roll in the same direction with the ironing roll and in an opposite direction to the delivery roll, a jaw arranged below the ironing roll and in rear of the delivery roll, and a scraper clamped adjustably in said jaw and disposed in contact with the surface of the ironing roll in rear of the pressure and delivery rolls, substantially as described.

No. 68,240. Electric Battery. *(Pile électrique.)*

Ernst Waldemar Jungner, Stockholm, in the Kingdom of Sweden, 27th July, 1900; 6 years. (Filed 11th September, 1899.)

Claim.—1st. An electrical element, for use as primary or secondary element, the holders of the active materials of which are not attackable by the alkaline solutions used as electrolyte, the active material of both electrodes consisting of finely divided metals insoluble in the electrolyte or oxides of metals which do not give up free hydrogen when the battery is active and of which the hydroxyl combinations cannot exist in the electrolyte, thus preventing change as regards quantity and chemical constitution in the electrolyte and thereby in the conductivity of the latter. 2nd. A form of the element in claim 1 in which oxyhydrates of metals which are stable in the electrolyte are added to the active materials in such proportions that the charging or discharging current causes a simple transfer of hydroxyl and the electrolyte remains unchanged as regards chemical constitution and quantity.

No. 68,241. Artificial Feet and Ankles. *(Pied artificiel.)*



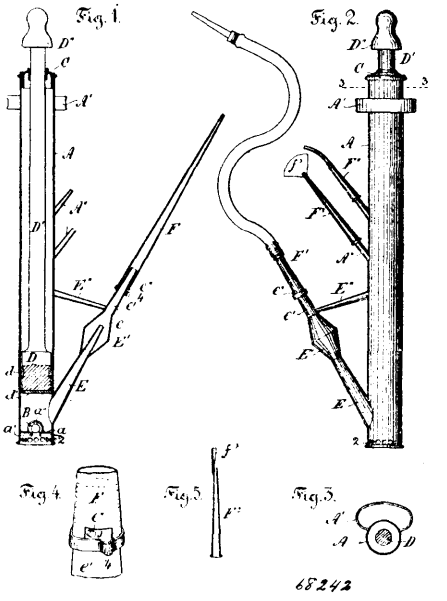
James T. Lyons, Chicago, Illinois, U.S.A., 27th July, 1900; 6 years. (Filed 9th June, 1898.)

Claim.—1st. As an article of manufacture, an artificial foot consisting of a hollow foot of electrical material which is filled with confined air and which is provided with a ledge or shoulder just above the plane of the sole line, and an upper of suitable material conforming to the shape of the upper surface of the upper part of the said foot. 2nd. As an article of manufacture, an artificial foot consisting of a foot of rubber, the contour of which includes raised instep and heel portion and which is hollow from toe to heel, and is provided just above the plane of the sole line with a ledge, of an upper shell which conforms to the shape of said foot just above said ledge upon which its edges rest and which is jointed at the ankle, as set forth.

No. 68,242. Spraying Pump. *(Pompe.)*

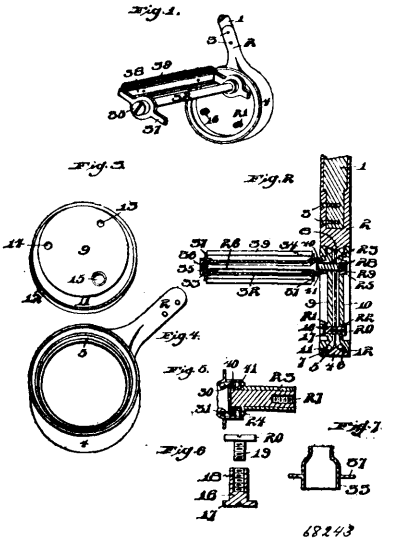
François Lefaibre, Ottawa, Ontario, Canada, 27th July, 1900; 6 years. (Filed 9th May, 1900.)

Claim.—1st. In a spraying pump, the combination with a tubular barrel of a diaphragm, with valve seat, valve box and suction pipe near one end, a glandular cover at the other, a packed piston with piston rod sliding in said cover and provided with handle, a ball in the valve box, an angularly disposed conical delivery tube communicating with said barrel near the diaphragm, a bulbous excrescense covering the discharge end of said tube and a tubular conical extension of said bulbous vessel, substantially as set forth. 2nd. In hand pumps, the combination with the barrel of an angularly disposed conical delivery tube communicating with said barrel, a bulbous excrescense or vessel of double cone shape enveloping the discharge end of said tube and a conical tubular extension of said bulbous vessel forming the discharge nozzle, substantially as set forth. 3rd. In hand pumps, the combination of a tubular barrel with handle, a diaphragm with valve near one end, a glandular cover at the other, a piston rod sliding in said cover and provided with a handle at one end and a packed piston at the other, an angularly disposed conical delivery tube communicating with said barrel and terminating in an overlapping bulbous excrescence having



a conical discharge nozzles adapted for connection with various attachments, a series of nozzles or attachments adopted for connection with said discharge nozzle and a series of carriers on the barrel for retaining said attachments when not in use, substantially as set forth.

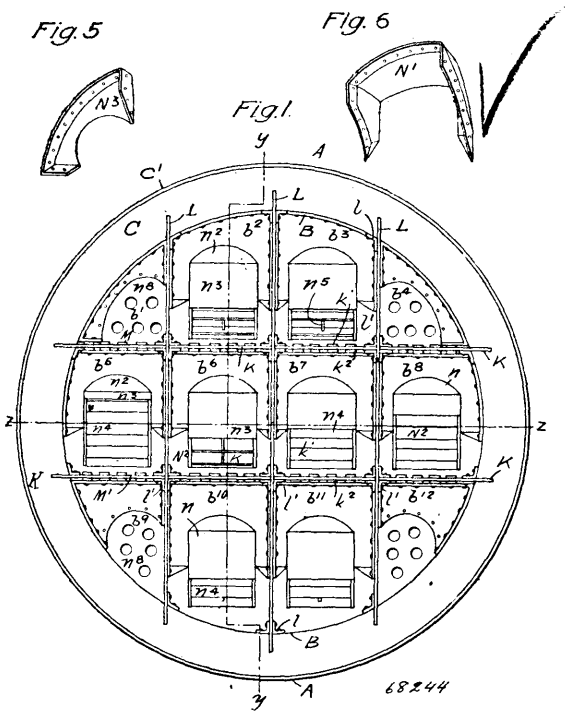
No. 68,243. Bicycle Pedal. *(Pédale de bicycle.)*



Thomas Behan, of Woodlawn, Pennsylvania, U.S.A., 28th July, 1900; 6 years. (Filed 25th May, 1900.)

Claim.—The combination of a pedal crank, a collar suitably connected thereto, cones arranged on the inner face thereof, a pair of revoluble discs mounted in said collar, said discs having apertures formed therein, one being of greater diameter than the others, a securing pin having the enlarged head on one end and the recess portion in the other mounted in a smaller aperture, a screw adapted to engage in said recess portion of the securing pin, the supporting bar adapted to be secured in the said larger apertures, a pedal shaft formed integral with one end of said supporting bar, cones formed on said pedal shaft, and a hollow sleeve supporting the tread of the pedal and adapted to surround the said pedal shaft, substantially as shown and described.

No. 68,244. Tunnelling Shield. (*Cylindre pour tunnels.*)



Cornelius G. Hastings, Chicago, Illinois, U.S.A., 28th July, 1900; 6 years. (Filed 25th May, 1900.)

Claim.—1st. A tunneling shield comprising a cutting face at the forward end, and a hood at the rear end thereof, two concentric cylindrical shells extending from and connecting said outer face and hood, connected together at both ends thereof, and a plurality of hydraulic rams placed at the rear end of said cylindrical shells, substantially as described. 2nd. A tunneling shield comprising a cutting face, at the forward end, and a hood at the rear end thereof, two concentric cylindrical shells connecting the same, and a series of radial plates interposed between and connecting said cylindrical shells longitudinally, substantially as described. 3rd. A tunneling shield comprising a double walled cylindrical shell, a bulkhead at forward end thereof and a series of trough shaped partitions, extending longitudinally thereof, and connected to both the inner and outer cylindrical shells, subtantially as described.. 4th. A tunneling shield comprising a double walled cylindrical shell, a bulkhead at the forward end thereof, a series of trough shaped plates extending longitudinally thereof, connecting said shells, and hydraulic rams inclosed within said troughs, substantially as described. 5th. A tunneling shield comprising a double walled cylindrical shell, a shell, a cutting face and bulk head at the forward end thereof, a bulk head at the rear end thereof and a number of stays exten ding diametrically between and secured to the said cylinder, providing cellular compartments between the shells, substantially as described. 6th. A tunneling shield comprising a cylindrical shell a cutting face at the forward end thereof, a working hood at the rear end thereof, a bulkhead fitted with air tight covered openings at the forward end of the shield and a similar bulkhead at the rear end thereof, also provided with air tight covered openings to provide a closed chamber between the said air tight bulkheads for the workmen within the shields, substantially as described. 7th. A tunneling shield comprising a cylindrical shell, a bulkhead provided with doors therein and having a concaved face to strengthen the bulkhead and direct the loose material toward the door opening, substantially as described. 8th. A tunneling shield comprising a cutting face at the forward end, a cylindrical shell, a hood at the rear end thereof, having longitudinal strips projecting rearwardly from the cylinder and separated from each other to admit of independent movement or deflection, substantially as described. 9th. A tunneling shield comprising a cutting face at the forward end, a cylindrical shell, a hood at the rear end thereof and a crane arm, having each of its ends provided with an extension piece, fitted with heads for carrying respectively the large and small segments of the tunnel lining, substantially as described. 10th. A crane for tunneling shields comprising an arm having a central hub, a shaft upon which said hub is supported, a scroll disc adapted to rotate upon said shaft, a segment holding head movably secured to the end of said arm, and a link connecting the said head to the scroll disc, substantially as described. 11th. In a crane for tunneling shields, the combination with the supporting shaft of the hub, the crane arm, the segment holding block movably secured to the end thereof, the scroll disc mounted upon the shaft, and a bolt connecting the said hub, and scroll disc, substantially as described. 12th. A tunneling shield comprising a cutting face at the forward end, a hood at the rear end, two concentric cylindrical shells extending from and connecting said outer face and hood, and longitudinal trusses connecting the said cylindrical shells providing open partitions and a plurality of compartments for hydraulic rams to be held therein, substantially as described. 13th. A tunneling shield comprising a cylindrical shell vertical and horizontal cutting and division plates at the forward end, rearwardly extending floor plates and trussed partitions comprising longitudinal parallel bars and connecting plates and providing intermediate spaces between the said bars, substantially as described. 14th. A tunneling shield comprising a cutting face at the forward end, a hood at the rear end, two concentric cylindrical shells extending from the cutting face to the hood, a series of radial trusses interposed between and connecting said cylindrical shells, perforated segment plates connecting the rear ends of the inner and outer cylinders, hydraulic rams supported between said radial trusses and projecting through the perforations of the segment plates, and separabl eyoke sections for supporting the forward ends of the rams, substantially as described, 15th. A tunneling shield comprising a cylindrical shell, vertical and horizontal cutting and division plates at the forward end thereof, floor plates extending rearwardly from the horizontal cutting and division plates and reinforcing strips secured longitudinally to the said cutting and division plates and floor plates, substantially as described. 15th. A tunneling shield comprising a cylindrical shell, vertical and horizontal cutting and division plates at the forward end thereof to provide cellular sections, removable bulkheads adapted to each of said cellular sections and doors adapted to said removable bulkheads, substantially as described. 17th. A tunneling shield comprising a cylindrical shell, vertical and horizontal cutting and division plates at the forward end to provide cellular sections, bulk heads adapted to said sections and a door having slotted pannels fitted upon said bulk head, substantially as described. 18th. A tunneling shield comprising a cylindrical shell, vertical and horizontal cutting and division plates at the forward end thereof to provide quadrangular sections, bulkheads adapted to said sections fitted with doors and fixed hooded triangular sections having fixed perforated bulkheads the said quadrangular and triangular chambers filling the cutting face of the cylindrical shell, substantially as described. 19th. A tunneling shield comprising a cutting face at the forward end, a cylindrical shell, and a hood at the rear end thereof consisting of a plate having a series of slits by which said plate is divided in parallel strips being left united through a portion of their length, whereby said strips are hinged together and also maintained parallel and at a uniform distance apart, substantially as described. 20th. A tunneling shield comprising a cylindrical shell, vertical and horizontal cutting and division plates at the forward end thereof to provide cellular sections, an apertured bulkhead at the rear of said cutting and division plates and arched deflector plates encircling the top and sides of the upper ends of said apertures and connecting both the vertical and horizontal division plates with the bulkhead, substantially as described.

No. 68,245. Press Feeding Mechanism.

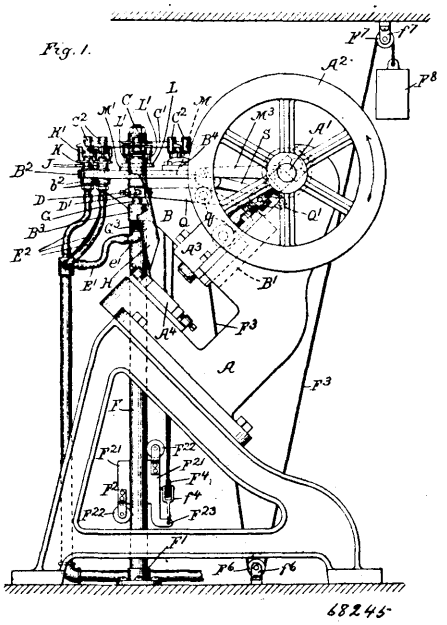
(*Mécanisme d'alimentation pour presses.*)

Emil Tyden, Hastings, Michigan, U.S.A., 28th July, 1900; 6 years. (Filed 18th December, 1899.)

Claim.—1st. In a press feeding mechanism, a carrier having a pick-up device adapted to detachably hold the blanks by action from one surface thereof, a source of blanks and means for moving the carrier from such source to delivering position, in combination with a detaching nozzle adapted to act upon the blank at the opposite side from the pick-up device located adjacent to the path of movement of the pick-up device from the source of delivery, whereby a superfluous blank may be detached from the blank primarily held by the pick-up before the latter reaches the delivering position. 2nd. In a press feeding mechanism, a carrier having the pick-up device adapted to hold the blanks detachably by acting upon one surface thereof, a source of blanks, and means for moving the carrier from such source to delivering position, in combination with a plurality of detaching devices adapted to act upon the blank at the surface opposite that at which the pick-up acts, located successively adjacent to the path of movement of the pick-up from the source to delivering position, whereby a plurality of surplus blanks may be detached one by one, from the blank primarily held by the pick-up before the latter reaches delivering position. 3rd. In a press feeding mechanism, a carrier having a pick-up device operating by suction adapted to hold the blank by acting at one surface thereof, a source of blanks, and means for moving the carrier from such source to delivering position, in combination with the detaching device similar to that of the pick-up, adapted to act upon the blanks at the side opposite that at which the pick-up acts, but with less force than the latter, such detaching devices being located adjacent to the path of movement of the pick-up between the source and the delivering position. 4th. In a press feeding mechanism, a carrier having a pick-up device adapted to hold blanks detachably acting upon one surface thereof, a source of blanks and mechanism for giving the carrier step-by-step movement from such source in position for delivering the blanks to the press, in combination with a detaching device adapted to act upon the blanks at the surface opposite that at which they are acted upon

by the pick-up, located adjacent to the path of movement of the pick-up between the source and the delivering position, and at the

Fig. 1.



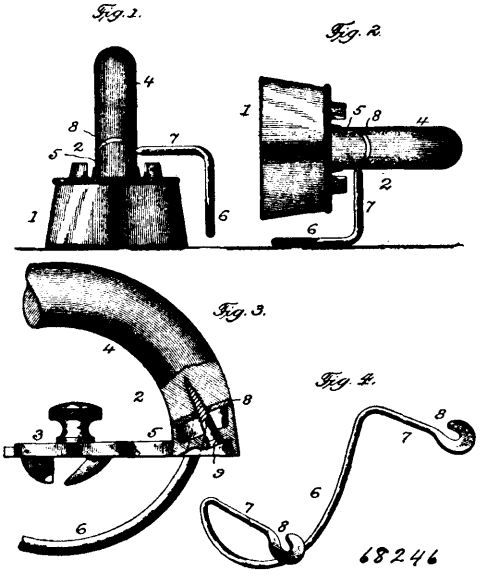
limit of one step of movement along said path, mechanism for communicating such step movement from the press adapted to cause one step of such movement for each cycle of the movement of the press. 5th. In a press feeding mechanism, a carrier having a pick-up device adapted to detachably hold the blanks by action upon one surface thereof, a source of blanks, and means for moving the carrier from such source to delivering position, in combination with a detaching device adapted to act upon the blank at the opposite side from the pick-up device, located adjacent to the path of the pick-up device from the source to the delivery, and mechanism for causing the pick-up device and the detaching device to approach each other at the point in the path of travel of the former at which said devices stand opposed to each other. 6th. In a press feeding mechanism, a carrier having a plurality of pick-up devices adapted to hold the blanks detachably by acting upon one surface thereof, a source of blanks and mechanism for giving the carrier step-by-step movement from such source to the position for delivering the blanks to the press, each step being equal to the distance between consecutive pick-up devices of such carrier, and being performed synchronously with the action of the press, a detaching device fixed in position adjacent to the path of movement of the pick-up devices of the carrier between the source and the delivery, opposed to the blank holding end of the carrier and adapted to act on the blanks at the opposite side from the pick-up device, and mechanism actuated by the press synchronously with the step-by-step movement of the carrier to reciprocate the carrier in a plane at right angles to its carrying movement to cause the picked devices to advance the detaching device as they successively reach a position to the same and before they reach delivery position. 7th. In a mechanism for feeding blanks, in combination with a receptacle for the blanks constructed and arranged to contain them in a pile or continuous rank, a carrier having a pick-up device adapted to face the discharge mouth of the receptacle to check the pile and to receive the blanks therefrom, mechanism which operate the carrier to cause the pick-up device to approach and depart from such position to receive and carry away the blanks, devices constructed and arranged to yieldingly advance the blanks by pressure at the rear or bottom of the pile, and mechanism for positively withdrawing said devices to permit the pile of blanks to recede, said mechanism being timed to cause both the advance and withdrawal to occur while the pick-up devices stands facing the delivery mouth. 8th. In a mechanism for feeding blanks, the combination with a receptacle for the blanks adapted to contain them in a pile or rank, a carrier having a pick-up device to face the discharge mouth of the pile and to receive blanks therefrom, mechanism for operating the carrier to cause the pick-up device to approach and depart from blank receiving position, devices constructed and arranged to advance the pile or blanks positively to a limited extent, and other devices constructed and arranged to advance the pile yieldingly until checked, and mechanism for withdrawing said devices to permit the pile to recede, said yielding and advance movements and said withdrawing movement being timed to occur while the pick-up devices stand in position to check the advance movement. 9th. In a mechanism for feeding blanks to die presses and other machines, in combination with a supply tube, the carrier having a blank holding device constructed and arranged to face the end of the supply tube to receive the blanks therefrom, mechanism for operating the carrier to cause the blank holding device to approach and depart from such position to receive and carry away the blanks, a follower in the supply tube, and devices constructed and arranged to advance the follower positively, and other devices adapted to advance it with yielding pressure in the tube to feed the blanks to the delivery end thereof, devices for restraining such yielding pressure of the follower on the blanks, constructed and arranged to both intermit such restraint after the positive advance is performed and re-apply the same within the time that the blank holding device faces the delivery mouth of the supply tube, and mechanism constructed and arranged to afterward, and before the departure of the blank holding device, release the follower from the positively advancing devices to permit the blanks to recede in the tube. 10th. In a mechanism for feeding blanks to die presses or other machines, in combination with a supply tube for the blanks, the carrier having a blank holding device, and mechanism for operating it to cause it to move to a position facing the delivery mouth of the tube, and to move away from such position, a follower in the supply tube, a cable connected to the follower, and suitable means for applying stress to the cable to cause it to advance the follower in the tube, a brake constructed and arranged to restrain the draft of the cable on the follower, mechanism constructed and arranged to positively advance the follower, and cams which respectively operate such mechanism and the brake, timed with respect to the carrier's movement to cause the follower to be positively lifted, and immediately thereafter to cause the brake to be applied and then released and next to allow the follower to recede, all said movements being performed during the time that the blank holding device faces the end of the tube. 11th. In a mechanism for feeding blanks to die presses and other machines, in combination with a supply tube for the blanks and carrier having blank holding devices and mechanism for operating it to bring such blank holding devices opposite the delivery mouth of the tube and cause them to depart from such position, the follower in the supply tube, the lever R, and the cam which actuates it, a cable connected to said lever and looped about a guide on the follower, and suitable means for applying stress to the cable to cause it to exert draft on the follower to advance it in the tube, a brake constructed and arranged to restrain such draft upon the follower, and a cam which is adapted to actuate the brake to release such restraint, said cams being timed with respect to the movement of the carrier to cause the lever to be operated to positively advance the follower while the brake is operative on the cable, and immediately afterward release the brake and then re-apply the same, and then release the lever and allow the follower to recede, all said actions of the cams being performed while the blank holding device faces the delivery mouth of the tube. 12th. In a press-feeding mechanism, in combination with a supply tube and a carrier having a blank holding device adapted to face the delivery mouth of the tube to receive and carry away blanks therefrom, a follower in the supply tube, a cable connected thereto and running over suitable guides a weight supported by the cable to force the follower yieldingly along the tube to feed the blanks to the delivery end, brake mechanism adapted to operate upon the cable to restrain its draft upon the follower, a lever R, suitably connected with the follower to advance the same in the tube, cams which operate upon said lever to lift the follower, and immediately after to release the brake while the blank holding device faces the end of the tube, and afterward to apply the brake and permit the lever to be retracted and allow the follower to recede before the departure of said device from the tube. 13th. In a press facing mechanism, a receptacle for the blanks to be fed consisting of a tube F, split or rifted at opposite sides, a follower adapted to move in said tube, and having wings protruding through the rifts, guides on the wings adapted to bear against the outer surface of the tube at opposite tides thereof and at points longitudinally separated thereon, and draft devices connected to the follower, substantially in the plane of the rift at the side of the tube at which the foremost of said outer guides is located. 14th. In a press feeding mechanism, in combination with the tube F, having the opposite rifts f^2, f^2, the follower having a portion f^{20}, within the tube having the wings F^{21}, F^{21}, extending through the rifts, the rollers F^{22}, F^{22}, mounted on the wings respectively at opposite ends, and adapted to bear upon the tube at opposite sides, and draft devices connected to the follower in the plane of the wings at the side at which the foremost of the rollers F^{22}, is located. 15th. In a feeding mechanism for a press or other machine, a carrier having a pick-up device constructed and arranged to detachably hold the blanks by action upon surface therof, a source of blanks and means for moving the carrier from such source to delivering position, in combination with a detaching device adapted to act upon the blank at the opposite side thereof from the pick-up device and located adjacent to the path of the latter between the source and delivery, mechanism for causing the pick-up device and the detaching device at the point in the path of travel of the former at which the said devices stand opposite each other, said pick-up and detaching devices and the mechanism for causing them to approach being constructed and arranged to terminate such approach before the blanks are positively pressed between the pick-up and detaching device. 16th. In a press feeding mechanism, a carrier having a pick-up device adapted to detachably hold the blanks by action upon one surface thereof, a source of blanks and mechanism for moving the carriers from such source to delivering position, in combination with a suction nozzle located adjacent to the path of the pick-up device between the source and delivery, and at the

opposite side of the blank from the pick-up device mechanism for causing the pick-up device and the suction nozzle to approach at the point in the path of travel of the former at which said devices stand opposite to each other, devices associated with the suction nozzle for cutting of and admitting the suction thereto, and mechanism for operating said suction admitting and cut-off devices constructed and arranged to admit the suction while the pick-up nozzle is approaching the detaching nozzle, and before the blanks are positively grasped between the two, whereby the suction nozzle is adapted to cause the suction to operate upon the blanks to detach the same before contact of the blank with the suction nozzle occurs. 17th. In a press feeder mechanism, in combination with a carrier having a pick-up device adapted to detachably hold the blanks by action upon one surface thereof, a source of blanks and means for moving the carrier from said source to delivering position, a suction nozzle adapted to operate as a detaching device located adjacent to the path of the pick-up device between the source and the delivery and at the opposite side of the blanks from the pick-up device, such suction nozzle comprising a spindle, a bearing in which such spindle has sliding movement, a spindle having a longitudinal passage leading from the nozzle mouth toward the opposite end, and another longitudinal passage leading from said opposite direction toward the first passage, but stopping short thereof, and lateral ports from the proximate ends of said longitudinal passage to the bearing surfaces, the spindle bearing having a recess adapted at one position within the range of the longitudinal sliding movement of the spindle to register with both said ports, and at other position to be out of registration therewith, whereby they are closed, suitable means for holding the nozzle yieldingly at the latter position and devices for moving it longitudinally to the former position constructed and arranged to so move it when the pick-up device is opposite the suction nozzle mouth.

No. 68,246. Sad Iron Rest or Support.

(*Appin et support pour fer à repasser.*)

Fig. 1. Fig. 2. Fig. 3. Fig. 4.



Elwood Calhoun Phillips, Chicago, Illinois, U.S.A., 28th July, 1900; 6 years. (Filed 19th July, 1900.)

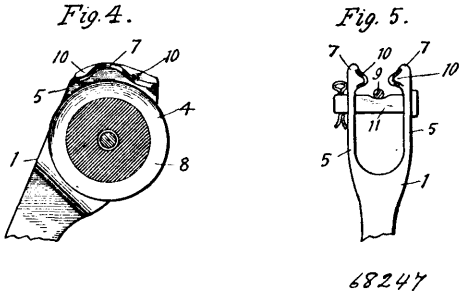
Claim.—1st. The combination with a sad iron of a rest or support therefor provided with a portion extending lengthwise of the iron and bent to provide a supporting base, the ends of the base portion being also bent to provide attaching arms by which the rest is secured to the iron. 2nd. The combination with a sad iron and its detachable handle of a rest or support extending lengthwise of the iron and having its ends formed with eyes that are adapted to fit between the ends of the grip portion and the base of the handle and secured in place by the screws which secure said grip and base portions together. 3rd. The combination with a sad iron and its detachable handle, of a rest or support extending lengthwise of the iron and having its ends flattened and formed with open sided eyes that are adapted to fit between the ends of the grip portion and the base of the handle and secured in place by the screws which secure said grip and base portions together.

No. 68,247. Trolley. (*Trolley.*)

Robert White, Toledo, Ohio, U.S.A., 28th July, 1900; 6 years. (Filed 2nd April, 1900.)

Claim.—1st. In a trolley for electric cars, the combination, with the trolley pole, of a forked head adapted to be secured thereto, provided with a grooved trolley wheel journalled within the fork and having fork sides projecting beyond the periphery of the wheel and

Fig. 4. Fig. 5.

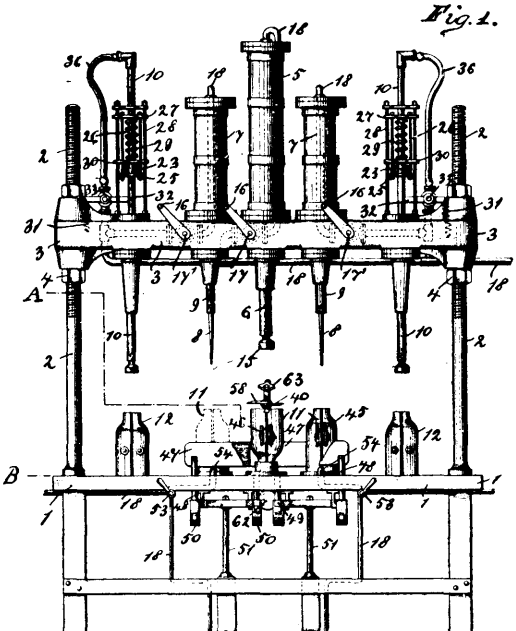


provided with oppositely disposed arched lips, the end portions whereof respectively project inwardly above and partially over the groove of the wheel, with the centre portion opening outward from the end portions in a curve, forming together an open mouth-shaped opening for access to the groove of the wheel, substantially as shown and for the purpose specified. 2nd. In a trolley for electric cars, the combination of a trolley pole with a forked head adapted to be secured thereto, provided with an ice scraper secured within and across the fork, and arched lips at the ends of the fork sides, having end portions projecting inwardly, above and partially over the crotch of the fork, with the centre portions opening outward therefrom in a curve, forming together an open mouth-shaped opening for access to the scraper, substantially as shown and for the purpose described.

No. 68,248. Glass Blowing Machine.

(*Machine à souffler le verre.*)

Fig. 1.



Heinrich Wilhelm Heerdt, Aussig, Austria, 28th July, 1900; 6 years. (Filed 17th March, 1900.)

Claim.—1st. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge of three cylinders inserted vertically into said bridge, a piston with a rammer in the centre cylinder, pistons with forming tools in the two side cylinders, a blowing stamp at each end of the bridge, a blowing mould below each blowing stamp, two press moulds, one neck below the rammer and one neck below each of the forming tools, substantially as shown and described. 2nd. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge, three cylinders bearing a rammer and two forming tools in the centre and a blowing stamp at each end, of means for lowering said rammer, forming tools and blowing stamp,

substantially as shown and described. 3rd. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge, three cylinders bearing a rammer and two forming tools in the centre and a blowing stamp at each end, of hand levers with counter weights, for the blowing stamps, two plates connected by rods and movable on said stamps, a spring below the upper plates resting upon a plate fixed for the stamp, air valve levers below the lower movable plates, substantially as shown and described. 4th. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge, three cylinders bearing a rammer and two forming tools in the centre and a blowing stamp at each end, of projections on the forming tool pistons gliding in helical grooves of the guides, substantially as shown and described. 5th. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge, three cylinders bearing a rammer and two forming tools in the centre and a blowing stamp at each end, of two movable press moulds, vertical reels connected with the pivot of the latter, rails movable vertically in front and behind said moulds, substantially as shown and described. 6th. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge, three cylinders bearing a rammer and two forming tools in the centre and a blowing stamp at each end, of two movable press moulds, vertical reels connected with the pivot of the latter, rails movable vertically in front and behind said moulds, of means for raising and lowering said rails, substantially as shown and described. 7th. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge, three cylinders bearing a rammer and two forming tools in the centre and a blowing stamp at each end, of two movable press moulds, vertical reels connected with the pivot of the latter, rails movable vertically in front and behind said moulds, of supports carrying said rails and resting upon double armed levers operated by compressed air, substantially as shown and described. 8th. In a glass blowing machine, the combination with a work table and two supports carrying a movable bridge, three cylinders bearing a rammer and two forming tools in the centre and a blowing stamp at each end, of scissors arranged below the rammer and carried on a horizontal gliding rod and governed by a double armed lever having a rhombical top, substantially as shown and described.

No. 68,249. Dredge and Elevator. (*Dragueur et ascenseur.*)

Fig. 1.

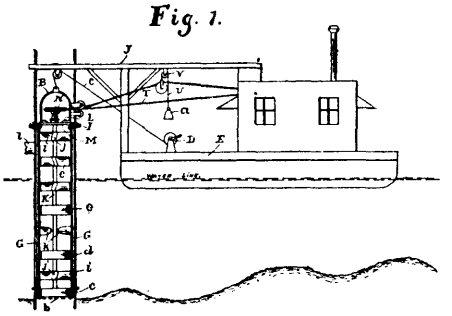


Fig. 3

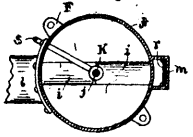


Fig. 4.

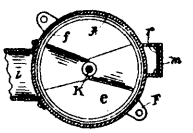
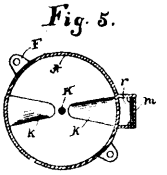


Fig. 5.



68249

Alonzo W. Cram, Haverhill, Massachusetts, U.S.A., 28th July, 1900; 6 years. (Filed 14th February, 1900.)

Claim.—1st. A dredge, and elevator comprising an elevator tube, a combined cutter and propeller at the lower end thereof, an external passageway having an outlet opening at the lower end thereof, an external passageway having an outlet opening at its lower end at a point below the said propeller and communicating with the elevator tube, and an external inlet opening at a point thereabove, substantially as described. 2nd. A dredger and elevator comprising an elevator tube, a combined cutter and propeller at the lower end thereof, an external passageway extending from the lower end thereof to a point above the water line and having an open upper end, the lower end of the passageway having an opening at its lower end communicating with the elevator tube at a point below the propeller, an inlet opening at a point above the propeller and below the water line, and a valve for said opening, substantially as described. 3rd. A dredger and elevator comprising an elevator tube, a cutter propeller at its lower end, an external passageway having an opening at its lower end communicating with the elevator tube at the propeller, and extending above the water line, and provided with an inlet opening at a point above the propeller and below the water line, a valve for the said inlet opening, and an operating member for the valve extending up through the passageway to the top of the tube, substantially as described. 4th. A combined dredger and elevator comprising a propeller tube, a centrally and lodgitudinally arranged shaft within the said tube, a combined cutter and propeller secured to the lowet end of the shaft within and at the lower end of the tube, a plurality of propellers attached to the shaft and concentrically arranged within the tube, one above the other, and a plurality of oppositely inwardly extending blades attached to the said tube and arranged between the propellers, and an operating mechanism substantially as described. 5th. In a dredger, the combination of an elevator tube having an open lower end, a propeller blade rotatable within and at the lower end of the tube, the propeller blade having at the centre of its lower side cutting blades *h*, substantially as and for the purpose described. 6th. A dredge and elevator comprising an elevator tube a rotating shaft within the tube, propellers attached to the shaft, and inwardly and oppositely extending blades attached to the elevator tube at a point between the propeller, said blades having an opposite inclination, whereby they serve to cause the upflowing water to continue its twirling movement between the elevator blades from one to the other, substantially as described. 7th. A propeller blade for a dredger elevator tube, comprising propeller blades, and an annular ring connected to the outer edges of the blade, the said ring being cut upward or narrowed to a point in front of the cutting edge of the blade, substantially as described.

No. 68,250. Cigar Cutter and Match Safe.

(*Coupe-cigare et boîte à allumettes.*)

Fig 1.

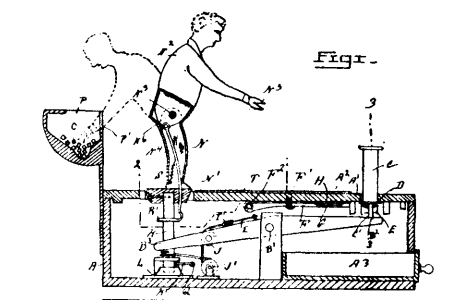


Fig 2.

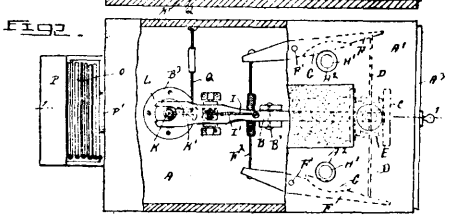
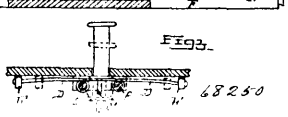


Fig 3.



68250

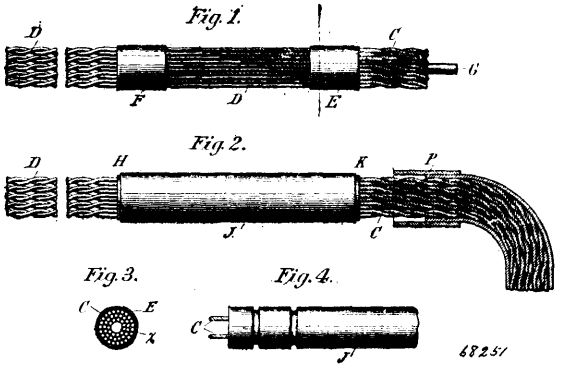
Andrew R. Fossum, Minneapolis, Minnesota, U.S.A., 28th July, 1900; 6 years. (Filed 17th January, 1900.)

Claim.—1st. A cigar cutter and match safe comprising a manually operated lever, a cutter adapted to be actuated from the lever and a match picker mounted to turn and also arranged to be swung into an inclined position to pick up a match, the movement of the said lever serving to turn the picker and also to swing the same, substantially as shown and described. 2nd. A match safe comprising a manually operated lever, and a match picker adapted to be rotated by said lever, and part of it being arranged to be swung into an inclined position to pick up a match, substantially as shown and described. 3rd. A match safe comprising a manually operated lever, a rope carried by one end of said lever and passing over pulleys, one of which is carried by the lever and the other journalled in a fixed bearing, a shaft on which winds said rope, and a figure carried by said shaft, and provided with claws for picking up and delivering a match, substantially as shown and described. 4th. A match safe comprising a manually operated lever, a rope carried by one end of said lever and passing over pulleys, one of which is carried by the lever and the other journalled in a fixed bearing, a shaft on which winds said rope, a figure carried by said shaft and

provided with claws for picking up and delivering a match, a claw carrying portion of the figure being pivoted, and a rod engaging said pivoted part of the figure, and adapted to be engaged by said lever, to impart a swinging motion to the pivoted part, substantially as shown and described. 5th. A match safe comprising a manually operated lever, a rope carried by one end of said lever and passing over pulleys, one of which is carried by the lever and the other journalled in a fixed bearing, a shaft on which winds said rope, a figure carried by said shaft and provided with claws for picking up and delivering the match, the claw carrying portion of the figure being pivoted, a rod engaging said pivoted part of the figure, and adapted to be engaged by said lever, to impart a swinging motion to the pivoted part, and a spring for returning the shaft to its normal position, as set forth. 6th. A cigar cutter comprising a rod fitted to slide, a band engaged by said rod and passing over pulleys, a spring pressed lever engaged by said band, a cutter carried by said lever, and a fixed plate having an aperture formed with bevelled sides to form a knife and over which operates said cutter, substantially as shown and described. 7th. A match safe comprising a lever, a shaft mounted to rotate and actuated from the said lever, and a match picker carried by said shaft and adapted to turn therewith, a part of said picker being arranged to be swung into an inclined position to pick up a match, and means actuated by the lever for swinging the said part of the picker, substantially as shown and described. 8th. A match safe comprising a casing, a receptacle for matches, a lever pivoted in said casing, a shaft mounted to turn, a figure carried by the said shaft, the upper part of said figure being pivoted and provided with means for picking up a match, mechanism operated by the lever for giving the shaft a half turn to cause the figure to move from a forward to a rearward position, and means also operated from the said lever for imparting a swinging motion to the upper part of the said figure, substantially as set forth.

No. 68,251. Terminal for Electric Cables.

(Bout de cable électrique.)

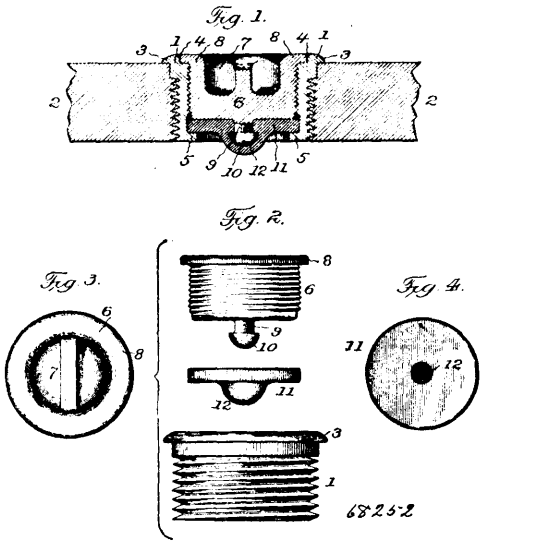


William L. Candee, Brooklyn, New York, U.S.A., 28th July, 1900; 6 years. (Filed 1st May, 1900.)

Claim.—1st. A terminal for insulated cabled conductors, consisting of a short section of cabled conductors respectively connected to the conductors of an insulated cable, combined with two separated adjacent and fixed sections of impermeable insulating material closely surrounding the conductors and projecting from the surface thereof, an impermeable shell or casing inclosing the conductors having its ends united to said sections respectively, to form an air tight junction therewith and an insulating material having a low melting point filling the space formed by the casing and fixed sections, substantially as described. 2nd. In a cable terminal, the cable consisting of a series of conductors coated with a form of insulating material susceptable to attack by moist air, combined with a section of cable composed of a series of conductors coated with an insulating material not susceptible to attack by moist air, an electrical junction between the respective conductors of the two sections, a fixed section of impervious insulating material projecting from the surface of each section near said junction, an impermeable shell or casing having its ends united to said sections respectively to form an air-tight inclosure and an insulating material having a low melting point filling the space or inclosure formed by said casing and sections, substantially as described. 3rd. A terminal for paper or fibrous insulated cabled conductors, consisting of a short section of cabled conductors having an impervious insulation respectively connected to said cabled conductors, a fixed section of impermeable insulating material applied in the form of a tape or strip wrapped round said conductors and an enclosing tube or pipe of impermeable material making an air-tight junction with said fixed section. 4th. A terminal for paper or fibrous insulated cabled conductors, consisting of a short section of cabled conductors having a waterproof insulation respectively connected to said cabled conductors, two fixed sections of impermeable insulating material in the form of a tape or strip applied to said conductors at opposite sides of the point of connection, respectively, and an enclosing tube or pipe of impermeable material making an air-tight junction with said sections.

No. 68,252. Barrel Bung and Bushing.

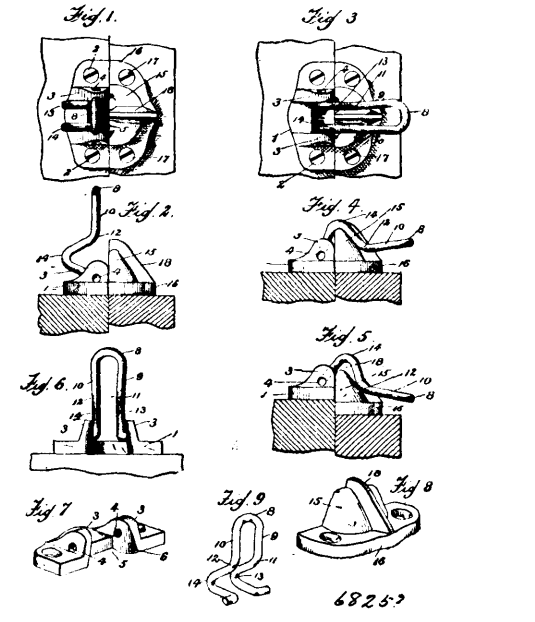
(Bindon pour tonneaux.)



Elwood Calhoun Phillips, Chicago, Illinois, U.S.A., 28th July, 1900; 6 years. (Filed 19th July, 1900.)

Claim.—In a barrel bung and bushing, the combination of the bushing formed with an inturned marginal flange at its lower end, a closure plug fitting said bushing, and an elastic cover or disc arranged on the lower end of the closure plug and adapted to seat itself on the inturned flange of the bushing, said cover or disc being detachably secured to the closure plug by a central closed bottom recess, and a downwardly extending shank on the closure plug, and a head or button on the lower end of said shank, substantially as set forth.

No. 68,253. Sash Lock. *(Arrête croisée.)*

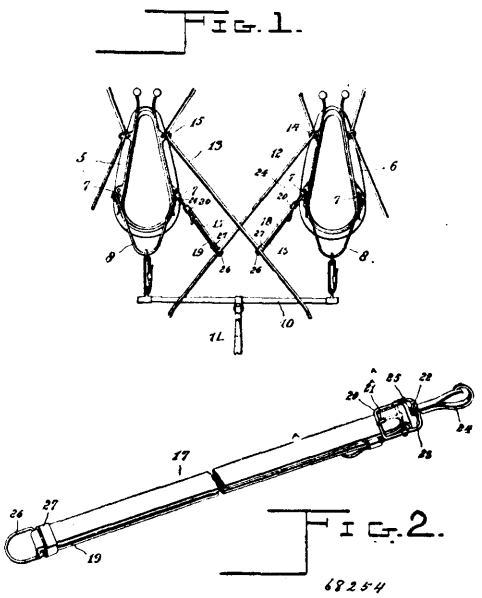


Frank H. Knight, Washington, Columbia, U.S.A., 28th July, 1900; 6 years. (Filed 19th July, 1900.)

Claim.—1st. In a sash lock, a locking latch comprising in a single piece a latch to hold the meeting rails of sash in contact and spring parts to exert a continuous downward pressure to hold said latch in continuous engagement with a catch plate, a latch carrying plate to which said latch is hinged, and a catch plate to be engaged by said latch, substantially as described. 2nd. In a sash lock, a locking latch comprising in a single piece of spring wire a hooked shaped portion to engage a catch plate and a spring to bear upon the latch carrying plate to maintain the hooked portion in continuous engage-

ment with a catch plate, said catch plate, and said latch carrying plate, substantially as described. 3rd. In a sash lock, a latch carrying plate provided with upwardly projecting lugs having their opposing faces rounded and undercut at their forward edges, a locking latch pivoted between said lugs and provided with spring portions to be acted upon by the rounded and undercut edges of said lugs, and a catch plate to be engaged by said locking latch, substantially as described. 4th. In a sash lock, a latch carrying plate provided with upwardly projecting lugs having their opposing faces rounded and undercut at their forward edges, a locking latch pivoted to said latch carrying plate and comprising in a single piece a hooked portion to engage a catch plate and spring portions to co-act with the rounded lugs of the latch carrying plate, and a catch plate to be engaged by said locking latch, substantially as described. 5th. In a sash lock, a catch plate having an upwardly projecting portion provided upon its forward surface with a web V-shaped in cross section to be engaged by a locking latch, a latch carrying plate provided with upwardly projecting lugs having their opposing faces rounded and undercut at their forward edges, and a locking latch pivoted between the lugs of the latch carrying plate and comprising in a single piece a hooked portion to engage the upwardly projecting portion of the catch plate and spring portions to co-act with the rounded lugs of the latch holding plate to maintain the latch in continuous engagement with the catch plate, substantially as described.

No. 68,254. Line Guide for Harness. *(Garde pour guides de harnais.)*



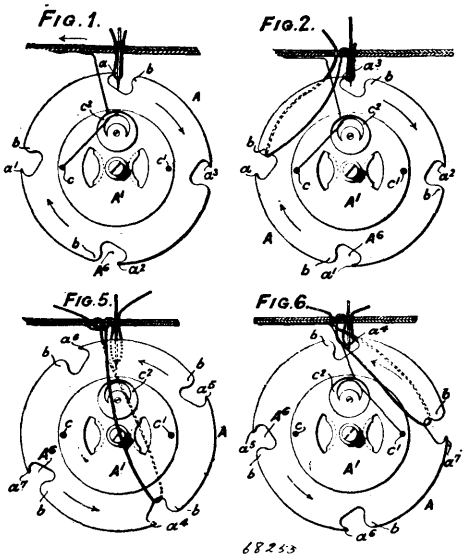
Sigurdus Joshua Bjornsson, Vernon, British Columbia, Canada, 28th July, 1900; 6 years. (Filed 17th July, 1900.)

Claim.—1st. The combination with the hames and the driving lines of a double harness, of line guides, each having a loose connection with one line and adjustable connection with one hame, substantially as described. 2nd. The combination with the hames and the crossed lines of a double harness, of the adjustable line guides, each having a ring at one end and a snap hook at the other end, each line guide having its snap hook engaged with a ring of one hame, and its ring fitted loosely on the rein or line which leads from the other hame, substantially as described. 3rd. A line guide for double harness, consisting of a strap doubled upon itself and formed with a bight at one end thereof, a ring in said bight of the strap, a slide fitted on the double strap, a buckle uniting the otherwise free portions of the doubled strap together and provided with an eye, of a snap hook swivelled in said eye of the buckle, substantially as described.

No. 68,255. Sewing Machine. *(Machine à coudre.)*

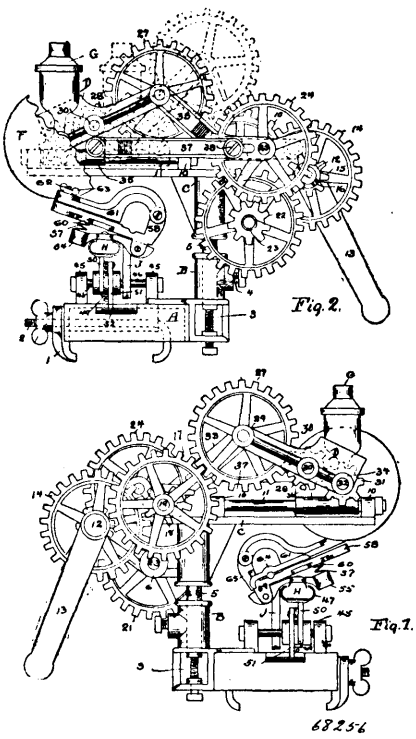
Harriet Ruth Tracy, 58 Brondesbury Villas, Maida Vale, London, England, 28th July, 1900; 6 years. (Filed 26th April, 1899.)

Claim.—1st. The combination with a reciprocating eye pointed needle of a revoluble loop taker arranged adjacent to the needle, the loop taker being provided on its periphery with four loop engaging hooks, by which the succeeding loops of the needle are engaged and the thread of each preceding loop taken up, the loop taker being so timed with relation to the needle that the loop of one stitch is entirely drawn up into the cloth or fabric by the loop taker in forming the succeeding switch before the needle enters into the fabric to make another stitch, substantially as described. 2nd. In a revoluble loop taker for sewing machines, the combination with a



shuttle A with one side of its outer edge cut away, of a throw off bar A^3 formed on or secured to the bobbin case behind and in proximity to the loop taking hook *a*, as and for the purpose specified.

No. 68,256. Machine for Grinding the Knives of Mowing Machines. *(Machine à aiguiser les couteaux des faucheuses.)*

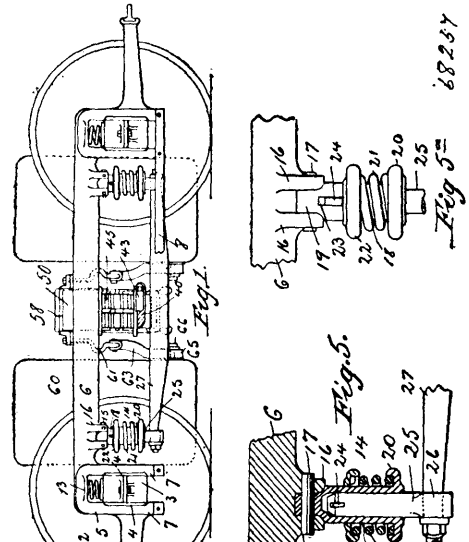


The Empire Implement Manufacturing Company, assignee of William P. Robinson, administrator of Albert S. Robertson, all of Albany, New York, U.S.A., 28th July, 1900; 6 years. (Filed 28th August, 1899.)

Claim.—1st. In a machine for grinding knives of cutter bars, the combination of a bed plate A, provided with a stationary clamp jaw 1, for adjustably carrying a frame support C, and sockets 52, arranged on the oppositely located vertical sides of said bed plate, in which rests supports 51, and vertical bearings 45, of a rocking shaft 46, as and for the purposes set forth. 2nd. In a machine for grinding knives of cutter bars, the combination of a bed plate, provided with

a clamp jaw and an adjustable clamp bolt and nut, a vertical socket for adjustably carrying a frame support C, and sockets arranged on the oppositely located vertical sides of said bed plate, in which rests supports 51, vertical bearings and a rocking shaft of a sliding bar socket 47, adjustably mounted on said rocking shaft and provided with stops 50 and supports 51, and an adjustable indicating pointer K, substantially as and for the purposes set forth. 3rd. In a machine for grinding cutter bars, the combination of a bed plate provided with a stationary clamp jaw and an adjustable clamp bolt and nut, a vertical socket for adjustably carrying a frame support C, and sockets arranged on the oppositely located vertical sides of said bed plate, in which rests supports 51, vertical bearings and a rocking shaft, a sliding bar socket adjustably mounted on said rocking shaft and provided with stops and supports, and adjustable indicating pointer, of a sliding bar H, fitted to be adjustably moved longitudinally on said sliding bar socket and carrying a cutter bar rest I, provided with means substantially as specified, for adjustably holding a cutter bar, and spiral springs 57, as and for the purposes specified. 4th. In a machine for grinding knives of cutter bars, the combination of a bed plate provided with a stationary clamp jaw and an adjustable clamp bolt and nut, a vertical socket for adjustably carrying a frame support and sockets arranged on the oppositely located vertical sides of said bed plate in which rests supports, vertical bearings and a rocking shaft, a sliding bar socket adjustably mounted on said rocking shaft and provided with stops and supports, an adjustable indicating pointer, a sliding bar H, fitted to be adjustably moved longitudinally in said sliding bar socket and carrying a cutting bar rest provided with means as substantially as specified, for adjustably holding a cutter bar and spiral springs of a hand lever S, arranged to raise said cutter bar rest to bring the cutting edge of the knife in closer contact with the face surface of the abrading wheel, as herein specified. 5th. In a machine for grinding knives of cutter bars, the combination with a cutter bar holder, frame C, provided with the downward projected spindle 5, abrading wheel F, carried by said frame, of the bed plate A, vertical socket B, secured to said bed plate and receiving said spindle, adjusting screw 3, working up through the bottom of said socket and against the lower end of said spindle and set screw 4, working in a side of said socket and against said spindle, whereby the circumferential face of said abrading wheel may be adjusted in relation to the bevelled edges of the knives, held by said cutter-bar holder, as set forth. 6th. In a machine for grinding knives of cutter bars, the combination with the cutter bar holder, frame C, provided with the downward projected spindle 5, abrading wheel F, carried by said frame, gear mechanism also carried by said frame and adapted to revolve said abrading wheel of the bed plate A, vertical slot B, secured to said bed plate and receiving the said spindle frame C, adjusting screw 3, working upwardly through the bottom of said socket and against the lower end of said spindle and set screw 4, working through a side of said socket and against said spindle, whereby the said abrading wheel may be properly adjusted in relation to the edge of the knife held by said cutter bar holder and be revolved in contact with the said edge of the knife, as set forth. 7th. In a machine for grinding the knives of cutter bars, the combination with a cutter bar holder, frame C, provided with the downward projected spindle 5, abrading wheel F, carried by said frame, gear mechanism also carried by said frame and adapted to revolve said abrading wheel, mechanism also carried by said frame and adapted to impart a reciprocating movement to said abrading wheel while it is being revolved, of the bed plate A, vertical socket secured to said bed plate and receiving the said spindle frame C, adjusting screw 3, working upward through the lower end of said socket and against the lower end of said spindle and set screw 4, working through a side of said socket and against said spindle, whereby the said abrading wheel may be held adjusted in relation to the bevelled edge of the knife held by the cutter bar holder, and be moved reciprocatingly the length of the bevelled edge, while its circumferential face is being revolved in contact with the bevelled edge of the knife, as set forth. 8th. In a machine for grinding knives of cutter bars, the combination of a vertical socket, a frame support having a spindle adjustably fitted into said vertical socket, an adjusting screw, a set screw, and the operating mechanism, substantially as specified, mounted on said frame support, a journal bearing case, one end of which is mounted on shaft 32, the opposite end connected to shaft 19, of the operating mechanism by means of the connecting rod 33, of the journal bearing, as and for the purposes specified. 9th. In a machine for grinding knives of cutter bars, the combination with a porous abrading or grinding wheel, containing the centrally located water chamber 41, having a solid or closed front end wall, the internal screw threaded metal piece 42, having its inner end provided with flange 43, and seated centrally in the rear side wall of the said chambered abrading wheel and clamping it from its chamber side, and the revolving shaft 32, having a screw threaded end screwing into the said flanged metal piece 42, and collar 44, on the revolving shaft and clamping on the other sides of the rear side wall, of the water duct 40, made longitudinal and central in the said revolving shaft 32, and the water cup G, intermittently connecting with said water duct, substantially as and for the purposes set forth. 10th. In a machine for grinding knives of cutter bars of mowers, the combination with a cutter bar holding bed which is adjustable in either direction, relatively oblique to the axle of the grinding wheel, and devices connected with said bed for supporting said cutter bar with its knives at right angles to the plane of said bed, and adapted to be moved at will, lengthwise, on said bed, of a vibrating frame having its rearward end supported on a pivot shaft arranged parallel with the line of direction of said bed when the lacter is parallel with the axis of the grinding wheel, of a grinding wheel mounted on a shaft which is supported in the free end of said vibrating frame and having its peripheral face in its cross direction parallel with the axis of the pivot shaft of said frame, of a drive wheel, gear mechanism between said drive wheel and said grinding wheel and gear mechanism, and an adjustable vibrating device between said drive wheel and the vibrating frame, substantially as and for the purposes set forth. 11th. In a machine for grinding knives of cutter bars, of mowing machines, the combination with a base piece from which the operating parts of the machine are supported, a vertically adjustable sectional standard mounted on said base piece, a gear frame connected with the upper section of said standard, of a drive gear mounted on said frame, a vibrating frame having its rear end pivoted on the shaft of said drive wheel, a grinding wheel mounted on a shaft carried by the free end of said frame, a gear mechanism between said drive wheel and grinding wheel, a vibrating lever pivoted on the frame carried by the upper section of the standard, a connection between one end of said lever and the vibrating frame, a driven wheel also carried by the frame carrying said vibrating lever, a pivoted connection between said lever and the said driven wheel and a gear between said driven wheel and the drive wheel, substantially as and for the purposes set forth. 12th. In a machine for sharpening the knives of cutter-bars of mowing machines, the combination with a cutter bar holding bed which is adapted to be adjusted obliquely in either direction in relation to the axis of the grinding wheel and also adapted to be vibrated toward and from the same, a vertically adjustable standard, a frame connected with said standard and a drive wheel mounted on a shaft carried by the said frame, of a vibrating frame having one end thereof pivoted on the shaft of said drive wheel and extended therefrom in direction transverse to the direction of the length of the cutter bar holding frame, a grinding wheel carried by the free end of said vibrating frame, a gear mechanism between the drive wheel and said grinding wheel, a driven wheel mounted on a shaft carried by the frame carried by said standard, a vibrating lever also pivoted on said frame and a pivoted connection between one of its ends and the said vibrating frame and a pivoted connection between its opposite end and a pivot carried by said drive wheel, substantially as and for the purposes set forth.

No. 68,257. Pivotal Truck. (*Chariot à pivot.*)



John A. Brill, assignee of George Martin Brill and Samuel M. Curven, all of Philadelphia, Pennsylvania, U.S.A., 28th July, 1900; 6 years. (Filed 18th January, 1899)

Claim.—1st. The combination in a car truck and its running gear, of the side frames supported outside of the wheel gauge, the bolster, the truck bolster, and separable spring links and equalising bars supporting said bolster directly from the side frames, substantially as described. 2nd. The combination in a car truck and its running gear, of the side frames supported outside of the wheel gauge, the truck bolster, the bolster being supported from the side frames by equalizing bars and extensible spring swinging links outside of the wheel gauge, substantially as described. 3rd. In a truck, the com-

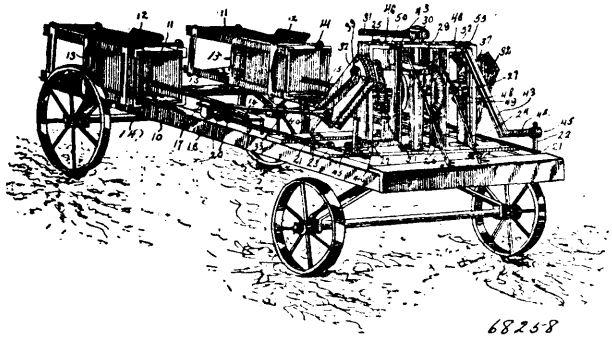
bination with a truck frame, of a bolster, and transversely swinging resilient suspending links secured to the truck frame adjacent the axle boxes, the inflexible equalizing bars secured to said links, the bolster being supported on said bars, substantially as described. 4th. In a car truck, the combination with the side frames, of transversely swinging links pendant from the side frames adjacent the axle boxes, longitudinal inflexible connections between the links, and a bolster supported upon said connections, substantially as described. 5th. The combination with a car truck, of the side frames, extensible swing links having load supporting springs ranged in the direction of the length of the truck and pendent from the side frames, a bolster and equalizing bars extending between said links and supporting the bolster, substantially as described. 6th. In a car truck, the combination with the side frames, a bolster, the spring plank, springs intermediate of the spring plank and bolster, the spring plank being connected to the side frames by intermediate swing links, and a spring on each of said links sustaining the spring plank, substantially as described. 7th. The combination in a car truck of the side frames, spring links depending from the side frames, longitudinal equalizing bars connecting the links below the side frames, and means for connecting said bars with a car body, substantially as described. 8th. The combination in a car truck, of the side frames, transversely swinging spring links depending from the side frames, longitudinally disposed transversely movable equalizing bars connecting the links beneath the side frames, and means for connecting said bars with a car body, suostantially as described. 9th. The combination in a car truck, of the side frames, with extensible spring swinging links depending from the side frames, an equalizing bar connecting the links, and a bolster supported on said equalizing bars, substantially as described. 10th. The combination in a car truck, of the side frames, swing links supported from the side frames, each of said links being yieldable in the direction of its length, equalizing bars connecting said links, and a bolster supported on said equalizing bars, substantially as described. 11th. The combination with a car truck, of the side frames, pendant extensible links on the side frames, springs on the links, the equalizing bars movably connected to the links, and a bolster supported on said equalizing bars, substantially as described. 12th. The combination in a car truck, of the side frames, the equalizing bars movably and resiliently suspended from the side frames, and a bolster supported on said equalizing bars, substantially as described. 13th. In a truck, the combination with the side frames, having axle box pedestals, the longitudinally disposed transversely swinging equalizing bars, pendent extensible resilient connections between the ends of the equalizing bars and the side frames adjacent said pedestals, and a bolster supported on said equalizing bars, substantially as described. 14th. The combination in a car truck, of the side frames having axle box pedestals, each frame having an upper longitudinal chord, and a lower parallel and swinging member, the lower member being movably suspended from the upper chord, springs included in said suspension, and a bolster supported on said lower member, substantially as described. 15th. The combination of a car truck, of the side frames, the equalizing bars, a cross bolster secured to the equalizing bars, links suspended from the side bars and attached to said equalizing bars, and springs carried by said links adapted to oppose the motion of the side frames or equalizing bars, substantially as described. 16th. In a car truck, the combination with the side frames, the links suspended from the side frames, each link carrying a double acting spring, equalizing bars secured to said links, and a bolster supported on the equalizing bars, substantially as described. 17th. The combination in a car truck, of the side frames having axle box pedestals, springs interposed between the axle boxes and the axle box pedestals, separate springs hung from the side frames adjacent said pedestals, connections between said springs on each side frame, a spring plank connecting said connections, springs on the spring plank, and a bolster on said latter springs, substantially as described. 16th. The combination in a car truck, of the side frames having axle box pedestals, springs interposed between the axle boxes and said pedestals, a further set of springs supported from the side frames, equalizing bars supported by said further springs, a spring plank supported by said equalizing bars, other springs, substantially as described. 19th. The combination in a car truck, of the side frames having axle box pedestals, springs interposed between the axle boxes and said pedestals, links with interposed springs, said links being supported from the side frames, equalizing bars connecting the links, a spring plank connecting said bars, bolster springs on said spring plank, and a bolster on said latter springs, substantially as described. 20th. The combination in a car truck, of the side frames having axle box pedestals, springs interposed between the axle boxes and said pedestals, links with interposed springs, said links being supported from the side frames, and a further set of springs for supporting the car body supported by said link interposed springs, substantially as described. 21st. In a car truck, the combination with the side frames having the axle box pedestals, springs interposed between said pedestals and the axle boxes. another set of springs, two for each side frame, hung to depend from the side frames adjacent said pedestals, the spring plank supported by said last mentioned springs, bolster springs on said spring plank, and a bolster on said bolster springs, substantially as described. 22nd. In a car truck, the combination with the side frames having the axle box pedestals, springs interposed between said pedestals and the axle boxes, links with interposed springs, said links being supported from the side beams adjacent the pedestals, and a further set of car upholding springs supported by said link interposed springs, substantially as described. 23rd. In a car truck, the combination with the side frames having the axle box pedestals, springs interposed between said pedestals and the axle boxes, links with interposed springs, said links being supported from the side frames at or near the pedestals, the spring plank supported by said link interposed springs, bolster springs on the spring plank, and a bolster on said bolster springs, substantially as described. 24th. The combination in a car truck, of the side frames having axle box pedestals, spiral springs interposed between the axle boxes and said pedestals, and a further set of spiral springs of greater carrying capacity supported from the side bars, a spring plank connected with said last mentioned springs, elliptic springs on said spring plank, and a bolster supported on said elliptics, substantially as described. 25th. In a car truck, the combination with the side frames having axle box pedestals, springs interposed between the axle box pedestals, a further set of springs supported from said side frames, equalizing bars suspended by said latter springs a spring plank transversely connecting said equalizing bars, springs on said spring plank, and a bolster on said last mentioned springs, substantially as described. 26th. The combination in a car truck, of the side frames, the pendant swing links, springs supported on the links, equalizing bars suspended by said springs, and a bolster supported on said equalizing bars, substantially as described. 27th. The combination in a car truck, of the side frames, extensible links each with an interposed spring hung on the said frames, equalizing bars suspended by said springs, and a bolster supported on said equalizing bars, substantially as described. 28th. The combination in a car truck, of the side frames, extensible links each with an interposed spring hung to swing transversely from the side frames, equalizing bars movably connecting the links on each of the side frames, and a bolster supported on said equalizing bars movably connecting the links on each of the side frames, and a bolster supported on said equalizing bars, substantially as described. 29th. The combination in a car truck, of the side frames, extensible links with interposed springs hung from the side frames to swing transversely thereof, the inflexible equalizing bars pivotally connected at the ends to said links, and a bolster supported on the equalizing bars, the bolster and links being adapted to swing transversely of the side frames, substantially as described. 30th. The combination in a car truck, of the side frame, a hanger pivotally suspended from said frame, a bolt movable in said hanger, a follower on the bolt, a spring interposed between the hanger and follower, equalizing bars secured at their ends to the bolt exterior to the hanger, and a bolster secured to said equalizing bars, substantially as described. 31st. In a car truck, the combination of the side frames having pendant lugs, a pin passing through said lugs, a barrel suspended by said pin, a spring seat on said barrel, a spring on the seat, an eye bolt having an eye at one end exterior to the barrel and a follower on the other end resting on said spring, an equalizing bar connected at its ends to said bolts, and a bolster on said equalizing bar, substantially as described. 32nd. In a car truck, the combination with the side frames, the barrels pivotally supported from the side frames, spring seats formed at the lower portions of said barrels, a spring on each of said seats, the equalizing bars, bolts on the ends of the equalizing bars, extending into said barrels, and connections between said bolts and the springs on the barrels, substantially as described. 33rd. The combination in a car truck, of the side frames, the bolster, the equalizing bars, the eye bolts movably secured to the ends of the equalizing bars, barrels movably suspended from the side frames, said bolts having followers guided by the barrels, and springs interposed between said followers and said barrels, substantially as described. 34th. The combination in a car truck, of the side frames, a spring plank, means for suspending the spring plank from the side frames, a spring on the spring plank, a truss rod extending between the ends of the spring plank and lying beneath it, and a spreader interposed between said truss rod or rods and the said plank, substantially as described. 35th. The combination in a car truck, of the side frames, a spring plank, springs on the plank means for suspending the plank from the side frames, paired truss rods extending between the ends of the spring plank, and spreaders interposed between the plank and said rods beneath the springs, said spreaders having lips engaging the plank, and recessed legs to receive the rods, substantially as described. 36th. The combination in a truck frame, of the side bars, transoms extending beneath the side bars, a spring plank and bolster, springs between said plank and bolster, and a safety strapping consisting of a strap encircling said plank, springs and bolster secured to the top of each of said transoms, substantially as described. 37th. The combination with a car truck, of the inwardly extending brackets 51[a] formed on the inside of the top chords 6, having longitudinal strengthening webs 52, and transoms of angle iron extending between said top chords, said angle irons each having a longitudinal web resting on the top of the webs 52, and vertical webs secured to the brackets 51[a], substantially as described. 38th. The combination with the side bars, of the equalizing bars rigid throughout their length, resilient links for suspending the equalizing bars from the side bars, and a spring plank secured to the equalizing bars, substantially as described. 39th. The combination in a car truck, of the side bars, depending links, the equalizing bars on the links, a spring plank secured to said equalizing bars, and a truss rod or rods extending between the ends of said plank, substantially as described. 40th. The combin-

ation in a truck, of the side bars of the truck frame, transoms extending between said bars, a bolster movably supported between the transoms, a motor secured at one end upon one of the truck axles, a hanger attached to the transom, a link pivotally secured to the hanger and depending therefrom, an aperture formed in the end of the hanger, a circular lug projecting from the free end of the motor passing through said aperture, and means for securing said hanger to said lug below the transom, substantially as described. 41st. The combination in a car truck, of the top chords of the truck frame, transom extending between said chords, a motor supported at one end upon one of the truck axles, a pendant hanger or hangers secured to said transom, a pendant swing link secured to said hanger or hangers, said link having an apertured eye at the end, and a circular lug on the free end of the motor engaging said eye, substantially as described. 42nd. The combination in a truck, of the motor secured on an axle thereof, the side frames, transverse connections between the frames, the hangers 61, pendent from said connections and ranged in line with each other links 63, suspended from the hangers by pins 62, the transversely disposed apertured eyes 65, on the ends of the links, and rounded lugs 66, extending from the motor into said eyes, substantially as described. 43rd. In a car truck, the combination with the side bars comprising the axle box pedestals or yokes, a bar connecting said yokes, lugs depending from said bar, links depending from said lugs, the inflexible equalizing bars connecting the links, and a bolster supported by said equalizing bar, substantially as described. 44th. A car truck having links comprising a plurality of parts movable to or from each other in the direction of their length, a spring for opposing such movement, equalizing bars pivotally secured at their ends to said links, a plank on said bars, springs on said plank, and a bolster on said latter springs, substantially as described. 45th. A car truck, having a bolster and links extensible in the direction of their length and having interposed springs, equalizing bars pivotally secured at their ends to an extensible element of said links, a plank on said bars, springs on said plank, and a bolster on said latter springs, substantially as described. 46th. A two part link, the parts being separable in the direction of their length, an interposed spring opposing such separation, and pivoting eyes formed on the opposing ends of the said parts, combined with a truck frame, equalizing bars, and a bolster on said bars, the upper eye being pivotally attached to said frame, the lower eye being pivotally attached to said bars, substantially as described. 47th. In a car truck, the combination with the side frames, of eye bolts movably suspended from the side frames, bars movably secured to the eye bolts, springs combined with the eye bolts whereby said bars are elastically supported, a cross beam supported by said bars, one or more springs thereon, and a car supporting bolster supported by said latter springs, substantially as described. 48th. In a car truck, the combination with the side frames, of link sections pivoted to the said frames, eye bolts to which the link sections are movably secured, bars movably secured to the eye bolts, springs on the link sections whereby the bars are elastically supported, a cross beam supported by said bars, one or more springs on the beam, and a car supporting bolster supported by the latter springs, substantially as described. 49th. In a car truck, the combination with the side frames, of link sections pivoted to said frames, eye bolts to which the link sections are movably secured, bars movably secured to the eye bolts, spiral springs on the link sections, cup shaped spring seats against which the spiral springs press, and a car supporting bolster suitably supported on said bars, substantially as described. 50th. In a car truck, the combination with the side frames having axle box pedestals, of the swing links suspended from the side frames adjacent to said pedestals, inflexible equalizing bars pivotally secured to said links below the side frames, and a cross bolster connecting the equalizing bars below the side frames, substantially as described. 51st. In a car truck, the combination with the side frames, of the links hung from the side frames, springs on the links equalizing bars supported by said springs a, cross beam connecting the equalizing bars, one or more springs on said cross beam, and a bolster on the latter springs, substantially as described. 52nd. In a car truck, the combination with the side frames, of the links hung from the side frames, spiral springs supported and guided by said links, equalizing bars supported by said springs, a cross beam connecting the equalizing bars, one or more elliptical springs on the cross beam, and a bolster on the latter springs, substantially as described. 53rd. In a car truck, the combination with the side frames, of the links hung from the side frames, springs on the links, equalizing bars supported by said springs, a cross beam connecting the equalizing bars, one or more springs on the cross beam, a bolster on the latter springs, and transoms extending between the side frames between which transoms the said bolster lies, substantially as described. 54th. In a car truck, the combination with side frames provided with axle box pedestals near their ends to receive axle boxes, springs disposed between the boxes and pedestals, whereby said frames are cushioned on the axle boxes, of a car body supporting bolster electrically suspended from the side frames, and a motor sustained at one end of the truck axles, the support for its free end finding an ultimate bearing on the journal boxes, substantially as described. 55th. In a car truck, the combination with the side frames, of a car body supporting bolster, a beam pivotally and elastically suspended from the truck frame below said bolster, and springs mounted on said beam and supporting said bolster, substantially as described. 56th. In a car truck, the combination with suitable side frames, of a swinging car body supporting bolster, a beam elastically suspended from the side frames below said bolster and a pair of elliptic springs mounted on said beam and connected with and supporting said bolster, substantially as described. 57th. In a car truck, the combination with the side frames, links pivoted to said frames and movably connected to eye bolts, bars elastically suspended from said eye bolts, and a cross beam supported by said bars, of elliptic springs mounted on each beam, and a car body supporting bolster mounted on said springs, substantially as described. 58th. In a car truck the combination with the side frames, of bars elastically suspended by link connections respectively from said frames, a beam extending transversely of the truck and resting on said bars, and a bolster supported on said beam, substantially as described. 59th. In a car truck, the combination with the side frames, of bars elastically suspended by link connections respectively from said side frame, a beam extending transversely of the truck and resting on said bars, a car body supporting bolster, and springs interposed between said beam and bolster, substantially as described. 60th. In a car truck, the combination with the truck frame, of swing plank, a bolster on the plank, and means for supporting the plank from the truck frame, comprising springs and said links, substantially as described. 61st. In a car truck, the combination with the truck frame, of swing links, a spring plank, springs on the plank, a bolster on the springs, and means for supporting said plank from the truck frame comprising said links and additional springs adapted to co-operate with said links, substantially as described. 62nd. In a car truck, the combination with the axle boxes, and side frames provided near each end with openings adapted to receive or straddle said axle boxes, of springs supporting said side frames elastically on the axle boxes, and a car body supporting bolster elastically suspended from said side frames, substantially as described. 63rd. In a car truck, the combination with the axle boxes, and side frames provided near each end with openings adapted to receive or straddle said axle boxes, of spiral springs arranged within the openings of said side frames and elastically supporting the latter on the axle boxes, a car body supporting bolster on equalizing bars and appliances elastically suspending said bars from the side frames, substantially as described. 64th. In a car truck, the combination with the side frames, of links pivoted to said frames, eye bolts to which the links are movably connected, bars movably connected to the eye bolts, springs whereby the bars are elastically supported, a cross beam supported by said bars, one or more springs on the beam, and a car supported bolster supported by the springs, substantially as described. 65th. In a car truck, the combination with the side frames, of links pivoted to said frames, eye bolts to which the links are movably connected, bars to which the eye bolts are movably connected, spiral springs 21 supporting said bars, cups against which the spiral springs press, and a car supporting bolster suitably supported on said beams, substantially as described. 66th. In a car truck, the combination with the side frames provided with openings near their ends to receive or straddle the journal boxes, and springs arranged between the tops of said openings and the journal boxes, whereby said frames are cushioned on the journal boxes, equalizing bars spring supported from the side frames, a bolster elastically supported on said bars, a motor supported at one end on one axle, the free end of the motor being supported on the journal boxes of the truck through an intermediate connection, substantially as described. 67th. The combination in a car truck, of the side frames, hangers pivotally suspended from said frames, a bolt movable in each of the said hangers, a follower on the bolt, a spring interposed between the hanger and the follower, equalizing bars secured at their ends to the bolt exterior to the hanger, and a bolster secured to said equalizing bars, substantially as described. 68th. In a car truck, the combination with the side frame having pendant lugs, a pin passing through each of said lugs, stirrups suspended by said pins, an apertured spring seat on said stirrup, a spring on the seat, an eye bolt having an eye at one end exterior to the stirrup, and a follower on the other end resting on said spring, an equalizing bar connected at its end to each said bolts, and a bolster on said equalizing bars, substantially as described. 69th. In a car truck, the combination with the side frames, the stirrups pivotally supported from the side frames, spring seats formed at the lower portions of said stirrups, a spring on each of said seats, the equalizing bars, bolts on the ends of the equalizing bars extending into said stirrups, connections between said bolts and the springs, and cars supporting devices restin, on said bars, substantially as described. 70th. The combination with the side frames, having the side bars, lugs on the side bars, stirrups suspended by the lugs, each stirrup having an aperture at the upper end and a spring seat on the lower end, a pin passing through said lugs and aperture, springs on each of the spring seats, the equalizing bars and connected bolster, bolts extending from the ends of the equalizing bars into the stirrups, and a follower in the stirrup resting on said spring, substantially as described. 71st. The combination in a car truck, of the side frames, the bolster, the equalizing bars, the eye bolts movably secured to the ends of the equalizing bars, a stirrup movably suspended from said side frames, said bolts having followers, and springs interposed between said followers and said stirrups, substantially as described. 72nd. In a car truck, the combination with the top chord, of the link or hanger comprising the stirrups 23 having the top bar 25 provided with an apertured enlargement 24, apertured lugs on the top chord, a pin securing said stirrup to said lugs, an eye bolt and follower, a spring interposed between the follower and the stirrup, the follower having upwardly extending lugs embracing the sides of the

top bar 25, substantially as described. 73rd. In a car truck, the combination of the side bar, with the stirrup 23 having a top cross 25, a transversely apertured enlargement 24 in the top cross bar, a pin securing the enlargement to the side bar, a spring seat 29 formed on the lower cross bar 28^a, an aperture 30 formed in said seat, a bolt passing upwardly into the stirrup through the aperture in the seat 29, a spring 38 on the seat 29 surrounding said bolt, a follower 33 secured on said bolt and resting on said spring, an apertured eye 32 formed on the end of said bolt, and a bolster secured through intermediate connections to the said eye, substantially as described. 74th. In a car truck, the combination of the side bar, with the stirrup 23 having a top cross bar 25, an apertured enlargement 24 in the top cross bar, a pin securing said enlargement to the side bar, a spring seat 29 formed on the lower cross bar 28^a, a follower within the stirrup, a bolt 31 passing into said stirrup through an aperture in the seat 29, said bolt being threaded and engaging a thread formed in the follower 33, a set nut 34, engaging the follower, an apertured eye 36 formed on the said bolt exterior to the stirrup, and a bolster secured through intermediate connections to the said eye, substantially as described. 75th. The combination in a car truck and the axle sustained motor, of the top chords of the truck frame, a transom extending between said chords, hangers depending from and secured to said transom, a cross bar extending between said hangers, springs on the hangers above and below said bar, a spring cap secured to the hanger below the transom against which cap the upper springs bear, a stop on the hanger for confining said cap thereon, and means for connecting said bar to the free end of said motor, substantially as described. 76th. The combination with the side bars 6, of the transom 43 extending between the side bars, the hangers 41 pendant from the transom, the cross bar 51 on the hangers, springs for supporting said bar on said hangers located below the bar, springs above said bar on said hangers, nuts above and below each of said last-mentioned springs, and a thread on the hangers for engagement with said nuts, substantially as described.

No. 68,258. Baling Press. *(Presse d'empaquetage.)*

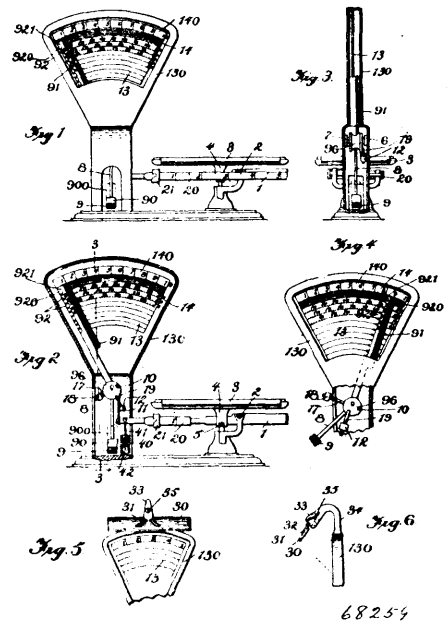
Fig. 1.



Charles Harrington and Edward Rawntree, both of Bartlett, Texas, U.S.A., 28th July, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. In baling press, the combination with plungers, and means for imparting forward or baling motion thereto, and for releasing the same at the limit of their forward or baling motion, of reciprocatory return elements connected with the plungers, oscillatory trip arms for contact with said return elements, oppositely revoluble main cams adapted for periodic contact with a trip arm to impart plunger returning movement thereto, and an auxiliary trip cam actuated by the other main trip cam, and adapted for periodic contact with the other trip, substantially as specified. 2nd. In a baling press, the combination with a plunger, and means for imparting forward or baling motion thereto, and for releasing the same at the limit of their forward or baling motion, of a return rod operatively connected with a plunger and provided with a bearing pin, an oscillatory trip arm adapted to contact with said bearing pin to impart motion in one direction to the return rod, and a continuously operated rotary trip cam, actuated by the plunger operating means, for periodic contact with the trip arm to communicate plunger returning motion to the return rod, substantially as specified. 3rd. In a baling press, the combination with a plunger and means for imparting forward or baling motion thereto, and for releasing the same at the limit of its forward or baling motion, of a return rod operatively connected with the plunger and provided with a bearing pin, an oscillatory trip arm arranged for contact with said bearing pin and provided with a rearwardly operated rotary trip cam, actuated by the plunger operating, and provided with an arm for periodic contact with said projection of the trip arm, to impart plunger returning movement thereto, substantially as described. 4th. In a baling press, the combination with reciprocatory plungers, of plunger operating mechanism consisting of shafts mounted for rotation in opposite directions, and operatively connected respectively with the plungers, means for communicating motion to said shafts, said connections being adapted to release the plungers at the limits of their advance movements, return rods operatively connected respectively with the plungers, and provided with bearing pins, oscillatory trip arms arranged in operative relation with the bearing pins, and provided with rearward projections, trip cams carried respectively by said shafts, the projection of one of said trip arms being arranged in the path of an arm of one of the main trip cams, and an auxiliary trip cam having a bearing ear arranged in the path of an arm of the other main trip cam, and having an arm in the path of which said projection of the other trip arm is arranged, substantially as specified. 5th. In a baling press, the combination with a plunger, and plunger operating mechanism including a shaft, of a return rod operatively connected with the plunger and provided with a bearing pin, a trip arm adapted for periodic contact with said bearing pins to impart plunger returning movement to said return rod, an adjustable securing plate upon which said trip arm is pivotally mounted for swinging movement, means for fastening said securing plate at the desired adjustment, and an armed trip cam carried by said shaft for periodic contact with a projection on the trip arm, the adjustment of said securing plate being adapted to vary the relation of the pivotal point of the trip arm with the axis of movement of the trip cam, substantially as specified. 6th. In a baling press, the combination with a supporting frame, baling chambers, and reciprocatory plungers arranged in the chambers, of plunger operating mechanism having oppositely revoluble co-axial driven shafts carrying crank heads, a single driving shaft operatively geared with the driven shafts, shifting wrist pins mounted upon said crank heads and adapted to occupy positions at opposite sides of the axes of the driven shafts, said crank heads being provided with spaced seats for engagement with the wrist pins to impart plunger advancing movement to said pins, cross heads 16, connected with the plungers for movement therewith, guides parallel with the paths of the plungers upon which said cross heads are mounted, pitmen connecting the cross heads with said wrist pins, and bearing rollers carried by the cross heads for receiving the thrust of the pitmen, said bearing rollers being adapted to traverse bearing surfaces of the supporting frame, substantially as specified.

No. 68,259. Computing Scale. *(Machine à compter.)*

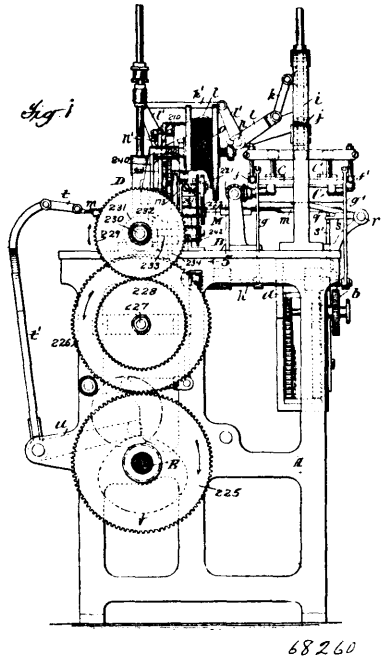


De Vilbiss Computing Scale Company, assignee of Allen De Vilbiss, jr. both of Toledo, Ohio, U.S.A., 28th July, 1900; 6 years, (Filed 20th February, 1900.)

Claim.—1st. A computing table for scales having a plurality of rows of weight totals, and a plurality of rows of price totals contiguous thereto and correctly graded, combined with indicating mechanism connected with and moved by the descent of the scale platform, of which the hand or index moves along said rows and co-acts with their figures, and the pendulum carries a fixed weight as well as a removable weight, the whole capable of operation, substantially as described. 2nd. A computing table for scales having a plurality of rows of weight totals, and a plurality of rows of price totals contiguous thereto and correctly graded, combined with indicating mechanism connected with and moved by the descent of the scale platform, of which the hand of index moves along said rows and co-acts with their figures, and the pendulum carries a fixed weight as well as a removable weight said band being provided with a plurality of rows of price units whereof each unit in one row is a

multiple of that in the row adjacent, as and for the purpose set forth. 3rd. A computing table for scales having a plurality of rows of weight totals differently coloured, and a plurality of rows of price totals contiguous thereto and correctly graded, combined with indicating mechanism connected with and moved by the descent of the scale platform, of which the hand or index moves along said rows and co-acts with their figures, and the pendulum carries a fixed weight coloured to correspond with the colour of the row of smaller weight totals as well as removable weight coloured to correspond with the colour of the row of larger weight totals, the whole capable of operation, substantially as described. 4th. A computing table for scales having a plurality of rows of weight totals differently coloured, and a plurality of rows of price totals contiguous thereto and correctly graded, combined with indicating mechanism connected with and moved by the descent of the scale platform, of which the hand or index moves along said rows and co-acts with their figures, said hand being provided with a plurality of rows of price units coloured to correspond with said weight totals and whereof each unit in one row is a multiple of that in the row adjacent, as and for the purpose set forth. 5th. A computing table for scales having a row of weight totals, and a plurality of rows of price totals contiguous thereto and correctly graded, combined with indicating mechanism connected with and moved by the descent of the scale platform, of which the hand or index moves along said rows and co-acts with their figures, and the pendulum carries a fixed weight of one colour and a removable weight of another colour, the face of the hand having two rows of price units coloured to correspond with the weights and whereof the units in one row are respectively multiples of those in the other, substantially as described. 6th. A computing table for scales having a plurality of rows of weight totals differently coloured, and a plurality of rows of price totals contiguous thereto and correctly graded, combined with indicating mechanism connected with and moved by the descent of the scale platform, of which the hand or index moves along said rows and co-acts with their figures, and the pendulum carries a fixed weight coloured to correspond with the colour of the row of smaller weight totals as well as a removable weight coloured to correspond with the colour of the row of larger weight totals, said hand being also provided with a plurality of rows of price units coloured to correspond with said weights and weight totals and whereof each unit in one row is a multiple of that in the row adjacent, as and for the purpose set forth. 7th. In a computing scale, the combination with the main beam hung on a fulcrum, the pan carried thereby, a pendulum connected with said beam, a computing table, and an index operated by the beam and moving over said table, of a supplemental or tare beam moving with the main beam and extending past its fulcrum, graduations thereon reading also past said fulcrum, and a tare weight.

No. 68,260. Machine for Wiring Blanks. *(Appareil à pour des lodures de fil de fer aux envelopes cartes portales, etc.)*



Frank Eugene Munn, assignee of Edward Penniman Sheldon, both of New York City, New York, U.S.A., 28th July, 1900; 6 years. (Filed 28th September, 1899.)

Claim.—1st. The combination of means for presenting to a blank a piece of wire of such length and guage as may be suitable to form an opener for the package in the making of which the blank is to be used, with means for mechanically attaching the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line, and that the blank may be cut upon the opening line by pulling upon the wire, substantially as described. 2nd. The combination of means for presenting to a paper blank a piece of wire of such length and guage as may be suitable to form an opener for the package in the making of which the blank is to be used, with means for mechanically attaching both ends of the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the wire shall be held to the blank against the pull required to use the wire to open the package, substantially as described. 3rd. The combination of means for presenting to a blank a piece of wire of such length and guage as may be suitable to form an opener for the package in the making of which the blank is to be used, means for bending an end of the wire length, means for inserting the bent end into the blank with the body portion of the wire extending along the inside thereof on the intended opening line, and means for securing the last mentioned end to the blank in such manner as to hold the wire against the pull required to use the wire to opsn the package, substantially as described. 4th. The combination of means for presenting to a blank a piece of wire of such length and guage as may be suitable to form an opener for the package in the making of which the blank is to be used, means for bending the ends of the wire length, means for inserting the bent ends into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing one at least of the last mentioned ends to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 5th. The combination of means for presenting to a blank a piece of wire of such length and guage as may be suitable to form an opener for the package in the making of which the blank is to be used, means for bending the ends of the wire length, means for inserting the bent ends into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing the ends to the blank in such manner as to hold the wire against the pull required to use wire to open the package, substantially as described. 6th. The combination of means for feeding a series of blanks, means for presenting to each of said blanks a piece of wire of such length and guage as may be suitable to form an opener for the package in the making of which the blank is to be used, and means for mechanically attaching each wire length to each blank respectively in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire, substantially as described. 7th. The combination of means for feeding a series of blanks, means for presenting to each of said blanks a piece of wire of such length and guage as may be suitable to form an opener for the package in the making of which the blank is to be used, and means for mechanically attaching both ends of each wire length to each blank respectively in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the wire shall be held to the blank against the pull required to use the wire to open the package, substantially as described. 8th. The combination of means for feeding a series of blanks, means for presenting to each of said blanks a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for bending an end of each wire length, means for inserting the bent end into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing the last-mentioned end to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 9th. The combination of means for feeding a series of blanks, means for presenting to each of said blanks a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for bending the ends of each wire length, means for inserting the bent ends into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing one at least of the last-mentioned ends to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 10th. The combination of means for feeding a series of blanks, means for presenting to each of blanks a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for bending the ends of each wire length, means for inserting the bent ends into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing the ends to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 11th. In a machine for providing blanks with wire openers, the combination of means for feeding a strand of wire, means for cutting therefrom a suitable length to form an opener for the package in the making of which the blank is to be used, and means for mechanically attaching the

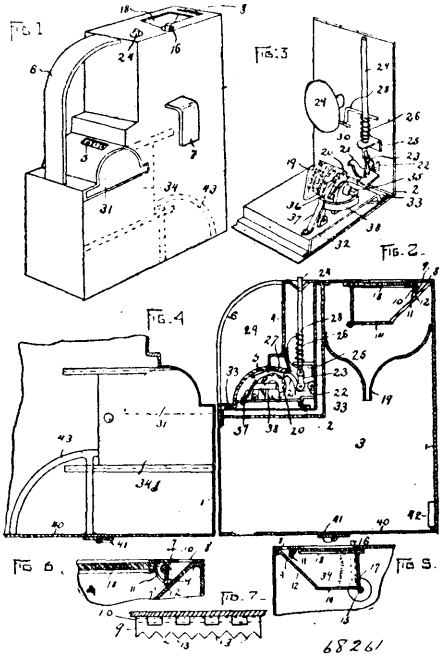
wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire, substantially as described. 12th. In a machine for providing blanks with wire openers, the combination of means for feeding a strand of wire, means for cutting therefrom a suitable length to form an opener for the package in the making of which the blank is to be used, and means for mechanically attaching the ends of the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the wire shall be held to the blank against the pull required to use the wire to open the package, substantially as described. 13th. In a machine for providing blanks with wire openers, the combination of means for feeding a strand of wire, means for cutting therefrom a suitable length to form an opener for the package in the making of which the blank is to be used, means for bending an end of the wire length, means for inserting the bent end into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing the last-mentioned end to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 14th. In a machine for providing blanks with wire openers, the combination of means for feeding a strand of wire, means for cutting therefrom a suitable length to form an opener for the package in the making of which the blank is to be used, means for bending the ends of the wire length, means for inserting the bent ends into the blank with the body portion of the wire length lying along the inside thereof on the intended opening line, and means for securing one at least of the last-mentioned ends to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 15th. In a machine for providing blanks with wire openers, the combination of means for feeding a strand of wire means for cutting therefrom a suitable length to form an opener for the package in the making of which the blank is to be used, means for bending the ends of wire length, means for inserting the bent ends into the blank with the body portion of the wire length lying along the inside thereof on the intended opening line, and means for securing the last mentioned ends to the blank in such a manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 16th. The combination of means for feeding a series of blanks, means for feeding a strand of wire, means for cutting suitable lengths therefrom to form openers for the packages in the making of which the blanks are to be used, means for presenting the wire lengths to the blanks one of each to one of the other respectively as the blanks are fed forward, and means for mechanically attaching each wire length to each blank respectively in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire, substantially as described. 17th. The combination of means for feeding a series of blanks, means for feeding a strand of wire, means for cutting suitable lengths therefrom to form openers for the packages in the making of which the blanks are to be used, means for presenting the wire lengths to the blanks, one of each to one of the other respectively as the blanks are fed forward, and means for mechanically attaching both ends of each wire length to each blank respectively in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the wire shall be held to the blank against the pull required to use the wire to open the package, substantially as described. 18th. The combination of means for feeding a series of blanks, means for feeding a strand of wire, means for cutting suitable lengths therefrom to form openers for the packages in the making of which the blanks are to be used, means for bending an end of each wire length, means for inserting the bent end into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing the last-mentioned end to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 19th. The combination of means for feeding a series of blanks, means for feeding a strand of wire, means for cutting suitable lengths therefrom to form openers for the packages in the making of which the blanks are to be used, means for bending the ends of each wire length, means for inserting the bent ends into the blank with the body portion of the wire length extending along the inside thereof on in the intended opening line, and means for securing one at least of the last-mentioned ends to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 20th. The combination of means for feeding a series of blanks, means for feeding a strand of wire, means for cutting suitable lengths therefrom to form openers for the packages in the making of which the blanks are to be used, means for bending the ends of each wire length, means for inserting the bent ends into the blank with the body portion of the wire length extending along the inside thereof on the intended opening line, and means for securing the ends to the blank in such manner as to hold the wire against the pull required to use the wire to open the package, substantially as described. 21st. The combination with mechanism for mechanically attaching a wire opener to a blank, of mechanism for folding said blank to form an envelope or other receptacle, and mechanism for advancing the blank from the first to the second of the mechanism mentioned, substantially as described. 22nd. The combination of means for presenting to a blank a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for mechanically attaching the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire mechanism for folding the blauk to form an envelope or other receptacle, and means for advancing the blank from the wiring to the folding mechanism, substantially as described. 23rd. The combination of means for presenting to a blank a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for mechanically attaching both ends of the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the wire shall be held to the blank against the pull required to use the wire to open the package, mechanism for folding the blank to form an envelope or other receptacle, and means fer advancing the blank from the wiring to the folding mechanism, substantially as described. 24th. The combination of means for presenting to a blank a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for mechanically attaching the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire mechanism for folding the blank about the wire so that the body of the wire shall lie inside the fold, and means for advancing the blank from the wiring to the folding mechanism, substantially as described. 25th. The combination of means for applying adhesive material to a blank, means for mechanically attaching a wire opener to the same, and means for folding the the wired blank to form an envelope or other receptacle, substantially as described. 26th. The combination of mechanism for applying adhesive material to a blank, mechanism for mechanically attaching a wire opener to the same, mechanism for folding the wired blank to form an envelope or other receptacle, and means for advancing the blank from the first to the second and from the second to the third of the mechanisms mentioned, substantially as described. 27th. The combination or the means for applying adhesive material to a blank, means for advancing the blank to a wiring mechanism, means for presenting to the blank a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for mechanically attaching the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire and mechanism for folding the blank to form an envelope or other receptacle, substantially as described. 28th. The combination of means for applying adhesive material to a blank, means for advancing the blank to a wiring mechanism, means for presenting to the blank a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for mechanically attaching the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire mechanism for folding the blank to form an envelope or other receptacle, and means for advancing the blank from the wiring to the folding mechanism, substantially as described. 29th. The combination of means for applying adhesive material to a blank, means for advancing the blank to a wiring mechanism, means for presenting to the blank a piece of wire of such length and gauge as may be suitable to form an opener for the package in the making of which the blank is to be used, means for mechanically attaching the wire length to the blank in such manner that the body portion of the wire length when applied to the blank shall lie along the inside thereof on the intended opening line and that the blank may be cut upon the opening line by pulling upon the wire and means for folding the blank about the wire length so that the body of the wire length shall lie within the fold, substantially as described. 30th. The combination of means for presenting to material to be wired a piece of wire having an end thereof bent to form a leg and for forcing the leg through the material, with means for forcing the leg through the material a second time and in the reverse direction, substantially as described. 31st. The combination of means for presenting to material to be wired a piece of wire having an end thereof bent to form a leg and for forcing the leg through the material, with means for bending the leg which has been forced through the material, and means for forcing it through the material a second time and in the reverse direction, substantially as described. 32nd. The combination of means for presenting to material to be wired a piece of wire having an end thereof bent to form a leg and for forcing the leg through the material with means for forcing the leg through the material a second time and in the reverse direction, and means for clinching the leg, substantially as described. 33rd. The com-

bination of means for presenting to material to be wired a piece of wire having an end thereof bent to form a leg and for forcing the leg through the material with means for bending the leg which has been forced through the material and means for forcing it through the material a second time and in the reverse direction, and means for clinching the leg, substantially as described. 34th. The combination of means for presenting to material to be wired to a piece of wire having the ends thereof bent to form two legs and for forcing the legs through the material with means for forcing the legs through the material a second time and in the reverse direction, substantially as described. 35th. The combination of means for presenting to material to be wired a piece of wire having the ends thereof bent to form two legs and forcing the legs through the legs through the material, with means for bending the legs after they have been forced through the material, and means for forcing them through the material a second time and in the reverse direction, substantially as described. 36th. The combination of means for presenting to material to be wired a piece of wire having the ends thereof bent to form two legs and for forcing the legs through the material with means for forcing the legs through the material a second time and in the reverse direction, and means for clinching the legs, substantially as described. 37th. The combination of means for presenting to material to be wired a piece of wire having the ends thereof bent to form two legs and for forcing the legs through the material with means for bending the legs after they have been forced through the material, means for forcing the legs a second time through the material in the reverse direction, and means for clinching the legs, substantially as described. 38th. The combination of means for feeding wire, means for feeding wire, means for cutting a wire length means for bending an end thereof to form a leg and for forcing the leg through the material to be wired, and means for forcing the leg through the material a second time and in the reverse direction, substantially as described. 39th. The combination of means for feeding wire, length, means for bending an end thereof to form a leg and for forcing the leg through the material to be wired, means for bending the leg which has been forced through the material, and means for forcing it through the material a second time and in the reverse direction, substantially as described. 40th. The combination of means for feeding wire, means for cutting a wire length, means for bending an end thereof to form a leg and for forcing the leg through the material, means for forcing the leg through the material a second time and in the reverse direction, and means for clinching the leg, substantially as described. 41st. The combination of means for feeding wire, means for cutting a wire length, means for bending the ends thereof to form two legs and for forcing the legs through the material and means for forcing the legs through the material a second time and in a reverse direction, substantially as described. 42nd. The combination of means for feeding wire, means for cutting a wire length, means for bending the ends thereof to form two legs and for forcing the legs through the material, means for bending the legs after they have been forced through the material, and means for forcing the legs through the material a second time and in the reverse direction, substantially as described. 43rd. The combination of means for feeding wire, means for cutting a wire length, means for bending the ends thereof to form two legs and for forcing the legs through the material, means for forcing the legs through the material a second time in the reverse direction, and for clinching the legs, substantially as described. 44th. The combination of means for feeding wire, means for cutting a wire length, means for bending the ends thereof to form two legs and for forcing the legs through the material, means for bending the legs after they have been forced through the material, means for forcing the legs through the material a second time and in the reverse direction, and means for clinching the legs, substantially as described. 45th. A machine for shaping articles of wire in which various parts co-operate to form a guiding channel supporting the wire substantially on all sides as it is fed, which parts after the feeding of the wire move with reference to each other to give the wire the desired shape, substantially as described. 46th. A machine for forming an instrument of wire and attaching it to the material in connection with which it is to be used in which various parts co-operate to form a guiding channel supporting the wire on all sides as it is fed, which parts after the feeding of the wire move with reference to each other to bend the wire into the desired shape and insert it into the material to be wired, substantially as described. 47th. A machine for forming and attaching a wire opening in which various parts co-operate to form a guiding channel supporting the wire on all sides as it is fed, which parts after the feeding of the wire move with reference to each other to bend the wire and insert it into the blank, substantially as described. 48th. The combination of means for feeding wire forward, means for cutting a length, a gripper for holding the wire length while being bent, a bender for bending the end of the wire past the gripper, a pivoted support for the wire while being fed in line with the bender, and means for swinging the support out of the way when the bender operates, substantially as described. 49th. In a wire bending machine, the combination of an anvil, means for bending the wire over the anvil, means for bending the wire across the space occupied by the anvil, and means for withdrawing the anvil to permit the last mentioned bending means to operate, substantially as described. 50th. The combination of an anvil, a reciprocating bender made in two parts movable with relation to each other, means for moving the bender to bend the wire upon the anvil, means for withdrawing the anvil, means for causing one portion of the bender to move out of operative position, and means for further advancing the bender to bend the wire past the position occupied by the anvil, substantially as described. 51st. In a wire bending machine, the combination of a wire guide piece adapted to direct the course of the wire as it is fed, with means for advancing the guide piece to serve as a guide for the wire, means for bending the wire over the guide piece, and means for withdrawing the guide piece so that the bent wire may be driven, substantially as described. 52nd. In a wire bending machine, the combination of side plates for supporting the wire while being bent, an anvil, means for advancing and withdrawing the same, a reciprocating bender moving between the side plates, and means for modifying the action of the bender upon the wire by withdrawing a portion thereof at the proper time, substantially as described. 53rd. In a wire bending machine, mechanism for bending a wire in two directions and supporting it while being bent consisting of the combination of side plates for supporting the wire, an advancing and retreating anvil, a reciprocating bender moving between the side plates, and means for moving a portion of the bender from its operative position, substantially as described. 54th. In a wire bending machine, the combination of the guiding plates to support the wire on opposite sides while being bent with a reciprocating bender moving between the plates and operating upon the wire, substantially as described. 55th. In a wire bending and inserting machine, the combination of two side plates for supporting the wire on opposite sides while being bent and inserted, with a plunger moving between the side plates for bending the wire, and a second bending the wire and a second plunger moving between the plates for forcing the wire into the material to be wired, substantially as described. 56th. In a machine for forming and inserting a wire instrument, the combination of means for forming and inserting the wire with a clincher therefor which in its normal position co operates with other parts of the machine to form a guiding channel for the wire while the latter is being fed, and which retreats to permit the end of the wire to pass through the material, and returns to its normal position to clinch said end upon the material, substantially as described. 57th. In a machine for forming and inserting a wire instrument, the combination of means for bending and inserting the wire, with a clincher therefor which retreats in order to permit the end of the wire to pass through the material, and advances to clinch the wire upon the material, substantially as described. 58th. In a machine for forming and inserting a wire instrument, the combination with means for feeding, bending and inserting the wire, of a pivoted clincher therefor forming a part of the guiding channel for the wire as it is fed to the bending means and which swings backward in order to permit the end of the wire to pass through the material and swings forward to bend the wire toward the material, substantially as described. 59th. A machine for forming an instrument of wire and attaching it to the material in connection with which it is to be used in which the grooves which holds the body of the wire instrument while the same is being formed and set, is slightly out of line with the grooves which receive the other portions of the wire, so as to permit the ends of the wire when bent inward to pass freely by the body portion of the wire, substantially as described. 60th. The combination of mechanism for attaching a wire opener to a blank, mechanism for folding the blank, a reciprocating carrier for transferring the blank from the first to the second of the mechanism mentioned, and means for holding the blank while being wired and preventing it from being carried backward by the carrier in its retreat, substantially as described, 61st. The combination of mechanism for attaching a wire opener to a blank with mechanism for embossing the blank, the embossing mechanism serving to hold the blank while being wired, substantially as described. 62nd. The combination of mechanism for attaching a wire opener to a blank, mechanism for folding the blank, means for transferring the blank from the first to the second of the mechanisms mentioned, and embossing mechanism serving to emboss the blank and also to hold it while being wired, substantially as described. 63rd. In a machine for shaping wire, the combination with means for bending a wire upon its lf so that the end may pass the body, of means for deflecting the end as it is bent to prevent it from striking the body, substantially as described. 64th. The combination with means for bending a wire, of a guide 3 for directing the end of the wire as it is bent past the body thereof, substantially as described. 65th, The combination with means for presenting to material to be wired a piece of wire having an end thereof bent to form a leg and for forcing the leg through the material, of means for forcing the leg through the material a second time and in the reverse direction, and means for clinching the leg and locking it across the body of the wire, substantially as described. 66th. The combination with means for presenting the material to be wired a piece of wire having the ends thereof bent to form two legs and for forcing the legs through the material, of means for forcing the legs through the material a second time and in the reverse direction, and means for clinching the legs and locking them across the body of the wire, substantially as described. 67th. The combination of means for feeding wire, means for cutting a wire length, means for bending an end thereof to form a leg and for forcing the leg through the material, means for forcing the leg through the material a second time and in the reverse direction, and means for clinching the leg and locking it across the body of the wire, substantially as described. 68th. The combination of means for feeding wire, means for cutting a wire length, means for bending the ends thereof to form two legs and for forcing the legs

through the material, means for forcing the legs through the material a second time and in the reverse direction, and means for clinching the legs and locking them across the body of the wire, substantially as described. 69th. In a wire bending machine, the combination of a gripper which grasps the wire on the sides thereof, and a bender which bends the end of the wire past the gripper, the wire being thus bent without a supporting anvil, substantially as described. 70th. In a wire bending machine, the combination of two grippers which grasp the ends of the wire length respectively on the sides thereof, and two benders which bend the ends of the wire past the grippers, the wire being thus bent without a supporting anvil, substantially as described.

No. 68,261. Fare Receiver and Register.

(*Receptacle et régistre pour billets de passage.*)



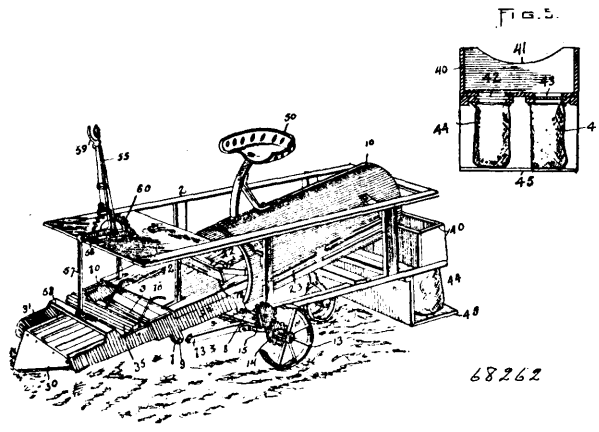
Louis P. Pichette, of Lawrence, Massachusetts, U.S.A., 30th July, 1900; 6 years. (Filed 26th June, 1900.)

Claim.—1st. A fare receiver and register, comprising a casing having a fare receiving compartment and a registering compartment, a door in the wall of the fare receiving compartment for removing its contents, a registering mechanism removably mounted in the registering compartment, an opening in the wall of said compartment for removing the registering mechanism, and an internal slide covering said opening and accessible from the fare receiving compartment through the door of the latter. 2nd. A fare receiver and register, comprising a registering compartment, registering wheels contained therein, the ratchet 20, for revolving said wheel, the pawl 21, pivoted to a fixed support and adapted to rotate said ratchet, the push rod 24, connected at one end to said pawl and having its other end extended through the wall of the registering compartment, a spring for retracting said rod and pawl, the arm 28, projecting from said rod, and the bell 29, having the operating lever 30, located in the path of the arm, whereby the bell is rung and the register actuated by a longitudinal operative movement of the rod 24. 3rd. A fare receiver and register, comprising a casing having a fare receiving compartment and a registering compartment, a door in the wall of the fare receiving compartment for removing its contents, a slide in the wall of the registering compartment, and means operated by the closing door, for locking the slide in place. 4th. A fare receiver and register comprising a casing having a slot for the introduction of fares, a registering mechanism mounted in said casing and having an arbor provided with a ratchet and formed to receive a key for setting back the mechanism, a check pawl engaging said ratchet to normally prevent such movement of the mechanism, said pawl having a lug which projects into alignment with the arbor, said lug resting against the key when the latter is fitted to the arbor and holding the pawl away from the ratchet, an opening in the wall of the casing for inserting the key, and a closure for said opening.

No. 68,262. Potato Digger. (*Arrache-patates.*)

Rasmus Rasmussen, Oregon, Wisconsln, U.S.A., 30th July, 1900; 6 years. (Filed 11th July, 1900.)

Claim.—1st. In an apparatus of the class specified, the combination with a slotted ploughshare provided with a plough point, of conveying mechanism, a cover for the conveying mechanism, guard fingers carried by the ploughshares and extended above said cover,



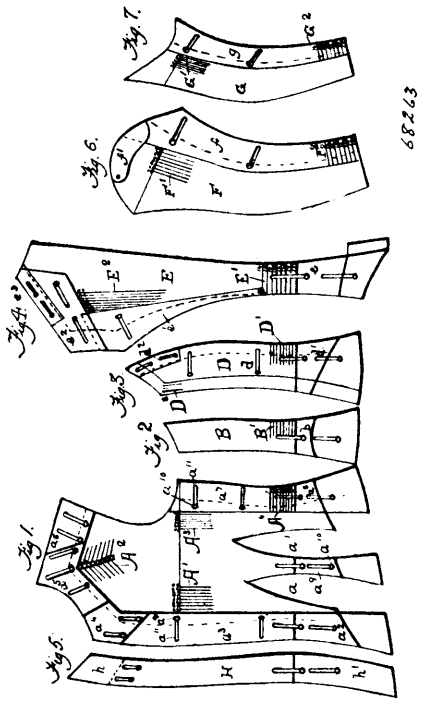
and a corrugated earth crushing roller mounted in advance of said fingers and adapted to exert a crushing force against the slotted portion of the ploughshare. 2nd. In a potato digger, the combination with a slotted ploughshare provided with a plough point, of a conveying mechanism, a cover for the conveying mechanism, guard fingers carried by the ploughshare and extending above said cover, and a rotary earth crushing roller mounted in advance of the guard fingers adjacent to the slotted portion of the ploughshare, and serving to crush lumps of earth against the slotted portion of the ploughshare, said roller being rotated solely by the earth engaging therewith. 3rd. In a potato digger, the combination with a slotted ploughshare provided with a plough point, of two independent conveyers, one of which is adjacent to the ploughshare, a cover for said adjacent conveyer, guard fingers carried by the ploughshare and extending above the diver, an earth crushing device mounted on the ploughshare and parallel with the slotted bottom thereof, in advance of the guard fingers, and adapted to engage and crush earth against the slotted portion of the ploughshare, and means for raising and lowering the ploughshare. 4th. In a potato digger, the combination with a ploughshare provided with a plough point, and with two independent conveyers, a cylindrical casing for one of the conveyers, a cover for the other conveyer, guard fingers carried by the ploughshare and extending above and over said cover, a crushing roll mounted on the ploughshare in advance of the guard fingers and adapted to crush earth against the slotted portion of the ploughshare, a receiver fixed to the rear end of said casing of one of the conveyers and provided with discharge openings, and a sack rest adapted to receive a sack. 5th. In an apparatus of the class described, the combination with a ploughshare provided with a plough point, of a casing located in line with the ploughshare, a conveyer in said casing and a series of guard bars secured to the share and the free ends of said bars being located over the cover of said casing, substantially as described. 6th. In an apparatus of the class described, the combination with a ploughshare provided with a plough point, of a casing located in line with the ploughshare and having a cover provided with an upturned end, a series of guard fingers secured to the share near the rear end thereof and the free ends of said bars being located over the cover, substantially as described. 7th. In an apparatus of the class specified, the combination with a pivotally supported ploughshare provided with a plough point, of an endless conveyer located at the rear of said ploughshare, a casing for inclosing the endless conveyer, an inclined cylindrical casing into which the endless conveyer feeds and containing a feed screw, driving mechanism for the conveyer and feed screw, a series of guard bars secured to the ploughshare and inclined and curved, the curved portions of said guard bars being located over the casing for the primary conveyer, and an earth crushing device sustained by the ploughshare, substantially as described.

No. 68,263. Dress Chart. (*Patron pour tailler les vêtements.*)

George Mackey Donaldson, Kentville, Nova Scotia, Canada, 30th July, 1900; 6 years. (Filed 11th July, 1900.)

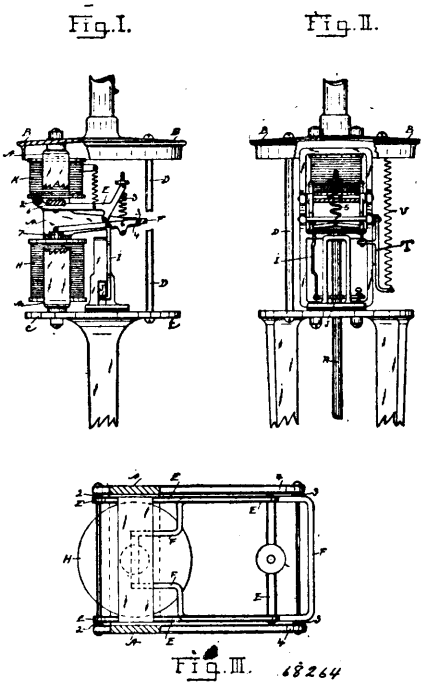
Claim.—1st. An adjustable pattern dress chart, comprising a main portion having graduated scales and marks thereon to indicate the variations in the size of the garment being marked out, a series of slides movably connected thereto, said slides being arranged as to retard, in their adjusted position, the desired configuration of the pattern regardless of the difference in the size of the garment being cut, substantially as set forth. 2nd. A garment pattern provided with skirt extension slides, said slides being specially adapted for

marking out coats and jackets, substantially as described. 3rd. A garment pattern having a supplemental portion for converting a



single-breasted garment into one that is double-breasted, as substantially described.

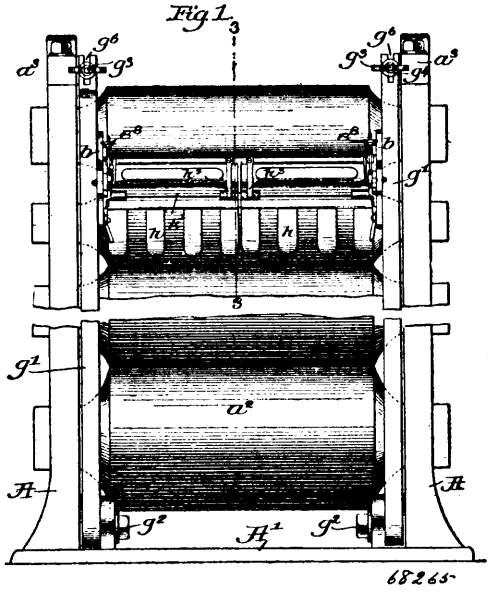
No. 68,264. Arc Lamp. (*Lampe à arc.*)



William A. Turbayne, Hamilton, and C. P. Company, St. Catharines, both of Ontario, Canada, 30th July, 1900; 6 years; (Filed 16th September, 1899.)

Claim.—1st. The combination, in an electric arc lamp, of a lever frame suitably pivotted and supporting at one end the armature of an electro-magnet, said magnet being located in a circuit shunting the carbons, an armature co-acting with said lever frame and operated by an electro-magnet located in the main circuit and means connected with the lever frame for closing the contacts of a safety cut-out path, which same means also short circuits and cuts-out of action the main circuit magnet, by the action of the magnet in the shunt circuit, as and for the purpose specified. 2nd. The combination, in an electric arc lamp, of a safety cut-out operated by a magnet located in a circuit shunting the carbons, a lever frame actuated by said shunt magnet and an armature frame, with arms extending, co-acting with said lever frame, a magnet in the main circuit capable of holding the arms of armature frame away from lever frame and means for cutting out the main circuit magnet to release said arms and forcibly press the cut-out contacts together immediately upon their being brought into contact by the action of the shunt magnet, substantially as described.

No. 68,265. Calendering Machine. (*Machene de calandrage.*)



Irwin Peter Dillon and Henry Clay King, both of Lawrence, Massachusetts, U.S.A., 30th July, 1900; 6 years. (Filed 18th January, 1900.)

Claim.—1st. In a calendering machine, a suitable support, a carrier movable in one direction thereon, a doctor mounted on said carrier and movable relatively thereto in a different direction, the resultant of the two distinct movements permitting the doctor to follow the movements of its roll, substantially as described. 2nd. In a calendering machine, a suitable support, a carrier yieldingly mounted thereon, a doctor supported by said carrier, and means carried by said carrier permitting bodily movement of the doctor relatively to the carrier, substantially as described. 3rd. In a calendering machine, a doctor, carriers therefor, said carriers and doctor being provided at their adjacent ends with co-operating means for guiding the doctor in its vertical movement, bearings for said carriers, the latter being movable on said bearings to and from the calendering rolls, and means for moving said doctor vertically relatively to its carriers, substantially as described. 4th. In a calendering machine, a doctor, pivotal bearings for the opposite ends of said doctor, yielding carriers for said doctor and said pivotal bearings, said doctor having bearings in said carriers independent of said pivotal bearings, and the latter being movable independently of said bearings in the carriers, substantially as described. 5th. In a calendering machine, a doctor, pivotal bearings for the opposite ends of said doctor, yielding carriers for said doctor and said pivotal bearings, said doctor having bearings in said carriers independent of said pivotal bearings and the latter being movable independently of said bearings in the carriers, combined with means normally tending to move said pivotal bearings away from their carriers, substantially as described. 6th. In a calendering machine, a doctor, pivotal bearings for the opposite ends of said doctor, yielding carriers for said doctor and said pivotal bearings, said doctor having bearings in said carriers independent of said pivotal bearings, and the latter being movable independently of said bearings in the carriers, combined with means normally tending to move said pivotal bearings away from their carriers, and an adjusting device for said means, substantially as described. 7th. In a calendering machine, a doctor, pivotal bearings for the opposite ends of said doctor, yielding carriers for said doctor and said pivotal bearings, said doctor having bearings in said carriers independent of said pivotal bearings, and the latter being movable independently of said bearings in the carriers, and means for regulating the yielding tension of said carriers, substan

tially as described. 8th. In a calendering machine, a doctor having at each end a stud or arm, a carrier having at its inner end a vertical guide to receive said stud and permit the latter to move freely up and down, a bearing for said carrier, the latter being movable on said bearing toward and from the rest of the machine, and means yieldingly supporting said doctor independently of said studs, substantially as described. 9th. In a calendering machine, a doctor having at each end a stud or arm, a carrier having at its inner end a vertical guide to receive said stud and permit the latter to move freely up and down, a bearing for said carrier the latter being movable on said bearing toward and from the rest of the machine, and means carried by said carrier and yieldingly supporting said doctor independently of said studs, substantially as described. 10th. In a calendering machine, a suitable support, a carrier mounted to slide thereon, a doctor mounted on and supported by said carrier, and means normally holding said doctor and carrier yieldingly pressed against the calenderlng roll, substantially as described. 11th. In a calendering machine, a doctor, directing fingers pivotally mounted thereon, permitting said fingers to be turned back from the adjacent calendering roll, and means automatically holding said fingers in their turned back position, substantially as described. 12th. In a calendering machine, a doctor, supports stationary bearing plates on which said doctor is yieldingly mounted, said bearing plates being movable relatively to their supports, and clamps normally locking said plates in position and permitting them to be instantly unlocked, whereby the doctor and its plates may be moved on said supports relatively to the adjacent roll, substantially as described. 13th. In a calendering machine, a doctor, supports, stationary bearing plates on which said doctor is yieldingly mounted, said bearing plates being pivoted at one end to said supports, and clamps detachably holding their opposite ends, the unclamping thereof permitting said plates and doctor to be swung back from the adjacent roll, substantially as described. 14th. In a calendering machine, a plurality of doctors, a support or pillar for each end of said doctors, said supports and their doctors being bodily movable relatively to and independently of the rest of the machine, and means normally locking said supports and doctors in operative position, substantially as described. 15th. In a calendering machine, and supports for the doctor, one support adjacent each end of the calendering rolls. said supports being pivoted to the base of the machine, and means removably holding the upper ends of said supports in operative position, substantially as described.

No. 68,266. Bicycle. (*Bicycle.*)

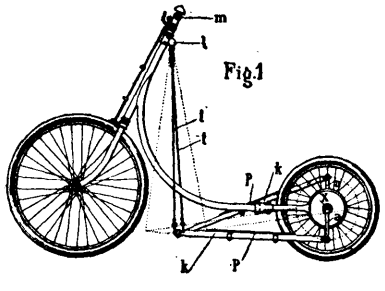
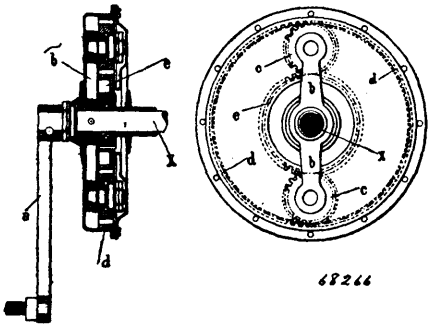


Fig.2 Fig.3

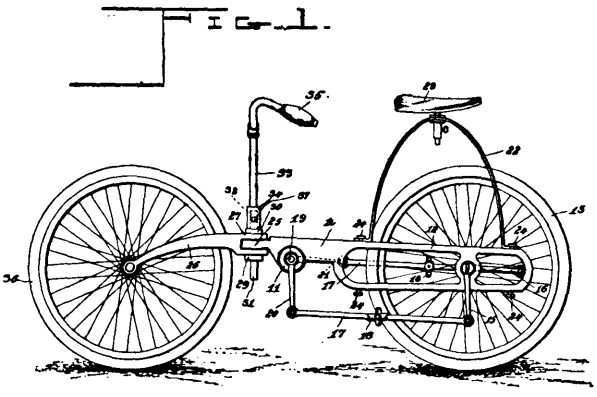


68266

Enrico Giovanni, Turin, Italy, 30th July, 1900; 6 years. (Filed 21st February, 1900.)

Claim.—1st. In a cycle of the type hereinbefore set forth, the speed gearing comprising a lever *b* keyed to the axle, gearing *c* and *d* constructed and operating so as to increase to the required degree the number of revolutions of the driving wheel of the cycle, substantially as hereinbefore set forth. 2nd. In a cycle of the type set forth, the system of pedal levers with moving fulcrum adapted to support the rider in the standing position, said levers connected on the one hand to cranks *a* keyed upon the axle *x*, and on the other hand to the rods *t* oscillating upon the pivot *l*, substantially as hereinbefore described and shown in the drawings. 3rd. In a cycle of the type set forth, pedals *p*, allowing the foot of the rider to be moved thereon towards the oscilating rod *t*, or toward the crank *a*, so as to vary the driving power in accordance with the resistance of the road. 4th. A cycle substantially such as described, comprising a wheeled frame having a driving axle, and levers hung on said frame and operatively connected with said axle, said levers arranged in such relation to the frame that the operator may stand in an erect position while in the act of propelling the cycle, as set forth. 5th. In a cycle substantially such as described, the combination of a frame and a wheeled driving axle mounted in the frame, foot levers operatively connected with the axle and disposed on opposite sides of the frame and suspension devices attached to the frame and said levers, as set forth. 6th. In a cycle substantially such as described, the combination with a wheeled frame, of a rear wheeled axle provided with cranks, suspension rods pivoted to the frame on opposite sides of the reach thereof, and foot levers pivoted to the suspension rods and to the cranks of said driving axle, as and for the purposes described.

No. 68,267. Bicycle. (*Bicyclé.*)

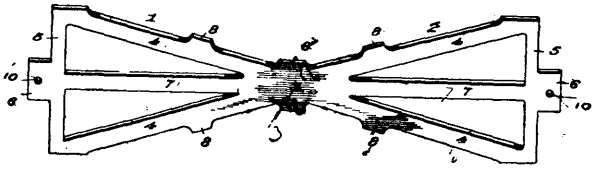


68267

Cyprien Larin, Lachine, Quebec, Canada, 30th July, 1900; 6 years. (Filed 8th May, 1900.)

Claim.—1st. A bicycle substantially such as described, comprising an invertible frame, and a seat and a steering device applied detachably to said frame, substantially as set forth. 2nd. A bicycle comprising a wheeled frame having its front member curved and connected by a vertical joint to the rear member, a seat secured removably to the rear member and a steering spindle adapted to be connected to the front member in either the normal or inverted position of the frame, substantially as described. 3rd. A bicycle comprising a rear frame having the driving wheel and the propelling mechanism, a curved front fork jointed to said frame and having the steering wheel, a seat mounted detachably on the rear frame and a steering spindle connected detachably to the shaft which affords the axis of motion of the front fork, substantially as described. 4th. In a bicycle, the combination with a rear frame, and a front fork, of the vertical shaft journalled in the frame and made fast with the fork and having the polygonal ends, and a steering spindle adapted to apply to either end of the vertical shaft, substantially as described.

No. 68,268. Wall Tie. (*Lien pour murs.*)



68268

John Dixon Johnston, Newport, Rhode Island, U.S.A., 30th July, 1900; 6 years. (Filed 5th July, 1900.)

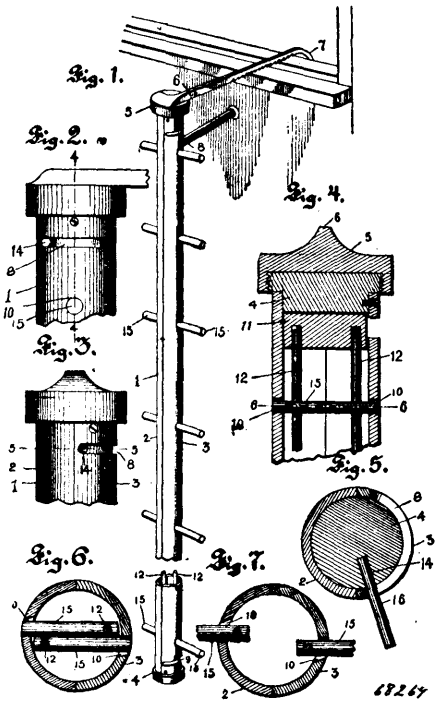
Claim.—A wall tie formed of a single piece of sheet material, and consisting of the V-shaped sections 1 and 2, having their diverging ends connected by the transverse parallel braces 5 5 formed with the longitudinal ears 6 6, the longitudinal bridge 3 and the longitudinally aligned braces 7 7 connecting said parallel transverse braces, substantially as shown and described.

No. 68,269. Fireman's Ladder. (*Echelle pour le feu.*)

Edward P. Becker, St. Louis, Missouri, U.S.A., 30th July, 1900; 6 years. (Filed 21st June, 1900.)

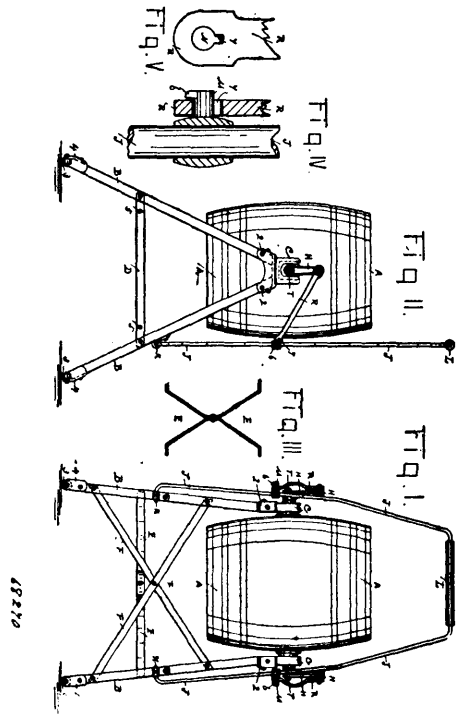
Claim.—1st. A fireman's ladder constructed with a tube, rung mountings within said tube, and rungs arranged to be drawn into

said tube upon rotary movement of the said rung mountings with relation to the said tube, substantially as specified. 2nd. A fireman's



ladder, constructed with a tube, a hook removably located upon the upper end thereof, said tube having a series of oppositely arranged apertures formed in its body, a pair of discs rotatably arranged, one in each end of said tube, a pair of oppositely arranged rods having their ends seated in said discs, and rungs pivotally held upon said rods and extending outwardly through the apertures in the tube, substantially as specified.

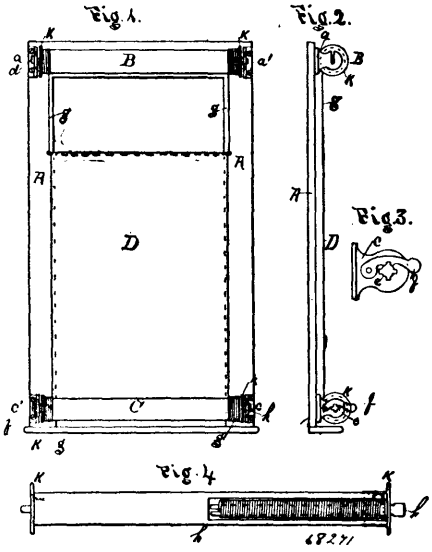
No. 68,270. Churn. *(Baratte.)*



George B. Downswell, Hamilton, Ontario, Canada, 30th July 1900; 6 years. (Filed 13th July, 1900.)

Claim.—1st. In a barrel churn, side stands with casters, transverse and horizontal braces and cross straps connecting the stands, bearings with flanges secured to the top of the stand, ball bearing casing in recesses in said bearings for the churn axles with cranks, a front and central operating rod, side extensions of said rod pivoted to the sides of the stand, journals on said operating rod, connecting rods connecting the journals to the cranks, lips on said journals and slots in said connecting rods conforming with each other and diametrically in line to retain said connecting rods in position on said journals, as described. 2nd. In a barrel churn, side stands, for the axles of the churn, cranks on said axles, a front and central handle operating rod, lower side extensions of said rod pivoted to the sides of the stand, journals on said extensions, connecting rods to connect said journals to the cranks, lips on said journals and slots in said connecting rods conforming with each other and in diametrical line to retain said connecting rods on said journals, as described.

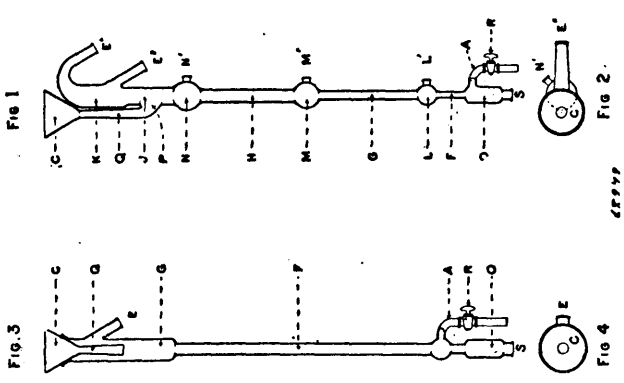
No. 68,271. Window Shade Hanger.
(Ferrure de sotore de fenêtre.)



Herman House, Oamarn, Otago, New Zealand, 30th July, 1900; 6 years. (Filed 14th July, 1900.)

Claim.—The combination of the spiral spring rollers, B and C, being connected to the shade D, by means of the cords or tapes *g g g g*, substantially as and for the purpose specified.

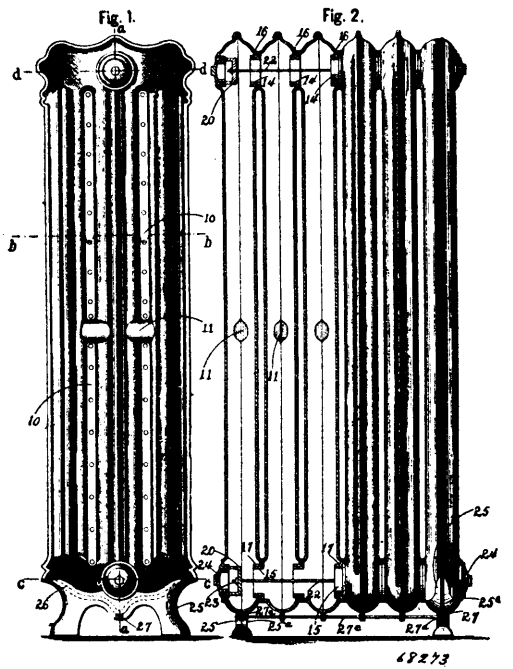
No. 68,272. Apparatus for the Separation of Minerals, etc. *(Séparateur de minerai.)*



Thomas Rowland Jordan, New York City, New York. U.S.A., 30th July, 1900; 6 years. (Filed 31st August, 1897.)

Claim.—An apparatus for separating precious and other metals from their ores and the like, consisting of a vertical tube having an inlet water supply, regulated by a valve, and a concentrating chamber at or near the bottom, and a feed hopper, and a discharge outlet at or near the top, said vertical tube being constructed of lengths of tubes of different cross sectional dimension and with an enlarged chamber between adjacent lengths of tubes, as and for the purpose set forth.

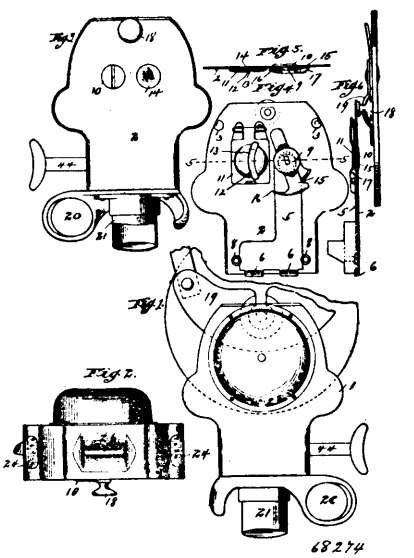
No. 68,273. Radiator. (*Calorifère.*)



Clarence Eugene Safford, Buffalo, New York, U.S.A., 30th July, 1900; 6 years. (Filed 13th May, 1899.)

Claim.—1st. As a new article of manufacture, a radiator section comprising two sheet metal plates struck into shape and having homogeneous coupling means for joining the section to adjoining sections. 2nd. A radiator composed of a plurality of sections of flexible metal, united by coupling members formed homogeneous or integral with said sections. 3rd. A radiator comprising a plurality of sections formed wholly of sheet metal joined to each other by telescoping tubular connections, formed integral with the sections and the rods for securing the sections together, as set forth. 4th. A sheet metal radiator composed of two or more sections, each having nipple portions formed integral therewith and extending from the sides thereof, and tie rods for securing the sections together. 5th. A radiator comprising two or more sections formed of sheet metal, and having upper and lower tubular portions formed integral therewith and projecting alternately outwardly and inwardly from their sides, the outwardly projecting portions of each section being adapted to telescope within the inwardly extending portions of the adjacent section, and thereby connect the sections together, and tie rods for securing the sections togethers, as set forth. 6th. A radiator comprising a plurality of sections formed of flexible sheet metal and united by joints tightened by internal fluid pressure. 7th. A radiator comprising a plurality of sections formed of flexible sheet metal and united by joints tightened by the pressure of the heating agent, as set forth. 8th. A radiator comprising a plurality of sections formed of flexible sheet metal, and united by homogeneous coupling means, tightened by internal fluid pressure. 9th. A radiator formed of flexible sheet metal and comprising a plurality of sections united by coupling members, which are tightened by the bulging of the sections through internal pressure, and tie rods for securing the sections together. 10th. A radiator comprising a plurality of sections formed of flexible sheet metal and united by homogeneous coupling members, tightened by the pressure of the heating agent, as set forth. 11th. A sheet metal radiator composed of two or more sections, each having male and female nipple portions formed integral therewith and extending from the sides thereof, the male nipples of one section being adapted to be inserted in the corresponding female nipple portions of the adjacent section, and to be more firmly forced therein by the bulging of the sections caused by the pressure of the heating agent. 12th. A radiator comprising a series of sections, each having diaphragmatic portions provided with coupling devices, said diaphragmatic portions being adapted to be moved by the fluid pressure of the radiator, to force the coupling devices into tight connection. 13th. A radiator composed of two or more sections of flexible metal, connected together by joints which are tightened by the bulging of the sections through the pressure of the heating agent, and connecting means for rigidly maintaining the end sections in substantially the same relative position with respect to each other. 14th. A radiator formed of flexible sheet metal composed of two or more sections formed in two portions, a male and female portion, tubular nipple portions integral with and extending outwardly from the sides of all the male portions with the exception of the end male portion, tubular nipple portions formed integral with and extending inwardly from the sides of the female portions and the end male portion, the said outwardly extending portions being adapted to telescope in the inwardly extending portions to secure the sections together, and tubular devices seated in the inwardly extending tubular portions of the male portion and the inwardly projecting portions of the female portion of the section at the opposite end, and each provided with an inner yoke, and rods or bars passing through said yokes, telescoping nipples and the sections for drawing and securing the sections together, whereby the bulging of the sections tends to force the tubular devices into closer contact to tighten the joint. 15th. A radiator section formed of two portions of sheet metal having the edge of one portion lapped over or bent upon the edge of the other portion, and the lapped edges bent back again upon themselves in the opposite direction, as set forth.

No. 68,274. Fare Register. (*Boîtes à billets.*)



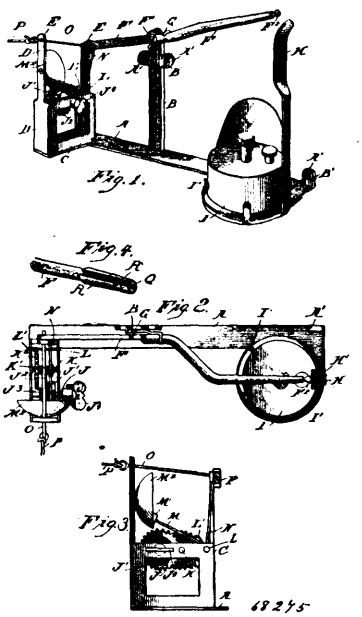
George Frederic Rooke, Peoria, Illinois, U.S.A., 30th July, 1900; 6 years. (Filed 23rd May, 1900.)

Claim.—1st. A fare register, comprising a registering mechanism, a movable frame for actuating the same, a spring for moving said frame from the receiving point towards the discharge point of the register, gripping devices on said frame for positively gripping the coin, and a detent mechanism for releasing said frame, adapted to be operated by the insertion of a coin, substantially as described. 2nd. A fare register, comprising a registering mechanism, a movable frame adapted to operate said registering mechanism, a spring to move said frame from the receiving point towards the discharge point of the register, gripping devices on the frame for positively gripping a coin, a spring actuated mechanism for operating said gripping devices, and a detent adapted to be operated by the insertion of a coin to release said frame and the mechanism for actuating the gripping devices, substantially as described. 3rd. A fare register, comprising a registering mechanism, a movable frame adapted to operate said registering mechanism, a spring to move said frame from the receiving point towards the discharge point of the register, gripping devices on the frame for positively gripping the coin, spring-actuated mechanism for operating said gripping devices, a detent adapted to be operated by the insertion of a coin to release said frame and the mechanism for actuating the gripping devices, and means for releasing said gripping devices when the frame has reached its limit of motion, substantially as described. 4th. A fare register, comprising a registering mechanism, a movable frame for actuating the same, a spring for moving said frame from the receiving point towards the discharge point of the register, gripping devices on said frame for positively gripping the coin, a detent mechanism for releasing said frame, adapted to be operated by the insertion of a coin, a shutter for closing the receiving end of the register after each registration, and means for locking said shutter in its closed position until the mechanism is re-set, substantially as described. 5th. A fare register, comprising a coin chute, a frame mounted to slide on said coin chute, a spring for moving said sliding frame from the receiving to the discharge end of said chute, coin gripping devices carried by said frame, a detent adapted to be released by the insertion of a coin in said chute, and a registering mechanism operated by the movement of the frame, substantially as described. 6th. A fare register, comprising a coin chute, a frame mounted to slide on said chute, coin gripping devices on said frame, a spring for moving said frame from the receiving to the discharge end of the chute, spring actuating mechanism for operating the

gripping devices, a detent adapted to be operated by the insertion of a coin to release said sliding frame and the mechanism for actuating the gripping devices, means for releasing the gripping devices when the frame has reached the discharge end of the chute, and a registering mechanism operated by the movement of the frame, substantially as described. 7th. In a register of the character described, the combination with the coin chute and the movable frame mounted thereon and provided with gripping devices and means for actuating the same, of a spring for moving said sliding frame from the receiving to the discharge end of the chute, a detent controlling said movement and adapted to be released on the insertion of a coin in the chute, a wheel provided with an eccentric pin, a lever connected to said eccentric pin and to the sliding frame, and means for actuating said wheel from the exterior of the case to return the sliding frame to the receiving end of the chute, substantially as described. 8th. In a register of the character described, the combination with a coin chute having a fixed cam or stop thereon, of a detent, a spring-actuated frame mounted to slide on said chute and provided with gripping devices, and a spring-actuated cam plate having a shoulder to engage thedetent and a projection to engage the cam or stop, substantially as described. 9th. In a register of the character described, the combination with a coin chute having a fixed cam or stop, of a detent, a spring-actuated frame mounted to slide on said chute and provided with a pivoted gripping dog, and a spring-actuated cam plate pivoted on said frame and having a projection to engage the fixed cam, a shonlder to engage the detent, and a link whereby it is connected with the gripping dog, substantially as described. 10th. In a register of the character described, the combination with a coin chute provided with a fixed cam and a fixed stop, of a detent, a spring actuated frame mounted to slide on said chute and provided with a pivoted gripping dog, and a spring actuated cam plate pivoted on said frame and having a projection to engage the fixed cam, a shoulder to engage the detent, a link whereby it is connected with the pivoted dog, and an arm arranged to engage the fixed stop at the limit of motion of the frame, substantially as described. 11th. In a register of the character described, the combination, with a coin chute having opposite longitudinal slots, of a sliding frame provided with means for actuating the same, and with a gripping dog extending through one of the slots, said frame embracing the chute and being provided on the opposite side thereof with a projection which extends through the other of said slots and co-operates with the gripping dog, substantially as described. 12th. In a register of the character described, the combination, with a coin chute, and a spring actuated frame sliding thereon and provided with gripping devices, of a lever pivoted to to said frame, a shutter frame centrally pivoted on the chute, a wheel to which said lever is eccentrically pivoted, said wheel also serving to control the position of the shutter frame during its movement, and means for actuating said wheel from the exterior of the register, substantially as described. 13th. In a register of the character described, the combination, with the coin chute and sliding frame thereon, of a lever pivoted to said sliding frame, a wheel to which said lever is eccentrically connected, said wheel being provided with cams on its periphery, means for actuating said wheel from the exterior of the register, and a shutter frame pivoted on the chute and having a projection adapted to engage said cams, substantially as described. 14th. In a register of the character described, the combination, with a sliding frame, of a lever pivoted thereto, an actuating wheel to which said lever is eccentrically connected, said actuating wheel having a spring pawl mounted on its inner face, a cam engaging the heel of said pawl during a portion of the revolution of the wheel, a ratchet wheel with which the toe of said pawl engages when free of the cam, a pinion rotating with said ratchet wheel, and a sliding rack bar meshing with said pinion and adapted to be operated from the exterior of the register, substantially as described. 15th. A fare register, comprising a registering mechanism, means for operating the same, a coin chute a shutter located at the receiving end of said coin chute, said shutter being open when the register is in operative position to receive a coin, and means actuated by the insertion of the coin in the chute for closing said shutter after the coin has passed said shutter, substantially as described. 16th. A fare register, comprising two registering mechanisms, and a spring actuated mechanism controlled by the passage of a coin and adapted to operate one of said registering mechanisms when released by the coin and to operate the other registering mechanism while being re-set, substantially as described. 17th. In a fare register of the character described, with the coin chute, a shutter for closing the receiving end thereof, the spring actuated movable frame and its gripping device and detent, of a spring arm having a pin adapted to close the chute when the frame is raised, and a cam plate adapted to withdraw the pin at the downward limit of motion of the frame and to permit it to enter the chute when the frame is raised, substantially as described. 18th. A portable or hand fare register comprising a casing adapted to be held in the hand and having a coin chute extending therethrough, a registering mechanism, a spring actuated mechanism for operating said registering mechanism, and a detent lever mechanically engaging and restraining the register-operating mechanism when set and adapted, when so engaged, to extend into the coin chute, whereby the coin in its passage through the chute will trip the detent lever and release the register operating mechanism and thereby cause the same to operate the register, said detent lever being held stationary by its engagement so as not to be displaced or released by changes in position of the register, substantially as set forth. 19th. A portable or hand fare register comprising a casing adapted to be held in the hand and having a coin chute extending therethrough, a registering mechanism, a spring actuated mechanism for operating said registering mechanism, a detent lever mechanically engaging and restraining the registering operating mechanism when set and adapted, when so engaged, to extend into the coin chute, whereby the coin in its passage through the chute will trip the detent lever and release the register operating mechanism and thereby cause the same to operate the register, said detent lever being held stationary by its engagement so as not to be displaced or released by changes in position of the register, and means controlled by the operator for re-setting the registrer operating mechanism and re-engaging it with the detent lever, substantially as set forth. 20th. A portable or hand fare register comprising a registering mechanism a spring actuated mechanism for operating the same, a detent lever mechanically engaging the register operating mechanism, a coin chute into which the detent lever projects, and an automatically operated shutter controlled by the register operating mechanism and adapted to close the receiving end of the chute after each registration and to open the same when the register operating mechanism is re-set, substantially as set forth. 21st. A portable or hand fare register, comprising a registering mechanism, spring actuated operating mechanism for the same, a detent lever mechanically engaging said operating mechanism, a coin chute into which the detent lever projects, and an automatically operated shutter controlled by the register operating mechanism adapted to close the discharge end of the chute before each registration, and to open the same after registration. 22nd. A portable or hand fare register comprisidg a registering mechanism, a spring actuated operating mechanism for the same, a detent lever mechanically engaging said operating mechanism, a coin chute into which the detent lever projects, and two shutters respectively controling the receiving and discharge ends of the chute and simultaneously closing and opening said ends respectively whereby either end of the chute is closed when the other is open, substantially as set forth. 23rd. A portable or hand fare register comprising a registering mechanism, means for operating the same, a coin chute, a shutter located at the receiving end of the coin chute said shutter being open when the register is in operative position to receive a coin and means actuated by the coin for closing said shutter after the coin has passed said shutter substantially as described. 24th. A portable or handfare register comprising a casing, a registering mechanism, means for operating the same, a coin chute extending through the register casing, a shutter located at the receiving end of the coin chute, means for holding said shutter in an open position and for return-ing it to said position, and means actuated by the coin for closing said shutter, substantially as set forth. 25th. A fare register comprising two registering mechanism, a spring actuated coin released frame for carrying the coin through the register, means for re-setting said frame, and means carried by said frame for operating one of said registering mechanisms when released by the coin and for operating the other registering mechanism while being re-set, substantially as described. 26th. In a register of the character described, the combination, with a coin chute and registering mechanisms located on opposite sides of said chute, of a frame s iding on said chute, a wheel adapted to be operated from the exterior of the register, and a lever connected with said frame and eccentrically pivoted to said wheel, said lever being adapted to engage one of said registering mechanisms when moving in one direction and to engage the other of said registering mechanisms when moving in the opposite direction, substantiatly as described. 27th. In a register of the character described, the combination, with a coin chute and a frame movable thereon and provided with gripping devices, of a shutter for the coin chute and means for actuating the gripping frame and simultaneously and positively actuating the shutter, substantially as described. 28th. In a register of the character described, the combination, with the coin chute and the gripping frame movable thereon, of a wheel for actuating said gripping frame and a shutter frame provided with a projection, said wheel being provided with a cam groove with which said projection engages, whereby the shutter frame is positively actuated and firmly held in all of its positions, substantially as described. 29th. A fare register comprising a coin chute, a frame mounted to slide on said chute, a spring for moving said sliding frame from the receiving to the disccharge end of said chute, coin gripping devices carried by said frame, a detent mounted on said chute and adapted to hold the sliding frame in its receiving position and to be released by the insertion of a coin in said chute, and a registering mechanism operated by the movement of the frame, substantially as described. 30th. In a register of the character described, the combination, with a coin chute having a fixed cam or stop thereon, of a detent pivotally mounted on the chute and extending into the interior thereof, a spring actuated lever mounted on the chute and engaging the detent, a spring actuated frame mounted to slide on said chute and provided with gripping devices, and an oscillating cam plate having an arm to engage the spring actuated lever on the chute and a projection to engage the cam or stop, substantially as described. 31st. In a register of the character described, the combination, with a coin chute provided with a detent and with a fixed cam, of a frame movable thereon and provided with gripping devices, a spring controlled cam plate pivoted on said frame and co-operating with the detent, grip-

ping devices and fixed cam, and a vibrating lever for operating the the moving frame, said lever being provided with a slot and said cam plate being provided with a projection to enlarge said slot, substantially as described. 32nd. In a fare register of the character described, the combination, with the coin chute, a shutter for closing the receiving end thereof, the movable frame and its gripping devices, and a detent, of a spring arm mounted on the movable frame and having a pin adapted to be projected into and withdrawn from the chute, a cam plate pivoted on the frame and adapted to be projected under and withdrawn from beneath said spring arm, and fixed stops in the path of said cam plate whereby the pin is permitted to enter the chute when the frame is raised and is withdrawn therefrom at the downward limit of motion of the frame, substantially as described. 33rd. A hand fare register adapted for the insertion of a coin therein by the prssenger and for manual operation by the collector, said register being provided with a projection on its casing having an enlarged head, in combination with a notched supporting plate adapted to receive said head and provided with a strap or other suitable means of suspension, substantially as described. 34th. In a fare register, the combination, with a casing having a removable section, of a locking bar mounted thereon, a shaft adapted to be operated from the exterior and having a cam to actuate said locking bar, a slotted seal receptacle having a glazed side opening, and a pointed arm secured on the shaft and adapted to pass through the slot of the receptacle to destroy the seal therein when the locking bar is operated, substantially as described.

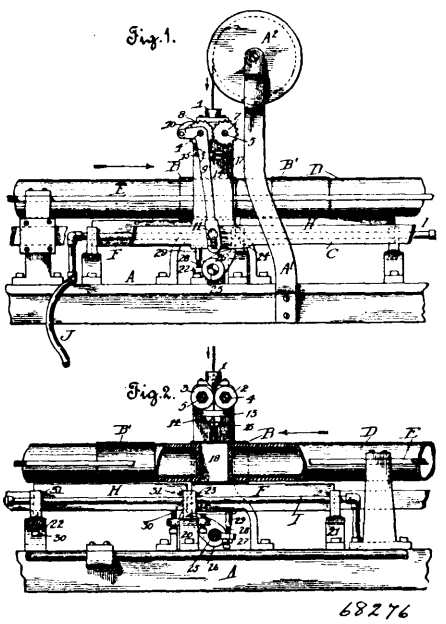
No. 68,275. Burglar Alarm and Lamp Lights.
(Avertisseur et lumière.)



James J. Hinson, Milan, Georgia, U.S.A., 30th July, 1900; 6 years. (Filed 6th May, 1899.)

Claim.—1st. The combination with the frame A, a lamp supported thereon, the electric strip H extending vertically therefrom and provided with a roughened outwardly turned end, the frame C carrying the escapement mechanism and gong, and uprights D and D^1 projecting from said frame and provided with openings E and E^1, the standards B erected on the frame A, the spring actuated match carrying arm pivoted to said upright, the set pin seated in the openings E and E^1 and adapted to engage in a similar opening in the lever F, and the escapement mechanism carrying a tripper bar N, substantially as described. 2nd. The combination with the frame A, a lamp supported thereon, the elastic strip H extending vertically therefrom and provided with a roughened outwardly turned end, the frame C carrying the escapement mechanism and gong, the uprights D and D^1 projecting from said frame and provided with openings E and E^1, the standard B erected on the frame A, the spring actuated match carrying arm pivoted to said upright, the set pin O seated in the openings E and E^1 and adapted to engage in a similar opening in the lever F, the gong or bell N^2 attached to the upright D, the cord or wire P extending to a window, door or other movable object, and the escapement mechanism carrying a tripper bar N, substantially as described.

No. 68,276. Soldering Machine. *(Machine à souder.)*



Robert Deniston Hume, Gold Beach, Oregon, U.S.A., 30th July, 1900; 6 years. (Filed 26th May, 1899.)

Claim.—1st. In combination with a can body, supporting means and with means for propelling such bodies along with their side seams horizontal, of a soldering iron below said supporting means, means for heating said iron, means for delivering solder to the upper edge of said iron, and means for moving the said iron bodily into contact with the can body. 2nd. The combination with a support for can bodies and with means for moving said bodies with their side seams horizontal, of a soldering bar beneath said support, a solder supplying device above said support, and a passage for delivering solder from the supplying device to the edge of the soldering iron. 3rd. The combination with a horn or mandrel forming a support for can bodies, and provided with upper and lower slots in line, of a soldering bar beneath and in line with said slots and a solder delivering device above and in line with said slots. 4th. The combination with a hollow horn or mandrel forming a support for can bodies and provided with upper and lower slots in line, of downwardly converging interior walls forming in connection with said slots and a guide passage, a soldering bar beneath and in line with said passage and a solder delivering device above and in line with said passage. 5th. The combination with can body supporting means, of a soldering iron beneath the supporting mandrel, means for delivering solder to its edge, means for moving said iron bodily upward into contact with the can body in order to supply solder thereto. a fixed iron beyond and in line with said movable iron, means for heating both irons and propelling means for moving the can bodies along. 6th. An outside soldering device for the side seams of sheet metal ware, comprising a straight soldering bar having an edge groove or channel conforming to the surface of the can body and supported so as to be bodily movable upwardly and downwardly toward and from the other side of the seam, means for moving it, a second straight edge bar adjustably fixed in line with the movable bar and means for heating both bars. 7th. In a soldering machine, a horn or mandrel forming a support for can bodies and having a vertical guide passage, in combination with a solder feeding device and a solder cutting device above said horn, and a soldering iron below said horn whereby the solder is cut and falls directly through said passage upon said iron. 8th. In a soldering machine, the combination with a horn or mandrel, and means for propelling can bodies along the same, or a soldering iron movable toward and from said horn, a reciprocating side bar and connections from said side bar to the said iron for giving it the movement referred to. 9th. In a soldering machine, the combination with a horn or mandrel, of a soldering bar beneath the horn or mandrel having one end normally depressed relatively to the horn, means for propelling the bodies along the horn, means for lifting the depressed end of the soldering iron into contact with the can body, means for delivering solder to the edge of said iron and means for heating the iron. 10th. In a soldering machine, the combination with a horn and with a reciprocating side bar having an off-set, of a rock shaft carrying a cam adapted to be operated by said off-set, a movable soldering iron and a support on said rock shaft for said movable iron.

No. 68,277. Fare Box. *(Boîte à billets.)*

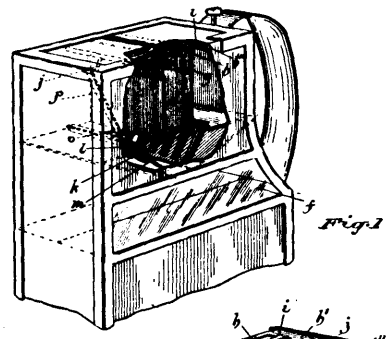


Fig. 1

Fig. 3a

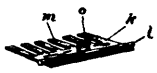


Fig. 3

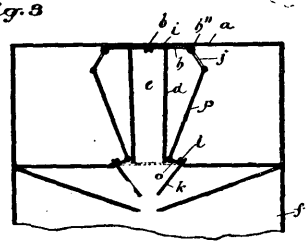


Fig. 2 68277

Huttson Watson, Toronto, Ontario, Canada, 30th July, 1900; 6 years. (Filed 16th June, 1900.)

Claim.—1st. A fare box, embracing in its construction a coinway having vertical slots in the upper end of its opposite sides, jaws pivoted in the fare box having prongs extending through the slots into the coinway and overlapping rearwardly directed lugs for the jaws, jaws pivoted in the fare box at the lower end of the coinway having prongs extending into the coinway and overlapping rearwardly directed lugs for the jaws and links connected to the lugs of the jaws at the same side of the coinway, substantially as specified. 2nd. A fare box, embracing in its construction a coinway having vertical slots at the upper end of its opposite sides, jaws pivoted in the fare box having prongs extending through the slots in the coinway and overlapping rearwardly directed lugs for the jaws, jaws pivoted in the fare box at the lower end of the coinway having prongs extending into the coinway and overlapping rearwardly directed lugs for the jaws, and links connected to the lugs of the jaws at the same side of the coinway, in combination with the magazine and examining chamber interposed between the magazine and coinway, substantially as specified. 3rd. A fare box, embracing in its construction a coinway, jaws pivoted to the fare box and extending into the coinway at the top and bottom of the same and means to operate the jaws to alternately open the jaw at one end and close it at the other, substantially as specified.

TRADE-MARKS

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7394. THE DEIMEL LINEN-MESH SYSTEM COMPANY, New York, N.Y., U.S.A. Linen Underwear, 5th July, 1900.

7395. THE TORONTO DRUG COMPANY, LIMITED, Toronto, Ont. Horse and Cattle Food, 5th July, 1900.

7396. REMI DECARY, Montréal, Qué. Tabac, 6 juillet, 1900.

7397. REMI DECARY, Montréal, Qué. Tabac, 6 juillet, 1900.

7398. E. ABDELNOUR AND COMPANY, Montreal, Que. Cutlery and Edged Tools, 6th July, 1900.

7399. THE NORDHEIMER PIANO AND MUSIC COMPANY, LIMITED, Toronto, Ont. Pianos, 7th July, 1900.

7400. NOVAL GESELLSCHAFT MIT BESCHRANKTER HAFTUNG, 56 Waldstrasse, Berlin, Germany. Polish Paste for Silver, 9th July, 1900.

7401. HYDE CARPET CLEANER AND MOTH EXTERMINATOR COMPANY, Des Moines, Iowa, U.S.A. Cleaning Compound, 10th July, 1900.

7402. SLATER, RODGER AND COMPANY, LIMITED, Glasgow, Scotland. Scotch Whiskey, 13th July, 1900.

7403. LEVER BROTHERS, LIMITED, Toronto, Ont. Medicated Soap, Common Soap, Detergents, Starch, Blue and other preparations for Laundry purposes, 13th July, 1900.

7404. H. P. ECKARDT AND COMPANY, Toronto, Ont. Canned Fruit, Vegetables, Meat, Soups and Fish, 13th July, 1900.

7405. A. LESCHEN AND SONS ROPE COMPANY, St. Louis, Missouri, U.S.A. Wire Rope, 16th July, 1900.

7406. CHARLES WILLIAM COOPER, 113 East 21st Street, New York, N.Y., U.S.A. Varnishes, 17th July, 1900.

7407. E. CONNOR AND COMPANY, New York, N.Y., U.S.A. Irish Frieze, 18th July, 1900.

7408. THOMAS EARLE, Victoria, B.C. Canned Salmon, 19th July, 1900.

7409. THOMAS EARLE, Victoria, B.C. Canned Salmon, 19th July, 1900.

7410. THOMAS A. EDISON, Llewellyn Park, Essex County, New Jersey, U.S.A. General Trade Mark, 19th July, 1900.

7411. THOMAS MARTINDALE, Philadelphia, Pennsylvania, U.S.A. Food, Food Stuffs and Novelties, including Cereals, Coffee, Tea, Candy, Dried Fruits, Chocolate, Cocoa, Smoked Meats, Canned Goods and Bread, 23rd July, 1900.

7412. THE PROVIDENT CHEMICAL WORKS, St. Louis, Missouri, U.S.A. Powdered Acid Phosphate of Lime, 24th July, 1900.

7413. HAIG AND HAIG, LIMITED, 1-3 Trinity Place, Tower Hill, London, England. Whiskey, 24th July, 1900.

7414. BRITISH COLUMBIA CANNING COMPANY, LIMITED, Victoria, B.C., and London, England. Canned Salmon, 24th July, 1900.

7415. THE CANADIAN PORTLAND CEMENT COMPANY, LIMITED, Toronto, Ont. Cement, 24th July, 1900.

7416. PELLISSON PÈRE ET COMPAGNIE, Cognac, France. Eaux de Vie, 24 juillet, 1900.

7417. PELLISSON PÈRE ET COMPAGNIE, Cognac, France. Eaux de Vie, 24 juillet, 1900.

7418. PELLISSON PÈRE ET COMPAGNIE, Cognac, France. Eaux de Vie, 24 juillet, 1900.

7419. THOMAS McAVITY AND SONS, St. John, N.B. Low-Down Closet Combination and Cistern, 26th July, 1900.

7420. THOMAS McAVITY AND SONS, St. John, N.B. Flush Valves for Water Closets, 26th July, 1900.

7421. THE OZONE COMPANY OF TORONTO, LIMITED, Toronto, Ont. Patent Medicines, 28th July, 1900.

7422. GEORGE TANGUAY, Québec, Qué. Tabac, 30 juillet, 1900.

7423. THOMAS G. PHINNEY, New Brunswick, New Jersey, U.S.A. Rat and Vermin Poisons, 30th July, 1900.

7424. JOHN D. PENNINGTON, Dundas, Ont. Games and Toys, 30th July, 1900.

7425. CONSUMERS CORDAGE COMPANY, LIMITED, Montreal, Que. Yarns, Twines and Cordages, 30th July, 1900.

7426. WILLIAM H. SCROGGIE, Montreal, Que. Groceries, 30th July, 1900.

7427. W. L. CHADWICK AND COMPANY, Union Street, Liverpool, England. Substances used as food, such as Preserved Fruits, Fish and Meats, 31st July, 1900.

INDUSTRIAL DESIGNS.

Registered during the month of July, 1900, at the Department of Agriculture—Copyright and Trade-Mark Branch.

1679. FREDERICK J. YESBERA, Toronto, Ont. Display Rack, 5th July, 1900.

1680. DONALD MACPHERSON HENDERSON, Toronto, Ont. Military Souvenir Spoon, 5th July, 1900.

1681. JOSEPH M. CLINTON, Windsor, Ont. Spring Snap, 10th July, 1900.

1682. CANADA RADIATOR COMPANY, LIMITED, Toronto, Ont. Radiator: "Canada Ornamented", 12th July, 1900.

1683. CANADA RADIATOR COMPANY, LIMITED, Toronto, Ont. Radiator: "Canada Window Seat", 12th July, 1900.

1684. CANADA RADIATOR COMPANY, LIMITED, Toronto, Ont. Radiator: "Canada Plain", 12th July, 1900.

1685. CANADA RADIATOR COMPANY, LIMITED, Toronto, Ont. Radiator: "Canada", 12th July, 1900.

1686. GERHARD HEINTZMAN, Toronto, Ont. Plate for Upright Grand Pianos, 18th July, 1900.

1687. THE PATRIOTIC NOVELTY COMPANY, London, Ont. Canes, Swagger Sticks, Umbrella Handles, &c., 18th July 1900.

1688. JOHN L. BANKS, Toronto, Ont. Plaster Portrait Plaque, re "To Alva", 24th July, 1900.

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11518. THE REIGN OF LAW. A Tale of the Kentucky Hemp Fields. By James Lane Allen. The Copp, Clark Company, (Ltd.), Toronto, Ont., 2nd July, 1900.

11519. HAIL TO THE SPIRIT OF LIBERTY. (March.) By John Philip Sousa. The John Church Company, Cincinnati, Ohio, U.S.A., 3rd July, 1900.

11520. EDUCATIONAL REVIEW SUPPLEMENTARY READINGS, CANADIAN HISTORY, NUMBER TEN, JUNE, 1900. George U. Hay, St. John, N.B., 3rd July, 1900.

11521. CARABINADES. Par Dr. Choquette. Avec préface et postface en vers par les Docteurs Beauchemin et Drummond. Ernest Choquette, M.D., St. Hilaire, Qué., 4 juillet 1900.

11522. HONOURABLE G. W. ROSS. (Photo.) Ernest J. Rowley, Toronto Ont., 4th July, 1900.

11523. GRIMSBY PARK: HISTORICAL AND DESCRIPTIVE. By Harriet Phelps Youmans, St. Catharines, Ont., 4th July, 1900.

11524. IDEAL HEAD OF THE REV. MARY BAKER EDDY. (Pen and ink drawing.) Lawrence Hague, Toronto, Ont., 5th July, 1900.

11525. AUNT ANN'S ANTICS. (Cake Walk, March and Two Step.) By Elmer H. Smith. The T. Eaton Company, (Ltd.), Toronto, Ont., 5th July, 1900.

11526. WHEELER'S GRADED STUDIES IN ENGLISH: FIRST LESSONS IN GRAMMAR AND COMPOSITION. W. H. Wheeler & Co., Toronto, Ont., 5th July, 1900.

11527. WHEELER'S GRADED STUDIES IN GREAT AUTHORS: A COMPLETE SPELLER. W. H. Wheeler & Co., Toronto, Ont., 5th July, 1900.

11528. SIR WILFRID LAURIER. (Painting.) J. Colin Forbes, Ottawa, Ont. 6th July, 1900.

11529. SIR WILFRID LAURIER. (Photograph of painting.) J. Colin Forbes, Ottawa, Ont., 6th July, 1900.

11530. CATALOGUE 'S' OF THE METALLIC ROOFING COMPANY OF CANADA, LIMITED. The Metallic Roofing Company of Canada, (Ltd.), Toronto, 6th July, 1900.

11531. THE PUBLIC SCHOOL ARITHMETIC AND MENSURATION. The Canada Publishing Company, (Ltd.), Toronto, Ont., 7th July, 1900.

11532. COME HOME. An Appeal on behalf of Reunion. By Rev. John Langtry, M.A., D.C.L., Toronto, Ont., 7th July, 1900.

11533. WATERLOO CENTENNIAL. March. By Watson H. Walker, Waterloo, Ont., 7th July, 1900.

11534. THREE CHEERS FOR THE FLAG. Words by Fred. W. Adams. Music by Chas. E. Andrews. R. S. Williams & Sons, Toronto, Ont., 7th July, 1900.

11535. HIGH SCHOOL FRENCH GRAMMAR AND READER. By W. H. Fraser, B.A., and J. Squair, B.A. The Copp, Clark Company, (Ltd.), Toronto, Ont., 9th July, 1900.

11536. MODERN PIANOFORTE TECHNIQUE. By A. S. Vogt. Part 2. Whaley, Royce & Co., Toronto, Ont., 9th July, 1900.

11537. THE HEROES OF SOUTH AFRICA. (Print.) Joseph Johnston, Vancouver, B.C., 10th July, 1900.

11538. MUSKOKA THROUGH A CAMERA. (Book.) Frederick Smily, Toronto, Ont., 10th July, 1900.

11539. OFFICIAL TELEPHONE DIRECTORY CITY OF MONTREAL AND SUBURBS, JULY, 1900. The Bell Telephone Company of Canada, (Ltd.), Montreal, Que., 11th July, 1900.

11540. UNLEAVENED BREAD. By Robert Grant. (Book.) Charles Scribner's Sons, New York City, New York, U.S.A., 11th July, 1900.

11541. RECITATIVE. (Maida.) "Alas! For Me." (Music.) By C A. E. Harriss. Whaley, Royce & Co., Toronto, Ont., 11th July, 1900.

11542. RECITATIVE AND CHORUS: Recit:—"My Gallant Defenders." (Music.) By C. A. E. Harriss. Whaley, Royce & Co., Toronto, Ont., 11th July, 1900.

11543. RECITATIVE, AIR AND CHORUS: The Cloister Scene. (Music.) By C. A. E. Harriss. Whaley, Royce & Co., Toronto, Ont., 11th July, 1900.

11 44. WAITING. (Photo.) Ernest J. Rowley, Toronto, Ont., 12th July, 1900.

11545. THE CANADIAN MAGAZINE. July, 1900. The Ontario Publishing Company, (Ltd), Toronto, Ont., 12th July, 1900.

11546. MANUEL DE DROIT COMMERCIAL. Par Mathieu A. Bernard. C. Theoret, Montréal, Qué., 12 juillet, 1900.

11547. REGISTER OF MEMBERS, REGISTER OF SHARES TRANSFERRED, REGISTER OF DIRECTORS OR MANAGERS, SUMMARY OF CAPITAL AND SHARES. Albert Francis Griffiths, Victoria, B.C., 13th July, 1900.

11548. NEW MAP OF THE PROVINCE OF ONTARIO, SHOWING COUNTIES, TOWNSHIPS, POST OFFICES, RAILWAYS AND CANALS. The Copp, Clark Company, (Ltd.) Toronto, Ont., 17th July, 1900.

11549. THE BOERS AND THE CAUSE OF THE WAR IN SOUTH AFRICA. By Captain John Ross. Imrie, Graham & Co., Toronto, Ont., Ont, 17th July, 1900.

11550. PLAN OF THE CITY OF NELSON AND ITS SUBURBS. (Map.) The Thomson Stationery Company, (Ltd.), Vancouver, B.C. 17th July, 1900.

11551. THE BRIGGS LEDGER SYSTEM. Francis W. Briggs, Ottawa, Ont., 18th July, 1900.

11552. SOLDIERING IN CANADA: RECOLLECTIONS AND EXPERIENCES. By Lt.-Col. George T. Denison. George N. Morang and Company, (Ltd.), Toronto, Ont., 21st July, 1900.

11553. MARCH TO PRETORIA. March and Two-Step. By George A. Watts. Harry H. Sparks, Toronto, Ont., 21st July, 1900.

11554. IT TAKES A DARKY TO HAVE A GOOD TIME. Words and Music by Boyle Woolfolk. Hill, Horwitz and Bowers, Chicago, Illinois, U.S.A., 21st July, 1900.

11555. THE RELIEF MARCH. By Jesse Arthur Longfield, Victoria, B.C., 23rd July, 1900.

11556. THE LIFE OF LIVES: FURTHER STUDIES IN THE LIFE OF CHRIST. By F. W. Farrar, D.D., F.R.S. William Briggs, Toronto, Ont, 23rd July, 1900.

11557. A BRITON IS A FREE MAN. Words by Harvey Lloyd, Music by Maurice Taube. J. M. Gould, Toronto, Ont., 23rd July, 1900.

11558. THE CONCISE READY RECKONER AND INTEREST TABLES. With valuable Tables of Weights and Measures. By Arnold W. Thomas. The Copp, Clark Company, (Ltd.), 23rd July, 1900.

11559. THE OTTAWA CITY DIRECTORY, 1900. The Might Directory Company of Toronto, (Ltd.), Toronto, Ont, 23rd July, 1900.

11560. THE MUNICIPAL MANUAL. (Eleventh Edition.) Revised and Rewritten by Charles R. W. Biggar, M. A., Toronto, Ont., 24th July, 1900.

11561. CIRCUIT GUIDE; AUTUMN ASSIZES, NO. XI. 1900. Archibald Blain, Toronto, Ont., 27th July, 1900.

11562. ALMANACH DES ADRESSES (DIRECTORY) TROIS-RIVIÈRES, 1900-1901. Narcisse Marchand, Trois-Rivières, Qué., 30 juillet 1900.

11563. MANUEL DE MÉDICINE VÉTÉRINAIRE. A l'usage des Cultivateurs. Par John D. Duchêne, Québec, Qué, 30 juillet 1900.