Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☑ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☑ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

The Canadian Patent Office RECORD

Vol. XXI.—No. 7. JULY 31st, 1893. Price free by post in Canada and the United States, $2.00.

NOTICE.

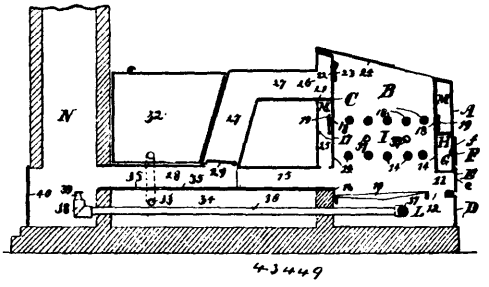
All solicitors, agents or attorneys who, in circulars or advertisements, or otherwise, refer to the Commissioner or Deputy Commissioner of Patents, or to any other official of the Patent Office, for evidence of their professional standing, do so without authority.

INVENTIONS PATENTED.

NOTE.—Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 43,449. Garbage Cremating Furnace.

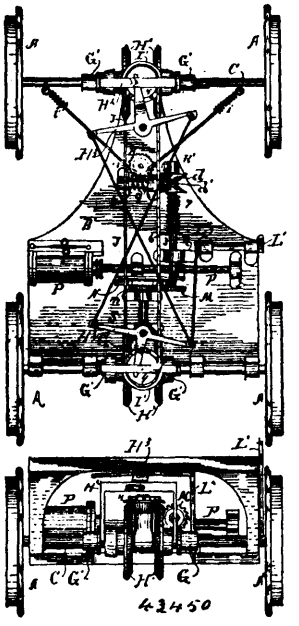
(*Fournaise à crémation pour tripailles.*)



Jean Francois Chazotte, Gustave Des Trois Maisons and Antoine Roy, all of Montreal, Quebec, Canada, 3rd July, 1893; 6 years.

Claim.—1st. A garbage cremating furnace, consisting of a furnace having a series of ash doors and fire doors, a combustion chamber in said furnace open or partially closed at the top, an air chamber formed around the lower portion of the said combustion chamber, apertures communicating with the said air chamber, apertures in the furnace wall communicating with the said chamber, and means for closing the said apertures, a flue running around the upper part of the said combustion chamber, apertures and means for closing the same, communicating with the said flue, the said flue being connected directly with the main flue, an auxilliary flue adapted to be closed or opened by means of a damper, also connected with the main flue, a grate at the bottom of the said combustion chamber, a main flue or flues leading from or a short distance above said grate, horizontally to the chimney, a closed vessel placed on the said main flue, an evaporating chamber under the said flue, and communicating therewith, tubes leading from the said closed vessel to the said evaporting chamber, steam pipes passing through the combustion chamber and through the evaporating chamber, and discharging into the chimney, substantially as set forth. 2nd. In a garbage creamating furnace, the combination with the main flue leading from the combustion chamber to the chimney of the closed vessel 32, the tubes 33 connecting the said closed vessel with the chamber 34, the chamber 34 formed under the said main flue, and apertures 35 connecting the said chamber 34 with the said main flue, substantially as set forth. 3rd. In a garbage cremating device, the combination with the combustion chamber of the doors E, having apertures *e*, the air chamber H, means for regulating the supply of air to the said air chamber, the flue M, passing around the said combustion chamber, the slanting wall 21, apertures 18 and 22 communicating with the said flue M, means for closing the said apertures, flues 25 connecting the flue M, with the flue 15, and flue 27, and damper 29, substantially as set forth. 4th. In a garbage cremating furnace, the combination with the combustion chamber I, the evaporating chamber M, and chimney N, of the steam pipe 37, and branches 38, passing through the said combustion chamber and evaporating chamber, the said branches being provided with nozzle 39, terminating in the base of the said chimney N, substantially as set forth.

No. 43,450. Vehicle. (*Voiture.*)

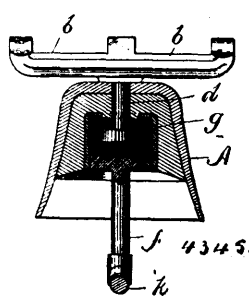


Homer L. Boyle, Grand Rapids, Michigan, U.S.A., 3rd July, 1893; 6 years.

Claim.—1st. In a car or vehicle, a bed plate attached by bearings to the rear axle, and pivotally attached to the front axle, and a fixed gear wheel on the rear axle, in combination with a shaft provided at one end with a gear wheel adjustably connected by a spline and groove, a connecting rod and lever for manipulating the same to operate the gear wheel on the rear axle, a double friction gear and sleeve longitudinally adjustable thereon by spline and groove connection, a shaft and gear for operating said double friction gear, and propelling power, substantially as shown and described. 2nd. The combination with a car or vehicle, of a motive power, a shaft connected therewith, and provided with a longitudinally adjustable double friction gear having a sleeve and springs, a rod and lever connected with said sleeve, a shaft carrying at one end a friction gear to engage with said double friction gear, and at the other end a bevel gear to mesh with a corresponding gear on the cross shaft 8, said cross shaft being provided with a screw thread, a sector attached to

the front axle and arranged to engage with said screw threads to change the position of the front axle, substantially as specified. 8rd. In a car or vehicle, a shaft connected to a motive power to transmit power to the rear axle, an adjustable double friction gearing, and a friction pinion, in combination with an operating shaft having a longitudinally adjustable double friction gearing, and connected by gearing with the rear axle, and a steering journal provided with a friction gearing and connected by gearing with its front axle whereby the motor may operate the rear axle and wheels, and also change the position of the front axle, substantially as and for the purpose set forth. 4th. The combination, with a car or vehicle, of a motor and driving shaft, with a double friction gearing the bore of whose hub is provided with a groove or spline, a sliding collar on said hub with means for connecting the same to a rod and lever, anti-friction rollers on each side of said collar, and two springs located on said hub on opposite sides of said collar, all substantially as shown. 5th. The combination, with a car or vehicle, of a bed plate attached by bearings to the rear axle and pivotally attached to the front axle, said axles each provided with a gear wheel, in combination with two gear wheels supported in journals and located respectively above the center of each axle, and means for transmitting the motion of the rear axle, through said gear wheels, to the front axle regardless of the relative position of said axles, all substantially as shown. 6th. The combination, with a car or vehicle having a motive power attached, of a shaft and pinion for transmitting power from said motor to the rear axle of the vehicle, gear wheels upon said axle, friction clutches connected, adjusted and arranged to engage the hubs of, and drive said gear wheels, said gear wheels arranged to mesh with the pinion on the power transmitting shaft and with a pinion between their upper edges and at right angles with them, said pinion having a sprocket wheel attached above, a sprocket chain arranged to engage therewith and with a corresponding sprocket wheel above the front axle, pinions on said front axle driven by said sprocket chain and wheel, and arranged to drive said front axle through the medium of friction clutches, substantially as shown and described. 7th. The combination, with a car or vehicle having a motive power attached, of a shaft and bevel pinions for transmitting power from said motor to the rear axle of the vehicle, bevel gear wheels upon said rear axle each side of, and arranged to mesh with said pinion, and friction clutches connected by a yoke and arranged to engage with or disengage from said bevel gear wheels to impart the motion thereof to said front axle, all substantially as shown and described.

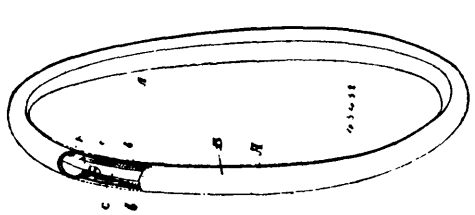
No. 43,451. Insulator. (*Isoloir.*)



Louis McCarthy, Boston, Massachusetts, U.S.A., 3rd July, 1893; 6 years.

Claim.—1st. An insulator comprising metallic portions separated by an interposed series of sheets of mica compressed together, securing devices by which said metallic portions and said mica are secured together, a mass of insulating material in which said metallic portions and said sheets of mica and their securing devices are embedded, and an outer metallic covering or case, substantially as shown and described.

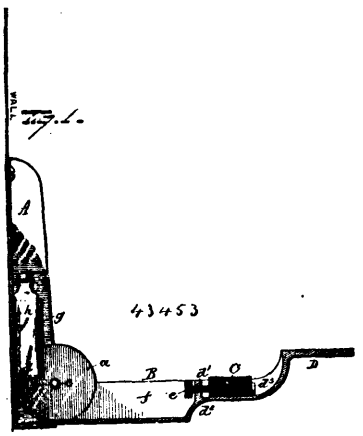
No. 43,452. Tire for Bicycles. (*Bandage de bicycles.*)



Hans James Caulfield, Toronto, Ontario, Canada, 3rd July, 1893; 6 years.

Claim.—1st. The combination with the rim, channel and wire bands bound in the edges of the envelope, of hexagonal couplings also bound in the edges of the envelope in alignment with the wire bands, and having internal right and left hand threads to receive the threaded ends of the wire bands, as and for the purpose specified. 2nd. The combination with the rim, channel and wire bands bound in the edges of the envelope, of hexagonal couplings also bound in the edge of the envelope in alignment with the wire bands, and having internal right and left hand threads to receive the threaded ends of the wire bands, and slits extending inwardly from the edges of the envelope around and slightly past the coupling, as and for the purpose specified.

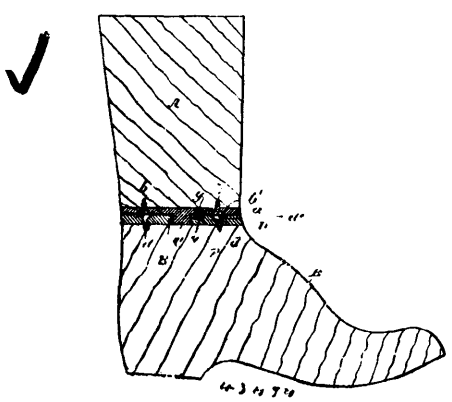
No. 43,453. Blacking Outfit. (*Appareil de cirage.*)



Augustus C. Barler, Chicago, Illinois, U.S.A., 3rd July, 1893; 6 years.

Claim.—1st. A blacking outfit comprising two parts hinged together, each part having a receptacle formed therein, one having a shoulder therein adapted to form an abutment for the pivoted end of the other end to strike when the device is open whereby a secure support is formed therefor, and the extreme free end forming a foot rest adapted to fall approximately into alignment with the back of the device when the parts are closed, substantially as set forth. 2nd. The combination with a stationary section comprising back and sides, and hinged section comprising front and sides, the edges of the sides of the two sections adapted to come together when the device is closed, the front of the hinged section curved inward at its lower end, and the other section having a shoulder which this curved end is adapted to strike when the device is opened, and a foot rest formed on the free end of the hinged section, substantially as set forth. 3rd. A blacking outfit comprising two members hinged together, one having two receptacles therein, one receptacle adapted to receive brushes and the other adapted to receive a blacking box, the latter receptacle having an adjustable device for removably securing the box in place, substantially as set forth. 4th. A blacking outfit comprising two members hinged together, one member stationary and the other member having a receptacle formed therein adapted to receive blacking brushes, this member also provided with a tread sufficiently raised from the receptacle so that a foot resting thereon will be above the articles contained in the receptacle, substantially as set forth.

No. 43,454. Last. (*Forme.*)



Henry Goodrick, of Montreal, Quebec, Canada, 3rd July, 1893; 6 years.

Claim.—1st. The combination with the separable component parts of a last, of interlocking plates secured on the meeting faces of same, for the purpose set forth. 2nd. The combination with the separable

component parts of a last, of interlocking plates secured on the meeting faces of same and a locking stop, for the purpose set forth. 3rd. The combination with the separable component parts of a last, of plates secured on the meeting faces of such parts and provided with male and female inter-connections, for the purpose set forth. 4th. The combination with the separable component parts of a last, of plates secured on the meeting faces of such parts and provided with male and female inter-connections, and a male and female locking stop, for the purpose set forth. 5th. The combination with the separable component parts of a last such as the leg portion A and foot portion B, of face plates *a* and D respectively provided with interlocking screw threaded projection A and screw threaded recess B^1, means for securing such face plates to the said parts and locking grooves and pin, as set forth. 6th. The combination with the separable component parts of a last, the meeting faces of which are respectively provided with male and female inter-connecting parts and corresponding grooves registering with each other when said parts are in their proper relative position to form a common opening, of a pin located in said opening, for the purpose set forth.

No. 43,455. Improved Duster or Polishing Cloth.

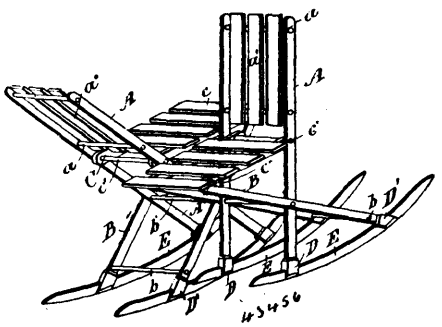
(*Torchon à épousseter ou polir.*)

Dugald Scott, of Manchester, England, 3rd July, 1893; 6 years.

Claim.—1st. The manufacture of dusters or polishing cloths made of a cotton weft cut pile fabric, substantially as described. 2nd. The improved dusters or polishing cloths, manufactured substantially as described.

No. 43,456. Folding Rocking Chair.

(*Berceuse pliante.*)



Joseph T. Chandey Cove, Amherst, Nova Scotia, Canada, 3rd July, 1893; 6 years.

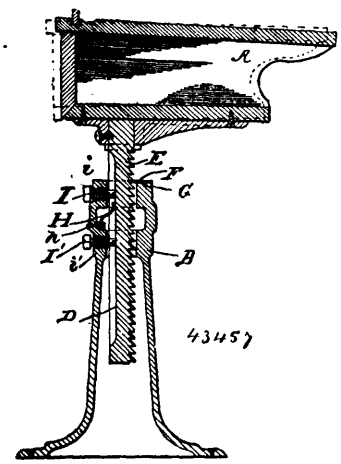
Claim.—1st. In a folding rocking chair, the combination of the frame consisting of the pieces A A connected by cross bars *a* carrying slats a^1, the legs B connected by cross bars *b* near each end and crossing the frame A outside and at an angle, a cross bar or rung *b*, forming a pivotal connection passing through the intersections of the pieces A and B, arms C notched at the forward lower edge and having slats *c* secured to the upper edge and pivotally secured to the inner sides of the back pieces A and the notches adapted to engage the upper rung *b* of the leg frame B, a cross bar or rung c^1 passing through the pieces A and the rear ends of the arms C, sockets D and D^1 secured to the rockers and adapted to receive the foot ends of the legs and the rockers E having said sockets secured to them, substantially as set forth. 2nd. In a folding coupled rocking chairs, the combination of two back frames each consisting of pieces A A transversely connected at the upper part and provided with back rest, two leg frames each consisting of pieces B B transversely connected near each end and crossing the pieces A outside at an angle, a transverse rung or bar b^1 passing through the intersections of the pieces A and B, a notched arm C pivotally connected to the inner side of each piece A and connected in pairs by material holding the two arms firmly together and forming the seat, sockets D and D^1 receiving the lower ends of the pieces A and B and rockers E to which the sockets are secured, substantially as set forth.

No. 43,457. Desk and Chair for Schools.

(*Pupitre- siège d'école.*)

Gabriel Alexander Bobrick, New York, U.S.A., 3rd July, 1893; 6 years.

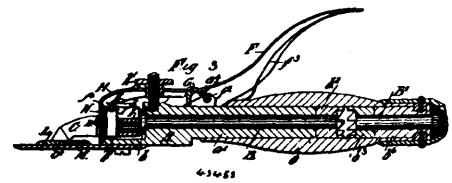
Claim.—1st. The combination of the tubular standard, the vertically movable support, having loose lateral play therein and provided with a row of teeth on one side, the retaining pawl adapted to engage with said teeth, and the binding screws in vertical alignment with each other, and their inner ends bearing against said support, substantially as and for the purpose specified. 2nd. The combination of the stationary tubular standard, the vertically movable support having loose lateral play therein and provided with a row of teeth on one side and a longitudinal groove on the side opposite, the retaining pawl adapted to engage said teeth, the spring secured to the standard and bearing against the support, and the binding screws in vertical alignment with each other, their inner ends bearing against said support and the lower screw, sub-



stantially as and for the purpose specified. 3rd. The combination of the stationary standard, formed with an annular recess in its interior, the vertically movable support sliding loosely in said standard, a friction or clamping spring consisting of a split ring located within the annular recess in the standard and adapted to press or bear against the movable support and the binding screws, substantially as set forth.

No. 43,458. Sheep Shearing Machine.

(*Appareil pour tondre les moutons.*)



Henry Bland, Leichardt, Colony of New South Wales, Australia, 3rd July, 1893; 6 years.

Claim.—1st. In a sheep shearing machine, the employment of a cutter having its teeth set to cut differentially, that is, so that each tooth commences to cut after the preceding one and by preference, so that no more than two teeth can be in cut at the same time, substantially as and for the purpose herein described and explained and as illustrated in the accompanying drawings. 2nd. In a sheep shearing machine, the combination, with a reciprocating cutter, of a pair of operating levers, such as C, fulcrumed at their rear ends and connected together by and driven through the medium of a bridge piece, such as J, substantially as and for the purposes herein described and explained and as illustrated in the accompanying drawings. 3rd. In a sheep shearing machine, the combination, with a pair of operating levers, such as C, fulcrumed at their rear ends within the casing of the machine and connected at their forward ends to a reciprocating cutter, of a bridge piece, such as J, connecting said levers and having a vertical slot, such as *j*, within which a square sleeve or block, such as I, upon a driving crank works, substantially as and for the purpose herein described and explained and as illustrated in the accompanying drawings. 4th. In a sheep shearing machine, the employment of a pair of cutter operating levers, such as C, fulcrumed at their rear ends within a recess formed to receive them in the casing of the machine, substantially as and for the purposes herein described and explained, and as illustrated in the accompanying drawings. 5th. In a sheep shearing machine, the employment of a broad, flat spring, such as K, bearing upon a bridge piece connecting the two cutter operating levers at its forward end, in combination with a thumb nut, such as k^1, bearing upon the centre of said spring, substantially as and for the purposes herein described and explained and as illustrated in the accompanying drawings. 6th. In a sheep shearing machine, the combination with a broad, flat spring, such as K, for adjusting the pressure of the cutter on the comb of a bridge piece, such as J, fitted with a series of rollers or balls, such as j^3, upon which the front curved edge of said spring is arranged to bear, substantially as and for the purpose herein described and explained and as illustrated in the accompanying drawings. 7th. In a sheep shearing machine, the employment of a sand shutter, such as N, fitting over the cutter operating levers of the machine and pressed against the front part of the cover thereof by a spring, such as *n*, substantially as and for the purposes herein

described and explained, and as illustrated in the accompanying drawings. 8th. In a sheep shearing machine, the combination, with a pair of clutches, such as b^2, b^3, adapted to connect the two parts of the driving spindle of the machine together, of a hand lever, such as F, mounted upon the casing of the machine adjacent to the handle, and adapted to throw said clutches in and out of gear with each other, substantially as and for the purposes herein described and explained, and as illustrated in the accompanying drawings. 9th. In a sheep shearing machine, the employment of a spring stop, such as G, for limiting the movement of a lever, such as F, used for throwing the two halves of a starting clutch into gear with each other, substantially as and for the purposes herein described and explained, and as illustrated in the accompanying drawings. 10th. In a sheep shearing machine, the combination of the forward part of a driving spindle, such as B, mounted in fixed bearings and having one half of a clutch on its end, with the hinder part of such driving spindle, such as B^1, mounted in bearings within a sliding handle, such as O, arranged to be slid to and fro by means of a hand lever, such as F, substantially as and for the purpose herein described and explained and as illustrated in the accompanying drawings.

No. 43,459. Composition for Preventing the Passage of Heat and for Deadening Sound. (*Composition pour empêcher le passage de la chaleur et assourdir le son.*)

Frederick Blake Pemberton, Southampton, England, 3rd July, 1893; 6 years.

Claim.—1st. A non-conducting covering composed of an admixture of peat, moss litter, charcoal, sheeps wool, fire clay, plaster of Paris, manilla fibre, alum and linseed oil, substantially as described. 2nd. The process of preparing the non-conducting covering hereinbefore described consisting in cleaning, drying and sifting the peat, moss litter and wool, then impregnating the same in a strong solution of alum, afterward drying the same and mixing it in a dry state with fire clay, plaster of Paris and charcoal, adding water until the whole is of the consistency of mortar, after which the boiled linseed oil is added and finally the fibre, such as manilla, which has been previously cut to a suitable length, substantially as described. 3rd. In a non-conducting covering a scratch coat mixture consisting of a mixture of equal quantities of the non-conducting covering, fire clay, substantially as described.

No. 43,460. Furnace. (*Fournaise.*)

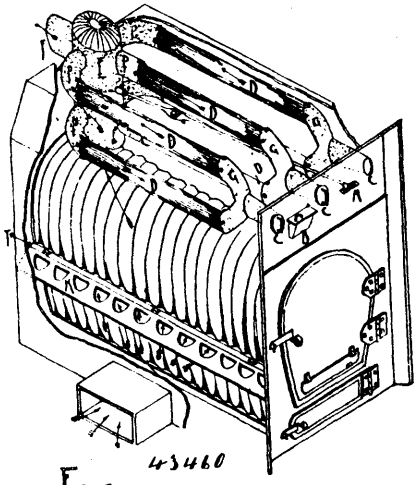


Fig 1

Robert Wellington Bigger, Hamilton, Ontario, Canada, 3rd July, 1893; 6 years.

Claim.—1st. The combination, with a furnace, of the dome tube E, provided with six elbows P, an exit F, a damper N, the steel tubes D, attached to elbows P, the front elbows G, attached to steel tubes D, and the tubes C of the elbows G, made to pass to the outer surface of the furnace front A^1, having movable stoppers I, and a rod A for operating the damper for direct and indirect draft, all constructed and arranged, substantially as and for the purpose specified. 2nd. In combination, with a heating furnace, a perforated shield K, attached to the sides, substantially as and for the purpose specified. 3rd. In combination, with a heating furnace, the flange of the upper sides constructed with a V-shaped projection U, and the flange of the lower section constructed with a corresponding V-shaped groove 7, to receive the former, the flanges 6 and 8 being bolted together, to form a close joint without cement, to prevent the escape of smoke and dust, substantially as specified.

No. 43,461. Valve. (*Soupape.*)

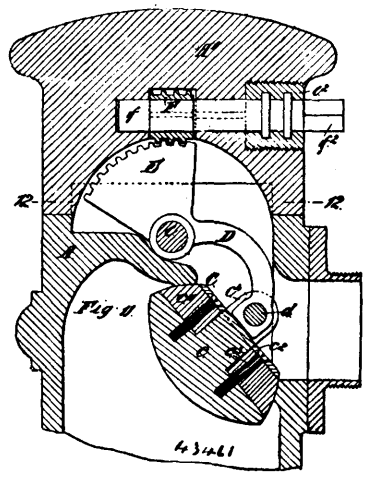


Fig. 1

Hugh Thomson, Thornton, Studley Park Road, Victoria, Australia, 3rd July, 1893; 6 years.

Claim.—1st. In fire plugs and hydrants, a valve, such as C, consisting of a casting, such as *c*, formed with lugs projecting up from its central portions around which is fitted a ring, such as c^1, of rubber or other packing material clamped between said casting, and a metal ring secured thereto by set screws, such as c^3, the whole being constructed and arranged, substantially as and for the purposes herein described and explained and as illustrated in the accompanying drawings. 2nd. In fire plugs and hydrants, a valve, such as C, pivoted upon an arm projecting from a spindle, such as *e*, to which motion is imparted by any convenient arrangement of mechanism, such for instance as that herein described and as illustrated in my drawings, substantially as and for the purposes specified. 3rd. In fire plugs and hydrants, a valve, such as C, pivoted upon an arm projecting from a spindle, such as *e*, either fitted with a toothed quadrant with which a worm, such as F, is in engagement, or else having a projecting arm engaging with a screw threaded rod, the whole being constructed and arranged substantially as and for the purpose herein described and explained, and as illustrated in the accompanying drawings.

No. 43,462. Tire for Wheels. (*Bandage de roue.*)

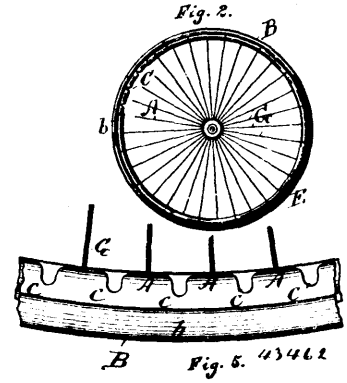


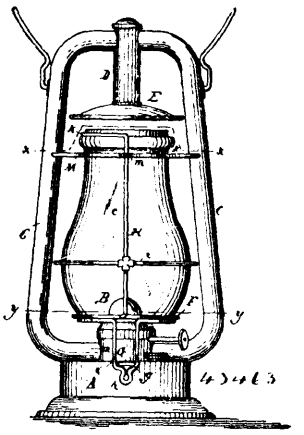
Fig. 2. Fig. 6.

John Thompson Smith, Bridgeport, Connecticut, and Arthur Herbert Smith, New York, State of New York, both of the U.S.A., 4th July, 1893; 6 years.

Claim.—1st. An elastic tire comprising a flanged crown and a webbing provided with transverse openings, substantially as set forth. 2nd. An elastic tire comprising a crown and an oblong webbing having marginal disconnected sections, substantially as set forth. 3rd. An elastic tire comprising a webbing and a flanged crown forming longitudinal depressions on each side of the webbing, substantially as set forth. 4th. The combination, in an elastic tire,

of a notched webbing, a crown thereon, and lobes or flanges projecting from said crown, substantially as set forth. 5th. The general combined arrangement and construction of parts forming the improved tire, substantially as set forth.

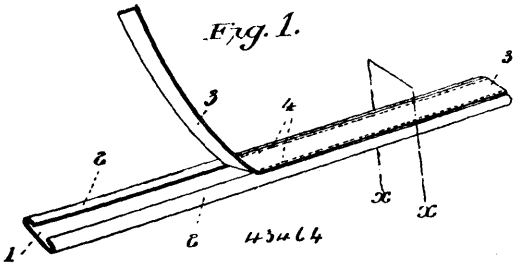
No. 43,463. Tubular Lantern. (*Lanterne tubulaire.*)



Frederick Dietz, assignee of Lewis Fulton Betts, both of New York, State New York, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. The combination, with the lantern base, side tubes and belt, constituting a rigid lantern frame, and the globe, of a globe frame hinged at its rear side to the lantern base, a catch secured to the lower front portion of the globe frame, and a stop on the front side of the base with which said catch interlocks, whereby the tilting movement of the globe frame in the rigid lantern frame is controlled by holding the catch, and the globe frame is locked in its normal position to the base without attaching it to the bell, substantially as set forth. 2nd. The combination, with the lantern base, side tubes and bell, constituting a rigid lantern frame, and the globe, of a globe frame hinged at its rear side to the lantern base, a catch secured to the lower front portion of the globe frame, a stop on the front side of the base with which said catch interlocks, and a cross piece secured to the front side of the rigid lantern frame opposite the upper position of the globe, whereby the globe frame is locked to the base, and the upper portion of the globe is drawn against the front cross piece in locking the globe frame to the base, substantially as set forth. 3rd. The combination, with the tubular lantern frame and the globe, of a globe plate hinged to the lantern frame, upright wires secured to said plate and arranged on the front and rear sides of the lantern, a bow wire connecting the upper ends of the front and rear wires on one side of the globe, and a guard ring connecting the middle portions of the front and rear wires, whereby the globe can be removed laterally upon tilting the globe frame, substantially as set forth. 4th. The combination, with the tubular lantern frame and the globe, of a globe plate hinged to the rear side of the lantern frame upright wires secured to said plate and arranged on the front and rear sides of the lantern, a bow connecting the upper ends of said wires and bearing against one side of the globe, and a cross wire secured to the tubular frame on the front side thereof, and supporting the front wire, substantially as set forth. 5th. The combination, with the tubular lantern frame, of a tilting globe frame composed of a supporting plate hinged to the base of the lantern, upright wires secured to said plate and arranged on the front and rear sides of the lantern, a bow connecting the upper ends of said wires and embracing one side of the globe, and a fixed bow secured to the lantern frame and embracing the front of the globe, whereby the upper end of the globe is clasped at one side and at the front when the globe frame is in its normal position, but permitted to be removed laterally when the globe frame is swung back, substantially as set forth.

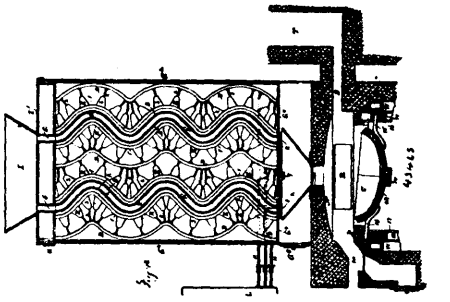
No. 43,464. Dress Stay. (*Busc de corset.*)



Morris P. Bray, Ansonia, Connecticut, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. A casing for a dress stay stiffener, the same comprising a base strip having its lateral edges folded inwardly, and a woven fabric strip having salvage lateral edges and superimposed upon said base strip, both of such strips being united by rows of stitches through their edges, substantially as set forth. 2nd. In a dress stay casing, the combination of a base strip of cloth having its lateral edges folded inwardly, and a superimposed upper strip of woven fabric with selvage lateral edges, the latter resting upon the folded edges of the base strip and secured thereto by rows of stitches, substantially as set forth.

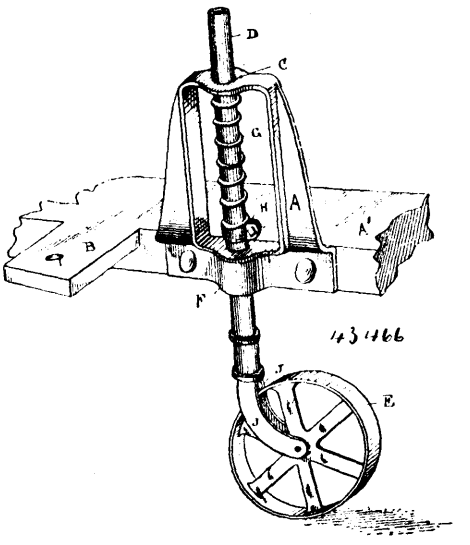
No. 43,465. Apparatus for Deoxidizing, etc.
(*Appareil pour désoxyder, etc.*)



Henry Anwyl Jones, Brooklyn, New York, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. The combination, with the vertical ranges of deoxidizing chambers, of intermediate gas supply chambers, branch pipes and funnels within which the air and gas are mixed, and gauze or perforated plates through which the air and gas pass to the flame, the flame being directed upon the exterior surface of the deoxidizing chambers, substantially as set forth. 2nd. The combination, with the vertical ranges of deoxidizing chambers, each composed of zigzag or undulating plates, of gas burners, gauze or perforated plates through which the mixed air and gas pass the flame, and two-part frames in which the gauze or perforated plates are supported and from which they may be removed, substantially as set forth. 3rd. The combination, in a deoxidizing apparatus, of a range of vertical chambers or retorts, having undulating or zigzag plates to agitate the material as it descends, gas chambers between the vertical deoxidizing chambers and burners receiving gas from such chambers, and directing the flame against the undulations, substantially as specified. 4th. The combination, with the deoxidizing apparatus, of an automatic rotary and oscillating hearth upon which the carbon and deoxidized ore is discharged and means for directing heat upon such hearth, substantially as set forth.

No. 43,466. Tongue Support. (*Appui de timon.*)

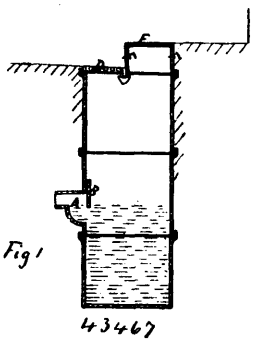


Daniel Ward and Alfred E. Grenier, both of Peoria, Illinois, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. In a tongue support, the combination with the tongue, of the upright frame or yoke and having an aperture C in the top thereof, an aperture in the bottom thereof, the upright bar or shaft D having bearings in said apertures of the frame A, a spiral spring G encircling said shaft D, a clip or clamp H adjustably secured to said shaft and a wheel E journalled at the lower end of the shaft D by the fork J J, substantially as set forth and described. 2nd. The combination with the tongue A, of the upright frame A,

the upright rod or shaft D, carried through a perforation in the top of the frame, and through a perforation in the bottom of the frame at the enlarged portion F, a spiral spring G encircling said shaft D, a clamp H adjustably secured to said shaft for the purposes set forth, the bifurcated arms J J on the lower end of said shaft D and the wheel E, substantially as set forth. 3rd. The combination in a tongue support of the upright frame A secured to the tongue A^1 and having an opening C in the top thereof, the upright rod D carried through the said opening C and through the opening in the bottom of said frame A at the enlarged portion F and formed at its lower end with the bifurcated arms J J, the spring G encircling said shaft D, a clamp H, adjustably secured to said shaft D, for the purposes set forth, and the wheel E journalled between the arms J, J, substantially as set forth and described.

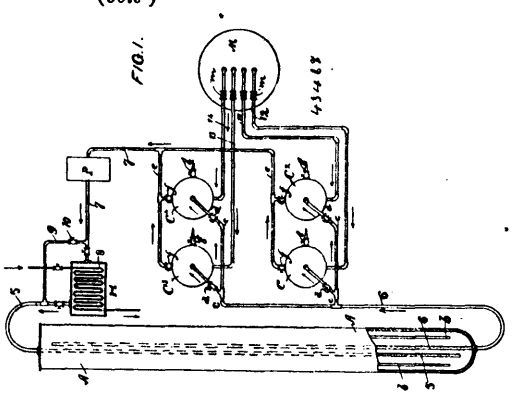
No. 43,467. Water Pump. (*Pompe.*)



Ignace Bilodeau, Quebec, Canada, 4th July, 1893; 6 years.

Resumé.—1er. La combinaison du siphon A et de la pelle B avec tuyau du puisard H, tel que décrit. 2ème. La combinaison de la grille D et de la trappe E avec tuyau G, tel que décrit. 3ème. La combinaison du tuyan G avec grille D et trappe E et du tuyau H avec siphon A et pelle B, tel que décrit.

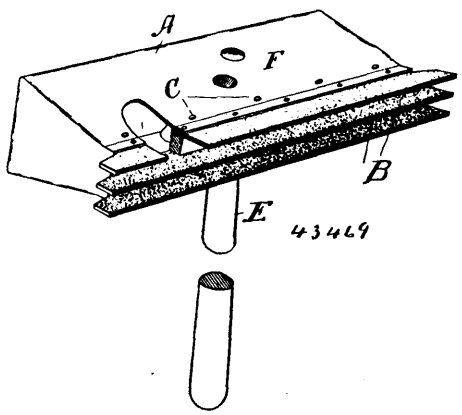
No. 43,468. Process and Apparatus for Vulcanizing Wood. (*Procédé et appareil de vulcanisation du bois*)



Samuel Edward Haskin, Avoca, New York, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. In apparatus for vulcanizing wood, the combination with the chamber in which the wood is treated, of an air compressor an air heater, an induction conduit communicating with said chamber through numerous relatively small orifices at difierent points in said chamber, and a suitable eduction conduit whereby heated compressed air may circulate uniformly through said chamber, substantially as described. 2nd. In apparatus of the character described, the combination with the chamber in which the wood is treated, of an air compresser, an air heater, an induction conduit communicating with said chamber through numerous relatively small orifices, and an eduction conduit likewise communicating with said chamber through numerous small orifices, substantially as and for the purpose set forth. 3rd. In the art of wood vulcanization, the improvement consisting in circulating through the vulcanizing chamber heated compressed air, and then without interrupting the circulation or releasing the pressure, introducing into the circulating system successive volumes of cold air until the wood is cooled down below the boiling point of its liquid or liquifiable constituents, substantially as described. 4th. The process described of vulcanizing wood consisting in maintaining through the vulcanizing chamber a steady circulation of heated and compressed air, and then cutting out successive volumes of heated air, and introducing in place thereof cold compressed air constantly maintaining the circulation and pressure, substantially as set forth.

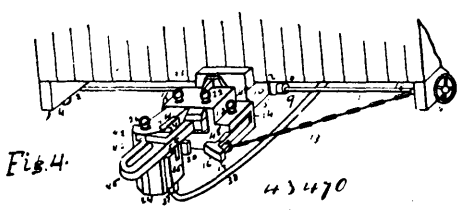
No. 43,469. Scrubbing Device. (*Brosse à nettoyer.*)



John William Roots, Toronto, Ontario, Canada, 4th July, 1893; 6 years.

Claim.—An improved scrubbing device consisting of a wedge shaped closed reservoir or receptacle having strips of rubber or similar pliable material located at the thin edge of the wedge shaped receptacle, a row of small perforation being made through the receptacle immediately above the strips of rubber or other material, and a row of larger perforations through the top of the receptacle near the edge farthest from the side from which the operating handle projects.

No. 43,470. Automatic Car Coupler and Air Brake. (*Attelage et frein de chars.*)

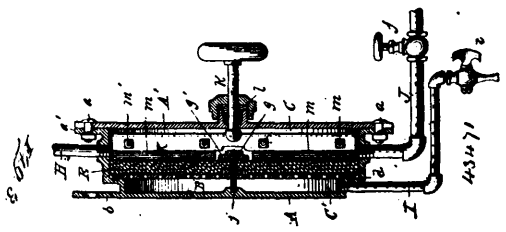


Phineas Pelton, Persia, Iowa, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. In a car coupler, the combination, with a draw-head provided upon its front face, and at one side of its centre with a forwardly projecting coupling head whose outer side is provided with a vertical shoulder, of a hook pivoted at the opposite side of the draw-head, and extending in front of the same opposite the coupling head, a spring for normally pressing the hook inward at its outer end, and means for retracting the hook against its spring, substantially as specified. 2nd. In a car coupler, the combination of the draw-head provided upon its front face and at one side of its centre with a forwardly projecting coupling head, whose outer side is provided with a vertical shoulder, of a hook pivoted at the opposite side of the draw-head and extending in front of the same opposite the coupling head, a spring for normally pressing the hook inward at its outer end bearings, one of which is a standard having a recess, a reciprocating shaft mounted in the bearings, wheels for operating the shaft, connections between the hook and the shaft, and a boss mounted on the shaft, and provided with a lug for engaging the recess of the standard, substantially as specified. 3rd. In a car coupler, the combination, with a draw-head, having at its front side, and at one side of its centre a projecting coupling head provided upon its outer side with a vertical rib, and upon its inner face without a horizontal recess, a cut off located in the horizontal recess and provided with an upwardly extending lug, a spring for normally pressing the cut off in the recess, and air passage leading from the side of the coupling head to the recess and pivoted spring pressed at the opposite side of the draw-head, substantially as specified. 4th. In a car coupler, the combination, with a draw-head, provided upon its face with a removable coupling head extending forwardly therefrom, said coupling head having at one side a vertical rib, and its inner face vertically recessed, the bottom of which is provided with a horizontal recess, a smooth faced plate located in the vertical recess, a sliding cut off mounted in the horizontal recess, a spring for normally pressing the cut off into its recess, an air passage communicating with the horizontal recess and with the bottom or the coupling head, a pipe coupling connected with the air passage, a recess in the opposite side of the draw-head, a draw hook pivoted in the recess, and extending forward beyond the draw-head, a spring interposed between the rear end of the hook and the draw-head and means for retracting the hook against the tension and its spring, substantially as specified. 5th. In a car coupler, the

combination, with a draw head, having its front face provided with a pair of transversely opposite openings, a coupling head having a tenon perforated and mounted in one of the said openings, a pin extending through said openings of the tenon, a rib at the front end, and at one side of the coupling head a pivoted spring pressed hook, having a front bevelled face located at the opposite side of the draw-head, means for retracting the hook, and a recess in the front end of the coupling head, said recess being provided with a pin hole, of a link having long and short perforated terminals, the same engaging removably with the recess in the draw-head and that in the coupling head, and pins passing through said recess and terminals, substantially as specified. 6th. The combination, with a jaw coupler, provided at one side with a T-shaped stud, of recesses formed in the jaw coupler and a link having long and short terminals adapted to engage the recesses and be secured therein in a removable manner, and to engage with the T-shaped studs and be supported thereby, substantially as specified.

No. 43,471. Filter. (*Filtre.*)

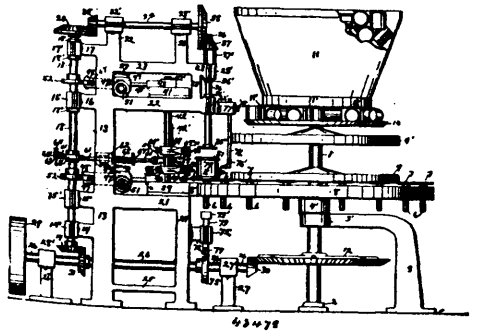


Virgil Harvey McConnell, Buffalo, New York, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. The combination, with the enclosing case of the filter, of a perforated supporting plate arranged within the case, and a porous filtering disc also arranged in the case and resting against said supporting plate, substantially as set forth. 2nd. The combination, with the enclosing case of the filter and the porous filtering disc arranged therein, of a perforated supporting plate arranged in the case parallel with the filtering disc, and a bolt or screw whereby the filtering disc is clamped against said supporting plate, substantially as set forth. 3rd. The combination, with the enclosing case of the filter having an internal shoulder, of a perforated supporting plate or diaphragm secured to said shoulder and dividing the case into inlet and discharge chambers, and a porous filtering disc arranged within the plate, substantially as set forth. 4th. The combination, with the enclosing case of the filter and the flat filtering disc arranged therein, of a rotary scraper arranged in the case and bearing against the face of the filtering disc, substantially as set forth. 5th. The combination, with the enclosing case of the filter and the flat filtering disc arranged therein, of a rotary scraper bearing against the filtering disc and provided with a handle extending through the case of the filter, substantially as set forth. 6th. The combination, with the enclosing case of the filter and the flat filtering disc whereby the case is divided into inlet and discharge chambers, of inlet and cleaning pipes connected with said inlet chamber, and a rotary scraper arranged in said inlet chamber, bearing against the face of the filtering disc, and provided with a handle extending through the case of the filter, substantially as set forth.

No. 43,472. Can Crimping Machine.

(*Machine à cambrer les boîtes métalliques.*)



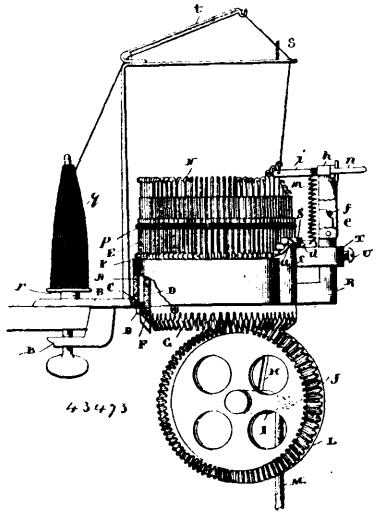
The Roberts Tinware Company, assignee of John Wesley Roberts, all of Cleveland, Ohio, U.S.A., 4th July, 1893; 6 years.

Claim.—1st. The combination, in a can crimping machine, of a vertical shaft, having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs, having spindles journalled around the carrier frame, a friction face around the carrier frame, and a friction bearing for the friction face, substantially as shown and described. 2nd. The combination, in a can crimping machine, of a carrier frame, having an intermittent rotary movement, spindles having discs on their tops, said spindles projecting through journals around the carrier frame, a rotating disc above the orbit of the spindles, having discs, a plunger below the orbit of the spindles, and a cam adapted to raise the plunger vertically, as the spindles successively come over the plunger to grip a can between the disc on the spindle and the rotating disc above the orbit of the spindles, substantially as shown and described. 3rd. In a can crimping machine, a sliding block, a cam to reciprocate the sliding block, adjustable connection between the cam and sliding block, and a yielding bearing between said adjustable connection and sliding block, substantially as illustrated and described. 4th. In a can crimping machine, a sliding block, having a bore therein, a rod to enter said bore and having its opposite end threaded, a yielding bearing back of said rod within the bore of the sliding block, a bar having a bore, into which the threaded end of the rod enters, a cross opening in the bar, and a wheel in said cross opening, the wheel being bored axially and threaded to screw upon said rod, substantially as illustrated and described. 5th. The combination, in a can crimping machine, of sliding blocks, cams to reciprocate the sliding blocks, adjustable connections between the cams and sliding blocks, and yielding bearings between the adjustable connections and sliding blocks, with means for gripping and revolving cans while being crimped, substantially as illustrated and described. 6th. The combination, in a can crimping machine, of a shaft carrying crimping discs, sliding blocks to which said shaft is attached, cams to reciprocate the sliding blocks, adjustable connections between the cams and sliding blocks, and yielding bearings between the adjustable connections and sliding blocks, with means for gripping and revolving cans while being crimped, substantially as illustrated and described. 7th. The combination, in a can crimping machine, of a vertical shaft, having secured thereto brackets carrying crimping discs, one of the brackets having vertical adjustment upon said shaft, sliding blocks, to which said vertical shaft is attached, cams to reciprocate the sliding blocks and shaft, adjustable connections between the cams and sliding blocks, substantially as illustrated and described. 8th. The combination, in a can crimping machine, of a vertical shaft, carrying brackets having arms, to which are pivoted crimping discs, one of the brackets having vertical adjustment upon said shaft, substantially as illustrated and described. 9th. The combination, in a can crimping machine, of a vertical shaft having fixed thereon brackets with arms to which are pivoted crimping disks, cams to reciprocate said vertical shaft, and suitable connections between said cams and vertical shaft, substantially as illustrated and described. 10th. In a can crimping machine, a bracket having pivoted thereto a crimping disk and carrying a smoothing disk to follow the crimping disk, substantially as shown and described. 11th. In a can crimping machine, a vertical shaft carrying two brackets, one of the brackets having pivoted thereto a crimping disk and carrying a smoothing disk to follow the crimping disk and the other bracket having pivoted thereto a crimping disk, one of the said brackets having vertical adjustment upon said shaft, substantially as illustrated and described. 12th. The combination, in a can crimping machine, of a vertical shaft carrying two brackets to one of which is pivoted a crimping disk and carrying a smoothing disk to follow the crimping disk, the other bracket carrying a crimping disk, one of said brackets being adjustable vertically upon said shaft, sliding blocks to which said vertical shaft is attached, and means to reciprocate said sliding blocks and vertical shaft, substantially as illustrated and described. 13th. The combination, in a can crimping machine, of a vertical shaft having attached thereto two brackets, one of the brackets having pivoted thereto a crimping disk and carrying a smoothing disk to follow the crimping disk, the other bracket carrying a crimping disk having vertical adjustment on said shaft, cams to operate said vertical shaft, and adjustable connections between said cams and said vertical shaft, substantially as illustrated and described. 14th. The combination, in a can crimping machine, of a vertical shaft having fixed thereon two brackets, one of the brackets having pivoted thereto a crimping disk and carrying a smoothing disk to follow crimping disk, the other bracket carrying a smoothing disk, one of the said brackets being adjustable vertically upon said shaft, cams to reciprocate said shaft, adjustable connections between said cams and vertical shaft, and yielding bearings between said adjustable connections and vertical shaft, substantially as illustrated and described. 15th. The combination, in a can crimping machine, of a crimping disk, a cam to reciprocate the crimping disk, a smoothing disk to follow the crimping disk, and means for throwing the smoothing disk into contact with a can being operated upon after the crimping disk shall have been thrown into contact with the can, substantially as illustrated and described. 16th. The combination, in a can crimping machine, of a bracket carrying a crimping disk, a link centrally pivoted upon the bracket, a reciprocating rod having one end pivotally connected with one end of said centrally pivoted link and carrying at its opposite end a smoothing disk, a cam and intermediate connection between said cam and centrally pivoted link, substantially as illustrated and described. 17th. The combination, in a can crimping machine, of a bracket carrying a crimping disc, a link pivoted upon said bracket, a reciprocating rod having one end pivoted to said pivoted link and the opposite end carrying a smoothing disc, a bar attached to said pivoted link, a cam, and an arm adjustably fixed to said bar and

having engagement with said cam, substantially as illustrated and described. 18th. The combination, in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between the driving shaft and vertical shaft, a vertical shaft rotated by driving connection between it and first mentioned vertical shaft, cams upon the first mentioned vertical shaft, a vertical shaft carrying crimping discs, and reciprocating connection between said cams and the vertical shaft carrying crimping disks, substantially as illustrated and described. 19th. The combination, in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between said horizontal driving shaft and the vertical shaft, a vertical shaft carrying a disc and having driving connection between it and the first mentioned vertical shaft, cams upon said first mentioned vertical shaft, a vertical shaft carrying crimping discs, and adjustable connections between said cams and the vertical shaft carrying crimping discs, substantially as illustrated and described. 20th. The combination, in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between the horizontal driving shaft and the vertical shaft, a vertical shaft carrying a disc and being rotated by driving connection between it and the first mentioned vertical shaft, a vertical shaft carrying two brackets, one of said brackets having pivoted thereto a crimping disc and carrying a smoothing disc to follow the crimping disc, the other bracket carrying a crimping disc, one of the brackets having vertical adjustment upon the shaft to which it is attached, cams upon the first mentioned vertical shaft to reciprocate the vertical shaft carrying the brackets, and a cam upon first mentioned vertical shaft to reciprocate the smoothing disc, substantially as illustrated and described. 21st. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journalled around the carrier frame, a friction face around the carrier frame, a friction bearing in the friction face, and a vertical shaft carrying crimping discs, substantially as illustrated and described. 22nd. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journalled around the carrier frame, a shaft carrying crimping discs, and smoothing discs to follow one of the crimping discs, substantially as illustrated and described. 23rd. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journalled around the carrier frame, a vertical shaft carrying brackets having arms to which are pivoted crimping discs, one of the brackets having vertical adjustment upon said shaft, substantially as illustrated and described. 24th. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journalled upon the carrier frame, a vertical shaft having fixed thereon brackets with arms to which are pivoted crimping discs, cams to reciprocate said vertical shaft with brackets fixed thereon, and connections between said cams and vertical shaft having brackets fixed thereon, substantially as illustrated and described. 25th. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journalled around the carrier frame, a bracket having pivoted thereto a crimping disc, and carrying a smoothing disc to follow the crimping disc, and means to reciprocate said bracket, with means for independently reciprocating the smoothing disc, substantially as illustrated and described. 26th. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon said shaft, a series of discs journalled around the carrier frame, a vertical shaft carrying two brackets, one of the brackets having pivoted thereto a crimping disc and carrying a smoothing disc to follow the crimping disc, and the other bracket having pivoted thereto a crimping disc, one of the said brackets having vertical adjustment upon said shaft, substantially as illustrated and described. 27th. The combination in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs journalled around the carrier frame, a vertical shaft carrying brackets, one of the brackets having pivoted thereto a crimping disc and carrying a smoothing disc, the other bracket having pivoted thereto a crimping disc, cams to reciprocate said vertical shaft carrying brackets, and means to reciprocate the smoothing disc, substantially as illustrated and described. 28th. The combination in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between the horizontal driving shaft and the vertical shaft, a vertical shaft carrying a disc which is rotated by driving connection between it and the first mentioned vertical shaft, a vertical shaft carrying brackets, to which are pivoted crimping discs, one of the brackets carrying a smoothing disc to follow one of the crimping discs, cams upon the first mentioned vertical shaft to reciprocate the shaft carrying brackets, and means to independently reciprocate the smoothing disc, substantially as illustrated and described. 29th. The combination in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the intermittently rotating shaft, a series of discs journalled around the carrier frame, a horizontal driving shaft, a vertical shaft having cams thereon, driving connection between the horizontal driving shaft and the vertical shaft having cams thereon, a vertical shaft carrying a disc supported above the orbit of the discs of the carrier frame, driving connection between said shaft and the vertical shaft having cams thereon, a vertical shaft carrying crimping discs, suitable connection between said cams and said shaft carrying crimping discs whereby the crimping discs are reciprocated by said cams, a smoothing disc to follow one of the crimping discs, means to independently reciprocate said smoothing disc, and means for raising successively the discs journalled around the carrier frame after each intermittent movement of said frame so as to grip a can between said discs successively, and the disc that is supported above the orbit of the can carrier disc, substantially as illustrated and described.

No. 43,473. Circular Knitting Machine.

(*Machine à tricot circulaire.*)



Joseph E. Gearhart, Clearfield, Pennsylvania, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. A circular knitting machine comprising a base having a depression to form a cam, a cam above the said depression, a revoluble cylinder within the said cam, and means for revolving the said cylinder. 2nd. A circular knitting machine comprising a base having a depression to form a cam, a cam above the said depression, a latch at the upper end of the said depression, a revoluble cylinder within the said cam, and a means for revolving the said cylinder. 3rd. A circular knitting machine comprising a base having a depression to form a cam, a vertical support outside of the said cam, and a cam adjustable held upon and at the inner end of the said support by means of a clamp, substantially as specified. 4th. A circular knitting machine comprising a base having a vertical portion having a cam, a revoluble cylinder inside of the said vertical portion carrying needles with shanks, a vertical support outside of the said vertical portion, a standard pivoted to the upper end of the support, a thread guide pivoted or journalled at the upper end of the standard to be reversible, and a spring having one end secured to the inner end of the thread guide and its opposite end to a a portion of the machine. 5th. A circular knitting machine comprising a base having a vertical portion provided with a cam, a revoluble cylinder inside of the said vertical portion, carrying needles with shanks, a means for revolving the cylinder, a vertical support outside of the said vertical portion, a standard pivoted to the upper end of the said support, a thread guide journalled in the upper end of the said standard having its inner end formed into a guide and its outer end formed into a handle, stops upon the standard which the handle engages, and a spring secured to the thread guide for holding it to its proper position and also for holding the said standard inward. 6th. A circular knitting machine comprising a base having a vertical portion provided with a cam depression, a spring actuated latch at each end of the depression which is normally held at its free end upon the vertical portion, a cam above the said depression, a revoluble cylinder inside of the said vertical portion carrying needles with shanks, and a means for revolving the said cylinder. 7th. A circular knitting machine comprising a base having a vertical portion provided with a cam, projections at each end of the said cam and outside thereof, laches having arms which are pivoted in the said projections and provided with inclined upper edges, springs for holding the free ends of the latches normally upon the said vertical portion, a revoluble cylinder inside of the said vertical portion, carrying needles with shanks, and a means for revolving the said cylinder.

No. 43,474. Boat. (*Bateau.*)

John James Robertson and William Robertson, both of Hamilton, Ontario, Canada, 5th July, 1893; 6 years.

Claim.—1st. A boat constructed with ribs bent over a mould, and an inner and outer layer of planking secured thereto with canvas,

or cloth saturated with a waterproof material as marine glue, pitch, etc., interposed between the layers of planking, substantially as

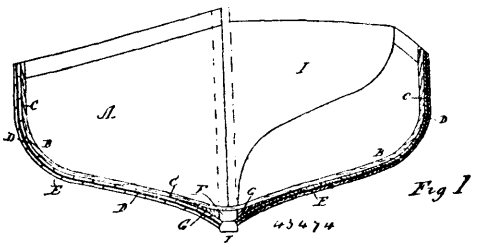


Fig 1

43474

described. 2nd. In a boat, the combination of the ribs B, inner planking C, outer planking E, with a woven fabric D, such as canvas, etc., or its equivalent interposed and saturated with marine glue or pitch, etc., substantially as described. 3rd. In a boat, the combination with the ribs B, inner planking C, outer planking E, woven fabric D, of the keelson F, formed of one piece from stem to stern, substantially as described.

No. 43,475. Car Coupler. (*Attelage de chars.*)

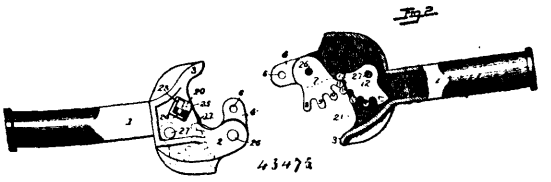


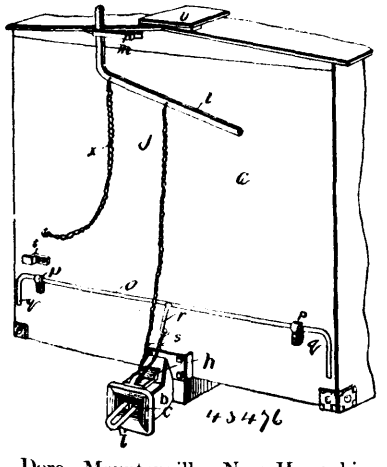
Fig 2

43475

Louis Napoleon Singin, Walls, Pennsylvania, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. In a car coupler the combination with the draw-head, of a pivoted knuckle having a sector provided with projecting teeth, and a pivoted sector having teeth continually engaging the teeth on the knuckle, substantially as described. 2nd. In a car coupler the combinated with the recessed draw-head, of a sector having teeth pivotally mounted therein, a knuckle having a sector provided with projecting teeth continually engaging the teeth of the sector, and means for locking the sector, substantially as described. 3rd. In a car coupler the combination with the draw-head, of the knuckle having a sector shaped projection provided with teeth, a sector pivotally mounted in the draw-head provided with teeth continually engaging the teeth of the knuckle, and a locking pin engaging said sector, substantially as described. 4th. In a car coupler the combination with the draw-head, of the knuckle having a sector shaped projection provided with teeth, a sector pivotally mounted in the draw-head provided with teeth continuously engaging the teeth of the knuckle, and a locking pin having an angular body arranged to engage the sector, substantially as described. 5th. In a car coupler the combination with the knuckle having a sector shaped projection provided with teeth, a pivoted sector mounted in the draw-head also provided with teeth continuously engaging the teeth of the knuckle, one of the teeth of the sector being enlarged to form a bearing portion, and a locking pin engaging said enlarged tooth, substantially as described.

No. 43,476. Car Coupler. (*Attelage de chars.*)

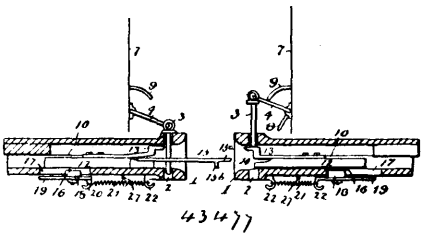


43476

Herman R. Dore, Mountonville, New Hampshire, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. A car coupling comprising in its construction a draw bar provided with an inclined chamber *d*, and lugs *c*, extending below the plane of the lower surface of the draw bar, and the hook *c*, provided with a shank extended through the said inclined chamber and pivoted in said lugs, whereby in case it is desired to remove the hook, the same may be done without removing the draw bar, as set forth. 2nd. In a car coupling, a draw bar provided with the inclined chamber *d*, the hook *c*, having its shank extended through the said chamber and pivoted at its inner lower end, a spring in the said chamber bearing upon the said shank, and a hood connected with the hook and covering the opening to the chamber, as set forth. 3rd. The combination with the coupling hook, of the lever *l*, the chain *j*, connecting the lever with the coupling hook, and the friction spring in the guide way of the lever, as set forth. 4th. The combination with the coupling hook, of the lever *l*, the chain *j*, connecting the latter with the coupling hook, the chain *x*, for drawing the lever *l* down, the rock rod *o*, provided with the crank or angular ends *q*, arm *r*, connecting chain *s*, and retaining clip *t*, as set forth.

No. 43,477. Car Coupler. (*Attelage de chars.*)

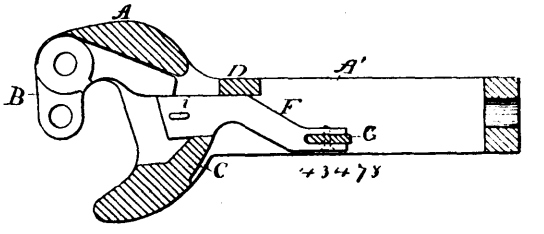


43477

Edouard Suprenant, Cohoes, New York, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. The combination with a draw-head having a vertical pin hole, a spring pressed slide having a lateral shoulder, and link engaging jaws at its front end and normally held by its spring in position to support a coupling pin, of a locking bolt carried by the draw head, and movable into engagement with the lateral shoulder of the slide when a link is engaged therewith to enter another draw-head, substantially as described. 2nd. The combination with a draw head having a vertical pin hole, a spring pressed slide having a lateral shoulder, and link engaging jaws at its front end and normally held by its spring in position to support a coupling pin, of a locking bolt carried by the draw-head and movable into engagement with the lateral shoulder of the slide when a link is engaged therewith, and a lengthwise movable rod extending transversely of the car and having an arm engaging the locking bolt for moving the latter back and forth, substantially as described. 3rd. The combination with a draw-head having a vertical pin hole, a longitudinal slot in its bottom wall, and a hook secured to the outside of the latter, of a lengthwise movable pin supporting slide having a hook and link engaging jaws at its front end, a sliding plate connected with the rear end of the pin supporting slide through the slot in the bottom wall of the draw head and provided with a hook, and a spring detachably engaged with the hook on the draw-head and the hook on the sliding plate, substantially as described. 4th. The combination with a draw-head having a vertical pin hole, and a pin supporting slide normally held by its spring in position to support a coupling pin, of a rock shaft journalled on the car and having a crank arm engaged with the eye of a coupling pin, and a stop arm secured to the car above the crank arm of the rock shaft for preventing the complete withdrawal of the coupling pin from the pin hole, substantially as described. 5th. In combination with a draw-head having a vertical pin hole, a spring pressed slide having link engaging jaws and adapted to support a pin and link, and link having a solid end and a downward projecting shoulder, substantially as set forth.

No. 43,478. Car Coupler. (*Attelage de chars.*)



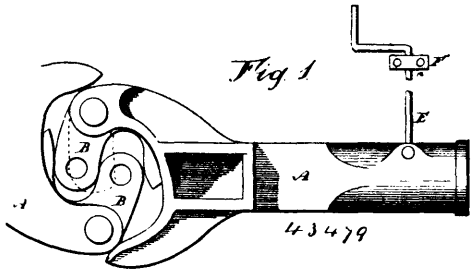
43478

Frank Harvey and John Kane, both of Renovo, Pennsylvania, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. The combination in a car coupling, of a draw bar carrying a latch the rear end of which is pivoted to a web located to one side of the center of the draw bar, together with bearing walls C and D, between which the latch moves, the forward end of the latch being adapted to engage with the coupling hook, substantially as shown, and for the purpose set forth. 2nd. The combination in a car coupling, of a draw bar carrying within the same a vertically

moving latch, the rear end of said latch being bifurcated to embrace a vertical web G, to which it is pivoted, together with guide C and D, provided with straight walls against which the forward portion of the latch bears, the center portion of the latch being bent to locate the ends out of line, substantially as shown, and for the purpose set forth. 3rd. In a twin jaw car coupling, a draw-head having one side extended inward to form a guide for the latch, webs D and G located on opposite sides of the draw bar, a pivoted coupling hook B, adapted to be engaged by the forward end of the latch, the forward portion of the latch lying between the guides or bearings D and C, the rear portion being bent so as to be pivoted to the web G, substantially as shown, and for the purpose set forth.

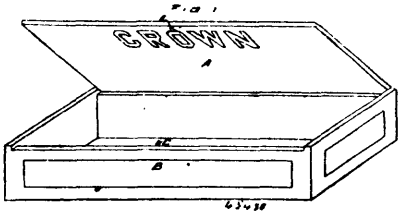
No. 43,479. Car Coupler. (*Attelage de chars.*)



Frank Benjamin Woodman, Cedar Rapids, Iowa, U.S.A., 6th July, 1893; 6 years.

Claim.—1st. In a car coupling, the combination, with the draw-head and knuckle substantially as described, said draw-head having diagonal ribs a^{11} a^{11}, of the gravity block C having diagonal grooves c^1 engaging with the ribs, the link block D connecting with the shifting device at one end, and at the inner end with the gravity block by a link which in the locked position of gravity block inclines upwardly and backwardly, substantially as and for the purpose set forth. 2nd. In a car coupling, the combination of the draw-head and knuckle, substantially as described, the gravity locking block C, the link block D, inclined link *c*, clevis *e* and shifter E having a looped portion E^1 at the end of the inner crank, substantially as and for the purpose set forth. 3rd. In a car coupling, the combination of the draw-head A, having a downwardly extended lug A^1, with a notch a^1 therein, the knuckle B having a downwardly extended stud or lug b^{11}, the pivot pin B^1, extending some distance below the draw-head, the coil spring wholly below the body of the draw-head passing around said pin, with its ends resting in said lugs of the draw-head and knuckle, respectively, and means for holding the spring on said pin, substantially as described. 4th. In a car coupling, the combination of the draw bar A having inclined guide ribs for the locking block, the gravity locking block C, the link block D connected therewith, and having a tail piece *d* extending through a slot in the bottom of the draw bar, means substantially as described for shifting the link block and gravity block, and the stirrup I adapted to catch the said tail piece *d* in case the tail bolt be broken.

No. 43,480. Fastener for Cigar Boxes.
(*Attache pour boîtes de cigares.*)



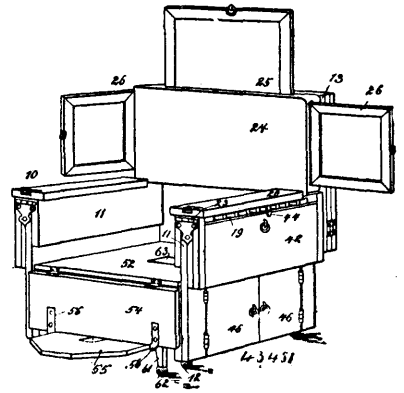
John Joseph Brady, Montreal, Quebec, Canada, 5th July, 1893; 6 years.

Claim.—1st. The combination of the hook C' with the catch O together with the groove F, substantially as and for the purpose hereinbefore set forth.

No. 43,481. Chair. (*Chaise.*)

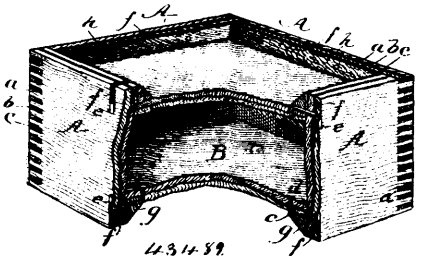
Clara Newton Wonson, Gloucester, Massachusetts, and Dennis Wilson Palmer, Hermon Centre, Maine, all in the U.S.A., 5th July, 1893; 6 years.

Claim.—1st. The combination, with the chair, of a chair back hinged to the chair arms and adapted to swing upward and lie flat upon the arms, and a table top pivoted on the chair back and provided with outwardly swinging leaves, substantially as described. 2nd. The combination with the chair, of a false back or mirror case secured thereto above the chair arms, and mirrors held within the case and adapted to be pulled outward, substantially as described. 3rd. The combination, with the chair having receptacles in the top of its arms, of covers hinged to the front ends of the chair arms



as to cover the same and adapted to swing outward and downward, substantially as described. 4th. The combination, with the chair, of a chair back hinged to the arms by longitudinally slotted links adapted to slide on their fastening bolts, the backs being adapted to lie flatwise upon the chair arms, and a table top pivoted on the chair back and provided with outwardly extending and inwardly folding leaves, substantially as described. 5th. The combination, with the chair having suitable arms, of an outwardly swinging shelf hinged to one of the arms and outwardly extending and inwardly folding brackets to support the shelf, substantially as described. 6th. The combination, with the chair having suitable arms, of an outwardly swinging shelf having end trunnions adapted to move vertically in slideways in the arms, and outwardly swinging brackets arranged behind the shelf and adapted to swing beneath and support the same, substantially as described. 7th. The combination, with the chair having suitable arms, of an outwardly swinging and vertically movable jointed shelf hinged to the outer side of one of the arms, and swinging brackets arranged behind the shelf and adapted to support the shelf, one of the brackets having an inclined top, substantially as described. 8th. The combination, with the chair, of compartments arranged in the body portion of the chair beneath the seat, and swinging doors to close the said compartments, substantially as described. 9th. The combination, with the chair, of a plurality of drawers arranged beneath the seat and adapted to be pulled outward, and swinging doors to cover and hide the drawers, substantially as described. 10th. The combination, with the chair, of a drawer arranged beneath the chair seat, an outwardly moving slide in the seat above the drawer, and a door in one of the chair arms to register with the slide, substantially as described. 11th. The combination, with the chair, of an extensible bed piece forming the chair seat and adapted to be extended horizontally, and swinging supports hinged to the front of the chair and adapted to be turned outward beneath the bed piece, substantially as described. 12th. The combination, with the chair, of a bed piece forming the seat of the chair and provided with leaves which hang normally in front of and behind the chair, and outwardly swinging supports hinged to the chair front and adapted to sustain the extended bed piece and leaves in a horizontal position, substantially as described. 13th. The combination, with the chair and the leaf hanging in front thereof, of a swinging foot piece hinged to the leaf, and a spring fastening device to fix the position of the foot piece, substantially as described.

No. 43,482. Box. (*Boîte.*)

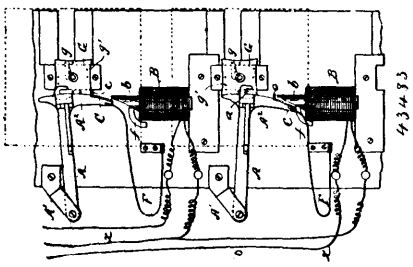


Joseph Martin Baker, Louisville, Kentucky, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. A packing box having its sides A composed of three pieces *a*, *b* and *c*, glued or connected together, with the grain of the intermediate piece being materially thinner than the other pieces, all substantially as shown and described. 2nd. A packing box having its sides A composed of three pieces *a*, *b* and *c*, fastened together with the grain of the intermediate piece *b*, which piece shall be materially thinner than the other pieces, crossing the grain of the

other pieces *a* and *c*, the tenons and mortises uniting the end of the sides, all substantially as shown and described. 3rd. A packing box having the slotted sides A, in combination with an end piece and the staple *e*, seated in the slot and secured at one end to the end piece and engaging the sides at the other end. 4th. In combination, with sides A, grooved as at *d*, and slotted as at *f*, an end piece seated in the groove, and the staple *c*, mounted in the slot and engaging the end piece and side. 5th. In combination, with sides A, slotted as at *f*, the end piece, the staple *e*, seated in the slot and engaging the side and end piece, and the strip *g* applied to the back of the staple, substantially as shown and described.

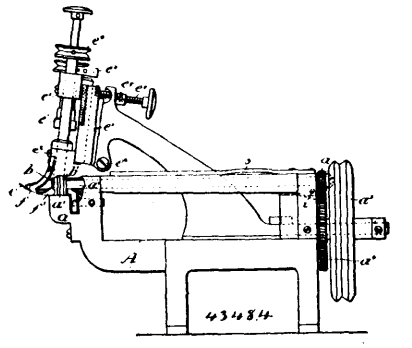
No. 43,483. Apparatus for Automatically Displaying Advertisements, &c. (*Appareil automatique pour exhiber les annonces, etc.*)



George Cook, Clerkenwell, London, England, and Charles Kerr Marr, Glasgow, Scotland, 5th July, 1893; 6 years.

Claim.—1st. In combination, the drums, the magnet and armature with means operated thereby for turning the drums, the series of radiating spring contact blades E, the rotary contact marker *d*, with clock work for operating the same, the pin *c*, against which the spring blades are pressed and the electrical connections, substantially as described. 2nd. In combination, the drum, the disc G on the drum shaft having the pins and the curved facets, the magnet, the pivoted armature lever having a curved end conforming to the facets of the disc and adapted to lock the same and the pawl carried by the armature lever to engage the pins on the disc for turning the same, substantially as described. 3rd. In combination, the display drums, the magnet and armature with means operated thereby for moving the drums step by step, the electrical connections with a contact breaker *d*, and the adjustable contact breaker to determine the duration of the action, of the device comprising the two adjustable discs placed side by side on a spindle *k*, and having contact surfaces extending partially about their peripheries, the means for holding the discs in their adjusted positions including the perforated plate and pin *l*, and the contact *n*, arranged to bear on the contact surface of the discs, substantially as described. 4th. In apparatus operated by clock work mechanism for automatically displaying advertisements, pictures and the like, the combination with the clock of a contact making cam *d*, and spring blades E connected by wires to electric induction magnets B in a battery circuit, the magnets being caused to turn the cylinders or drums displaying the advertisements by the cam *d*, making contact of the spring blades E with pins *c*, in the circuit, substantially as described. 5th. In apparatus of the class set forth, the combination of the lever A with its plate C, *c*, magnets B, spring F and escapement G operating to turn the cylinders or drums H, substantially as and for the purpose described with reference to the drawings annexed. 6th. In apparatus of the class set forth, the adjusting mechanism substantially as described with reference to figures 5, 6 and 7 of the drawings for automatically controlling the duration of the machine's operation.

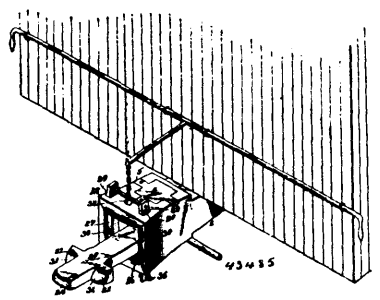
No. 43,484. Leather Skiving Machine.
(*Machine à biseauter les cuirs.*)



Andrew J. Tewksbury, Haverhill, Massachusetts, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. In a leather skiving machine, a bed, a feed roll, and its rotatable shaft constituing the feeding mechanism, combined with the presser rolls *b*, b^1, and rotary knife, substantially as described. 2nd. In a leather skiving machine, the stationary bed and serrated feed roll, and its rotatable shaft constituting the feeding mechanism, combined with the presser roll beside the feed roll, lip f^1, and rotary knife, substantially as described. 3rd. In a leather skiving machine, the combination of a bed over which the material passes, a feed roll above the bed, its rotatable shaft, a pivoted spring pressed frame supporting said shaft, and a rotary knife, substantially as described. 4th. In a leather skiving machine, the combination of a bed, a yielding feed roll, a yielding presser roll b^1, and rotary knife, substantially as described. 5th. In a leather skiving machine, the combination of a bed, a yielding feed roll, yielding presser *b*, lip f^1, and rotary knife, substantially as described. 6th. In a leather skiving machine, the combination with a feeding device, of two presser rolls loosely mounted on a shaft, a gage as *c*, a lip as f^1, and a rotary knife, substantially as described. 7th. In a leather skiving machine, a feeding device combined with a knife, its rotatable shaft, a grinder and its rotatable shaft, a block as e^2, serving as bearings for said shaft, and a supporting block as e^3, in which said block e^2 is vertically adjustable, substantially as described. 8th. In a leather skiving machine, a feeding device combined with a knife, its rotatable shaft, a grinder and its rotatable shaft, a block as e^2, serving as bearings for said shaft, a supporting block e^3, in which said block e^2, is vertically adjustable, a pivot for the block e^3, and means to move it on its pivot, substantially as described. 9th. In a leather skiving machine, a feeding device combined with a knife, its rotatable shaft, a grinder and its rotatable shaft, a block as e^2, serving as bearings for said shaft, a supporting block as e^3, in which said block e^2 is vertically adjustable, and a screw rod on which said block e^3, is mounted and upon which it is laterally movable, substantially as described. 10th. In a leather skiving machine, the following instrumentalities, viz.: Feeding devices, and a rotary cutter, the rotary shaft g^1, reduced in diameter at its lower end to leave a shoulder, a grinding disc, and an oil retaining cup mounted on reduced portion of the shaft, said cup abutting against said shoulder and held between it and the grinding disc, substantially as described.

No. 43,485. Combined Car and Air Brake Coupler.
(*Attelage de char et de frein atmosphérique combinés.*)

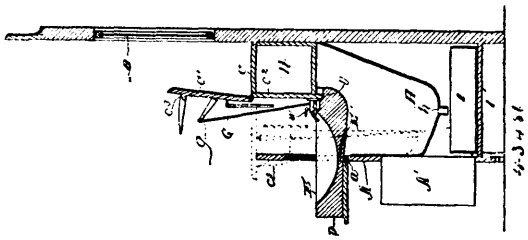


The Mable Automatic Car and Air Self Coupler Company, assignee of William Mable, all of Port Collins, Colorado, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. In a coupling of the character described, the combination of automatically adjustable air boxes or chambers loosely mounted within the draw-heads, and having the air pipes of the air brakes connected thereto, and a tubular link adapted to connect said air boxes or chambers and form a conduit for the air pipes, substantially as described. 2nd. In a coupling of the character described, the combination of air boxes or chambers loosely arranged and automatially movable in the draw-heads, and having a flexible diaphragm in the bottom portions thereof, air brake pipes connected thereto, and a coupling link of tubular form having openings therein adjacent to the ends thereof adapted to engage said diaphragm, said diaphragm having an opening therein, in direct communication to the brake pipe and link, substantially as described. 3rd. In a coupling of the character described, the combination of the draw-heads having openings extending through opposite sides thereof, the coupling link with shoulders arranged in pairs on opposite sides adjacent to the ends of the same, and coupling pins vertically movable in said draw-heads, and having enlargements at the upper portions thereof adapted to engage the shoulders of said link, substantially as described. 4th. In a coupling of the character described, the combination of draw-heads, air chambers or boxes mounted therein having air pipes attached thereto, a tubular link adapted to communicate with the said air chambers or boxes, and adjustable cams mounted in the upper portions of said air boxes or chambers and adapted to engage the upper portions of the ends of the link to sustain an air tight connection, substantially as described. 5th. In a coupling of the character described, the combination of draw-heads having chambers therein, air boxes or chambers loosely mounted in said chambers of the draw-heads and having weighted portions, and a tubular link adapted to engage said air boxes or chambers and be

sustained in proper position by weighting the said air boxes or chambers, substantially as described. 6th. In a coupling of the character described, the combination of draw-heads, air boxes or chambers mounted in said draw-heads and having air pipes connected to the bottom portions of the same, and having a flexible diaphragm above the air pipes, and a tubular link having bottom entrance openings adjacent to the ends thereof, adapted to communicate with the said air brake pipes through an opening of the diaphragm, substantially as described. 7th. In a coupling of the character described, the combination of draw-heads having chambers therein, air boxes adjustably mounted in said chambers, of the draw-heads having chambers in the bottom portions of the same with bottom openings, an elastic diaphragm mounted over said chambers in the air boxes or chambers and having legs depending therefrom and openings therein, air brake pipes passing through elongated openings in the bottom portions of the draw-heads and attached to the lower chambers of the said air boxes or chambers, a metallic strip across the front edge of each of said diaphragms, an adjustable cam in the upper portions of said air boxes or chambers, and a tubular link having bottom openings adjacent to the ends thereof communicating with the openings in the said diaphragm, substantially as described. 8th. In a coupling of the character described, the combination of draw-heads having chambers therein, air boxes adjustably mounted in said chambers, of the draw-heads having chambers in the bottom portions of the same with the bottom openings, an elastic diaphragm mounted over said chambers in the air boxes or chambers and having legs depending therefrom and openings therein, air brake pipes passing through elongated openings in the bottom portions of the draw-heads and attached to the lower chambers of the said air boxes or chambers, and a tubular link having bottom openings adjacent to the ends thereof communicating with the openings in the said diaphragm, substantially as described. 9th. In a coupling of the character described, the combination of draw-heads having chambers therein, air boxes adjustably mounted in said chambers of the draw-heads, having chambers in the bottom portions of the same with bottom openings, an elastic diaphragm mounted over said chambers in the air boxes or chambers and having legs depending therefrom and openings therein, air brake pipes passing through elongated openings in the bottom portions of the draw-heads and attached to the lower chambers of the said air boxes or chambers, a metallic strip across the front edge of each of said diaphragms, and a tubular link having bottom openings adjacent to the ends thereof, communicating with the openings in the said diaphragm, substantially as described. 10th. In a coupling of the character described, the combination of draw-heads having chambers therein, air boxes adjustably mounted in said chambers of the draw-heads, having chambers in the bottom portions of the same with bottom openings, an elastic diaphragm mounted over said chambers in the air boxes or chambers, and having legs depending therefrom and openings therein, air brake pipes passing through elongated openings in the bottom portions of the draw-heads and attached to the lower chambers of the said air boxes or chambers, and a pressure device such as a cam to bear against the link and hold it in close contact with the diaphragm, and a tubular link having bottom openings adjacent to the ends thereof, communicating with the openings in the said diaphragm, substantially as described.

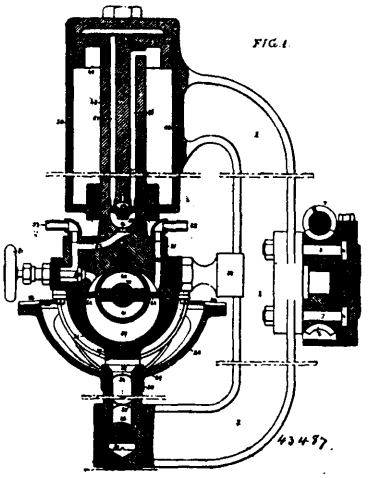
No. 43,486. Combined Washstand and Dressing Case.
(*Lavabo et nécessaire de toilette combinés.*)



Axel Wettervik and Julius Alfred Olsson, both of Chigago, Illinois, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. In a combined washstand and dressing case, the combination of the main frame A, having the water reservoir W, with the base D having the basin E, and pivotally secured to the front of the frame, the lid c^1 having the cleat c^3 to engage the base D, the rods G and pieces g, connected together and uniting the said base and lid, and adapted to hold the latter in an upright position, substantially as described. 2nd. In a combined washstand and dressing case, the combination of the frame A, having the mirror B with the reservoir W, having the hinged lid c, faucet w, and lug or projection u, and located in the upper part of the frame, the base D pivotally secured to the front of the frame, and having the basin E provided with the extended outlet E^1, and soap receptacle F, having the door f, with extended part f^2 to engage the lug u on the reservoir, the lid c^1 having the cleat c^3 to engage the base when in an upright position, the rods G secured at their lower ends to the base D, and having at their upper ends the pieces g secured to the lid c^1 and adapted to raise said lid and to hold it in an upright position, all constructed, arranged and operating substantially as and for the purpose set forth.

No. 43,487. Power Driven Tool. (*Moteur pour outils.*)

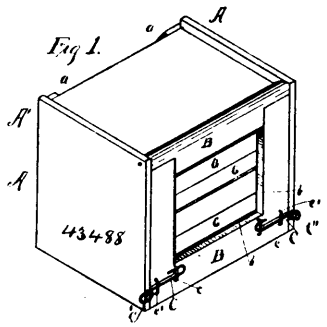


Frank Henry Cathcart, Philadelphia, Pennsylvania, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. The combination of a rotated motor, a casing within which said motor is contained, a tool shank operatively connected to and rotated by said motor, and a fluid pressure cylinder adapted to continuously feed the motor and tool toward the work, substantially as specified. 2nd. The combination of a rotated motor, the casing within which said motor is contained, a tool shank operatively connected to and rotated by said motor, and a fluid pressure cylinder adapted to advance and retract both the motor and tool toward and from the work, substantially as specified. 3rd. The combination of a, supporting and guiding frame, a motor casing guided by the frame, a motor contained within said casing, a tool shank operatively connected to and rotated by said motor, a cylinder, as 50, carried by the frame, and a piston connected to the motor casing and adapted to be travelled within said cylinder, substantially as specified. 4th. The combination of a casing, a fluid motor contained therein, a tool shank operatively connected to and rotated by said motor, a pressure cylinder, a piston within said pressure cylinder, a piston rod connecting the piston to said casing, communicating fluid passages in the piston rod and in the casing, controlling valves, a fluid supply, as 53, and an exhaust, as 82, substantially as specified. 5th. The combination with a rotated tool, of a feeding device for advancing and retracting said tool, said feeding device comprising a pressure cylinder, as 50, a piston within said cylinder, a piston rod, as 48, forming communication between the piston and the tool, fluid passages in said rod and communicating with a chamber, as 55, supply and escape passages also communicating with said chamber and a controlling valve in said chamber, substantially as specified. 6th. The combination, of a rotated motor, a casing within which said motor is contained, a tool mandrel operatively connected to and rotated by said motor, and an axis for said tool mandrel secured to or forming part of said motor casing, substantially as specified. 7th. The combination, of a rotated motor, a casing within which said motor is contained, a tool mandrel, a cup like body, as 25, secured to or forming part of said tool mandrel, gear teeth on said cup like body, and a pinion rotated by said motor and meshing with the gear teeth on said cup-like body, substantially as specified. 7th. The combination, of a rotated motor, a casing within which said motor is contained, an axis, as 26, secured to or formed integral with the casing, a hollow body, as 25, mounted on said axis, a tool shank secured to said hollow body, gear teeth on said hollow body, and a pinion rotated by the motor and meshing with said gear teeth, substantially as specified. 9th. The combination of a motor, a pinion rotated by said motor, a casing within which said motor is contained, an axis, as 26, secured to or formed integral with said casing, a loose sleeve, as 30, surrounding said axis, a hollow body, as 25, partly surrounding the motor casing, and secured to said sleeve 30, a tool shank secured to said hollow body, and gear teeth on said hollow body, meshing with the teeth of the said pinion, substantially as specified. 10th. The combination, in a rotated tool, a plunger, a frame, by which said plunger is carried, fluid passages in the piston of said plunger, a valve for controlling the same, and a fixed cylinder enclosing said plunger, substantially as specified. 11th. The combination, of the frame 1, a supporting arm 2, therefor, a worm wheel carried by said frame 1, and a worm carried by said arm 2, and meshing with said worm wheel, substantially as specified. 12th. The combination, of the frame 1, the worm wheel, carried thereby, the arm 2, having an undercut circular slot, a series of bolts pro-

jecting from the frame 1, and adapted to said slot, a worm wheel carried by said frame and a worm carried by the arm 2, and engaging with said worm wheel, substantially as specified. 13th. The combination, of the frame 1, the longitudinally adjustable arm 2, the vertical arm, and a clapping foot in which said vertical arm is swivelled, with devices for securing the said vertical arm in said clamping foot, substantially as specified.

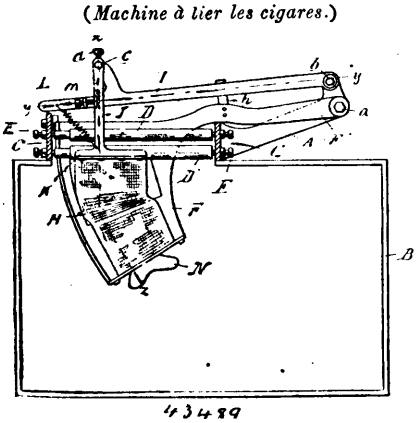
No. 43,488. Egg Crate. (*Boîte à œufs.*)



William Trigg Fisher and Charles H. Fisher, Prigmore, Tennessee, U.S.A., 5th July, 1893 ; 6 years.

Claim.—1st. The combination, with the egg box, of the skeleton door pivoted to the ends of the box and adapted to form, with the top of the box, a receptacle when thrown back on top of the said box, substantially as shown and described. 2nd. The combination, with the egg box and its pivoted skeleton door, of a series of egg crates having ventilating slots which register with each other, a series of egg holders, such as described, secured to said crates, and a series of spring supports located within holders and secured to the crates, substantially as and for the purpose set forth. 3rd. The combination, with the egg box, having ends, the top edge of said ends extending above the top surface of the box, of the pivoted skeleton door provided with spring latches, such as shown, the egg crates having slots and adapted to slide directly upon each other, and the combined egg holder and support secured to the said crates, substantially as and for the purpose set forth.

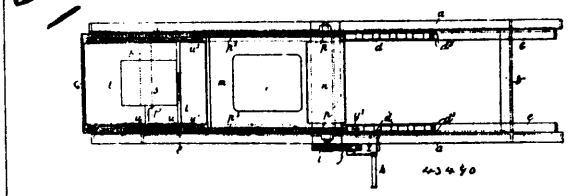
No. 43,489. Cigar Bunching Machine.
(*Machine à lier les cigares.*)



Alexander Gordon, Detroit, Michigan, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. In a bunching machine, the combination of the oscillating bunching table F, the bunching apron and the swinging support J, carried by the oscillating bar I, substantially as described. 2nd. In a bunching machine, the combination of the oscillating bunching table F, the bunching apron, the swinging support J, and the oscillating bar I, carrying the swinging support and the set screw *m* and spring *l*, substantially as described. 3rd. In a bunching machine, the combination of the oscillating bunching table F, the bunching apron, the oscillating bar I, carrying the swinging support J, and the adjustable stop *d*, substantially as described. 4th. In a bunching machine, the combination of the oscillating bunching table, the bunching apron and the oscillating bar I, adapted to be operated by the bunching table and having a loose play, substantially as described. 5th. In a bunching machine, the combination, with the frame, of the bunching rollers D, D¹, the oscillating bunching table F, the bunching apron, the swinging support J, the oscillating bar I, carrying the swinging support, the adjustable stop *d*, on said bar, the spring L, and the adjusting screw *m*, substantially as described. 6th. In a bunching machine, the combination of the oscillating bunching table, the oscillating bar I, operated by said table, the bunching rollers, the bunching apron and the loose connection *h*, all substantially as described.

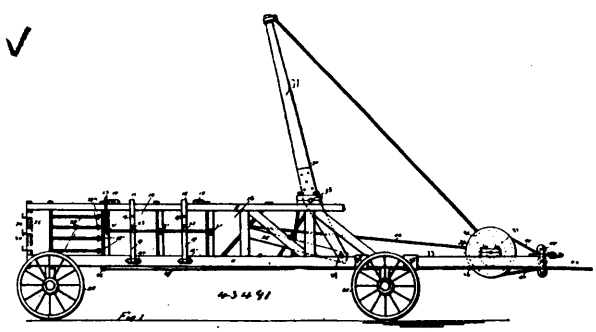
No. 43,490. Process of and Apparatus for Printing Glass. (*Procédé et appareil pour imprimer le verre.*)



James Budd, London, England, 5th July, 1893; 6 years.

Claim.—1st. The described process for printing glass, such process consisting in transferring designs or the like from a lithographic stone or other printing surface to sheets of glass by means of a roller faced with suitable composition, which is first passed over the printing surface and then over the sheet of glass to be printed, the said sheet of glass being supported upon a yielding bed, all substantially as and for the purposes described. 2nd. In a machine for transferring designs from a lithographic stone or other printing surface to a sheet of glass by means of a roller covered with suitable composition, the combination with the said roller of a table sliding on a frame beneath the said roller and carrying the lithographic stone or other printing surface and an elastic or yielding bed upon which the sheets of glass to be printed are placed, the said roller being lifted during the return movement of the table after a printing operation, substantially as and for the purposes described. 3rd. In a machine for printing glass, in which a yielding bed is employed, the combination with the said bed of gauges *t* and *t*¹, arranged and operating substantially as described.

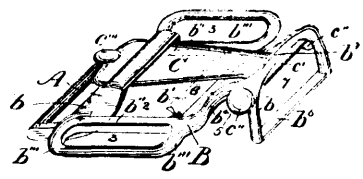
No. 43,491. Press for Hay. (*Presse à foin.*)



Daniel Phialcofsky and Moise Hebert, both of Beauharnois, Quebec, Canada, 5th July, 1893 ; 6 years.

Claim.—1st. A hay press comprising a press box having an opening in the top and a door at its rear end, a cover for the opening, a reciprocating plunger to move in the box, a lever mechanism for forcing the plunger into the box, and for pulling the plunger back out of the press box, substantially as described. 2nd. A hay press comprising a press box, having a door at its rear end and a covered opening in its top, a plunger arranged to reciprocate in the box, a lever mechanism for forcing the plunger into the box, equally with a clutch coupling and a cable connection between the said pulley and plunger, whereby the tension of the cable pulled up by the pulley will move the plunger forward, substantially as described. 3rd. A hay press comprising a press box having a covered opening in its top and a door at its rear end, a tilting lever fulcrumed in front of the press box, a cable and a right and left grooved cone pulley for tilting the lever, a plunger operated by the lever, and adapted to reciprocate in the box, and a pulley with clutch coupling operatively connected with the plunger to return it after being actuated by the lever, substantially as described. 4th. The combination of the press box, the plunger, the tilting lever for operating the plunger, the right and left grooved cone pulley with its clutch coupling, the pulley with clutch coupling and cable for tilting the lever, the main drum to turn the cone pulley, and the two cables winding around and unwinding alternatively from the drum and connected with the drum, and also, the lever mechanism for throwing the clutch couplings into gear and out of gear, substantially as described. 5th. The combination of the press box having a covered opening in its top, a door in its rear end and slots in its sides, and the compressing plunger held to reciprocate in the press box, substantially as described. 6th. The combination of the press box, the swinging cover for the same, the cross bars secured to the cover and projecting beyond both sides of the box, the spring pressed latch bars to engage the cross bars of the cover, and the eccentric rods journalled on both sides of the press box and adapted to engage and release the latch bars, and also the double eyed hinge for the top cover, substantially as described.

No. 43,492. Trace Buckle. (*Boucle de trait.*)

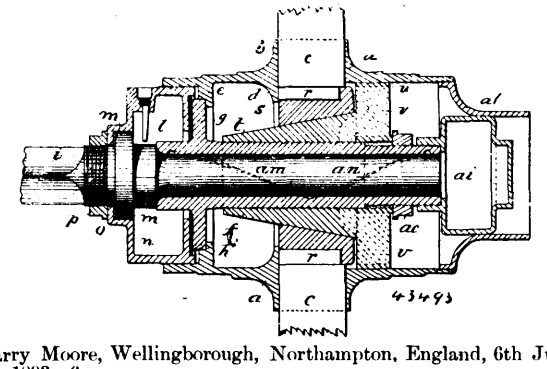


43492

George Victor Martin, Whitby, Ontario, Canada, 5th July, 1893; 6 years.

Claim.—1st. In a trace buckle, the combination of the draw link A, frame B having the cross bars b and b^1, side bars b^{11} to form a rectangular opening 2, the oblong eyes 3, the conical slots 5, and openings 6 and 7 formed by upwardly curved arms and cross bars, and the tongue plate C having the tongue c, and arm c^1 with heads c^{11}, substantially as set forth. 2nd. In a trace buckle, a loose tongue plate C, having on its lower surface a tongue c, adapted to enter the trace, and at the other end the pintles c^1 with heads c^{11}, adapted to be held in a slot, substantially as set forth. 3rd. In a trace buckle, an integral frame consisting of side bars b^{11}, b^4 and b^5, connected by cross bars b, b^1, b^6 and b^7, and forming the openings 2, 6 and 7, and the slots 5, and with the continuations b^{111} formings the loops 3, substantially as set forth.

No. 43,493. Wheel for Road Vehicles.
(*Roue de voiture routière.*)



Harry Moore, Wellingborough, Northampton, England, 6th July, 1893; 6 years.

Claim.—1st. In a wheel, the combination with the nave, the spokes passing through mortices in the nave and the axle box, of a series of wedge shaped shoes adapted to fit on the ends of the spokes, and of a cone adapted to be moved along the axle box and act on the inner surfaces of the shoes to force them outwards radially, substantially as set forth. 2nd. In a wheel, the combination with the nave, the spokes passing through mortices in the nave and the screw threaded axle box, of a series of wedge shaped shoes adapted to fit on the ends of the spokes, and of a cone adapted to be screwed along the axle box and act on the wedge surface of the shoes to force them radially outwards, substantially as set forth. 3rd. In a wheel, the combination with the hub, the axle and collar on the axle, of a box adapted to bear against the back of and be retained by the collar, and to be secured to the said hub, substantially as set forth. 4th. In a wheel, the combination with the hub, the axle and the collar on the axle, of a washer plate adapted to bear on the back of the collar, and of screwed bolts or studs secured in the back end of the hub and adapted to secure the hub and washer plate together, substantially as set forth. 5th. An axle box provided with right and left handed spiral grooves, substantially as set forth for the purpose specified. 6th. A tire for a wheel rolled or cast endless without weld or joint, substantially as set forth.

No. 43,494. Nail. (*Clou.*)

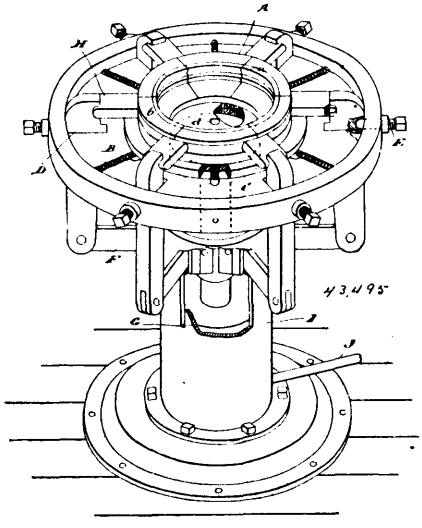
Eben Perkins and James Pender, both of St. John, New Brunswick, Canada, 6th July, 1893; 6 years.

Claim.—1st. As an improved article of manufacture, a nail coated with asphalt, tar, rosin, shellac or gum. 2nd. A nail coated with asphalt, tar, rosin, shellac or other similar gum in a solvent state and dried, whereby the surface will be slightly viscous and protected from oxidation, as set forth.

No. 43,495. Machine for Heating Water Boilers and other Cylindrical Vessels. (*Machine pour entêter les chaudières et autres vaisseaux cylindriques.*)

James Morrison, assignee of Walter Scott Shipe, both of Toronto, Ontario, Canada, 6th July, 1893; 6 years.

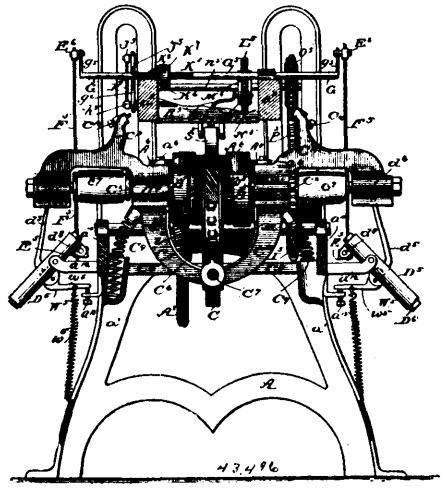
Claim.—1st. A ring, made in segments and connected to mechanism, arranged to force the said segments together to reduce the size of the ring and compress the head on to the cylinder, substantially as and for the purpose specified. 2nd. A ring made in segments



43495

the ends of each segment having fingers formed on them to interlock with the corresponding fingers formed on the adjacent segments, in combination, with mechanism arranged to force the said segments together to reduce the size of the ring and compress the head on to the cylinder, substantially as and for the purpose specified. 3rd. A ring A, made in segments and supported on the table C, the said segments being held apart by the springs B, the arms or levers D, pivoted each on the end of a set screw E, and connected by the block H, to the ring A, in combination with the link F, pivoted on the end of the arm or lever D, and connected to the piston G, substantially as and for the purpose specified. 4th. A ring A, made in segments, each segment having fingers a, formed on its ends and supported on the table C, the said segments being held apart by the springs B, the arms or levers D, pivoted each on the end of a set screw E, and connected by the block H, to the ring A, in combination with the link F, pivoted on the end of the arm or lever D, and connected to the double ended piston G, fitted into the cylinder, having an inlet pipe J, at one end and the hole d, at its other end, substantially as and for the purpose specified.

No. 43,496. Stave Trimming and Jointing Machine.
(*Machine pour dresser et joindre les douves.*)



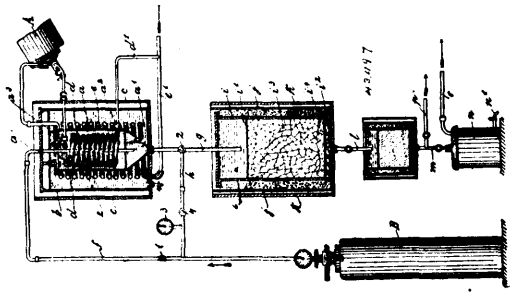
43496

William James Wright, Cooperstown, assignee of James McGavin McKerrow and David Lewis Trax, both of Oil City, all in Pennsylvania, U.S.A., 6th July, 1893; 18 years.

Claim.—1st. In a stave trimming and jointing machine, in combination, the main frame, a transverse guide bar mounted thereon, the laterally movable boxes held on said guide bar, mechanism for adjusting such boxes towards or from each other, the laterally movable saws, and connection between such boxes and the saws, whereby such saws are set by the movement of the boxes, substantially as and for the purpose described. 2nd. In a stave trimming and jointing machine, the combination with the main frame, and the laterally adjustable trimmer, saws mounted thereon, of the

dovetail guide rail E, the movable boxes H, held thereon, the lever F, pivoted thereon between the boxes, the link arms h h^1, connecting such boxes, with the lever F, to the front and rear of its fulcrum and the arms H^1, connecting such boxes, and the saw hubs, all as and for the purpose described. 3rd. In a stave trimming and jointing machine, the combination with the main frame, and the transverse yoke j^x, formed with bearings j, at its outer ends, and the boxes and bearings j^1, j^2, supported on the side beams a^x, of the main frame, of the hollow shafts J^1, mounted in the bearing j^1, j^2, the shafts J, longitudinally movable in and held to turn with the hollow shafts J^1, and the saws I, mounted on the inner ends of the shafts J, lever mechanism for simultaneously adjusting the saw shafts J, inward or outward, and means for rotating the shafts J^1, all substantially as shown and for the purpose described. 4th. In a stave jointing machine, in combination, the endless carrier, the cutter frames and cutters, held to be rocked laterally to such carrier, bilge forming devices connected therewith, spreader arms connected with the cutter frames, projected in advance thereof, to be engaged by the passing stave, such arms having adjustable fulcrums on the main frame at the rear of the cutter frames, all arranged, substantially as shown, whereby the front contact faces of the arms can be adjusted to set the cutters to cut a greater or less bilge, by adjusting the fulcrums of such arms to or from the cutters, as and for the purpose described. 5th. In a stave jointing machine, the combination with the main frame, the endless carrier and the laterally swinging cutter frames, of the spreader arms A^5, pivotally connected near their front ends to the cutter frames, such front ends having contact faces adapted to be engaged by the passing stave, the longitudinally arranged guide rods a^1, on the main frame, the transverse rod a^8, adjustably held thereon, and the slide blocks a^7, longitudinally adjustable to the rear ends of the arms A^5, and transversely adjustable on the rod a^8, all substantially as and for the purpose described. 6th. In a stave jointing machine, the combination with the main frame, the swinging cutter frames and cutters and the endless carrier passing between such cutter frames bilge forming devices, including rocker head blocks and plungers operating therein, link arms on the cutter frames pivotally connected with the plunger rods, intermittently operated gear devices, including reciprocating arms connected to the swinging head blocks, and lock cams for holding the plungers to their adjusted position, all arranged to be automatically and successively operated by the moving stave, and whereby the movement of the cutter frames will set the plungers to determine the bilge movement of such cutter frames whereby such movement is rendered continuous during the passage of the stave between the cutters as set forth. 7th. In a stave jointing machine, the combination with the swinging cutter frames, the rotary cutters mounted thereon and mechanism for carrying the billet between such cutters, of bilge formers arranged to be set to their initial position by the lateral or swinging movement of the cutter frames, devices for holding such formers to their adjusted position, and intermittent gear mechanism arranged to be set in operation by the passing stave and adapted to impart a reciprocating motion to the formers whereby to move the cutter frames on a proper bilge curve as and for the purpose described. 8th. In a stave jointing machine of the class described, the combination with the swinging cutter frames and the rotary cutters mounted thereon, of a bilge forming device, comprising tubular rocker frames pivoted on the main frame, plunger rods movable therein, link arms pivotally connected to such rods and to the swinging cutter frames, whereby to move such plungers, as the cutters frames are swung on their pivotal axis, means for holding the tubular frames to their normal position, and locking devices adapted to lock the plunger rods from movement when the tubular frames are rocked substantially as and for the purpose described. 9th. In a stave jointing machine of the class described, the combination with the laterally swinging cutter frames and the revolving cutters mounted therein, of the tubular head blocks D^5, slotted on their upper and lower faces, the plunger rods D^6, operating therein, the link arms d^5 pivotally connecting the plungers and the swinging cutter frames, the cams W pivoted on the head blocks D^5 adapted to be out of contact with the plungers when the head blocks are in their normal positions, and to engage the said plungers when such blocks are swung on their pivots, and means for rocking such head blocks, all substantially as and for the purpose described. 10th. In a stave jointing machine of the class described, the combination, with the laterally swinging cutter frames and the revolving cutters mounted therein, the swinging tubular head blocks pivoted to the sides of the main frame, the plunger rods longitudinally movable thereon, the pivoted link connections d^5, and the cam devices W^5 for engaging the plunger rods, of the drive shaft M^5, the shaft n^5 geared therewith, provided with a gear N^5, the rotary shaft K^5, a swinging gear connection M^6 mounted thereon, the rock shaft G^5 connected with the shaft K^5 and operated thereby, the crank arms g^5 on said shaft G^5, the rods F^5, connecting such crank arms and the head blocks, and mechanism connected to the swinging gear connection M^6, adapted to be engaged by the passing stave whereby to gear the shafts K^5 and n^5, together during the operation of cutting, all substantially as and for the purpose described. 11th. In a stave jointing machine of the class described, the combination with the main frame A, the drive wheels L, L^1, the endless carrier mounted thereon, the laterally swinging cutter carrying frames, the bilge former head blocks pivotally mounted for a rocking movement on the main frame connected with the cutter frames, the shafts G^5, formed with slotted crank arms g^5, g^5, the rods F^5, adjustably secured at their upper ends in said slotted cranks g^5, their lower ends pivotally connected with the rocking head blocks and mechanism for imparting a rocking motion to the shaft G^5, during the operation of forming the bilge cut on the billet, all substantially as and for the purpose described. 12th. In a stave jointing machine, substantially as described, the combination, with the cutter and the bilge forming mechanism, including the head blocks adapted to be set to their initial point of operation by the passing billet, and the shaft n^5, geared with one of the drive shafts of the machine, of the shaft K^5, provided with a gear k^5, the swinging frame M^6 held on the shaft K^5, carrying an idler m^5, the lifting arm S^5, hung in the path of the moving billet in advance of the cutters, the rod T^5, connecting the frame M^6 and the arm S^5, and formed with a rearward extension t^5, and connections between the shaft K^5, and the head blocks for imparting a rocking motion thereto, all as and for the purpose described. 13th. In a stave jointing machine, substantially as described, the combination, with the shaft K^5, the drive shaft n^5, the swinging gear carrying frame M^6, and the pivotal lifter arm S^5, of the rod T^5, pivotally connected with the arm S^5, at its front end, a block U^5, pivotally connected to the swinging frame M^5, such rod T^5, having a yielding connection in the block U^5, at its rear end, as and for the purpose described.

No. 43,497. Apparatus for Separating Solid or Fluid Substances. (*Appareil pour séparer les substances solides ou fluides.*)



Carl Weitenkampf, assignee of Heinrich Deiswiger, both of Berlin, German Empire, 6th July, 1893; 6 years.

Claim.—1st. An apparatus for separating solid or fluid substances dissolved in alcohol, ether or chloroform without evaporation of the solvent, consisting of the reservoir a, provided with cooling case b, and protecting case c, and capable of being made particularly cold by worms such as d, e, which reservoir is connected with the filtering chambers and also to the carbonic acid holder by a pipe f, substantially as and for the purpose hereinbefore set forth. 2nd. The combination and in connection with one or more filtering vessels connected between themselves, each consisting of a closed holder which holds the filtering material arranged between the sieves, and is kept at a constant temperature by a cooling and heat protecting case or surrounding, substantially as and for the purpose hereinbefore set forth. 3rd. The combination and acting in conjunction with means for returning the carbonic acid from the worms d, e, and from the delivery pipe m, and the holder n, to the carbonic acid reservoir for the purpose of being again used over and over again for cooling or saturating the solutions intended to be purified, substantially as and for the purpose hereinbefore set forth. 4th. The combination with apparatus such as hereinbefore described, of the connection pipe f, with stop cock therein and a shut off branch pipe h, so as to shut off the cooling holder a, after being emptied and to permit the refilling thereof with fresh solution so as to prepare and cool same without interfering with the filtering operation, substantially as described and shown in the drawings.

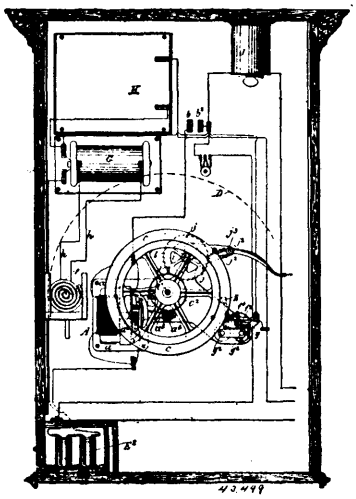
No. 43,498. Process of Separating Solid or Fluid Substances. (*Procédé pour séparer les substances solides ou fluides.*)

Carl Weitenkampf, assignee of Heinrich Deininger, Berlin, Empire of Germany, 6th July, 1893; 6 years.

Claim.—The herein described process for separating solid or liquid substances dissolved in alcohol, ether or chloroform without evaporating the solvent, and in which the solution is first cooled to a temperature of about 20° to 25° C, is then saturated under pressure with carbonic acid, and is lastly made to pass through filtering materials, the same conditions of pressure and temperature being maintained throughout by the means and in the manner, substantially as described.

No. 43,499. Apparatus or Means for Exhibiting Optical Illusions. (*Appareil ou moyen d'exhibition d'illusions optiques.*)

Fig 1



The Electrical Wonder Company Limited, of Strand County, London, England, assignee of Ottomar Anschutz, of 14 Unter den Linden, Berlin, Germany, 6th July, 1893; 6 years.

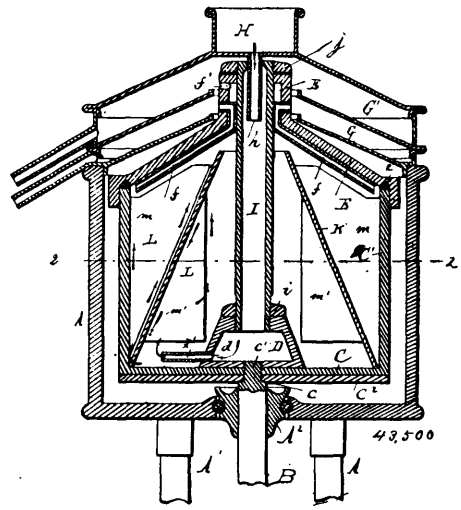
Claim.—1st. In apparatus for exhibiting optical illusions the combination of a disc or moving frame or strip and means for operating it, the said disc frame or strip carrying a series of pictures representing succeeding phases of movement with an electric illuminating device by which each picture is illuminated as it passes before a sight hole or the like, substantially as hereinbefore described. 2nd. In apparatus for exhibiting optical illusions, the combination of a disc or the like, and means for causing it to be operated on the insertion of a coin or token, the said disc or the like carrying a series of pictures representing succeeding phases of movement with an electric illuminating device by which each picture is illuminated as it passes before a sight hole or the like, substantially as hereinbefore described. 3rd. In apparatus for exhibiting optical illusions, the combination of a disc or the like, and means for causing it to be operated on the insertion of a coin or token, and means for arresting the movement after a predetermined interval, the said disc or the like carrying a series of pictures representing succeeding phases of movement, and an electric illuminating device by which each picture is illuminated as it passes before a sight hole or the like, substantially as hereinbefore described. 4th. In apparatus for exhibiting optical illusions, the combination, with an enclosing case, of a rotatable disc or picture carrier, an electro-motor and connections for operating such disc or carrier an electric illuminating device such as a Geissler tube, its spark producing elements and connections, and means for effecting an intermittent operation of the same, a coin receiver having movable parts, and electrical contacts adapted to be operated by the said coin to start the apparatus, and a releasing device for such coin, all substantially as shown and described.

No. 43,500. Centrifugal Liquid Separator.

(*Séparateur de liquide centrifuge.*)

D. H. Burrell and Company, assignees of Carl John Lundstrom, all of Little Falls, New York, U.S.A., 6th July, 1893; 6 years.

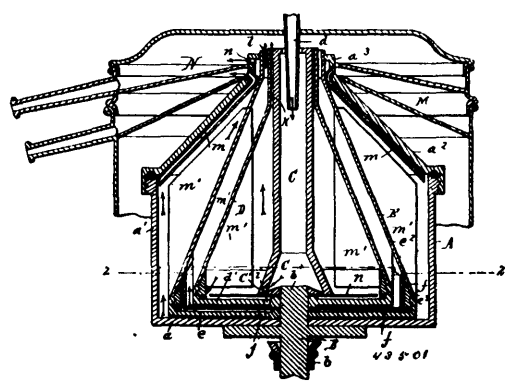
Claim.—1st. The combination, with the separating bowl having an inlet for the full milk and discharges for the separated cream and skimmed milk, of a hollow separating cone extending diagonally through the liquid space of the bowl from the bottom of the bowl toward the cream outlet and terminating with its small end near the cream outlet, substantially as set forth. 2nd. The combination, with the separating bowl having a device whereby the full milk is fed to the bottom of the bowl, and having its cover provided with a contracted neck in which the outlets for the cream and skim milk are arranged, of a hollow separating cone resting with its base upon the bottom of the bowl, and terminating with its small end near the contracted neck of the bowl, substantially as set forth. 3rd. The combination, with the separating bowl having an inlet for the full milk and discharges for the separated cream and skim milk, of a hollow corrugated separating cone extending diagonally through the liquid space from the bottom of the bowl toward the cream outlet, and terminating with its small end near the cream outlet, substantially as set forth. 4th. The combination, with the separating bowl, having an inlet for the full milk and discharges for the separated cream and skimmed milk, of a main separating cone extending diagonally through the liquid space from the bottom of the bowl toward the cream outlet, and a supplemental separating cone of smaller diameter arranged within the main cone, substantially as set forth. 5th. The combination, with the spindle provided at its upper end with a screw threaded shank and with a shoulder surrounding



said shank, of a bowl resting with its bottom on said shoulder, and a feed cup bearing upon the bottom of the bowl and having in its bottom a screw threaded opening which engages with the shank of the spindle, substantially as set forth. 6th. The combination, with the body of the separating bowl and its removable cover resting with its marginal portion loosely upon the upright wall of the body, and having a contracted neck, of a feed cup secured to the bowl upon its bottom, a tubular stem secured with its lower end to the feed cup and extending through the neck of the bowl, and a screw nut applied to the upper end of the tubular stem and bearing upon the neck of the cove, substantially as set forth.

No. 43,501. Centrifugal Liquid Separator.

(*Séparateur de liquide centrifuge.*)

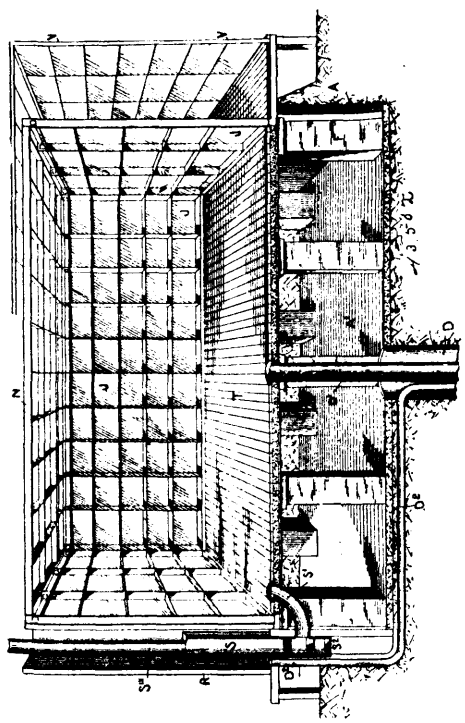


D. H. Burrell and Company, assignees of Carl Johan Lundstrom, 6th July, 1893; 6 years.

Claim.—1st. The combination, with the rotating separating bowl, which primarily receives the milk, to be separated, and which is provided with an outlet for the separated cream and an outlet for the partially skimmed milk, of a secondary separating bowl arranged concentrically with reference to said primary separating bowl, receiving partially skimmed milk therefrom, and provided with outlets for the separated cream and skim milk, substantially as set forth. 2nd. The combination, with the rotary separating bowl, provided with outlets for the separated cream and skim milk, of an internal separating bowl which primarily receives the milk to be separated, and which is provided with an outlet for the separated cream and with a discharge by which the partially skimmed milk is delivered into the outer bowl, substantially as set forth. 3rd. The combination, with an outer separating bowl provided with a contracted neck, having an outlet for the separated cream and an outlet for the skimmed milk, of an internal separating bowl, having a contracted neck arranged within the neck of the outer bowl, and having at its bottom an outlet through which the partially skimmed milk is discharged into the outer bowl, substantially as set forth. 4th. The combination, with an outer separating bowl, having its cover provided with a contracted neck and having outlets for the separated cream and skim milk arranged therein, of an upwardly tapering internal separating bowl arranged within said outer bowl

and provided at its upper end with an outlet for the separated cream, and at its bottom with an outlet for the partially skimmed milk, substantially as set forth. 5th. The combination with an outer separating bowl, provided with a contracted neck, having outlets for the separated cream and skimmed milk, of primary and secondary internal separating bowls arranged concentrically within said outer bowl, and provided each with a cream discharge at its top and with a discharge for the partially skimmed milk at its bottom, substantially as set forth. 6th. The combination, with an outer separating bowl, provided with a contracted neck, having outlets for the separated cream and skim milk, of a primary internal separating bowl, which first receives the milk to be separated, and a secondary internal separating bowl, in which said primary bowl is arranged, and which is in turn arranged in said outer bowl, said secondary bowl being provided between its bottom and the bottom of the primary bowl with a diaphragm having an upturned marginal flange, substantially as set forth.

No. 43,502. House. (*Maison.*)



William Van der Heyden, Yokohama, Japan, 6th July, 1893; 6 years.

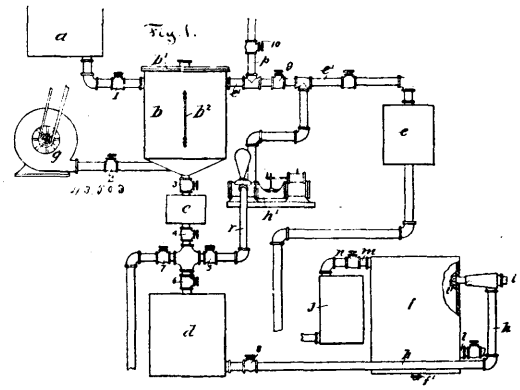
Claim.—1st. A perfected sanitary house, suitable for use in all climates, characterized by the walls and roof being built up of a number of water tight boxes, each composed of two sheets of plate glass carried in rectangular metal frames, each box being filled with a solution of alumen, the whole structure being supported by columns, upon stone pillars connected by concrete walls, through apertures in which air is admitted into a basement or cellar, and filtered by passing through pure cotton, the air supplying a well made within the basement, from which well air of unvarying temperature is drawn by pipes to supply the upper room or dwelling place, the vitiated air being drawn from the upper room to maintain combustion in a stove, and around the outside of the said stove the air from the well passes as it enters the room to supply the air exhausted by the said stove, as set forth. 2nd. A perfected sanitary house, suitable for use in all climates, the walls and roof consisting of a number of water tight boxes, each composed of sheets of plate glass carried in rectangular metal frames, each box being filled with a solution of alumen, as set forth.

No. 43,503. Process of Extracting Fat from Wool.

(*Procédé pour extraire la graisse de la laine.*)

William Tenny Cutter, East Lynne, and Charles Justin Luce, Niantic, both in Connecticut, U.S.A., 6th July, 1893; 6 years.

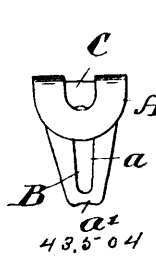
Claim.—1st. The process of cleansing animal fibre, as wool, that consists in passing and repassing the initial quantity of naphtha at a regulated speed through the animal fibre that is inclosed in a vessel, then passing a current of hot air in a reverse direction through the mass of fibre, and then washing the mass by passing a current of water through it, all substantially as described. 2nd. The process of cleaning wool, that consists in confining a compressed mass of the material in a closed vessel, then passing a current of hot air at a temperature of about 250° Fahrenheit through the mass, and then saturating the mass with a suitable fat solvent and passing and



repassing the initial quantity of the solvent at a regulated speed through the mass of wool, all substantially as described. 3rd. The process of cleansing wool, that consists in first drying the mass of wool, that is held in a suitable vessel, by passing a current of hot air therethrough and then subjecting the dried mass to repeated washings by a suitable fat solvent repeatedly passed through the mass, then driving off the excess of solvent by a current of hot air, and then washing out the potash salts and other deposited impurities from the mass of wool by means of a current of water at a suitable temperature passed through the mass, all substantially as described. 4th. The process of cleaning wool fiber, that consists in first drying the mass of wool that is held in a suitable vessel, by passing a current of hot air therethrough, and then subjecting the dried mass to repeated washings by a suitable fat solvent repeatedly passed through the mass, then driving off the excess of solvent by a current of hot air, and then washing out the potash salts and other deposited impurities from the mass of the wool by means of a current of water at a temperature of about 100° Fahrenheit passed through the mass, all substantially as described. 5th. The process of extracting the fat from wool, which consists in subjecting the greasy wool to the action of a suitable solvent of fat in an inclosing receptacle, and repeatedly percolating the same or initial charge of solvent through the wool, substantially as described.. 6th. The process of extracting fat from a fibrous material, which consists in subjecting a mass of such greasy fibrous material to the action of naptha in an inclosing receptacle and repeatedly percolating the initial charge of solvent through the mass, substantially as described. 7th. The process of extracting the fat from wool, which consists in percolating the fat solvent through greasy wool and thereby freeing it of foreign matter, then repeatedly passing this resulting solution so charged through the wool until the fatty bodies are dissolved out and taken up by the solvent, and the suspended impurities are filtered out and deposited in the wool, all substantially as described. 8th. The process of cleansing wool from grease and other foreign matters, which consists in subjecting wool in an inclosing receptacle to the action of a current of suitable solvent, then filtering the initial charge of solvent through the wool to dissolve out the fatty bodies and redeposit the suspended impurities in the wool, and repeating the percolation of this initial charge of solvent until the fluid solution of fatty matters is substantially clear of suspended impurities, and then washing the wool to cleanse it of the deposited impurities, all substantially as described. 9th. The process of clarifying a fatty solution obtained by passing a quantity of suitable fat solvent, as naptha, through a mass of animal fibre that consists in repeatedly filtering this solution of fat mixed with foreign matter through a mass of the same animal fibre, all substantially as described.

No. 43,504. Clasp for Garment.

(*Agrafe de vêtement.*)



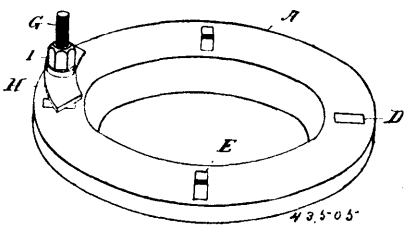
Isaac Blum, Baltimore, Maryland, U.S.A., 6th July, 1893; 6 years.

Claim.—1st. In a garment fastening, a catch hook A, having openings B B¹, separated by bridge strap C, and base bar with upper and under edges invertedly curved in opposite directions adapted to be inserted within overlying layers on one end of a waist band, in combination with meshing hasp on the opposite end, substantially as described. 2nd. The within described fastening catch for connecting opposite ends of trousers opening, the upper section of said catch being overturned, the lower end being inserted between overlying layers of the garment fabric and therein retained by rows of stitches *s*, passing through the superimposed material thereby composing a

looped yielding stay holding the bridge C, and preventing its withdrawal when subjected to lateral tension, as and for the purpose intended, substantially as described. 3rd. The combination of the superimposed layers of a waist band with bridge strap C, of catch A, the lower section of said catch being inserted intermediately of the overlying fabric end therein confined by suitable interior connections and sewed looped and adjacent to the outer edge of bridge C, the upper section of the catch being overturned outwardly on a plane aligning with the concealed lower section, and adapted to intermesh with hasp on the opposite side of the garment, as and for the purpose intended, substantially as described. 4th. In a garment fastening device the staple S, consisting of a central bar turned downwardly near each of its ends having terminal shield pieces *s*, provided at their opposite edges with inverted curves 4, substantially as described. 5th. A waist band having inserted at one end between its front and rear layers of fabric, a catch hook A, provided with openings B B^1, separated by cross bridge C, the lower end of said hook being fastened to a strip of fortifying material intermediate of the overlying surfaces, the inner strip 3, at its end being folded upon itself and inserted under the bent end a^1, of the catch hook and connected by stitching *s*, to fabric 2, at each side of the hook and above cross bridge C, in combination with meshing hasp at the opposite end of the waist band, as and for the purpose intended, substantially as described. 6th. In a garment fastening device the staple S, consisting of a central bar turned downwardly near each of its ends having terminal shield s^1, provided at their opposite edges with inverted curves 4, and perforated at 6, substantially as and for the purpose specified.

No. 43,505. Floor Flange for Closets.

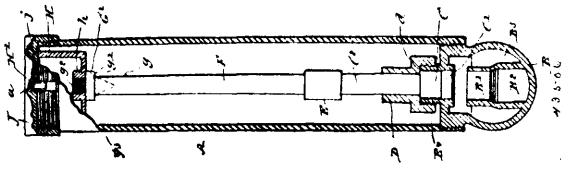
(*Bourrelet de plancher pour latrines.*)



Harry William Parker, Toronto, Ontario, Canada, 6th July, 1893; 6 years.

Claim.—A floor flange having elongated bolt holes, a cover being formed below each bolt hole in such a manner as to permit the head of the bolt to enter and engage with the flange without leaving any space for water to pass below the flange, substantially as and for the purpose specified.

No. 43,506. Stop Cock. (*Robinet.*)

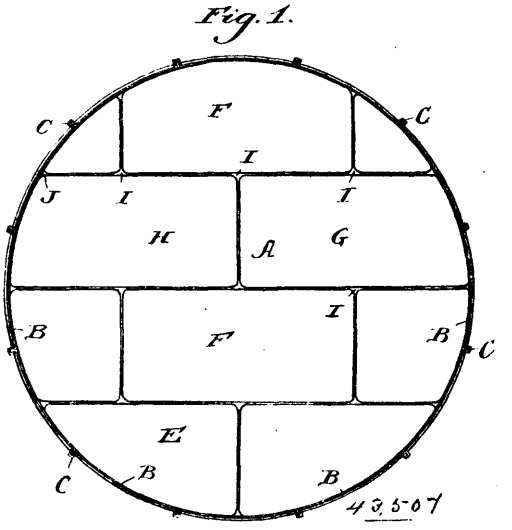


John George Smith, Montreal, Quebec, Canada, 6th July, 1893; 6 years.

Claim.—1st. In a water cock, the sliding valve thereof adapted when released to be operated by the water pressure upon same. 2nd. In a buried street water cock, the combination with the enclosing shaft or tubular casing, of a closing cap for the open end of the same, and means operated by the water pressure of the main to effect the locking of said cap. 3rd. In a buried street water cock, the combination with the enclosing shaft or tubular casing, of a closing cap for the open end of same, adapted after being set in place to be automatically locked against movement, and means within said shaft or casing for effecting such locking. 4th. A water cock, the valve of which is adapted to be opened and maintained in its open position by the water pressure upon same, as set forth. 5th. In an enclosed street water cock, a sliding valve adapted to be opened and maintained in its open position by the water pressure upon same, and an intermediate connection variable as to length between said valve and the cap of the enclosing casing for the purposes set forth. 6th. In a street water cock, a valve held in its cylinder or working chamber by a removable bearing having a rotatory connection with said cylinder, and adapted by the rotation of said bearing to be removed from said cylinder, as set forth. 7th. In a street water cock, the combination with a valve cylinder, of a sleeve bearing having a screw thread connection with same, a valve having a piston head and diminished stem portion, the latter adapted to work in such bearing and the extent of movement of the said piston head being regulated by said sleeve bearing, and such valve and sleeve bearing being removable from said seat by the simultaneous rotation of both in the same direction. 8th. In a buried street water cock, the combination with an automatically operated valve located at the bottom of a shaft or tubular casing, of a closing cap for the open end of such shaft or casing and an intermediate connection between said valve and cap, for the purposes set forth. 9th. In a buried street water cock, the combination with a sliding valve located at the bottom of a shaft or tubular casing, and adapted to be operated to open by the water pressure upon same, of a closing cap for the open end of such shaft or casing, an upward extension from said valve, and locking parts carried by the upper end of said extension, adapted upon the opening movement of the valve to connect with and lock against movement said closing cap, as set forth. 10th. In a buried street water cock, the combination with the vertically sliding valve located at the bottom of a shaft or tubular casing and adapted to be elevated by the water pressure beneath same, of a closing cap for the open top end of said shaft or casing, an upward extension from said valve variable as to length, and locking parts carried by the upper end of said extension adapted upon the elevation of said valve and extension to connect with and lock against movement of said closing cap, as set forth. 11th. In a buried street water cock, the combination with the vertically sliding valve, located at the bottom of a shaft or tubular casing, of a closing cap for the open end of said shaft, having an aperture adapted to receive a removable plug, an upward extension from said valve variable as to length and surmounted by a cup or like receptacle, locking lugs carried by said cup and recesses in the under side of said cap to receive said lugs, as set forth. 12th. In a buried street water cock, the combination with the vertically sliding valve located at the bottom of a shaft or tubular casing, of a closing cap for the open end of said shaft or casing, an upward extension from said valve formed in parts, and a removable plug or section adapted to be inserted in said extension to form a part of and lengthen same, as set forth. 13th. In a water cock, a sliding valve, carrying flexible packing to receive the pressure of the water, as set forth. 14th. In a water cock, a sliding valve, having a flexible packing or cup, leather secured to the face of the valve opposed to the water pressure, as set forth. 15th. In a water cock, a sliding valve having a flexible packing disc secured to the face of the valve and presenting a concave surface to the water pressure, as set forth. 16th. In a buried street water cock, the combination, with the valve body having a valve chamber with projection beyond said body, of a valve working in said chamber, a sleeve bearing or mounting removably connected with said projection, and the said valve having a stem or extension working through said sleeve bearing or mounting inlet and outlet to and from said chamber, and means for operating said valve, as set forth. 17th. In a buried street water cock, the combination, with the valve body located at the bottom of a shaft or tubular casing, and having a valve chamber with projection beyond said body, of a valve working in said chamber, a rotatable sleeve bearing or mounting removably connected with said projection, and the said valve having a stem or extension working through said sleeve bearing or mounting, inlet and outlet to and from said chamber, means for operating said valve, and the said rotatable bearing being adapted upon rotation in one direction to be disconnected from said valve body as set forth.

No. 43,507. Tank. (*Réservoir.*)

Fig. 1.



William Forgie, Washington, Pennsylvania, U.S.A., 6th July, 1893; 6 years.

Claim.—1st. In the construction of tanks, the vertical plates or sections flanged at their adjacent edges, the grooved bars having

said flanges caulked therein, and the peripheral grooved bars which receive the flanges on the lower edges of the sections or plates, as and for the purpose described. 2nd. In the construction of tanks, the combination of the flanged vertical plates of the shell, the flanged horizontal plates of the head or bottom, the peripheral grooved bars at the lower and outer edges of said plates or sections, the vertical grooved bars, substantially as described. 3rd. In the construction of tanks, the combination, with the plates or sections, of the angle plates having the grooves which receive the flanges of three sections, said sections having their flanges caulked in grooves or seats of the angle plates, as and for the purpose described. 4th. In the construction of tanks, the angle plates having the diverging grooves intersecting with the ends of a straight groove, combined with the sections having their flanges adapted to the diverging grooves, and another section with its flange in the straight groove, said flanges being caulked in the grooves of said angle plate, as and for the purpose described. 5th. In the construction of tanks, the combination, with the flanged sections, of the grooved angle plate which receives the flanges at the corners of the sections, and the grooved bars united to said angle plate and receiving the flanges along the straight edges of the sections, said flanges being caulked in the grooves of the angle plate and bars, as and for the purpose described. 6th. In the construction of tanks, the angle plate having the grooves and the sockets in its corners, combined with the straight grooved bars fitted in the sockets of said angle plates and secured to the same by the interlocking teat or fin and notch, and the sections or plates secured at their corners in the angle plate and along their side edges in the ground bars, as and for the purpose described. 7th. In the construction of tanks, the vertical sections having the flanged side edges united by a vertical grooved bar, the bottom or head sections united by the angle plates and the grooved horizontal bars, the segmental peripheral bars which receive the lower and outer edges of the shell and bottom, and the peripheral angle plates receiving the grooved horizontal and peripheral bars, as and for the purpose described.

No. 43,508. Beverage. (*Breuvage.*)

François Rey, Saint Laurent, Manitoba, Canada, 6th July, 1893; 6 years.

Résumé.—1° Un vin dont la composition est formée par le produit de la fermentation par la levure elliptique, des matières amylacées contenues dans l'orge germée ou malt et autres céréales, dans les proportions et pour les fins décrites.

No. 43,509. Method of separating Copper from Cupriferous Nickel Ores. (*Procédé de séparation du cuivre des minerais cuprifères de nickel.*)

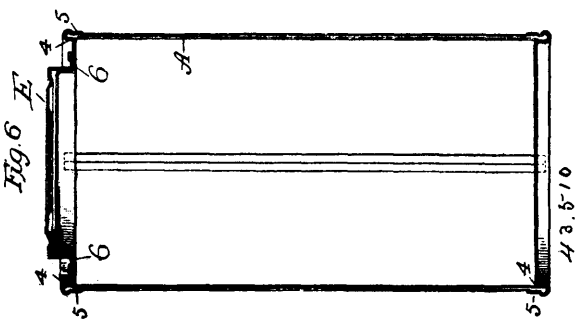
James Douglas, executor of the will of Thomas Sterry Hunt, of New York, U.S.A., 6th July, 1893; 6 years.

Claim.—1st. The hereinbefore described method of separating copper from ore or matte containing copper pyrites and oxides of nickel and iron, and recovering the nickel and iron as nickeliferous iron, which consists in crushing and thoroughly roasting the ore or matte, then digesting the mass in sulphuric acid to dissolve the copper oxide and a small quantity of iron and nickel, then separating the solution from the residue, then smelting the residue to produce nickeliferous iron, then adding a soluble chloride to the solution and subjecting it to a stream of sulphurous acid gas in order to reduce the copper and generate acid, then precipitating the last traces of copper in the form of metallic copper, and, lastly, crystallizing the iron and nickel from the solution and calcining and smelting the crystals to produce nickeliferous iron. 2nd. The hereinbefore described method of separating the copper from a solution containing copper oxide and oxides of iron and nickel to produce nickeliferous iron, which consists in first adding common salt to the said solution, then passing a stream of sulphurous acid gas through the said solution, then precipitating the last traces of the copper in the form of metallic copper and subsequently crystallizing out the nickel and iron and calcining and smelting the product to obtain nickeliferous iron, substantially as specified.

No. 43,510. Packing Vessel and Method of Packing. (*Boîte et méthode d'empaquetage.*)

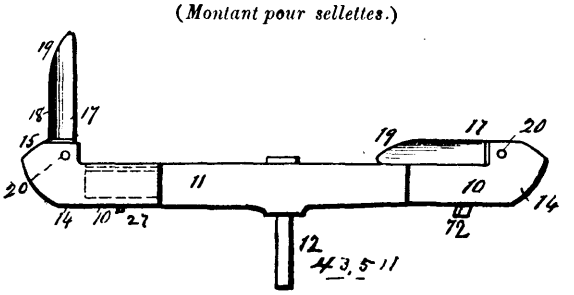
Henry Clarkson Hunter, Alameda, California, U.S.A., 6th July, 1893; 6 years.

Claim.—1st. A packing can, consisting of a body of paper board or like fibrous material, connected by a side seaming strip clamping the abutting edges and provided with permanently fixed metallic top and bottom. 2nd. The head having flanges for connecting it to the body, a flanged cap opening, lugs cut from the metal of the top and adapted to hold the flanges of the cap, and a cap having flanges fitted to the lugs and arranged to cover the holes from which the lugs are cut. 3rd. The side seaming strip having the hollow bead like head, the web and the flange. 4th. The mode of putting up goods, consisting in forming the labelled body blank into tubular form and connecting the edges, then fixing the bottom to the body



so formed, next filling the can, and finally fixing the top to the body.

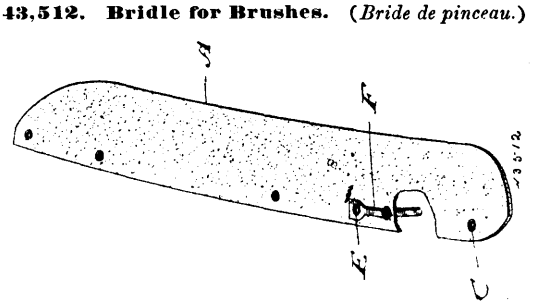
No. 43,511. Standard for Wagon Bolsters. (*Montant pour sellettes.*)



Anthony Miller and Henry Rowan, Cape Girardeau, Missouri, U.S.A., 6th July, 1893; 6 years.

Claim.—1st. A combined ferrule and standard, comprising a ferrule adapted to fit upon a bolster, parallel wings produced upon the outer end of the ferrule, the wings being connected at the top and the outer edge by a rib, and a standard pivoted between the wings, the standard having a depending shank to strike the end of the bolster, and its back arranged to strike the rib connecting the wings, substantially as described. 2nd. A combined ferrule and standard, comprising a ferrule body adapted to fit a bolster, and having a longitudinal groove in its upper side, parallel wings produced at the outer end of the bolster, the wings being connected at the top and outer edge by a rib, and a swinging standard pivoted between the wings and adapted to lie in the groove of the ferrule, the said standard having its back arranged to strike the rib and a depending shank held to abut with the end of a bolster, substantially as described. 3rd. A combined ferrule and standard, comprising a ferrule adapted to fit a bolster, parallel curved wings produced at the outer end of the bolster, the wings being connected at the top by a cross rib, a swinging standard pivoted between the wings and adapted to fold upon the ferrule, the standard having a depending rounded lower end or shank to strike the end of a bolster, and a curved rubber iron fastened to the ferrule and arranged to close the slot between the wings, the rubber iron being also adapted to frictionally engage the lower end of the standard, substantially as described. 4th. The combination, of the ferrule shaped to fit a bolster and having wings at its outer end which project above the bolster body, and a swinging standard pivoted between the wings and adapted to lie upon the bolster, the standard having its free end rounded on one edge and straight on the other, substantially as described.

No. 43,512. Bridle for Brushes. (*Bride de pinceau.*)

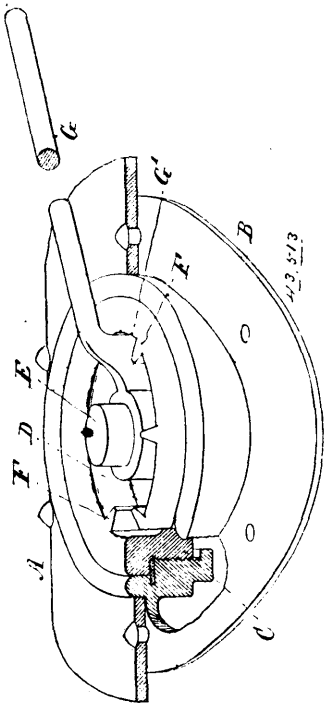


Charles Boekh, Junr., Toronto, Ontario, Canada, 6th July, 1893; 6 years.

Claim.—1st. A brush bridle composed of a strip of cloth or similar material made the desired width and sufficiently long to wrap

around the bristles, one edge of the strip having a fastening arranged to detachably connect the strip to the head of the brush, substantially as and for the purpose specified. 2nd. A strip A, wrapped around the bristles B, and having a series of eyelets C, made through the strip near one edge thereof, in combination with the pins D, and flexible cleat F, arranged substantially as and for the purpose specified.

No. 43,513. Plug. (*Cheville.*)

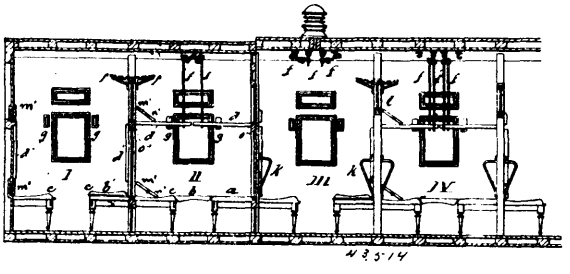


William Morrison, Toronto, Ontario, Canada, 6th July, 1893; 6 years.

Claim.—A cap, having an annular recess with a stem or hub in its centre, one or more spurs projecting from the wall of said recess, in combination with a lever having a round hole to fit on to the centre stem or hub, and formed or set so that the spurs shall be in its path, substantially as and for the purpose specified.

No. 43,514. Railway Car. (*Char de chemin de fer.*)

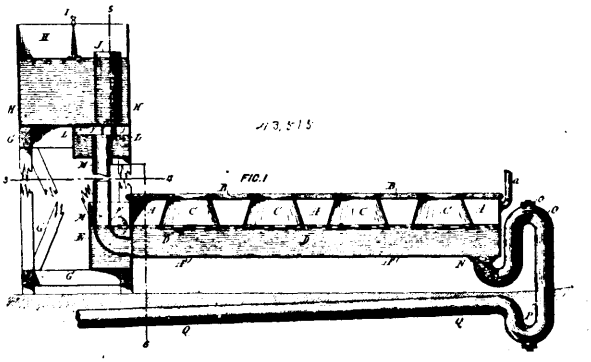
Fig. 2



Isaac Ber Günzburg, St. Petersburg, Russia, 6th July, 1892; 6 years.

Claim.—1st. In combination, in a sleeping car, the sections having the seats and the boards for filling the space between the seats, there being two independent boards for each lower section whereby two sleeping couches are provided capable of being made up independently, substantially as described. 2nd. In combination, the two seats facing each other and the movable boards between the same, said boards having bevelled or sloping edges adapted to corresponding edges on the seat frames and adapted when in place to provide a flush surface for receiving the bed clothes, substantially as described. 3rd. In combination, the seats and the supplemental movable seat boards, having their upper sides concaved to the shape of a seat and adapted to be placed on the seat proper or to extend from one seat to the other, the bottom of said seat being flat, substantially as described. 4th. In combination, in a sleeping car, the seat and the folding head board, composed of hinged sections, said head board being hinged to the car frame, substantially as described. 5th. In combination, in a sleeping car, the upper berths composed of board d, d^1, hinged to the section partitions and the rods f, f, connected with the adjacent ends of said boards and the car frame, substantially as described. 6th. In combination, the section partitions and the boards d, d^1, hinged thereto and adapted to fold down against said partitions, and to swing into horizontal position with their free ends adjacent to each other and the means for holding the boards in horizontal position, substantially as described. 7th. In combination, in a sleeping car, of the berths, and the folding steps arranged to be turned into and out of the plane of its supporting frame, substantially as described. 8th. In combination, in a sleeping car, the berths, the pivoted step P, and the prop having its lower end movable in a vertical guideway and pivoted at its upper end to the outer end of the step P, substantially as described. 9th. In combination, the section partition, the upper berth and the step secured to said partition, substantially as described. 10th. In a sleeping car, a berth composed of two independent portions arranged side by side and capable of being made up independently, substantially as described.

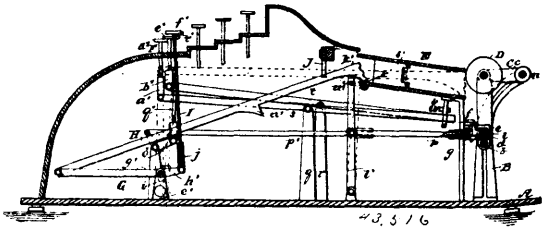
No. 43,515. Latrine and Flushing Apparatus.
(*Latrine et appareil pour nettoyer.*)



William Clark, Sydney, New South Wales, Australia, 6th July, 1893; 6 years.

Claim.—1st. In a water closet, the undercut bottomless pan or pans dripping below the surface of water contained in a trough beneath, as herein specified. 2nd. The combination of a trough provided with one or more seat openings with an elevated cistern, provided with a gauge tap, with syphon apparatus, and with an auxiliary chamber the elevated cistern being connected to the trough by means of a down pipe, as herein described, for the purposes set forth. 3rd. The combination of a trough and elevated cistern containing a syphon apparatus, with a supply cistern on the same level as the trough, the water supply to the supply cistern being governed by a ball cock or other analogous contrivance, as herein specified, and for the purposes set forth. 4th. The improved latrine and apparatus in connection therewith consisting mainly of a trough that is automatically filled with water, and automatically flushed by syphon action periodically by water contained within an elevated cistern, as herein specified.

No. 43,516. Type Writing Machine. (*Clavigraphe.*)



Eugene A. Ford, New York City, New York, U.S.A., 6th July, 1893; 6 years.

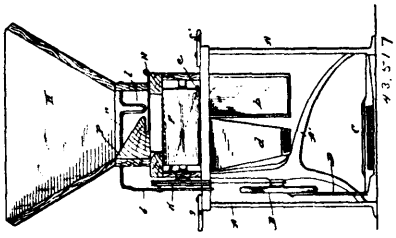
Claim.—1st. In a type writing machine, the combination of a series of type bars having each two or more characters, a series of key levers for imparting to said type bars their printing stroke, and a shifting device for moving said bars, independently of said levers, in the direction of the alignment of the characters, substantially as described. 2nd. In a type writing machine, the combination of a series of key levers, a series of type bars each pivotally connected with its lever and movable independently thereof transversely to the printing stroke, each type bar being provided with two or more characters, and a shifter or guide at the free ends of the type bars, and under the control of the operator, for shifting said bars at will in the direction of the alignment of the type, substantially as

described. 3rd. The combination of the key levers, the type bars having each two or more characters, the movable guide at the free ends of the type bars, and means for moving said guide to shift the type bars in the direction of the alignment of the type, substantially as described. 4th. The combination of a series of key levers pivoted each to a fixed support, a series of type bars having each two or more characters, and jointed each to a key lever so as to receive a printing stroke longitudinally of said bar, and a shifting guide controlling the free ends of said type bars for moving the same transversely to the printing stroke, substantially as described. 5th. In a type writer machine, the combination of a series of type bars N, the fixed slotted guide J, the triangular type bar guide E, for causing the type bearing ends of the type bars to register, and the type bar actuating mechanism consisting of levers G, rods I, and finger pieces f^1, substantially as specified. 6th. The combination, with the horizontal platen, of a vertically swinging hollow guide having its sides converging toward the platen, levers acting against the lower side of the hollow guide to raise it into the new positions, a series of type bars having vertically aligned type or characters on their forward ends, and operating devices for projecting the type bars forwardly through the hollow guide and its contracted forward end into contact with the platen or paper thereon, substantially as set forth. 7th. In a type writer, the combination, with a series of type bars converging at their forward ends, each provided with vertically aligned type or characters, and keys having a lever connection with the rear ends of the bars, of a hollow vertically swinging guide hinged at its rear end and having a contracted opening at its forward end of a size to firmly guide the forward end of a single type bar, vertically swinging levers beneath the said hollow guide and constructed to raise its forward end into two new positions, and a key mechanism adjacent to the keys of the type bars to be operated simultaneously therewith or separately, and connected with the guide elevating levers substantially as set forth. 8th. The combination, with a series of horizontal levers pivoted near their forward ends, a series of converging type bars pivoted at their lower ends to the long radial arms of said levers and inclined upwardly and forwardly therefrom, vertically aligned type or characters on the forward end of said bars, and a series of vertically extending key rods pivoted at their lower ends to the forward ends of said levers to raise the type bars into a horizontal position and project them forwardly to a common printing point, of a vertically swinging hollow guide pivoted at its rear end adjacent to the upper forward ends of the type bars, and levers acting on the said hollow guide to elevate its free end into two new positions, substantially as set forth. 9th. The combination, with the inclined converging type bars, each having on its forward end vertically aligned type or characters, the keys connected with said bars, and a stationary bar having vertical slots, through which the converging upper ends of the type bars pass, of a vertically swinging hollow guide pivoted at its rear end and adjacent to the upper forward ends of the type bars and tapering forwardly to receive and firmly guide the printing end of a single type bar, and key actuated levers acting on the lower side of the hollow guide to raise it into two new positions, substantially as set forth. 10th. The combination with the vertically swinging type bar guide and a rest limiting the downward movement of its forward end, of the vertically swinging key levers extending forwardly under said guide and beneath its rest to engage the latter when their forward ends are swung up, and upwardly projecting studs on the forward ends of said levers and one projecting higher than the other to engage the lower side of the hollow guide and raise its forward end into two new positions, substantially as set forth. 11th. The combination, with the paper carriage, its spacing mechanism having a key operated rod, and intermediate vertical levers pivoted between their ends to the said rod and connected at their upper ends by a cross bar or rod, of the inclined type bars crossing at their forward ends the said cross bar and having depending lugs to engage it and rock the vertical levers forwardly to actuate the spacing mechanism, vertically aligned type or characters on the forward ends of the said bars, keys for actuating the type bars, and a vertically swinging hollow guide contracted at its forward end to form a common printing opening and pivoted at its rear end adjacent to the upper ends of the type bars, and key operated levers acting on the lower side of the hollow guide to raise its forward end to two new positions, substantially as set forth. 12th. In a type writing machine, the combination of the type bars N^1, provided with projections n^1, the levers l^1, and pawl and ratchet mechanism connected with the paper carriage and arranged to be operated by the impact of the type bar through the levers l^1, and their connections, substantially as specified. 13th. In a type writing machine, the combination, with the paper carriage and printing mechanism, of the double ratchet bar *e*, attached to the paper carriage, the pawl *i*, adapted to engage one side of the ratchet bar, the slotted pawl *h*, adapted to engage the opposite side of the ratchet bar, the adjusting screw *n*, inserted in the pawl *h*, and bearing upon the pawl *i*, and the retractile spring *o*, connected with the pawl *h*, and with a fixed support, substantially as specified.

No. 43,517. Bean Picker. (*Moissonneuse de fèves.*)

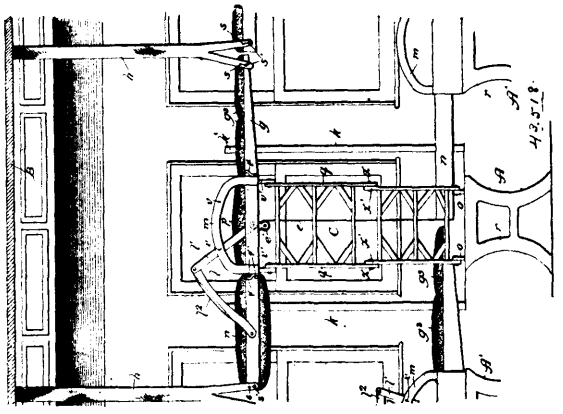
Hiram A. Bacon, Pontiac, Michigan, U.S.A., 7th July, 1893; 6 years.

Claim.—1st. In a bean picker, the combination of a frame, a carrying belt, a hopper, a vibrating agitator, and means for giving motion to said carrying belt and agitator, substantially as described. 2nd. In a bean picker, the combination of a frame, a carrying belt,



a screen adapted to separate broken from whole beans, an agitator vibrating in the mouth of the hopper, and a valve adapted to regulate the feed, substantially as and for the purposes described. 3rd. In a bean picker, the combination of a supporting frame, a carrying belt, a hopper provided with a block P, having a passge way at one side, and underneath the same a regulating valve, and an agitator vibrating in the passage way at the side of said block P, substantially as and for the purpose described. 4th. In a bean picker, the combination of a frame, a hopper, a carrying belt, and a vibrating spring agitator, and means for giving motion to said carrying belt and agitator, substantially as described. 5th. In a bean picker, the combination of a frame work, a carrying belt, a screen, a vibrating spring agitator, and a valve adapted to regulate the feed, substantially as and for the purpose described. 6th. In a bean picker, the combination of a supporting frame, a hopper provided with a block P, having a passageway at one side and underneath the same, a carrying belt, a regulating valve, and a vibrating spring agitator in the passageway at the side of the said block P, substantially as and for the purpose described.

No. 43,518. Railway Car. (*Char de chemin de fer.*)



James Douglas Morrison, Reminbeck, Iowa, U.S.A., 7th July, 1893; 6 years.

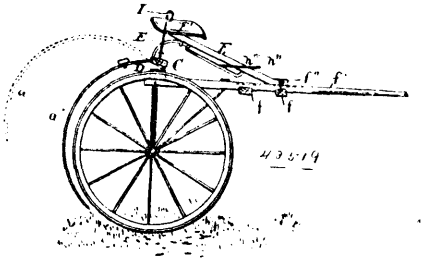
Claim.—1st. In a car seat, the combination, with the base of a seat portion separably supported thereon and a connection between the seat portion and base formed in sections folding lengthwise along the base and extensible upward to elevate the seat portion into and support it in position for an upper sleeping berth, substantially as described. 2nd. In a car seat, a connection between the seat portion and base comprising a frame formed in folding sections extensible upward to elevate the seat portion into and support it in position for an upper berth and forming, when so extended a ladder, substantially as described. 3rd. In a car seat, the combination with the base of a seat portion separably supported thereon, a connection between the seat portion and base formed in sections folding lengthwise along the base and extensible upward to elevate the seat portion into and support it in position for an upper sleeping berth, and a back on the seat portion adjustable into alignment therewith to form part of the said berth, substantially as described. 4th. A car seat provided with an upward extensible support for elevating the seat portion into and supporting it in position for an upper sleeping berth, a back supported in bearings on the seat portion and connected therewith by jointed links rendering the back reversible, and adjustable into alignment with the seat portion to form part of the said berth, substantially as described. 5th. In combination with a car, a seat comprising the base and seat portion having a folding and extensible connection between them and a reversible back ad-

justable into alignment with the seat portion, guides on the car wall, provided with adjustable bearings, and a bar secured to the said seat portion and extending at opposite ends into said guides to be raised thereon and supported on said bearings in converting the the seat into an upper sleeping berth, substantially as described. 6th. In combination with a car, a seat provided with an upward extensible support for elevating its seat portion into and supporting it in position for an upper sleeping berth, a back on the seat portion adjustable into alignment therewith to form part of said berth, side rails removably connected with the seat portion to extend the length of the berth at the end thereof opposite that formed with the back and supporting an extension of the couch, and means for sustaining the said back and rails at their free ends, substantially as described. 7th. In combination with a car, a seat comprising a base r, a seat portion p, a frame C formed of pivotal sections q, connecting the seat portion with the base at the aisle end of the seat and adapted to be folded under the seat portion on the base and to be extended vertically to elevate the seat portion into position for an upper sleeping berth, a back n reversibly supported on the seat portion and fastened thereto by pivotally connected links l^1 and l^2, slotted arms at opposite ends of the seat portion and through which the links l^1 extend, guides k on the car wall, provided with dogs i^1, a bar i secured to the wall end of the said seat portion and extending at opposite ends into the guides to be raised therein and supported by the dogs in converting the seat into an upper sleeping berth, side rails a separably connected with the seat portion p to extend the said berth and support an extension of the couch, and suspended straps h, supporting the free ends of the seat portion n and rails g, substantially as and for the purpose set forth. 8th. In combination a car seat provided with a swinging back adjustable into alignment with the seat portion in converting the seat into a sleeping berth, and a removable extension of the berth at the side of the seat portion opposite that on which the back is so adjusted, substantially as described. 9th. In combination, with a car, seats A and A^1 convertible into upper and lower sleeping berths, each seat A being provided with an upward extensible support for elevating its seat portion into and supporting it in position for an upper sleeping berth, and each seat A^1 having a back n adjustable into alignment with it to extend the couch at one end in forming a lower sleeping berth, and provided with removable side rails g to extend the said berth toward the opposite end and support an extension of the couch portion thereof, substantially as described. 10th. In combination with a car, seats A A^1 convertible into upper and lower sleeping berths, each seat A being provided with an upward extensible support for elevating its seat portion into and supporting it in position for an upper sleeping berth, and with a back on the seat portion adjustable into alignment therewith to form part of the said berth, side rails removably connected with the seat portion to extend the length of the berth at the end thereof opposite that formed with the back and supporting an extension of the couch, means for sustaining the adjusted back and rails at the ends of the berth, and each seat A^1 having a swinging back adjustable into alignment with seat its portion to convert said seat into a lower sleeping berth and a removable extension of the said berth at the side of the seat portion opposite that on which the back is so adjusted, the backs and extensions on the lower berths being supported on the bases of seats A, substantially as described. 11th. In combination with a car, seats A A^1 convertible into upper and lower sleeping berths, each seat A comprising a base r, a seat portion p, a frame C formed of pivotal sections q connecting the seat portion with the base at the aisle end of the seat and adapted to be folded under the seat portion on the said base and to be extended vertically to elevate the seat portion into position for an upper berth, a back n reversibly supported on the seat portion and fastened thereto by pivotally connected links l and l^2, and slotted arms m at opposite ends of the seat portion and through which the links l^1 extend, guides k on the car wall, provided with bearings i^1, a bar i secured to the wall end of the said seat portion and extending at opposite ends into the guides to be raised therein and supported by said bearings in converting the seat into an upper sleeping berth, side rails g separably connected with the seat portion p to extend the said berth and support an extension g^3 of the couch, and suspended supporting straps h, for the opposite ends of the said berth, and each seat A^1, comprising a seat portion p, a swinging back n adjustable into alignment with its seat portion to convert said seat into a lower sleeping berth, and connected with the seat portion by pivotally connected links l^1 and l^2, and slotted arms m on the said seat portions through which the links l^1 extend, and side rails g separably connected with the seat portion to extend the said berth and support an extension g^3 of the couch, the backs and side rails on the lower berths being supported on the bases of seats A, substantially as described.

No. 43,519. Horse Hay Rake. (*Rateau à foin.*)

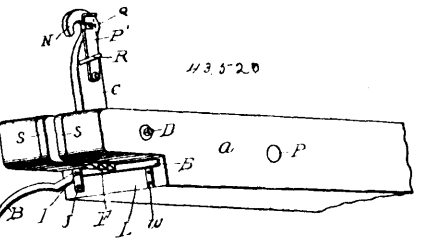
Francis Lewis Osborn, Windsor, New York, U.S.A., 7th July, 1893; 6 years.

Claim.—1st. In a horse hay rake, the rake head C, hinged to the bolster D, immediately above the axle, and having the curved bow E, in combination with the seat F^1, supported on a yielding bar F, substantially as and for the purpose described. 2nd. In a horse hay rake, the combination of the seat F^1, and yielding seat bar F, the



rods g and h, the bow E, and the rake head C, with the teeth a, all as and for the purpose described.

No. 43,520. Standard for Wagon Bolsters.
(*Montant pour chevilles de wagon.*)



Ludlow George Cook, Minneapolis, Minnesota, U.S.A., 7th July, 1893; 6 years.

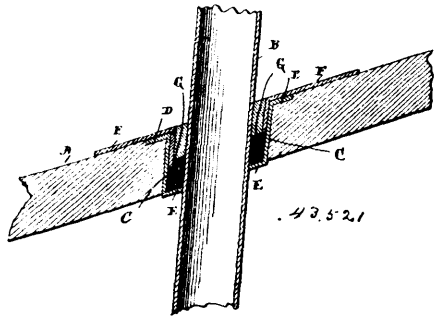
Claim.—1st. The combination, with the bolster, of a stake or standard pivoted therein, a bolt passing transversely through the bolster and pivoting said stake therein, and a lever arranged to engage the lower end of said stake to lock the same against swinging on said pivot, substantially as described. 2nd. The combination, with the bolster, having the slotted end, of a stake or standard pivoted therein and adapted to swing in a plane parallel therewith, a lever having an end arranged transversely with respect to the bolster and arranged to engage the lower end of said standard, and said lever adapted to be moved out of engagement therewith to allow the stake to be swung down, substantially as and for the purpose set forth. 3rd. The combination, with the slotted end of the bolster, of a stake C, arranged therein, a bolt D, for pivoting the same and passing transversely through the end of the bolster, said stake C, provided with a lower end having ratchet teeth F, and a locking device adapted to engage the same, whereby said stake may be locked in any desired position, substantially as and for the purpose set forth. 4th. The combination, with a bolster or beam, of a vertical stake pivotally arranged in the end thereof and adapted to be raised or lowered about its pivot in a vertical plane parallel with the sides of the bolster, and means for locking said stake in the positions described. 5th. The combination, with the bolster, of a shoulder L, thereof, the stake C, having its lower end provided with the ratchet teeth F, said stake arranged in a vertical slot in the end of the bolster, a bolt D, for pivoting said stake therein, the locking lever B, pivoted on said shoulder, and said teeth adapted to stand below the upper surface of the bolster when the stake C, is swung down, substantially as described and for the purpose set forth. 6th. The combination, with a bolster or beam, of a vertical stake pivotally arranged in the end thereof and adapted to be raised or lowered about its pivot in a vertical plane parallel with the sides of the bolster, said stake having a hooked end, a locking block or latch pivoted to said stake and having a notch, and means for locking said stake in the positions described. 7th. The combination, with a bolster or beam, of a suitable stake or standard provided with a hooked end, a locking block or latch secured to said stake and provided with a recess or notch, and means for locking said stake, as described.

No. 43,521. Pipe Collar. (*Collet de tuyau.*)

Alonzo W. Cram, Haverhill, Massachusetts, U.S.A., 7th July, 1893; 6 years.

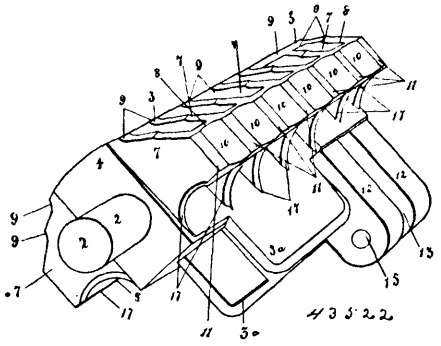
Claim.—1st. The combination, of a roof having an opening therein, a collar within the opening, a flange on the upper end of the opening which rests on the roof, a pipe depending through the collar, and a packing between the collar and the pipe, substantially as shown and described. 2nd. The combination, of a roof having an opening therein, a collar within the opening, having an outwardly projecting flange at its upper end, which rests on the roof, an inwardly projecting flange at its upper end which rests on the roof, an inwardly projecting flange at the lower end of the collar, a pipe depending through the collar, and a packing material resting on the lower flange of the collar and caulking in the space between

the pipe and collar, substantially as shown and described. 3rd. The combination, of a roof having an opening therein, a collar



within the opening, having a flange on its upper end, which rests on the floor, a flange at the lower end of the collar projecting inward, a pipe depending through the collar, a ring interposed between the pipe and the said last named flange, and packing material between the pipe and the collar, substantially as shown and described. 4th. The combination, of a roof having an opening therethrough, a collar within the opening, having a flange at its upper end which rests on the roof, a pipe extending through the collar, a plate of sheet metal surrounding the pipe, having an opening through which the pipe extends, the edges of said opening being flarred downward between the collar and the pipe, and packing material between the said flarred down edge and the pipe, substantially as shown and described. 5th. The combination, of a roof having an opening therein, a collar within the opening, a flange on the upper end of the collar, which rests on the roof, an inwardly projecting flange at the lower end of the collar, a pipe extended through the collar, a plate of sheet metal surrounding the pipe, having an opening through which the latter extends, depending annular flange surrounding the opening, a packing of oakum or other similar material inserted within the space between the pipe and the flange, and a filling of lead on top of said packing, substantially as shown and described.

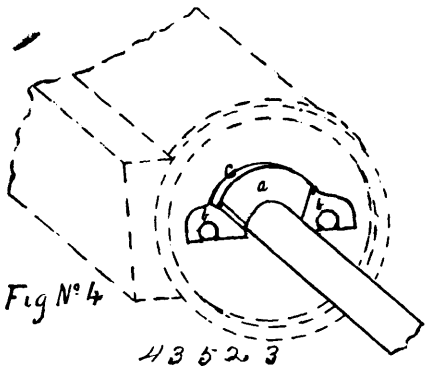
No. 43,522. Rocking Grate Bars for Furnaces.
(*Barre de grille tournante pour fournaises.*)



William Henry Heeson, Toronto, Ontario, Canada, 7th July, 1893; 6 years.

Claim.—1st. A furnace grate bar comprised of a central longitudinal web, a series of laterally extending ribs joined at either inner ends to the central web and located on each side thereof, a longitudinal rib connected to the outer end of the laterally extending ribs each of the laterally extending ribs having one or more steps formed on its upper face and each of the longitudinal ribs having a series of vertical corrugations formed on its side face, substantially as set forth. 2nd. A furnace grate bar comprising two centrally longitudinal webs connected together at each end and intermediately between the ends to form a passage therethrough them for the admission of a draught of air from the under side of the grate bars to the fire, a series of laterally extending ribs joined or connected at their inner ends to the centrally longitudinal webs, and a longitudinal rib connected to their outer ends one or more steps formed on the upper face of each of the laterally extending ribs, substantially as described. 3rd. A furnace grate bar comprising two centrally longitudinal webs connected together at each end and intermediately between the ends to form a passage therethrough them for the admission of a draught of air from the under side of the grate bars to the fire, a series of laterally extending ribs joined or connected at their inner ends to the centrally longitudinal webs, and a longitudinal rib connected to their outer ends, one or more steps formed on the upper face of each of the laterally extending ribs, a series of vertical corrugations formed on the side face of the longitudinal rib, the concaved portions of the said corrugations tapering from the bottom to the top of the longitudinal rib and the convex portions tapering from the top to the bottom, substantially as described. 4th. A furnace grate bar comprising two centrally longitudinal webs connected together at each end and intermediately between the ends to form a passage therethrough them for the admission of a draught of air from the under side of the grate bars to the fire, a series of laterally extending ribs joined or connected at their inner ends to the central longitudinal webs and a longitudinal rib connected to their outer ends, one or more steps formed on the upper face of each of the laterally extending ribs, each of the laterally extending ribs provided on its under side with a supporting rib the edge of which is concaved, a series of vertical corrugations formed on the side face of the longitudinal rib, the concaved portions of the said corrugations tapering from the bottom to the top of the longitudinal rib and the convex portions tapering from the top to the bottom, substantially as described.

No. 43,523. Lubricator. (*Graisseur.*)

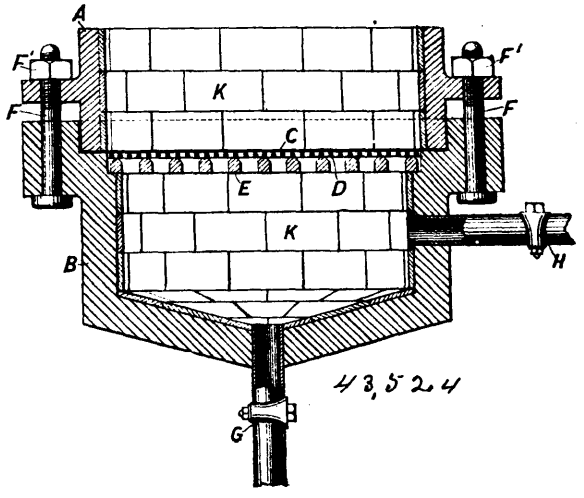


Vital Alfred Edmond, Québec, Province de Québec, Canada, 7th July, 1893; 6 years.

Resumé—1° Un lubrifieur automatique pour les tiges de pistons des cylindres à vapeur, composé de la plaque métallique *b*, de la boîte *a* rivée à la plaque *b*, et du couvercle *c*, la boîte *a* contenant du feutre ou autre matière absorbante, le tout tel que décrit et pour les fins indiquées.

No. 43,524. Apparatus and Solvents for Extracting Gold and Silver. (*Appareil et dissolvant pour extraire l'or et l'argent.*)

FIG. I.

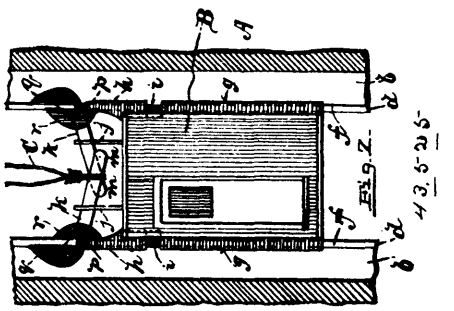


John Cunningham Montgomerie, Dalmore Ayr, Scotland, 7th July, 1893; 6 years.

Claim.—1st. The improved process of extracting gold and silver from ores or compounds containing the same, substantially as herein described, the same consisting in mixing the ore with a solution of cyanide of potassium or other cynide solvent rendered alkaline by the addition of sodium oxide or an equivalent alkaline oxide, filtering or otherwise separating the liquid (containing the gold and silver in solution) from the ore and treating the former, by precipitation or other known mode, for the recovery of the precious metals. 2nd. In the extraction of the precious metals by a solvent process of the

general character herein referred to, applying the solvent solution, after separation from the first charge of ore, to a subsequent charge or successively to subsequent charges of fresh ore, the solution being fortified at each operation by the addition of a suitable quantity of the chemical agents employed, and ultimately treating the liquid (consisting of a more or less saturated solution of gold and silver) by any known means for the separation and recovery of the precious metals. 3rd. In the process of extracting gold and silver by means of cyanide of potassium or other cyanide solvent, the addition of sodium oxide or other suitable alkaline oxide to the solvent, either prior to or during its admixture with the ore, for the purpose of economizing the solvent and expediting its action. 4th. In the extraction of the precious metals by a solvent process of the general character herein referred to, discharging the solvent remaining with the ore after filtration by adding water to the surface of the ore and thereby displacing the solvent containing the precious metals in solution, substantially as described. 5th. In the extraction of the precious metals by a solvent process of the kind herein referred to, the employment of dioxide of sodium (potash or equivalent) as an oxidizing and alkaline agent, substantially as herein described. 6th. In the extraction of the precious metals by a solvent process of the kind herein referred to, the employment of dioxide of sodium (potash or equivalent) in the presence of oxygen, or atmospheric air, under pressure, substantially as and for the purpose set forth. 7th. In an apparatus adapted for use in the treatment of ores or compounds containing gold or silver, a barrel, filter or leaching vessel, such as A or B, lined with the tiles K set in an acid or solvent resisting cement, substantially as herein described. 8th. The herein described apparatus for use in the treatment of ores or compounds containing gold and silver by means of solvents, the same comprising an upper vessel A for the reception of the ore and solvent, a lower vessel B in which the solution is received, a filter cloth C held between the lower part of the vessel A and a socket in the upper part of the vessel B, wire gauze D on which the filter cloth lies, and bars E for supporting the wire gauze. 9th. The herein described apparatus for use in the treatment of ores or compounds containing gold and silver by means of solvents, the same comprising an upper vessel A lined with tiles K, a lower vessel B also lined with tiles K, a filter cloth C held between the vessels A and B, wire gauze D under the filter cloth, bars E for supporting the wire gauze, a draw off cock G, and an exhaust cock H.

No. 43,525. Elevator. (*Elévateur.*)



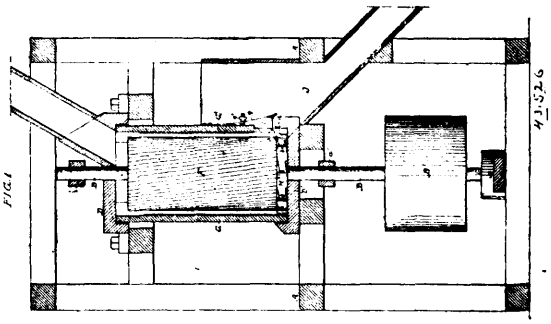
Andrew McEachan, Fitchburg, Massachusetts, U.S.A., 7th July, 1893; 6 years.

Claim.—1st. A safety clutch for elevator cars, comprising a lever mounted on a spring pushed fulcrum on the car and projecting through a slot in the carways, two clamping shoes pivoted to said lever respectively at opposite sides of its fulcrum and in position to engage opposite faces of said ways, the shoe pivots being in different horizontal planes, a lifting rope secured to the inner end of said lever, and a connection between the lever and car body disposed between said rope and fulcrum, substantially as described. 2nd. In an elevator, the combination, with the car and well, having the slotted ways, of the spring supported arms fitted to slide on the car and in said slots, the levers *k*, fulcrumed respectively on said arms and projecting through said slots, the shoes *q*, *r*, pivoted on said levers in different planes and at opposite sides of the ways, the lifting rope C, secured to the inner ends of the levers, and the loop *j*, connecting the car with said levers between their fulcrums and said rope, all being arranged substantially as described.

No. 43,526. Hominy Mill. (*Moulin à blé d'inde.*)

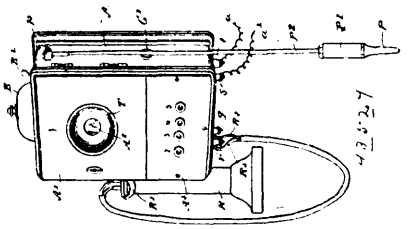
Odeon Horace Titus, Wilmington, Deleware, U.S.A., 7th July, 1893; 6 years.

Claim.—1st. A hominy mill, in which a rotating cylinder is combined with a shell, having concaves with faces, each representing a section of a pyramid, and having one bevelled face and one abrupt face, substantially as specified. 2nd. A hominy mill, in which a ribbed and rotating cylinder is combined, with a shell having concave facets, each representing a section of a pyramid, and having one bevelled face and one abrupt face, the apex of the bevelled face of the facet being towards the advancing ribs of the cylinder, substantially as specified. 3rd. A hominy mill, in which a rotating cylinder is combined with a shell or casing having concaves provided with vertical and horizontal rows of pyramidial facets



staggered or offset in respect to each other, substantially as described. 4th. A hominy mill, in which a rotating cylinder is combined, with a shell or casing, having concaves, with facets, each representing a section of a pyramid, the central ridge or fin of the bevelled front face of the facet, being in a plane at right angles to the longitudinal line of the cylinder, substantially as specified. 5th. A hominy mill, in which an outer casing, having concaves provided with pyramidal facets, is combined with a rotating cylinder, having ribs or teeth abrupt on the forward faces, and inclined on the rear faces, the abrupt faces of the teeth moving towards the apices or points of the facets of the concaves, substantially as specified. 6th. The within described cylinder, for a hominy mill, the same consisting of a body portion, having secured thereupon bars presenting successive faces at reverse angles, said bars abutting against each other so as to form a continuous ribbed working surface for the cylinder, substantially as specified. 7th The within described cylinder for hominy mills, the same consisting of a body portion, having secured thereupon angle bars, each having an abrupt portion and an inclined portion, the abrupt portion of each bar overlapping the inclined portion of the succeeding bar, substantially as specified. 8th. The within described cylinder for hominy mills, the same consisting of a skeleton or hollow body, composed of a series of notched rings or discs and bars, secured to said notched rings or discs, and presenting successive faces at reserve angles, said bars abutting against each other so as to form a continuous ribbed working surface for the cylinder, substantially as specified. 9th. The combination, of the shell, of the mill having a yielding delivery flap at the lower portion with the cylinder, having at the bottom a disc with projecting peripheral ribs or vanes, substantially as specified. 10th. The combination, of the shell of the mill with the cylinder, having at the bottom a disc furrowed on the under surface, so as to throw outward any grains which may gain access thereto, substantially as specified. 11th. The combination, of the shell of the mill with the cylinder, having at the bottom a disc furrowed upon both its upper and lower surfaces, the furrow of one surface being in a reverse direction of those of the other surface, substantially as specified.

No. 43,527. Telephone System. (*Téléphone.*)

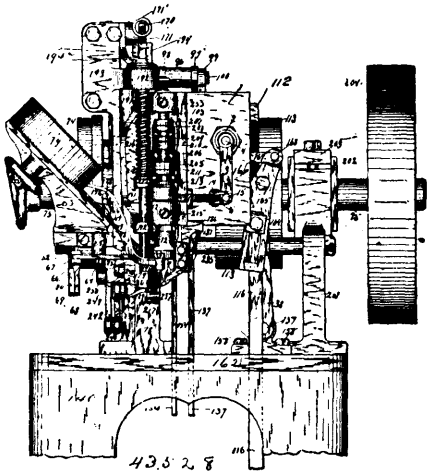


Charles Warren Brown, of Montreal, Quebec, Canada, 7th July, 1893; 6 years.

Claim.—1st. A system of telephonic intercommunication comprising a number of subscribers' stations connected directly together without the intervention of a central office, by a series of main lines entering each station and all but one terminating in sockets, a call bell at each station normally connected with the unsocketed main line, and a single telephonic and signalling apparatus at each station normally disconnected from said socketed main lines, but adapted to be connected with any of them through a plug connection between said telephonic and signalling apparatus and said sockets, whereby a subscriber may call any other subscriber and by united action of both subscribers telephonic communication be secured between two stations. 2nd. In a system of telephonic intercommunication comprising a number of subscribers' stations connected directly together without the intervention of a central office, by a series of main lines entering each station, the combination and arrangement at each station, of a set of instruments comprising a

box or case, the front side of which is formed of a hinged door section and a stationary keyboard portion, a transmitter and connections mounted on the inside of said door section, and such section also having a mouth aperture therein, a number of metal sockets carried by said stationary keyboard portion projecting through same and forming terminals for all but one of the main lines entering the station, a call bell located at the top of said box, and having its magnets enclosed therein and connected to the unsocketed main line entering such station, an induction coil, telephone receiver with hook and spring switches, a push button, spring switch and main calling battery connection, and a metal plug connected by flexible conductor, and fixed connections with said battery switch and adapted to be inserted in either of said socket terminals, and connections for the transmitter battery circuit the whole carried by and within said box or case, and adapted for operation, as set forth.

No. 43,528. Lasting Machine. (*Machine à enformer.*)

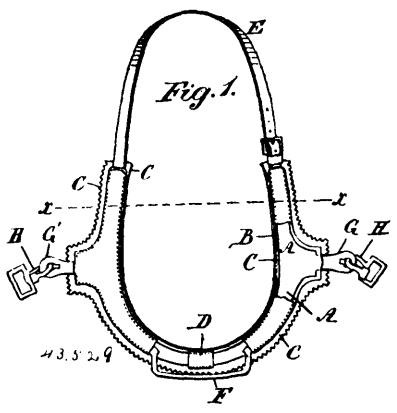


John Thomas Avery, St. Louis, Missouri, U.S.A., 7th July, 1893; 6 years.

Claim.—1st. In a lasting machine, the combination with mechanism for gripping and drawing the upper over the last, of the upper securing mechanism comprising the tack race and its supporting block for the reciprocating separator at the end of the tack race, a reciprocating separator slidingly mounted in the block, means for reciprocating the separator, and a tack deliverer mounted in an inclined way and adapted to receive the tack from the separator and deposit it in a point below the plane where it receives it, substantially as and for the purposes described. 2nd. In a lasting machine, the combination with the mechanism for gripping and drawing the upper over the last, of the upper securing mechanism comprising the tack race, the tack separator at the end of the race, tack delivering jaws mounted in an inclined way, a folder arm below the delivering jaws, and a plunger, substantially as and for the purposes described. 3rd. In a lasting machine, the combination with the mechanism for gripping and drawing the upper over the last, of a tack deliverer for delivering tacks upon the upper, an anti-friction roller in the lower forward end of said deliverer adapted to rest against a folder arm when in position for delivery, a folder arm and a plunger, substantially as and for the purposes described. 4th. In a lasting machine, the combination with the mechanism for drawing the upper over the last, of a tack deliverer for delivering the tacks upon the upper, a roller in the lower forward end of said deliverer adapted to rest against the folder arm when in position, a spring for holding said roller in position, a folder arm and a plunger, substantially as and for the purposes described. 5th. In a lasting machine, the combination with the folder arm, of a rocking guide way therefor, and means for rocking the guide way and reciprocating the folder arm, substantially as and for the purposes described. 6th. In a lasting machine, the combination with the folder arm, of a rocking guide way in which said folder arm is slidingly secured, means for rocking said guideway and reciprocating the folder arm, and a spring for returning the guideway to its normal position after actuation, substantially as and for the purposes described. 7th. In a lasting machine, the combination with a gripping shaft and gripper jaws, of a projection on the gripper shaft, a rocking arm and a projection between the rocking arm and projection, whereby when the arm is rocked the gripper jaws are rotated, substantially as and for the purposes described. 8th. In a lasting machine, the combination with the mechanism for drawing the upper over the last, of a tack deliverer for delivering the tacks upon the upper, a roller in the lower forward end of said deliverer adapted to rest against the folder arm when in position, a spring for holding said roller in position, a folder arm and a plunger, substantially as and for the purposes described. 9th. In a lasting machine, the combination with the head stock, of a gripper shaft mounted therein, and gripper jaws on the shaft, a bifurcated lever extending from the shaft and adapted to rotate the same, a rock-arm, a rod having a sliding connection with the bifurcated lever, and its other end connected to the rock arm, and a slidingly adjustable block mounted on the head stock and encircling the connecting rod, substantially as and for the purposes described. 10th. In a lasting machine, the combination with the laterally movable head stock, of a pivoted gripper carrier mounted therein and adapted to swing outwards and return, a gripper shaft mounted in said carrier, an extension on the gripper shaft, a rock arm, and a swivelled connection between the rock arm and extension on the gripper shaft, whereby when the rock arm is actuated it communicates a rotary movement to the gripper shaft, through the medium of its connection therewith, substantially as and for the purposes described. 11th. In a lasting machine, the combination with the head stock, of a gripper carrier, a gripper shaft mounted therein, a bifurcated arm extending therefrom, a connecting rod, provided with a stud or pin in its end, a grooved roller mounted on a pin, the groove in which, affording reception for the prongs of the bifurcated arm, and a rocking arm, substantially as and for the purposes described. 12th. In a lasting machine, the combination, with means for adjustably rotating the gripper shaft, of a cam for actuating said means, a controlling lever for controlling said means, and a yielding connection between the controlling lever and cam actuated lever, substantially as and for the purposes described. 13th. In a lasting machine, the combination with the gripper shaft, of an extension thereon, a rocking arm, a connection between the rocking arm and extension, a cam actuated lever, intermediate connections between said lever and rocking arm, for communicating a rotary movement to the gripper shaft, and a yielding controlling lever, connected to the cam actuated lever for controlling the movement of the same, substantially as and for the purposes described. 14th. In a lasting machine, the combination, with the gripper jaws, for drawing the upper over the last, and their actuating mechanism, of a controlling device for said actuating mechanism, comprising a stirrup, a rod passing through said stirrup and provided with a cap on its end, a compression spring interposed between the cap and stirrup, and a foot lever, to which the stirrup is secured, substantially as and for the purposes described. 15th. In a lasting machine, the combination with the gripper jaws for drawing the upper over the last and their actuating mechanism, of means for controlling said mechanism, comprising a controlling rod 154, a lever 152, to which the same is pivoted, a strap or stirrup, a compression spring mounted in the stirrup and bearing against the lever, a foot lever, a strap or stirrup pivoted thereto, a rod passing through the stirrup provided with a cap on its end, and a compression spring interposed between the caps and stirrups, substantially as and for the purposes described. 16th. In a lasting machine, the combination, with a vertically movable gripper shaft, of an independently operated restraining bar, for controlling the upward movement of said shaft, substantially as and for the purposes described. 17th. In a lasting machine, the combination, with the gripper shaft and jaws, of mechanism for closing said jaws, an independently operated restraining bar, the free end of which bears against the upper end of the gripper shaft, for holding the shaft against longitudinal movement while the jaws are being closed, substantially as and for the purposes described. 18th. In a lasting machine, the combination, with a laterally movable head stock and means for moving said head stock laterally, of a swinging gripper carrier pivotally mounted in said head stock, and an adjustable connection between the gripper carrier and actuating mechanism for the laterally movable head stock, for moving the gripper carrier backward and forward simultaneously with the lateral movement of the head stock, substantially as and for the purposes described. 19th. In a lasting machine, the combination, with a laterally movable head stock and means for moving the head stock laterally, of a swinging gripper carrier mounted in the head stock, means for swinging said gripper carrier forward and backward, and a controlling lever for adjusting the stroke of the laterally movable head stock, substantially as and for the purposes described. 20th. In combination, with the gripper carrier, its gripper jaws and actuating mechanism, of a plunger adapted to actuate the gripper carrier, being provided with a slot, a pin passing through said slot, a compression spring for receiving motion from the plunger, a connecting rod secured in the plunger, a bell crank lever for actuating said rod and plunger, and means for actuating the bell crank, substantially as and for the purpose described. 21st. In a lasting machine, the combination, with a gripper carrier, its gripper jaws and actuating mechanism therefor, in which is included a cam operated rock arm, a rod swivelled to said arm, a head slidingly mounted on said rod, a compression spring bearing against the head, adjusting nuts, and a connection between the sliding head and gripper carrier, substantially as and for the purposes described. 22nd. In a lasting machine, the combination, with a laterally movable head stock, of a swinging gripper carrier pivoted therein, cam operated lever arms for receiving and transmitting the lateral movement to the head stock, and a sliding connection between one of said arms and the gripper carrier, whereby the thrust of the gripper carrier is made yielding and its return positive, substantially as and for the purposes described. 23rd. In a lasting machine, the combination, with a laterally movable head stock, of a swinging gripper carrier pivoted therein, cam operated lever arms for moving the head stock laterally, a plunger in the gripper carrier, and a connection between

one of said cam operated lever arms and the plunger, comprising a sliding connection, a spring, and adjustable abutting nuts for the sliding connection, whereby the gripper carrier is yieldingly thrust forward and positively returned, substantially as and for the purposes described. 24th. In a lasting machine, the combination with a laterally movable head stock, a gripper carrier mounted in said head stock, so as to be movable independently thereof, and gripper jaws, of means substantially as described herein, for moving said gripper carrier, consisting in a cam operated lever arm, connections between the free end of the lever arm and said gripper carrier, and intermediate connections having included therein a sliding connection, adjustable abutting nuts, and a compression spring whereby the forward movement of said lever arm is positively transmitted and adjustable amount to the intermediate connecting parts, and the reverse movement of said lever arm is transmitted to the said intermediate connecting parts through the said compression spring, substantially as and for the purposes described. 25th. In a lasting machine, the combination with the head stock, of a gripper carrier pivoted therein, actuating mechanism for moving the head stock laterally, and a connection between said actuating mechanism and the gripper carrier, for moving the said gripper carrier backward and forward simultaneously with the lateral movement of the head stock, substantially as and for the purposes described. 26th. In a lasting machine, the combination with a laterally movable head stock carrying the gripper shaft and gripper jaws, of a rocking lever for moving the head stock laterally, said lever being provided with a slotted member, a slotted rock arm, a controlling rod provided with a sliding pivot for adjusting the intersection of the longitudinal axis of the two slotted arms, and a yielding lever for actuating said controlling lever, substantially as and for the purposes described. 27th. In a lasting machine, the combination with the head stock, gripper shaft and gripper jaws, of means for controlling the movement of said gripper jaws, comprising a controlling rod 137, a pivoted lever to which the same is connected, a rod connected to the opposite end of said lever, a cap on the end of the rod, a stirrup pivoted on a bell crank lever, a compression spring interposed between the cap on the rod and the stirrup, and means for actuating the bell crank lever, substantially as and for the purposes described. 28th. In a lasting machine, the combination with the head stock, gripper shaft and gripper jaws, of means for controlling the movements of said jaws, comprising a controlling rod, a bell crank lever for actuating said rod, a rod for actuating the bell crank lever, provided with a notch or recess to limit its movement, and a knee pad on the outer end of the rod, substantially as and for the purposes described. 29th. In a lasting machine, the combination with the head stock, gripper shaft and gripper jaws, of means for controlling the movements of the gripper jaws, comprising a bell crank lever, a yielding connection between the bell crank lever and controlling rod 137, a rod 116, for controlling the throw of the head stock, connected to the bell crank lever, substantially as and for the purposes described. 30th. In a lasting machine, the combination with the laterally movable head stock, a gripper shaft provided with gripper jaws, and mechanism for actuating the several parts, of rods for controlling the movements of the head stock and gripper jaws, and means for actuating the rods simultaneously whereby at the same time of the shortening of the throw of the head stock, the gripper jaws are rotated, substantially as and for the purposes described. 31st. In a lasting machine, the combination with the laterally movable head stock, of a gripper shaft, provided with gripper jaws, rods for controlling the movements of the head stock and gripper jaws, a bell crank lever to which said rods are connected, an actuating rod, for the bell crank lever, and a knee pad on said rod, substantially as and for the purposes described.

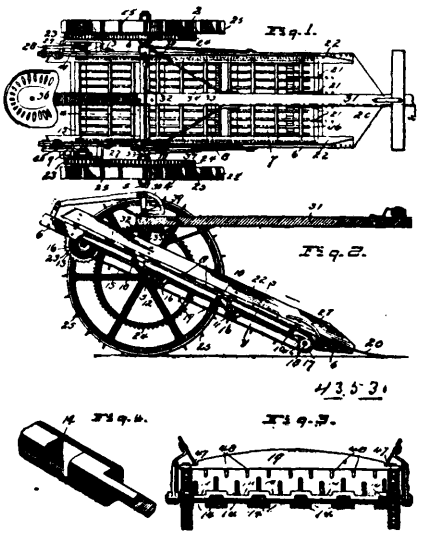
No. 43,529. Breast Collar for Horses.
(*Harnais à poitrail.*)



Andrew Henry Fletcher, Kingsville, Ontario, Canada, 7th July, 1893; 6 years.

Claim.—1st. The U-shaped frame A, having a loop E, located at the turn or bend, as set forth. 2nd. The U-shaped frame A, having the lugs G G¹, extending outwardly from near the ends of the frame as set forth. 3rd. The U-shaped frame, having the lugs G G¹ and the loop E, as set forth, for the purposes described.

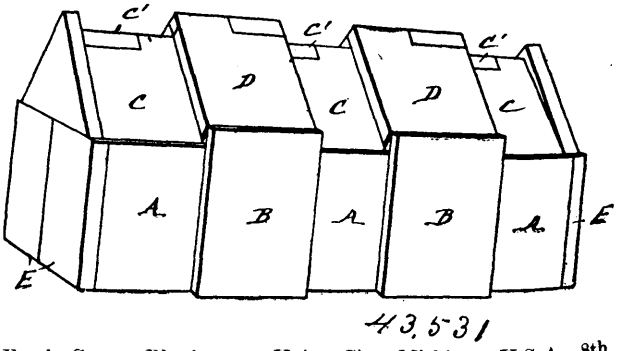
No. 43,530. Potato Digger. (*Arrache-patates.*)



George E. Anderson and Martin J. Anderson, both of Grantsburg, Wisconsin, U.S.A., 8th July, 1893; 6 years.

Claim.—1st. The combination, in a potato digger, of supporting and driving wheels, with the inclined bed provided at its lower end with a prow or share, tiers of longitudinal vibrator slats, shafts 11, 12 and 13, having notches 14, and adapted to operate said slats, and a conveyer adapted to carry the potatoes, &c., upward on said bed, substantially as described. 2nd. The combination, in a potato digger, of the sills and the supporting wheels, with the prow 20 arranged between the lower ends of said sills, the notched vibrator shafts 11, 12 and 13 and the shaft 17, the sprockets arranged thereon, the sprocket chains passing over the same, shafts or rods 10, extending between said sills, means for driving said sprocket chains, flights or cross bars 19, arranged thereon, and the longitudinal slats 7, 8 and 9, arranged respectively in banks or tiers and adapted to be operated by the revolution of said shafts 11, 12 and 13 respectively, substantially as described. 3rd. The combination, with the sills 6, of the wheels 2 and 4, arranged on the axle to support said sills, a prow or share 20, notched shafts 11, 12 and 13, bearings provided therefor in said sills, the longitudnal slats 7, 8 and 9, loosely pivoted on rods 10, the extended ends 46, of the slats 7, the shaft 18, sprockets arranged on all of said shafts, prongs 21, gear wheel upon said wheels 2, and 4, and pinions 23, adapted to mesh therewith and secured upon the shaft 13 by suitable clutch devices, substantially as described. 4th. The combination, with inclined sills, of wheels 2 and 4, the axle supporting the same, the prow 20, the vibrator shaft and the shaft 18, sprocket wheels arranged on the same, sprocket chains and flights 19, adapted to operate over said sprocket wheels, slats 7, 8 and 9, loosely pivoted on rods 10, and having their upper ends resting upon said vibrator shafts and adapted to be operated thereby, means for driving said sprocket chains by the forward movement of said wheels 2 and 4, a tongue 31, arranged in connection with said axle, and means for raising and lowering the lower end of the machine, substantially as described.

No. 43,531. Grave Vault. (*Caveau pour tombes.*)

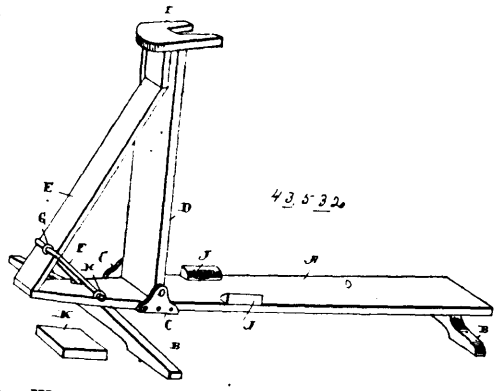


Frank Coman Rheobottom, Union City, Michigan, U.S.A., 8th July, 1893; 6 years.

Claim.—A grave vault, comprising side slabs A, spaced a short distance from each other, slabs B, overlapping the slabs A, and

covering the intervening spaces, the top slabs C, C, spaced a short distance from each other, their lower edges resting on the upper edges of the slab A, the upper edges of the corresponding slabs on opposite sides resting against and supporting each other and forming the angle of the roof, said upper edges being formed with interlocking shoulders, the slabs D, overlapping the slabs C, and closing the intervening spaces, the lower edges of said slabs D, resting on the upper edges of the slabs B, and their upper edges united in the same manner as those of the slabs C, and the end slabs, all of said slabs being of imperishable material and their joints so arranged as to render them adjustable to different sizes of graves, substantially as specified.

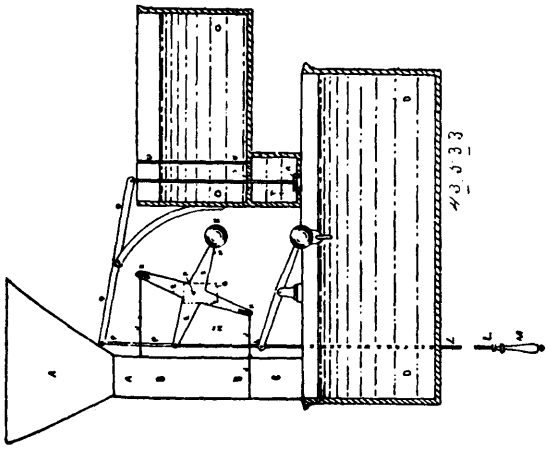
No. 43,532. Door Holder. (*Arrête-porte.*)



Madison W. Reeves, Sayre, Pennsylvania, U.S.A., 8th July, 1893; 6 years.

Claim.—1st. The combination of a base, an upright supported thereby, and a grasping device at the upper end of the upright, substantially as shown and described. 2nd. The combination of a base, an upright pivotally secured thereto at its lower end, a brace for the rear of the upright and a grasping device at the upper end of the upright, substantially as shown and described. 3rd. The combination of a base, an upright pivotally secured thereto and adapted to turn forward thereon, a brace secured to the upper end of the upright, a bale pivotally secured to the base and a connection between the bale and the brace, substantially as shown and described. 4th. The combination of a base, plates secured to and projecting from the sides thereof, an upright pivoted between the plates, a brace at the rear side of the upright, and a swinging connection between the lower end of the brace and the base, whereby the former is adapted to be moved forward, substantially as shown and described. 5th. The combination of a base, an upright hinged at its lower end thereto, an inclined brace secured to the back of the upright, a bale pivotally secured at its ends to the base, a loose connection between the lower end of the base and the bale, a notched block secured to the upper end of the upright and blocks J, secured to the base, substantially as shown and described.

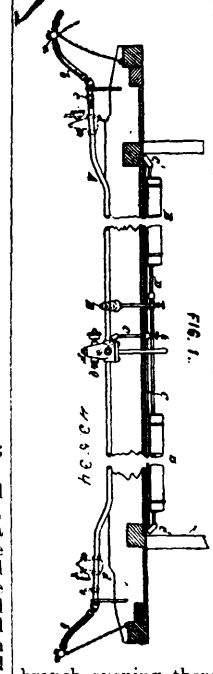
No. 43,533. Appliance for Permitting the Introduction of Disinfectants into Water Closet Sewers. (*Appareil pour permettre l'introduction de désinfectants dans les égouts des latrines.*)



George Turner Orton, Winnipeg, Manitoba, Canada, 8th July, 1893; 6 years.

Claim.—An appliance by which disinfectants either in a dry or liquid form can be introduced into the flush tank of an ordinary water closet consisting of the combination of box A, charge chamber B, connecting pipe C, levers E E, working on the axle F, axle block G, slots H H, near ends of the lever E E, valves J J, with weight K, chain L L, handle M, stop bolts N N to prevent levers E E, revolving too far tank O for liquid disinfectant, chain P, connecting with chain L L and with lever Q which works on fulcrum V, valve R, aperture S in the bottom of tank O and communicating with charge chamber T, with discharge aperture W in bottom of charge chamber T, connecting rod X and an air tube U, substantially as and for the purpose above set forth.

No. 43,534. Valve. (*Soupape.*)



Edward Ethel Gold, New York, State of New York, U.S.A., 8th July, 1893; 6 years.

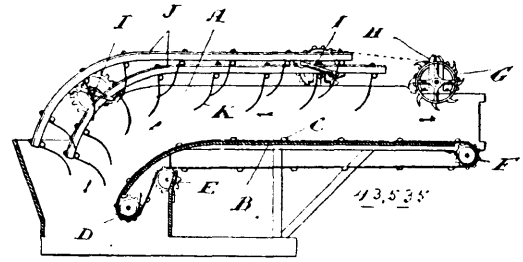
Claim.—1st. A train pipe valve for the steam heating system of a railway car, consisting of a valve casing and a valve movable therein, said casing formed with a cavity or chamber and openings thereinto communicating with the opposite sections of the train pipe and a branch opening thereinto communicating with the branch steam pipe leading to the radiator within the car, said branch pipe being permanently in communication with said chamber, and said valve constructed relatively to said casing to close in its extreme position one and only one of said train pipe openings, whereby to close off the train pipe at the rear of the train, and in its middle position to afford an unobstructed passage between said openings through said chamber, whereby to permit the passage of steam to the car in the rear, and also constructed relatively to said casing to be free from said branch opening and hence incapable of interrupting the communication of said branch pipe with said chamber, whereby in either position of the valve steam may flow from the locomotive boiler through the train pipe to said chamber and thence into said branch pipe. 2nd. A train pipe valve for the steam heating system of a railway car, consisting of a valve casing and a valve movable therein, said casing formed with a cavity or chamber and openings thereinto communicating with the opposite sections of the train pipe, and a branch opening thereinto communicating with the branch steam pipe leading to the radiator within the car, said branch pipe opening being permanently in communication with said chamber, and said valve movable to three positions and constructed relatively to said casing to close in each of its extreme positions the corresponding one of the two train pipe openings, whereby to close off the train pipe at the rear of the train whichever end of the car is turned rearward, and in its middle position to afford an unobstructed passage between said openings through said chamber, whereby to permit passage of steam to the car in the rear, and also constructed relatively to said casing to be free from said branch opening and hence incapable of interrupting the communication of said branch pipe with said chamber, whereby in either position of the valve steam may flow from the locomotive boiler through the train pipe to said chamber and thence into said branch pipe. 3rd. In a car heating system, the combination, with the main steam pipe, a branch pipe leading therefrom to a radiator in the car, and a throttle valve in said branch controlling the flow of steam to the radiator, of a valve casing interposed in the main pipe at the junction of said branch pipe, consisting of a shell or chamber having opposite seats with their openings communicating with the respective sections of the main pipe, and an opening communicating with said branch pipe, and a cut off valve movable in said shell to three different positions, in one of which it is seated against one of said seats to close off one section of the main pipe, in another of which it is seated against the other seat to close the other section, and in the third position it is unseated from both seats to leave free communication through the pipe. 4th. A valve for the main steam pipe of a railway car, consisting of a casing having oppositely arranged valve seats and openings therefrom for communication with the respective sections of said pipe, combined with a valve mounted to move within said casing between said valve seats and movable to three different positions, in one of which it is seated against one of said seats to close off one section of the main pipe, in another of which it is seated against the other seat to close the other section, and in the third position it stands intermediate of the seats to leave free communication between them, the valve casing being formed with a free space or passage around the valve when the latter is in the intermediate position, and a branch pipe opening in constant communication with said space or passage, whereby said valve is incapable of closing said passage. 5th. In a car heating system, the combination, with the main steam pipe, a branch pipe leading therefrom to a radiator in the car, and a throttle valve in said branch controlling the flow of steam to the radiator, of a valve interposed in the main pipe at the junction of said branch pipe, consisting of a casing formed with

a chamber and openings thereinto communicating with the respective sections of the main pipe, and an opening communicating with said branch pipe, and a sliding valve movable in guides or slideways within said shell, too small to fill said chamber, so that it is incapable of obstructing the communication of said branch pipe opening therewith, and adapted when in one position to close against a seat and shut off one section of the main pipe, and when in another position to be unseated therefrom and leave free communication between the sections of pipe, and mechanical means for operating said valve from the exterior of the shell. 6th. A valve for the main steam pipe of a railway car, consisting of a shell or chamber having opposite valve seats and openings therefrom on the same axis for communication with the respective sections of said pipe, and formed with cylindrical guide ways concentric with said axis, combined with a cylindrical valve movable in said guide ways, adapted in its extreme position to close against the respective seats, and when in an intermediate position to afford free communication between said seats, and mechanical means for operating said valve from the exterior of the shell. 7th. A valve for the main steam pipe of a railway car, consisting of a shell or chamber having openings for communication with the respective sections of said pipe, and formed with guides or slideways, and with a space or passage between said openings beyond said slideways and exterior to the path of travel of the valve, combined with a sliding valve movable in said slideways adapted when in one extreme position to close one of the openings communicating with the main pipe in order to close off the pipe at the end of the train, and the valve shell formed with a blow hole through said slideways and opening exterior to the shell, arranged in position to be normally covered and closed by the valve, but to be uncovered thereby when the valve is in said extreme position, in order that steam may escape through this blow hole from the valve at the end of the train. 8th. A valve for the main steam pipe of a railway car, designed for closing off said pipe at the rear of a train, consisting of a shell formed with an internal cavity or chamber, two opposite openings thereinto for communication with the opposite sections of said main pipe, a valve movable within said chamber, adapted to seat against and close either of said openings, said valve being shorter than the distance between said openings, whereby when in an intermediate position both openings are uncovered, the said shell constructed with a free space or passage affording communication between said openings around the valve when in such intermediate position, and formed with a branch opening for communication with the branch pipe leading to the radiators in the car. said branch opening communicating with said free space or passage, whereby when the valve is in said intermediate position it communicates with both the opposite main pipe openings, and when the valve is in either extreme position it communicates uninterruptedly with the opposite or uncovered main pipe opening. 9th. A value for the main steam pipe of a railway car, consisting of a shell or chamber, having openings for communication with the respective sections of said pipe, combined with a sliding valve movable in guides or slide ways within said shell, an operating spindle passing through a stuffing box in said shell, an arm on said spindle within the shell entering a recess in the valve for communicating motion thereto, and a lever arm fixed on said spindle exterior to the shell. 10th. A valve for the main steam pipe of a railway car, consisting of the combination of a shell or chamber having openings for communication with the respective sections of said pipe, with a valve movable in said chamber adapted when in one position to close one of the openings and when in another position to be unseated and afford free communication between said openings, an operating spindle passing through a stuffing box in said shell, and in mechanical connection within the shell with said valve, an operating handle in connection with said spindle exterior to the shell and a locking device in connection with said spindle for fastening it to hold the valve in either position. 11th. A valve for the main steam pipe of a railway car, consisting of a shell or chamber having openings for communication with the respective sections of said pipe, and extended beneath said openings to form a condensation pocket or sediment well, a valve movable in said chamber adapted when in one position to close one of the openings and when in another position to be unseated and afford free communication between said openings, and an automatic trap or drainage valve for discharging condensed water from said shell, whereby in one interruption of the main pipe are combined the means for closing off the pipe at the rear of a train and for freeing the steam in its passage through said pipe of condensed water.

No. 43,535. Band Cutter and Feeder for Threshing Machines. (*Coupe-hart et alimentateur pour machines à battre.*)

John Chambers Lundy, Winnipeg, Manitoba, Canada, 8th July, 1893; 6 years.

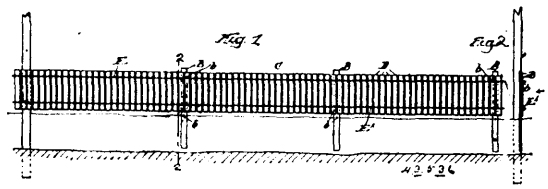
Claim.—1st. In a threshing machine, a revolving band cutter located on top of the machine above a horizontal conveyor, adapted to throw the straw on to the threshing cylinder, in combination with tines arranged above the said conveyor, and having a throwing motion imparted thereto by suitable mechanism, substantially as and for the purpose specified. 2nd. In a threshing machine, a revolving band cutter G, located on top of the machine above the horizontal conveyor C, and adapted to throw the straw on to the threshing cylinder, in combination with the tines K, connected to the bars J, journalled on the cranks of the revolving shafts I, substantially as and for the purposes specified. 3rd. In a threshing machine, a revolving band cutter located on top of the machine above the horizontal conveyor C, having one end turned down towards the cylinder, in combination with the tines K connected to the bars J, having ends concentric to the turned down end of the conveyor C, and journalled on the cranks of the revolving shafts I, substantially as and for the purpose specified. 4th. In a threshing



machine, a horizontal conveyor C, adapted to throw the straw on to the threshing cylinder, in combination with tines K connected to bars J, journalled on the cranks of the revolving shafts I, substantially as and for the purpose specified. 5th. In a threshing machine, a horizontal conveyor C, adapted to throw the straw on to the threshing cylinder, in combination with tines K connected to bars J, journalled on the cranks of the revolving shafts I, the said cranks being arranged so that while some of the bars are entering the grain others are leaving it, substantially as and for the purpose specified.

No. 43,536. Portable Snow Screen.

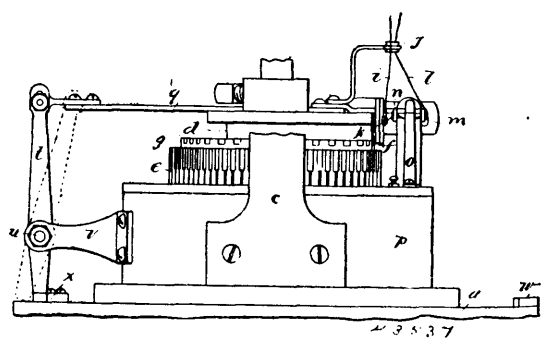
(*Garde-neige portatif.*)



Franz O. Skoglund, Chicago, Illinois, U.S.A., 8th July, 1893; 6 years.

Claim.—The combination with the portable stakes B, provided with pins *b*, of the flexible screen C, composed of the strips B, and ropes E, E'.

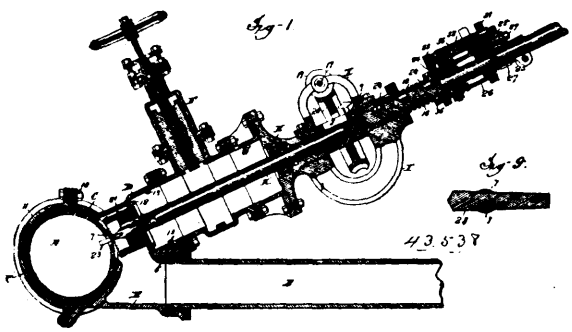
No. 43,537. Thread Splicing Mechanism for Knitting Machines. (*Appareil à épisser le fil pour machines à coudre.*)



George H. Coburn and Albert W. Stone, both of Laconia, New Hampshire, U.S.A., 8th July, 1893; 6 years.

Claim.—A knitting machine comprising in its construction a splicing thread guide, a spring clamp in proximity to said guide for clamping and releasing the thread, a cam faced slide for acting upon the said clamp, a lever for actuating the said slide, and an adjustable stop for acting upon the said lever, as set forth.

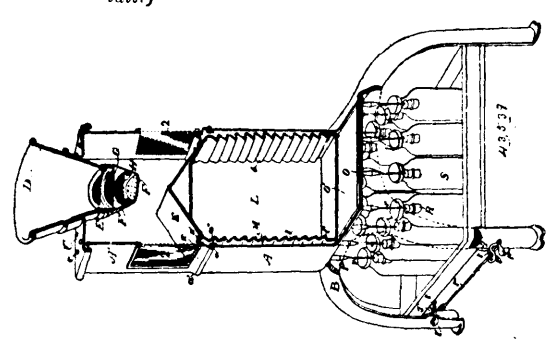
No. 43,538. Method of and Means for Tapping Water Mains. (*Méthode et moyen de raccordement avec le tuyau principal d'une conduite d'eau.*)



Harvey Hallock Burritt, Newark, New Jersey, U.S.A., 8th July, 1893; 6 years.

Claim.—1st. The improvement in the art of tapping a main under pressure, which consists in connecting to the main a pipe, having a branch forming a connection with other pipes and attaching a gate valve to said pipe, tapping the main through said gate valve and pipe, closing the pipe between the gate valve and main by a plug, making a tight joint against the main pressure when forced into the pipe, and constructed to be packed within the pipe, removing the gate valve, and packing the plug within the pipe, substantially as described. 2nd. The improvement in the art of tapping a main under pressure, which consists in connecting to the main a pipe having a branch, forming a connection with other pipes and attaching a gate valve to said pipe, tapping the main through said gate valve and pipe, closing the pipe between the gate valve and main by forcing in a plug, having a head of wood or similar elastic material fitting the pipe closely or a screw plug, so as to form a tight joint and hold the plug against the main pressure when the gate valve is removed, removing the gate valve and packing the plug, substantially as described. 3rd. The improvement in the art of tapping a main under pressure, which consists in connecting to the main a pipe having a branch forming a connection with other pipes and attaching a gate valve to said pipe, drilling a small hole in the main through said gate valve and pipe, filling the connections thereby and testing the joints, plugging the hole in the main and perfecting the connections if required, then tapping the main full size for the connections through the gate valve and pipe, closing the pipe between the gate valve and main by a plug, making a tight joint against the main pressure when forced into the pipe and constructed to be packed within the pipe, removing the gate valve and packing the plug within the pipe, substantially as described. 4th. The combination with the main A, of a straight valveless pipe D, connected therewith and permanently closed at its outer end by a plug constructed to form a tight joint and be held within the pipe against the main pressure by its own construction, and packed within the pipe, and a branch E, forming a connection for branch pipes, substantially as described. 5th. The combination with the main A, of a sectional sleeve C, having integral therewith, a hub consisting of a straight valveless pipe D, constructed to support a gate valve F, and a branch B, forming a connection for branch pipes, substantially as described. 6th. A sectional sleeve C, having a hub integral therewith consisting of a straight valveless pipe D, having shoulder 12 and constructed to coact with a screw plug, and a branch E, forming a connection for branch pipes, substantially as described. 7th. A sectional sleeve C, having a hub integral therewith consisting of a straight valveless pipe D, having shoulder 12 and lugs 13, and a branch E, forming a connection for branch pipes, substantially as described. 8th. The combination, with pipe D, having shoulder 12, and constructed to coact with a screw plug, of a plug having head 14 seated on said shoulder and screw cap 15, substantially as described. 9th. The combination, with pipe D, having shoulder 12 and lugs 13, of a plug having head 14 seated on said shoulder and screw cap 15, substantially as described. 9th. The combination, with pipe D, having shoulder 12 and lugs 13, of a plug having head 14 seated on said shoulder, and cap 15, having rim 3 provided with slots 4, and inclined screw surfaces, substantially as described. 10th. A plug consisting of a head 14, and screw cap 15 pivotally connected thereto, so as to rotate independently of said head, substantially as described. 11th. A plug consisting of a head 14 and cap 15 pivotally connected thereto, so as to rotate independently of said head, and having rim 3 provided with slots 4 and inclined screw surfaces, substantially as described. 12th. A plug consisting of the head 14 having ring 1 of rubber, lead or similar yielding material, and screw cap 15, having a rotary pivotal connection therewith, substantially as described. 13th. A plug consisting of the head 14 having ring 1 of rubber, lead or similar yielding material, and cap 15 having a rotary pivotal connection therewith, and having the rim 3 provided with slots 4 and inclined screw surfaces, substantially as described. 12th. A plug consisting of a head P, of wood or similiar elastic material constructed to fit closely the pipe to be plugged, and a reduced metallic portion P^1, having the stem d, for attachment to a forcing tool, substantially as described. 15th. The combination, with main A, straight valveless pipe D, branch pipe E, and gate valve F, of a tapping spindle, and means for rotating the same, feeding devices for advancing said spindle during its rotation, and a sleeve on said spindle forming a part of said feeding devices and constructed to be secured to said spindle or released therefrom, substantially as described. 16th. The combination, with main A, straight valveless pipe D, branch pipe E, and gate valve F, of tapping spindle K, and driving gear 20 in which the shaft is splined stationary screw 16, sleeve 35 threaded on said screw and connected to said spindle so as to advance the latter, and driving connections between the shaft and sleeve for rotating the latter, substantially as described. 17th. The combination with main A, straight valveless pipe D, branch pipe E, and gate valve F, of tapping spindle K and means for rotating the same, stationary screw 16, sleeve 35 threaded on said screw, sleeve 25 on said spindle constructed to be secured to said spindle or released therefrom, sleeve 35 threaded on said screw and connected to said sleeve 25 so as to advance the latter, and driving connections between said sleeves 25, 35 for rotating the latter from the spindle, substantially as described. 18th. The combination with main A, straight valveless pipe D, branch pipe E and gate valve F, of tapping spindle K and driving gear 20 in which the shaft is splined, stationary screw 16, sleeve 35 threaded on said screw, sleeve 25 carried by the spindle and carrying gear 27, carriage 26 loose on said spindle and connected to said sleeves 25, 35, so as to permit their rotation while forming a connection between them for advancing the spindle by the rotation of the sleeve 35, and gears carried by the carriage and forming driving connections between the gear 27 and sleeve 35, substantially as described. 19th. The combination with main A, straight valveless pipe D, branch pipe E and gate valve F, of gear 27 and removable gear 31, arm 36 swinging concentrically with the axis of gear 31, shaft 29 carried by said arm, and gear 28 and removable gear 30 on said shaft engaging respectively gears 27 and 31, substantially as described. 20th. The combination with main A, straight valveless pipe D, branch pipe E and gate valve F, of gear 27 and removable gear 31, arm 36 swinging concentrically with the axis of gear 31, shaft 29 carried by said arm, gear 28 and removable gear 30 on said shaft engaging respectively gears 27 and 31, and bolts 37 carried by said arm 36 and moving in a slot concentric with the axis of gear 31 for holding the arm 36 in position, substantially as described. 21st. The combination with main A, straight valveless pipe D, branch pipe E and gate valve F, of rotating and longitudinally moving spindle K having recesses 24, driving gear 20 having slot 8, removable spline 9, and means for securing the spline in the recesses, substantially as described.

No. 43,539. Machine for Purifying and Bottling Milk. (*Machine pour purifier et embouteiller le lait.*)

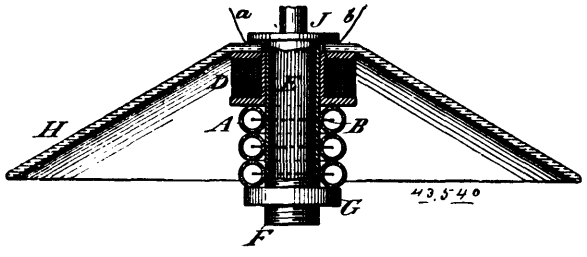


William Albert Clark, Toronto, Ontario, Canada, 8th July, 1893; 6 years.

Claim.—1st. As a milk purifier and bottler, a milk receptacle supported in the top of the rectangular casing, and having one or more strainers, a ridged diaphragm situated beneath the milk receptacle, and provided with perforated channels and passage ways beneath the channels, and means whereby the milk is conveyed from the channels to the bottles, as and for the purpose specified. 2nd. As a milk purifier and bottler, a milk receptacle supported in the top of a rectangular opening, and provided with one or more strainers, and openings 2 on two of the opposite sides of the rectangular casing, a ridged diaphragm situated beneath the milk receptacle, and provided with perforated channels and passage ways beneath the channels, and means whereby the milk is conveyed from the channels to the bottles, as and for the purpose specified. 3rd. As a milk purifier and bottler, a milk receptacle supported in the top of a rectangular casing, and having one or more strainers and openings 2 on two of the opposite sides of the rectangular casing, the ridged diaphragm situated beneath the milk receptacle, and provided with perforated channels and passage ways beneath the channels, a chilling or ice chamber, the two sides of which form the inner walls of the passage ways, and means whereby the milk is conveyed from the channels to the bottles, as and for the purposes

specified. 4th. As a milk purifier and bottler, a milk receptacle supported in the top of a rectangular casing, and having one or more strainers and openings 2 on two of the opposite sides of the rectangular casing, a ridged diaphragm situated beneath the milk receptacle, and provided with perforated channels and passage ways beneath the channels, a chilling or ice chamber having two corrugated sides which form the inner walls of the passage ways, and means whereby the milk is conveyed from the passage ways into the bottles, as and for the purpose specified. 5th. A milk receptacle D, supported in the top of the rectangular casing, and having strainers E, F, G and H, a ridged diaphragm supported beneath the strainers, and provided with a perforated channel, and passage ways situated beneath the channel and chilling chamber, the two walls of which form the corrugated sides of the passage ways, the lower end of the chilling chamber having situated on the outside of it a supplemental channel I, extending at an incline from the obliquely arranged corrugated side around the vertical side into the channel O, in the bottom O^1, and means whereby the milk is emptied from the channel O into the bottles, as and for the purpose specified. 6th. The combination with the milk receptacle provided with one or more strainers, openings 2, diaphragm K, having perforated channels H, chilling chamber L, having corrugated sides l^1, and passageways extending downwardly from beneath the perforated channels, of a channel O, in the bottom O^1, having the holes o, and spouts P, leading therefrom, each having a central cross bar p, at the bottom and a stopper Q, having the central spindle r, provided with a float R, and collar r^1, as and for the purpose specified. 7th. The combination, with the milk receptacle provided with one or more strainers, openings 2, diaphragm K, having perforated channels H, chilling chamber L, having corrugated sides l^1, and passageways extending downwardly from beneath the perforated channels, of a supplemental channel I, leading into the channel O, in the bottom O^1, having the holes o, and spouts P, leading therefrom, each having a central cross bar p, at the bottom, and a stopper Q, having the central spindle r, provided with a float R, and collar r^1, as and for the purpose specified. 8th. In an apparatus such as specified, the combination, with the channel and spouts and stoppers for each spout, of a pan or receptacle U, for supporting the bottles, and means for adjusting the pan vertically, as and for the purpose specified. 9th. In an apparatus, such as specified, the combination, with the channel and spouts, and stoppers for each spout, of a pan or receptacle U, for supporting the bottles and adjusting rollers F, the ends of which have secured to them the spindles t, which are partially rotated by the cranks t^1, connected together by the rod t^{11}, as and for the purpose specified. 10th. In an apparatus such as specified, the combination, with the channels and spouts, and stoppers for each spout, of a pan or receptacle U, for supporting the bottles and adjusting rollers F, the ends of which have secured to them the spindles t, which are partially rotated by the cranks t^1, connected together by the rods t^{11}, and the spiral spring V, extending between the bottom board of the pan U, and the base board W, as and for the purpose specified. 11th. In an apparatus such as specified, the combination, with the channel and spouts, and stoppers for each spout, of a pan or receptacle U, for supporting the bottles and adjusting rollers F, the ends of which have secured to them the spindles t, which are partially rotated by cranks t^1, connected together by the rod t^{11}, the spiral springs V, extending between the bottom board of the pan U, and the base board W, and the telescopic standards V, surrounding the springs, as and for the purpose specified. 12th. The combination, with the milk filling apparatus, as specified, of a pan or receptacle U, having the pins x, extending into the slots X, adjusting rollers F, spindles t, cranks t^1, connected together by the rods t^{11}, springs v, situated in the telescopic standards V, and means whereby the pan is secured in position when lowered, as and for the purpose specified. 13th. The combination, with the milk filling apparatus, as specified, of a pan or receptacle U, having the pins x, extending into the slots X, adjusting rollers F, spindles t, cranks t^1, connected together by the rods t^{11}, springs v, situated in the telescopic standards V, and the spring catch Z, designed to be brought into engagement with the catch Y, by the roller T, acting against the cam arm z^{111}, as and for the purpose specified.

No. 43,540. Electric Lamp. (*Lampe électrique.*)

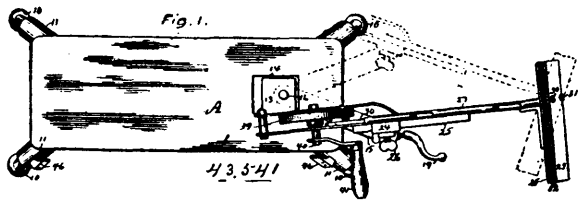


Edward A. Colby, Newark, New Jersey, U.S.A., 8th July; 1893; 6 years.

Claim.—1st. A glow lamp having a filament in ring or closed coil form completely enclosed within an exhausted receiver and held on supports in said receiver and having no leading-in wires, substantially as and for the purpose hereinbefore set forth. 2nd. A glow lamp having a filament in ring or closed coil form contained in an exhausted receiver and having no leading-in wires, in combination with an inducting coil or other means of producing a field of force, in which field of force said lamp is placed and the filament thus caused to glow by induction, the light intensity of said lamp being variable by moving the lamp with reference to the field, or the field with reference to the lamp, or otherwise varying the inductive effect of the field upon the filament, substantially as and for the purpose hereinbefore set forth.

No. 43,541. Milking Machine.

(*Appareil pour traire les vaches.*)



Bryan Atwater, Berlin, Connecticut, U.S.A., 8th July, 1893; 6 years.

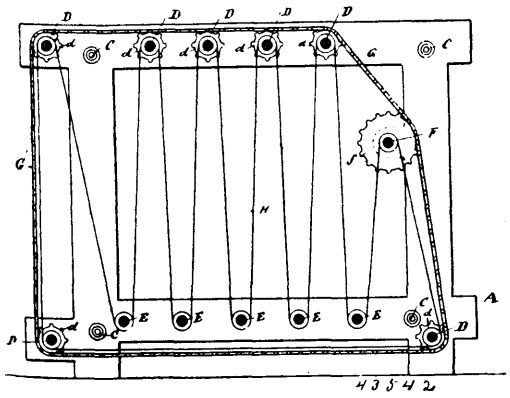
Claim.—1st. The combination of a frame, a pair of opposing pressure plates, the connecting rods secured to the different parts of said plates, and the differently formed cams for operating said rods with unlike movements, substantially as described and for the purpose specified. 2nd. The combination of a suitable frame, the divided rods 30 and 31, the pressure plates, one of which is connected with said rods, the operating cams and springs 33 connected to the two parts of said rods, substantially as described and for the purpose specified. 3rd. The combination of a suitable frame, the divided rods 30 and 31, the pressure plates, one of which is connected with said rods, the operating cam, springs 33 connected to the two parts of said rods and the pull plates 35 for limiting the yielding motion of said divided rods, substantially as described and for the purpose specified. 4th. The combination of a frame, a pair of pressure plates, one of which is fixed upon said frame, the rods to which the other of said plates is secured, the operating cams, and yielding connecting devices, substantially as described and for the purpose specified. 5th. The combination of a frame carrying milking devices and their operating mechanism, the supporting bracket 20, horizontal ways or guides formed on said frame horizontally on said bracket, a standard on which said bracket for tilting said frame laterally on said standard, substantially as described and for the purpose specified. 6th. The combination of a support, the socket 17 on said support, the standard 18 mounted in said socket, fastening mechanism for securing and adjusting said standard within said socket, and the bracket 20 carrying milking devices and mounted on said standard, whereby said milking devices may be swung horizontally and adjusted vertically, substantially as described and for the purpose specified. 7th. The combination of a support, a laterally swinging frame 15 pivotally mounted on said support by its inner end, and vertically adjustable standard carrying milking devices and connected with said frame by a vertical socket or joint in the outer end thereof, and devices for securing said standard at different heights in said socket, substantially as described and for the purpose specified. 8th. The combination of a support or stool, the frame 13 carrying milking devices and pivoted on said stool by a horizontal axis, and springs connected with said frame and stool for holding said frame in its normal position, substantially as described and for the purpose specified. 9th. The combination of a support, a vertically swinging frame mounted on said support, a laterally swinging frame 15 pivotally mounted at its inner end on said vertically swinging frame, and a standard carrying milking devices, said standard being pivoted to said laterally swinging frame 15 by a socket or joint in the outer end thereof, substantially as described and for the purpose specified. 10th. The combination of a resisting plate and the opposing plate consisting of a series of finger plates jointedly connected, and operating devices for successively moving said finger plates toward said resisting plate, substantially as described and for the purpose specified. 11th. The combination of a resisting plates, the opposing plate consisting of a series of finger plates jointedly connected, the connecting rods having flexible connections between them and the lower finger plates, and mechanism for operating said rods, substantially as described and for the purpose specified.

No. 43,542. Advertising Device. (*Appareil d'annonce.*)

Stanislas Payette, Montreal, Quebec, Canada, 8th July, 1893; 6 years.

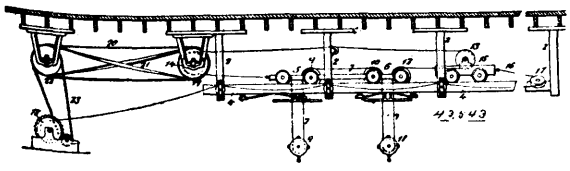
Claim.—An advertising device having two frames A and B connected by the bolts G, the rollers D, E and F, cogged wheels *d* and

f chain G, and continuous advertising sheet H, substantially as



described and for the purpose set forth.

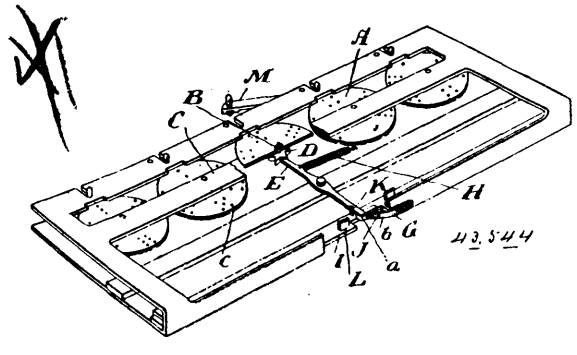
No. 43,543. Conveyor. (*Transport.*)



Thomas Spencer Miller, South Orange, New Jersey, U.S.A., 8th July, 1893; 6 years.

Claim.—1st. In a conveying apparatus, containing two parallel cables, a carriage to travel thereon, and a rope supported by said carriage, in combination with said parts, a rope carrier, a clamp whereby it is connected with one of said cables, means whereby the free end of said carrier is normally steadied, and a clamp, whereby said means is secured to the other of said cables, substantially as described. 2nd. In a conveying apparatus, containing two parallel cables or trackways, a carriage to travel thereon, and a rope supported by said carriage, in combination with said parts, a rope carrier connected with one of said cables or trackways and extending into the space between the cables or trackways, and means whereby said rope carrier is normally held in said position, substantially as described. 3rd. In a conveying apparatus, containing two parallel cables or trackways, a carriage to travel thereon, and a rope supported by said carriage, in combination with said parts, a rope carrier connected with one of said cables or trackways and extending into the space between the cables or trackways, and means whereby the free end of said carrier is normally sustained by the other cable or trackway, substantially as described. 4th. In a conveying apparatus, containing two parallel cables or trackways, a carriage to travel thereon, and a rope supported by said carriage, in combination, with said parts, a rope carrier connected with one of said cables or trackways, and extending into the space between the cables or trackways, means whereby said rope carrier is normally held in said position, and a buffer mounted upon the carriage, whereby said rope carrier is thrust out of the path of the carriage, substantially as described.

No. 43,544. Game. (*Jeu.*)

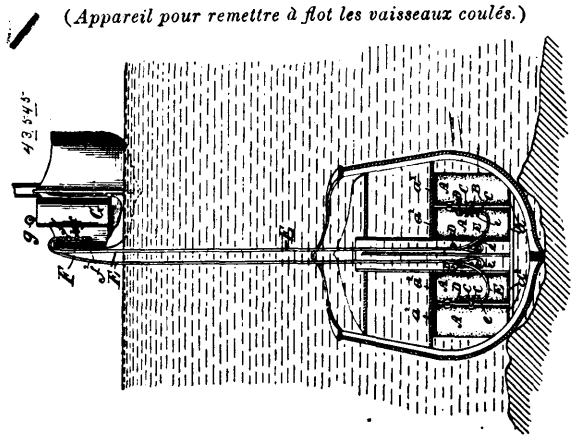


George A. Cline, Toronto, Ontario, Canada, and Charles A. French, Boston, Massachusetts, U.S.A., 8th July, 1893; 6 years.

Claim.—1st. A series of discs having a series of numbers or symbols printed on each, which is fixed to an easily revolvable spindle operated by mechanism arranged to revolve all the discs simultaneously or one or more of them separately and to stop them separately or collectively, substantially as and for the purpose specified. 2nd. A series of discs, each disc fixed to a revolvable spindle having a pinion fixed to it, a pivoted finger arranged to engage with each pinion and a spring to operate the said finger, in combination with locking mechanism arranged to hold the fingers in mesh with their respective pinions and of a movable bar arranged by its adjustment to unlock and lock the said pivoted finger, substantially as and for the purpose specified. 3rd. A series of discs, each disc fixed to a revolvable spindle having a pinion fixed to it, a pivoted finger arranged to engage with each pinion and a spring to operate the said finger, in combination with locking mechanism arranged to hold the fingers in mesh with their respective pinions and of a movable bar arranged by its adjustment to unlock and lock the said pivoted finger, and of a pivoted latch arranged to lock each disc independent of the others, substantially as and for the purpose specified. 4th. A disc A, fixed to the spindle B, journalled in the frame C, and having a pinion D connected to it, the pivoted finger E, spring H, connected to the finger which has an L-shaped end butting against the shoulder *a*, formed on the wedge shaped spring plate G, in combination with the adjustable bar I, having shoulders J, formed thereon, the whole being arranged and operated substantially as and for the purpose specified.

No. 43,545. Apparatus for Raising Sunken Vessels.

(*Appareil pour remettre à flot les vaisseaux coulés.*)

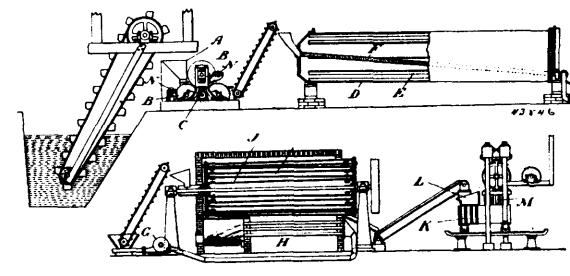


Ernest Niehoff, Tacoma, Washington, U.S.A., and Henry Thomas D'Entremont, Lower East Pubnico, Nova Scotia, Canada, 10th July, 1893; 6 years.

Claim.—1st. An apparatus for raising sunken vessels, comprising a suitable air bag provided with a T coupling, one of its branches provided with a cut off and a means of attachment to the supply pipe E, and its other branch provided with a pressure gauge, whereby the attendant under water is enabled to regulate the pressure of the air in the bag, an air receiver B provided with a T coupling, the branch *f* of which is provided with a cut off, the branch f^1 with a cut off and means of attachment to the supply pipe E, and the branch f^2 with a cut off and an escape passage to the atmosphere, a pipe E connecting the air receiver and bag, and provided with a cut off near its lower end which can be operated by an attendant under water to prevent water entering the said pipe when it is disconnected from the bag, substantially as described. 2nd. An air bag for use in raising sunken vessels provided with a suitable mouth, and strengthening plates and means for attaching the bag to a pipe, substantially as described.

No. 43,546. Process of Reducing Crude Peat.

(*Procédé pour réduire la tourbe crue.*)

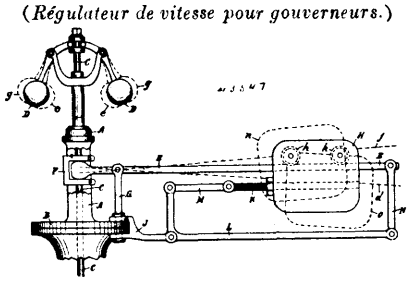


The Ontario Peat Fuel Company, Toronto, Ontario, assignee of Archibald A. Dickson, Côte St. Antoine, Montreal, Quebec, both in Canada, 10th July, 1893; 6 years.

Claim.—1st. The within described process of preparing peat by forcing the crude peat against a porous surface provided with means

for carrying away the water from the peat, substantially as and for the purpose specified. 2nd. The within described process for preparing peat by forcing the crude peat against a porous surface provided with means for carrying away the water from the peat, and then carrying the peat through a chamber having a current of air passing through it, substantially as and for the purpose specified. 3rd. The within described process for preparing peat by forcing the crude peat against a porous surface provided with means for carrying away the water from the peat, and then carrying the peat through a chamber having a current of air passing through it and means for agitating the peat, substantially as and for the purpose specified. 4th. The within described process of preparing peat first by partially drying it without breaking its fibre, then forcing it into one or more formers in such a manner as to simultaneously form, compress, remove the air and coat the outer surface with an atmospheric resisting substance without the application of artificial heat, substantially as and for the purpose specified. 5th. The within described process of preparing crude peat by partially drying it without disintegration, then simultaneously forcing, compressing, removing the air and coating the outer surface with an atmospheric resisting substance in such a manner as to preserve the volatile combustible elements indigenous to peat without the application of artificial heat, the whole substantially as described. 6th. The within described process of preparing crude peat by partially drying it without disintegration, forming, compressing, removing the air, coating the outer surface with an atmospheric resisting substance preserving the volatile combustible elements indigenous to peat in such a manner that each charge of peat receives a uniform compression irrespective of the specific gravity of the crude material without the application of artificial heat, the whole substantially as described.

No. 43,547. Speed Regulator for Governors.
(*Régulateur de vitesse pour gouverneurs.*)

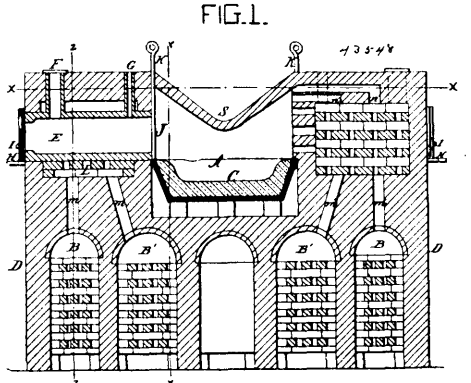


Fred. G. Mitchell, Francis W. Giddens and William T. Gartley, all of London, Ontario, Canada, 10th July, 1893; 6 years.

Claim.—1st. A weight H, automatically and instantly adjusted lengthwise on a lever E, and means for connecting and operating said weight with and by the governor, substantially as shown and described and for the purpose specified. 2nd. A weight H, and a lever E, on which said weight is automatically and instantly adjusted lengthwise, in combination with the fulcrum G, bracket J, bell crank L, pivotally connected at one end to the weight H, and at the other end to the lever E, and means for engaging the lever E with the governor, substantially as shown and described and for the purpose specified. 3rd. A weight H, provided with anti-friction wheels *h*, *h*, and a lever E, on which said weight is automatically and instantly adjusted lengthwise thereon by the governor, in combination with the fulcrum G, bell crank L, couplings M, N, and an arm K, substantially as shown and described and for the purpose specified.

No. 43,548. Metallurgical Furnace.
(*Fournaise métallurgique.*)

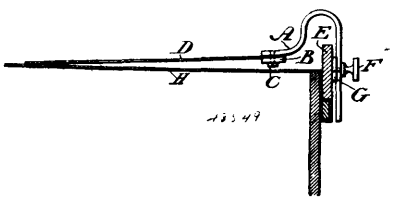
FIG. 1.



William Bell, New York City, New York, U.S.A., assignee of Michael Robert Conley, Brooklyn, New York, U.S.A., 10th July, 1893; 6 years.

Claim.—1st. A metallurgical regenerative furnace, having a melting hearth with regenerators and flues connecting the regenerators with the opposite ends of the said melting hearth, in combination with retorts having their inner ends opening directly on to the melting hearth, but normally closed by gates, these retorts being interposed in the said flues between the generators and the hearth at the opposite ends of the latter, whereby the same regenerators serve for both melting hearth and retorts and on the opening of the latter the ore may be pushed directly into the molten metal on the hearth, substantially as described. 2nd. A metallurgical reverberatory furnace having a melting hearth and regenerators with flues connecting the regenerators with the hearth, closed deoxidizing retorts in the said flues having their inner ends opening directly on to the melting hearth, but normally closed by gates, and checker work L, around the retorts, substantially as set forth.

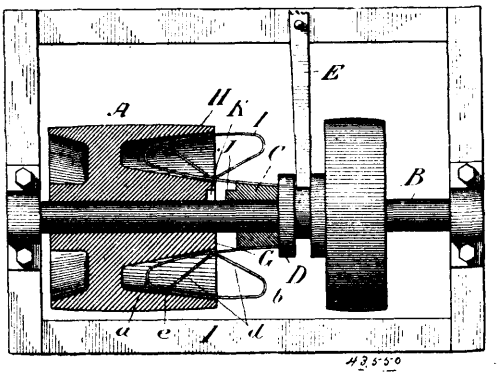
No. 43,549. Snare for Drums. (*Corde de timbre.*)



James W. Pepper, Philadelphia, Pennsylvania, assignee of Henry Theophel, Akron, Ohio, both in the U.S.A., 10th July, 1893; 6 years.

Claim.—1st. An improved snare for drums, consisting of a clamp arranged to be attached to the drum, provided with elastic wires arranged to press on the drum head, substantially as shown and described. 2nd. The combination, with a clamp containing spring wires arranged to press on the drum head, of a plate connected with the drum, and means, as a screw, for uniting said clamp and plate, substantially as shown and described. 3rd. The combination, with a drum hoop, of a clamp detachably connected therewith bearing elastic wires which project over and press against the drum head, substantially as shown and described. 4th. The combination, with the plates A, B, and G, of the wires D and thumb screw F, all constructed and arranged substantially as described and for the purpose specified.

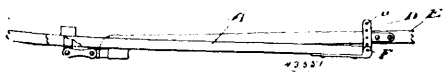
No. 43,550. Friction Clutch. (*Embrayage à friction.*)



Harman Bunker and James Herbert McKeggie, both of Barrie, Ontario, Canada, 10th July, 1893; 6 years.

Claim.—1st. As an improved clutch, a sleeve fixed to a pulley connected to the driving power and loosely journalled upon a shaft to which is fixed a peculiarly formed pulley connected to the mechanism to be driven, the said pulley having a hub surrounded by the rim, the said hub being designed to fit into a cup formed by a series of spring plates connected at one end to the sleeve attached to the driving pulley, the body of each of the springs being bent backwardly and shaped as shown so that on one side they shall be in contact with the hub and on the other side be held against the interior surface of the pulley rim, substantially as and for the purpose specified. 2nd. As an improved clutch, a sleeve fixed to a pulley connected to the driving power and loosely journalled upon a shaft to which is fixed a peculiarly formed pulley connected to the mechanism to be driven, the said pulley having a hub surrounded by the rim, the said hub being designed to fit into a cup formed by a series of spring plates connected at one end to the sleeve attached to the driving pulley, the body of each of the springs being bent backwardly and shaped as shown so that on one side they shall be in contact with the hub and on the other side be held against the interior surface of the pulley rim, a clutch being formed, one-half on the end of the hub and the other half on the end of the sleeve, the clutching points being provided with a spring so as to form a cushion in the clutch as the two halves come together, substantially as and for the purpose specified.

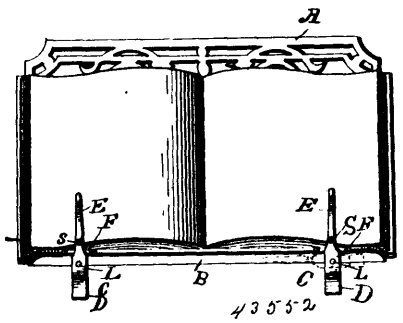
No. 43,551. Cart. (*Charrette.*)



Harman Bunker and James Herbert McKeggie, both of Barrie, Ontario, Canada, 10th July, 1893; 6 years.

Claim.—In a two wheeled cart, a pair of shafts pivoted at the front of the cart and adjustably connected at their inner ends to the cart's body, substantially as and for the purpose specified.

No. 43,552. Leaf Holder for Music.
(*Porte-feuille de musique.*)



Joseph Wood, Walter Wilkinson and Sam Bateman, all of Philadelphia, Pennsylvania, U.S.A., 10th July, 1893; 6 years.

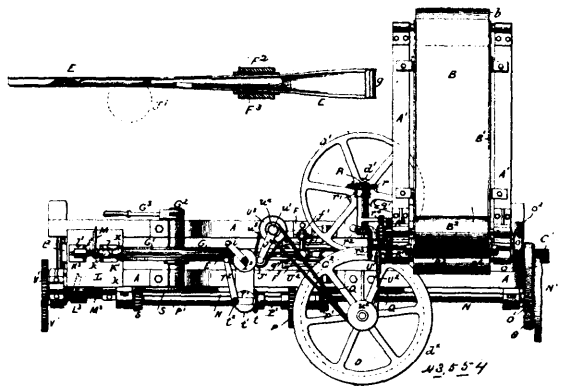
Claim.—The combination, with a music rack or support, and the rest or ledge at the lower edge thereof and extending at a right angle thereto, of the herein described improved leaf holding devices, each consisting of a T-shaped plate whose upper horizontal portion is perforated and secured to the outer edge of the ledge or rest, and whose lower portion is perforated and depressed below the same, the metal strap G, bent into U-shape to form a pocket and having an inner short and an outer long terminal, bearings formed in the short terminal and transversely opposite in the long terminal, a shaft passed through the bearings and through the perforation in the lower end of the T-shaped plate, washers at opposite sides of said plate and upon the shaft, a space block between the inner washer and the inner terminal of the strap, a weight located in the pocket formed by the bending of the strap and below the shaft, and a curved spring arm E pivoted to the upper end of the long terminal and extending inwardly and upon its lower end and at its outer side provided with a depending offset finger forming a stop and adapted to limit the outward swing of the arm, substantially as specified.

No. 43,553. Art of Manufacturing Sulpho-acid from Petroleum. (*Art de fabrication d'acide sulfaté du pétrole.*)

The Grasselli Chemical Company, assignee of Hans A. Frasch, all of Cleveland, Ohio, U.S.A., 10th July, 1893; 6 years.

Claim.—1st. The art of manufacturing sulpho-acid from petroleum, natural mineral oil or the distillates or derivatives thereof, which consists in sulphonating the substance and separating the sulpho-acid from the remainder, substantially as described. 2nd. The art of manufacturing sulpho-acids from petroleum, natural mineral oil or the distillates or derivatives thereof, which consists in sulphonating the substance, removing the free sulphuric acid, separating the soluble from the insoluble and oily matters in the remainder, splitting the soluble matter into soluble and insoluble lime salts, and ultimately converting these salts into distinct sulpho-acids, substantially as described. 3rd. The art of manufacturing sulpho-acids from petroleum, natural mineral oil or the distillates or derivatives thereof, which consists in sulphonating the substance, removing the free sulphuric acid, separating the soluble from the insoluble and oily matters from the remainder, splitting the soluble matter into a soluble and an insoluble lime salt, and separating the sulpho-acid by adding to such soluble lime salt hydrochloric acid or other acid that will displace the lime, substantially as described. 4th. As an article of manufacture, a sulpho-acid producing, with carbonate of lime or caustic lime, a salt soluble in water and another salt insoluble in water, having in aqueous solution a greenish fluorescence and emitting the characteristic odour of petroleum or coal oil when highly heated, substantially as described. 5th. As an article of manufacture, a sulpho-acid of greenish black colour when solid and of greenish yellow to yellow coloration in solution, soluble in water, having a greenish fluorescence in solution emitting the characteristic odour of coal oil when highly heated, and whose calcium salt is soluble in water, substantially as described. 6th. As an article of manufacture, a sulpho-acid emitting the characteristic odour of coal oil when highly heated, and whose calcium salt is soluble in water, substantially as described.

No. 43,554. Cigarette Machine.
(*Machine pour faire les cigarettes.*)

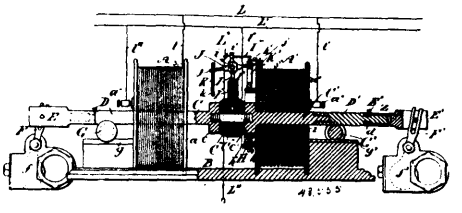


The International Cigarette Machine Company, assignee of James Baker Pollard, all of Roanoke, Virginia, U.S.A., 10th July, 1893; 6 years.

Claim.—1st. The combination, substantially as hereinbefore set forth, in a cigarette machine, of an endless apron which carries the tobacco, a vertically arranged endless band extending past the end of the apron and mounted to move in close proximity thereto to deliver the tobacco at a regulated speed, a combing roll below the lower end of the endless band and below the end of the apron to draw the tobacco away from the apron and band, a concave between which and the combing roll the tobacco passes, and gearing which drives the combing roll faster than the band, and apron to come out and arrange the tobacco. 2nd. The combination, substantially as hereinbefore set forth, in a cigarette machine, of a retarding device through which the tobacco passes at a regulated speed, a combing roll which draws the tobacco away from the retarding device, a concave between which and the roll the tobacco passes, a second combing roll upon which the tobacco is deposited from the first one, smooth rollers close to the second combing roll, and gearing which drives both combing rolls in the same direction and faster than the retarding device, so that the tobacco combed out by the first roll is still further drawn on in passing between the second combing roll and its adjacent smooth rolls. 3rd. The combination, substantially as hereinbefore set forth, of a retarding device through which the tobacco passes at a regulated speed, a combing roll which draws the tobacco away from the retarding device, a concave between which and the roll the tobacco passes, a second combing roll upon which the tobacco is deposited from the first roll, smooth rollers close to the second combing roll, a third combing roll close to the second, a concave close to which it works to draw out and discharge the tobacco, and gearing actuating the moving parts of these devices. 4th. The combination, substantially as hereinbefore set forth, of means for delivering the tobacco in regulated quantities, a combing roll which receives the tobacco therefrom, smooth rolls between which and the combing roll the tobacco is drawn, another combing roll upon which the tobacco is delivered from the first, a concave close to which it turns and between which and it the tobacco is discharged, and gearing actuating the moving parts of these devices. 5th. The combination, substantially as hereinbefore set forth, of a supporting frame, combing rolls turnings in bearing therein, end plates adjustable to and from the ends of the rolls, and means for setting the plates close to the ends of the rolls. 6th. The combination, substantially as hereinbefore set forth, of a supporting frame, combing rolls carried thereby, a casing inclosing the sides of the rolls, and plates adjustable lengthwise of the rolls, and set screws interposed between the frame and end plates to set them close to the ends of the combing rolls. 7th. The combination, substantially as hereinbefore set forth, of an endless filler carrying belt, annularly grooved horizontal filler forming wheels revolving close together above the filler carrying belt and in the same horizontal plane, and an endless pressing belt leading to and terminating near the contiguous portions of the filler forming wheels, and working over the filler carrying belt, for the purpose specified. 8th. The combination, substantially as hereinbefore set forth, of annularly grooved horizontal filler forming wheels revolving in the same plane with their edges in contact, an endless pressing belt leading to and terminating near the contiguous portions of the wheels, and means beneath the wheels for supporting and carrying the filler while passing beneath the pressing belt and between the wheels to form a contiguous cigarette rod. 9th. The combination, substantially as hereinbefore set forth, of an endless filler carrying belt, an annularly grooved filler forming wheel revolving over this belt in a plane parallel therewith, another similarly grooved wheel revolving in the same plane with its edge in contact with the former one, a flange on the upper wheel overlapping the other one to aid in forming the filler, a pressing belt overhanging the carrying belt and filler forming wheels, and means for driving these parts. 10th. The combination, substantially as hereinbefore set forth, of a feed hopper having a discharge opening in its rear wall, a filler carrying

belt travelling close to the open bottom of the hopper, horizontal filler forming wheels revolving over the belt, a pressing belt extending from the discharge opening in the hopper to the contiguous portions of the filler forming wheels and working above the filler carrying belt, and means for driving the moving parts. 11th. The combination, substantially as hereinbefore set forth, with the wrapping tube of a cigarette machine, of a holding device applied thereto intermediate of its length, said holding device comprising a clamp, means carried by the clamp for adjusting the wrapping tube longitudinally, a bracket or support, and means for adjusting the clamp on its support laterally relatively to the wrapping tube. 12th. The combination, in a cigarette machine, of a supporting bracket, an arm mounted thereon, means whereby said arm may be adjusted vertically on the bracket, a clamp adapted both to slide and to swing on the arm, a holder carried by the clamp, a wrapping tube carried thereby, and means for securing the wrapping tube in the holder, as set forth. 13th. The combination, substantially as hereinbefore set forth, of a vertically slotted supporting bracket F, an arm F^1, held thereon, a clamp F^2, adapted both to slide and to swing thereon, a split holder F^3, carried by the clamp, a wrapping tube carried thereby, and a securing screw f^3, which holds the tube in its adjusted position. 14th. The combination, substantially as hereinbefore set forth, of an endless filler carrying belt, annularly grooved horizontal filler forming wheels revolving thereover in the same plane, a wrapping tube in rear of these wheels, and an endless wrapping belt travelling through this tube, to which the filler rod is fed by the wheels, as described. 15th. The combination, substantially as hereinbefore set forth, of an endless horizontal filler carrying belt, filler forming wheels revolving over it, an endless pressing belt over the filler belt and terminating near the contiguous portions of the filler forming wheels, a wrapping tube in rear of the wheels, and an endless wrapping belt travelling through this tube, as described. 16th. The combination, substantially as hereinbefore set forth, of a paste reservoir, its piston, its actuating screw, its ratchet feed, an upright paste receiving wheel having an annular groove in its edge or periphery which traverses the outlet of the paste reservoir, and a paste applying roller or wheel revolving with its edge in contact with said grooved periphery of the paste receiving wheel for the purpose described. 17th. The combination, substantially as hereinbefore set forth, in a cigarette machine, of a cutter carrying frame, means for reciprocating it longitudinally, a cutter mounted in said frame, means for vibrating it intermittently across the path of the continuous cigarette, supporting brackets on the cutter frame before and behind the cutter, a tubular supporting section longitudinally adjustable in the front bracket, its pinch screw, an independent tubular supporting section movable endwise in the rear bracket, and its actuating spring whereby the tubular support travels in a fixed path substantially coincident with that of the continuous cigarette, and the cutter intermittently vibrates across said path in contact with the adjacent edges of the holder sections to sever the cigarette. 18th. The combination, substantially as hereinbefore set forth, of a cutter carrying frame, parallel pivoted arms on which it is mounted, a power driven cam, and connections between the cam and the cutter carrying frame, whereby it is moved to and fro, a support for a continuous cigarette, a cutter and means for vibrating it intermittently across the line of travel of the continuous cigarette. 19th. The combination, substantially as hereinbefore set forth, of a cutter carrying frame, a cutter, means for actuating the cutter and frame, supporting brackets on the cutter carrying frame before and behind the cutter, an adjustable tubular supporting section projecting from one of the brackets towards the cutter, and spring-actuated tubular supporting section projecting from the other bracket towards the cutter.

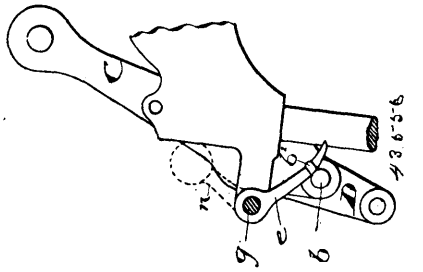
No. 43,555. Electric Current and Current Generator Governor. (*Courant électrique et gouverneur de générateur de courant.*)



Charles Wiese, George Garrabaldi Roe, and Herbert George Ralfe, all of Ottawa, Ontario, Canada, 10th July, 1893; 6 years.

Claim.—1st. A current and current generator governor, composed of two reels A and A^1, having tubular cores set in line a distance apart and wound with fine insulated wire, each of which is connected separately at one end with the same wire of the main circuit line and the other end of one connected with the other wire of the said main, soft iron cores C and C^1, freely sliding in the cores of the reels and provided at their inner ends with heads c and c^1, and insulating hub C^{111}, placed between said heads and, firmly held between them, a non-magnetic connecting piece C^{11}, rigidly uniting said heads and hub, suitable non-magnetic extension pieces to said cores, forming one rigid axle with the same and provided with means for operating controlling devices, means for carrying said extensions so as to enable the cores to slide freely in the tubes of the reels, a soft iron ring mounted upon the head c^1, but insulated from it and connected with the other wire of the main line, a brass ring K^1, connected to the adjacent end of the wire of the reel A^1, adjustably suspended above the last named ring, a soft iron disc K, having an insulated rim k, suspended above the head c, and a walking beam J, pivoted to a post secured to the hub C^{111}, and having screw-threaded ends, on which the disc K, and ring K^1, are suspended, substantially as set forth. 2nd. The combination, with the two wires of an electric circuit, of a reel wound with insulated wire, one end of which is connected with one wire and the other with the other wire, another similar reel set a distance apart from the other, and its centre in line therewith, and being similarly wound and having one end of the wire connected to the same wire of the circuit as the corresponding end of the other reel, soft iron cores adapted to move freely in the tubular cores of the reels, and each having a head opposite each other united into a rigid structure by a non magnetic connection and an insulating hub, a soft iron ring mounted on one of the heads, but insulated therefrom and connected to the same wire of the main circuit, as the corresponding end of the opposite reel first above referred to, a suspended ring of brass adapted to make contact with said mounted ring, and connected with the end of the wire of the adjacent reel, a soft iron disc having an insulated rim suspended above the head of the other core, and adapted to make contact therewith, a post secured to the insulating hub, a walking beam pivoted in said post, and carrying said suspended ring and disc adjustably, substantially as set forth. 3rd. The combination of the two reels A and A^1, having tubular cores 2, 2^1, set in line a distance apart, and wound with insulated wire 3, 3^1, soft iron cores C, C^1, adapted to move freely in said reels, and having heads c, c^1, a connecting piece C^1, connecting said heads, a hub C^{11}, of insulating material placed between said heads, and through which said connecting piece passes, non magnetic extensions D and D^1, screwed endwise to said cores, cross heads E and E^1, secured to the ends of the extensions and forming one rigid structure or axle Z, levers F and F^1, engaged by said cross heads and controlling valves, friction rollers G and G^1, and rails g and g^1, supporting said extensions and enabling the axle Z to slide freely in the tubes of the reels, a soft iron ring H mounted upon the head c^1 by set screws h, and insulated by the blocks h^{11}, a post I having a cross head i, and upward extension $i,^1$ adjustably secured to the hub C^{11} by a tube I^1, and jam nut I^{111}, a walking beam J pivoted in said cross head and having screw threaded ends, the insulated soft iron disk K, and brass ring K^1, carried on the arms of the said beam and adapted to make contact with the head c and ring H below respectively, a projecting arm I^{111}, carried by the extension i^1 of the post I extending over the ring K^1, and a ground wire L^{11} connected thereto, a binding post and contact k^1 on said ring connected with the wire 3^1, and the circuit wires L and L^1 connected with the reel wires 3 and 3^1 by the wires l l^1 and l^{111}, with the ring H by the wire l^{11}, substantiantially as set forth. 4th. The combination of two cores C and C^1 having heads c and c^1, a connecting piece C^{11} screwed in said heads, an insulating hub C^{111} between said heads through which said connecting piece passes and the ring H mounted upon and insulated from the head c, substantially as set forth. 5th. The combination of an insulating hub C^{11} held between the heads of two soft iron cores passing through two reels, said heads firmly and non-magnetically connected, a post I with cross head i secured adjustably to said hub, a walking beam J pivoted in said head, an insulated soft iron disc K held adjustably on one arm of said beam so as to make contact with the head c below, and a brass ring K^1 held adjustably on the other arm and adapted to make contact with the ring H below, said two rings each connected with the terminal of an electric circuit, substantially as set forth.

No. 43,556. Compound Lever. (*Levier composé.*)

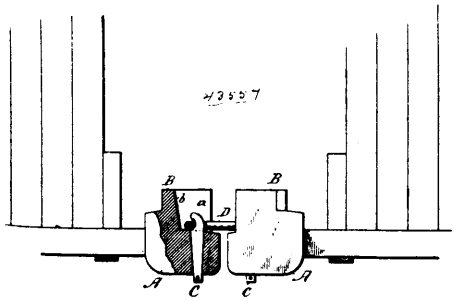


James Lakie Morrison, Toronto, Ontario, assignee of Thomas A. Briggs, Arlington, Massachusetts, U.S.A., 10th July, 1893; 6 years.

Claim.—1st. The combination, with a pivoted lever, of an arm pivoted to said lever, a bolt movably connected to one of said parts, and adapted to engage and release the other of said parts, and a gravity lever actuating the bolt, as set forth. 2nd. The combination of the pivoted lever C, provided with the eye c, the arm D, pivoted

to said lever and provided with the socket d, the bolt b, sliding in the aforesaid eye, and adapted to enter the socket, the lug b^1, projecting laterally from the bolt, and the cam e, adapted to be thrown in the path of the lug to automatically unlock the bolt during the movement of the lever, as set forth. 3rd. In combination, with the pivoted lever C, provided with the eye e, and the arm D, pivoted to said lever, and provided with the socket d, the bolt b, sliding in the aforesaid eye, a spring forcing said bolt toward the socket d, a lug b^1, projecting laterally from the bolt, a revoluble shaft parallel with the axis of the lever, the cam e, on said shaft, adapted to fall into the aforesaid lug, and a gravity lever attached to the aforesaid shaft to hold the cam in its requisite position in relation to the lug b^1, substantially as described and shown. 4th. In combination, with the lever C, provided with the eye e, and the arm D, pivoted to said lever and provided with the socket d, the bolt b, sliding in said eye and adapted to enter the socket, and the abutment o, projecting from the lever and in position to arrest the movement of the arm in one direction, and at a point to bring the socket d in line with the bolt, substantially as and for the purpose set forth.

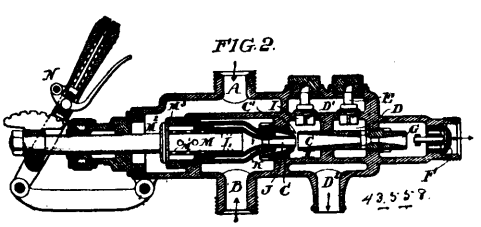
No. 43,557. Car Coupler. (*Attelage de chars.*)



Berton A. Keeler and George C. Griffith, both of Russell, Arkansas, U.S.A., 10th July, 1893; 6 years.

Claim.—1st. In a car coupling, a draw-head having a raised portion with an open end and top and an inclined rear wall, of a removable pin having an upwardly projecting portion carried by the draw-head, with which the link is adapted to engage, said upwardly projecting portion of the pin having a curved front edge and a convex rear edge, substantially as shown and for the purpose set forth. 2nd. In a car coupling, a draw-head A, having a raised portion B formed integral therewith, said raised portion having a recess with vertical side walls and an inclined rear walls, a tapered aperture c adapted to receive a tapered pin having a head shaped substantially as shown, said pin being locked in the aperture in the draw-head, for the purpose set forth. 3rd. In a car coupling, a draw-head having at its front end upwardly projecting side walls a, a, and an inclined rear wall b, a tapered aperture extending from the bottom of the recess formed by the walls a, a and b through the draw-head, a pin C adapted to be secured in said aperture so that the head thereof will lie within said recess, and a coupling link, substantially as shown.

No. 43,558. Injector. (*Injecteur.*)

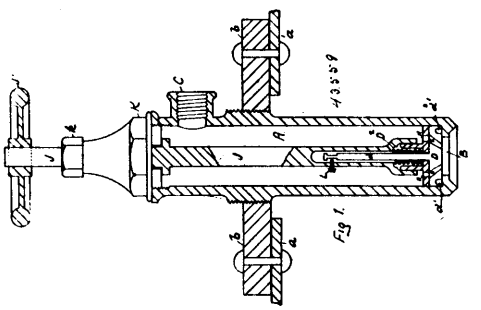


Louis Schutte, Philadelphia, Pennsylvania, U.S.A., assignee of Ernest Korting, Hanover, Prussia, 10th July, 1893; 6 years.

Claim.—1st. In an injector, the combination of a split combining tube, a central steam nozzle extending to or about to the split in the combining tube, an annular steam nozzle surrounding the central nozzle and terminating at a point in the combining tube back of the central nozzle and of the split, and a chamber surrounding the split in the combining tube and opening to the atmosphere. 2nd. In an injector, the combination of a split combining tube, a central steam nozzle extending to or about to the split in the combining tube, an annular steam nozzle surrounding the central nozzle, and terminating at a point in the combining tube back of the central nozzle and of the split, a chamber surrounding the split in the combining tube and opening to the atmosphere, and an outwardly opening check valve governing the connection of said chamber with the atmosphere. 3rd. In an injector, the combination of a split combining tube, a central steam nozzle extending to or about to the split in the combining tube, and directly connected with the steam supply, an annular steam nozzle surrounding the central nozzle, and terminating at a point in the combining tube back of the central nozzle and of the split, said annular nozzle receiving its steam supply from the central nozzle through a series of small holes in the intervening walls. 4th. In an injector, the combination of a split combining tube, a central steam nozzle arranged to connect directly with the steam supply, and extending to or about to the split in the combining tube, said nozzle having a series of small holes extending through its walls, an annular steam nozzle surrounding the central nozzle and receiving steam through the holes in the wall thereof, said nozzle extending to a point in the combining tube back of the split, a valve arranged to move over the openings in the walls of the central nozzle to regulate the supply of steam to the annular nozzle, and a chamber surrounding the split in the combining tube and opening to the atmosphere.

No. 43,559. Atomizer for Liquids.

(*Pulvérisateur de liquides.*)

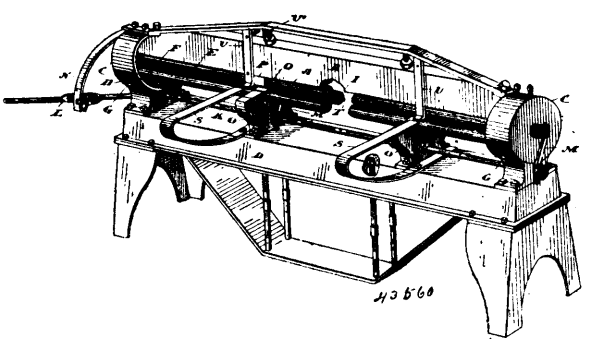


The Economical Gas Apparatus Construction Company, Toronto, Ontario, assignee of Leonard Lancaster, Merrifield, Franklin, Massachusetts, U.S.A., 10th July, 1893; 6 years.

Claim.—1st. In a gas making apparatus, a hydrocarbon liquid atomizing device formed of a cylindrical casing A, having a connection C, for admission of liquid hydrocarbon at a point external to the gas mixing chamber, and convergent apertures E, E, for discharge of liquid hydrocarbon within the gas mixing chamber, as herein described and for the purpose set forth. 2nd. In a gas making apparatus, a liquid hydrocarbon spraying apparatus having the cylindrical casing A, attached to the casing of the mixing chamber and having the admission connection C, and the disc D, with the convergent discharge apertures E, E, in combination with the spindle J, the cap K, and stuffing box k, and the wheel or handle J^1, as herein described and for the purpose set forth. 3rd. In a gas making apparatus, a liquid hydrocarbon spraying apparatus having the cylindrical casing A, the admission connection C, the disc D, with the convergent discharge apertures E, E, in combination with the disc F, and the spindle J, and the cap K, and the wheel or handle J^1, as herein described and for the purpose set forth.

No. 43,560. Sheet Metal Rolling Mill.

(*Moulin à rouleaux pour le métal en feuille.*)

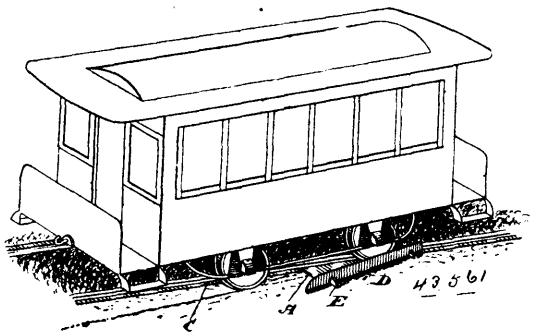


James Morrison, assignee of Walter Scott Shipe, both of Toronto' Ontario, Canada, 10th July, 1893; 6 years.

Claim.—1st. A sheet metal rolling machine, having three rolls geared together so that they will act as feed rolls, one of said rolls being provided with mechanism by which it may be adjusted without stopping the machine, substantially as and for the purpose specified. 2nd. A sheet metal rolling machine, having three rolls geared together so that they will act as feed rolls, the main driving roll being journalled in a stationary bearing box, while the two rolls geared to it are carried in adjustable bearing boxes, in combination with rod and lever suitably connected to the movable bearing boxes of one of the rolls, and provided with locking mechanism by which the said roll may be locked in the position to which it is adjusted, substantially as and for the purpose specified. 3rd.

In a sheet metal rolling machine, a feed roll having a series of adjustable lifting pins arranged in it, substantially as and for the purpose specified. 4th. In a sheet metal rolling mill, the main roll A, journalled in the stationary bearing boxes B, which are supported in the end brackets C, the roll E, geared to the roll A, and supported in the adjustable bearing boxes F, the roll I, journalled in the bearing boxes J, and geared to the roll A, in combination with the links M, rod K, and lever L, provided with suitable locking mechanism, substantially as and for the purpose specified. 5th. In a sheet metal rolling mill, a beam R, connecting the end brackets C, which support the rolls in combination with the queen truss, V, substantially as and for the purpose specified. 6th. In a sheet metal rolling mill, the bed D, on which the brackets carrying the rolls are supported, in combination with the queen truss W, substantially as and for the purpose specified. 7th. In a sheet metal rolling mill, the springs S, designed to support the sheet about to be rolled, in combination with the stop plate U, arranged slightly below the surface of the supporting springs, substantially as and for the purpose specified.

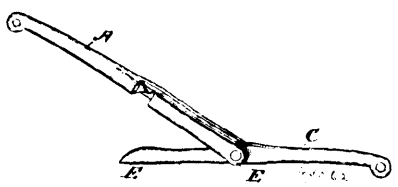
No. 43,561. Car Replacer. (*Lève-char.*)



James Findlay and Hugh Miller, both of Toronto, Ontario, Canada, 10th July, 1893; 6 years.

Claim.—1st. As an improved car replacer, a plate flanged on one side to fit over the flange of the rail, and an upwardly projecting flange on its opposite side, set at a suitable angle, substantially as and for the purpose specified. 2nd. As an improved car replacer, a plate flanged on one side to fit over the flange of the rail and an upwardly projecting flange on its opposite side set at a suitable angle, fingers projecting from the said plate beyond the angular flange being provided to support the said plate, substantially as and for the purpose specified. 3rd. As an improved car replacer, a plate flanged on one side to fit over the flange of the rail, and an upwardly projecting flange on its opposite side, set at a suitable angle, fingers projecting from the said plate beyond the angular flange, being provided to support the said plate, and spikes projecting below the said plate, holding it in position, substantially as and for the purpose specified.

No. 43,562. Joint. (*Joint.*)



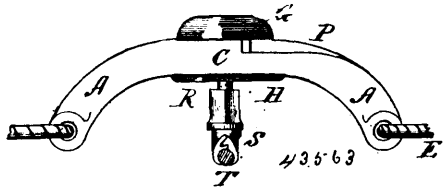
Daniel Conboy, Toronto, Ontario, Canada, 11th July, 1893; 6 years.

Claim.—1st. A concealed joint connecting the two back bows and consisting of two bars pivoted on the said bows and connected together by a pivot pin, one of the bars being bifurcated behind the pivot pin and the other bar extending beyond the pivot pin and designed to fit within the bifurcated bar when the joint is locked, substantially as and for the purpose specified.

No. 43,563. Support for Trolley Wires.
(*Support pour fil de trollée.*)

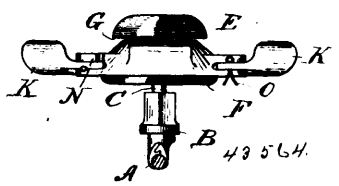
John S. Gustin and Frank O. Weydell, both of Chicago, Illinois, U.S.A., 11th July, 1893; 6 years.

Claim.—1st. In a trolley wire support the combination of a two part supporting frame, with a one part insulation secured on such frame, and a wire support fastened to the insulation. 2nd. In a trolley wire support the combination of a one part piece of insulation, with a two part insulation supporting frame, one part of which is removable and adapted to bear upon the other part and furnish a support for the insulation. 3rd. In a trolley wire support the combination of two interlocking parts of a supporting frame, with an insulation piece adapted to be engaged between them and thus to be supported by them. 4th. In a trolley wire support the combination



of a supporting frame piece provided with an aperture therethrough, with a removable part which in part bridges or fills such aperture, and an insulation piece adapted to be received into the unfilled portion of such aperture and thus to be secured and supported upon the two parts of the frame. 5th. In a trolley wire support the combination of a supporting frame piece, with an aperture therethrough one end of such aperture small and of a shape to receive the insulation, the other end large and of a shape to receive an interlocking and removable piece, and a piece of insulation adapted to be received and sustained between the two. 6th. In a trolley wire support the combination of a two part frame each part having a portion of a substantially circular aperture, with a grooved piece of insulation adapted to be received in such aperture and between the parts and to be supported upon them. 7th. In a trolley wire support a two part frame piece consisting of a main portion with a removable part resting thereon, the two shaped so as to form an aperture of variable size between them, with a piece of insulation adapted to be received in such aperture and having an overhanging portion to bear upon both pieces of the frame whereby the insulation is supported on such frame pieces. 8th. In a trolley wire support the combination of a main supporting frame piece having three shoulders thereon, facing, two of them in one direction and one in the other, with a removable frame piece adapted to interlock with the main frame piece and engage such shoulders and a piece of insulation grooved and adapted at its grooved part to be received into the aperture formed between the two parts of the frame.

No. 43,564. Trolley Wire Support.
(*Support pour fil de trollée.*)



John S. Gustin, Chicago, Illinois, U.S.A., 11th July, 1893; 6 years.

Claim.—1st. In an insulated trolley wire support, the combination of a single piece of insulation, with means for securing the trolley wire thereto, and a two part supporting frame for such insulation, one part hinged and adapted to be secured in position to hold the insulation. 2nd. In an insulated trolley wire support, the combination of a single piece of insulation with a two part supporting frame, one part hinged upon the other, and oppositely projecting lips or ears on such frame pieces to receive the span wire. 3rd. In an insulated trolley wire support, the combination of a single piece of insulation with a two part supporting frame, one part hinged upon the other, and oppositely projecting lips or ears on such frame pieces to receive the span wire, the ear on the hinged piece off the centre so that the tension on the span wire tends to hold the parts together. 4th. In an insulated trolley wire support, the combination of a single piece of insulation, with means for attaching the trolley wire or clamp thereto, a two part supporting frame for such piece of insulation, one part hinged upon the other, and both recessed so as to form an aperture to receive the insulation, two ears at the extremities of the principal portion of the frame, and one oppositely faced ear midway between them, which said ears receive the span wire and thus tend to force the parts together. 5th. In an insulated trolley wire support, the combination of a single piece of insulation, with a two part frame for the same, a span wire, and bearing surfaces for such span wire oppositely faced, and at least one of them out of line with the span wire so that the tension of the latter tends to force the parts together to secure the insulation.

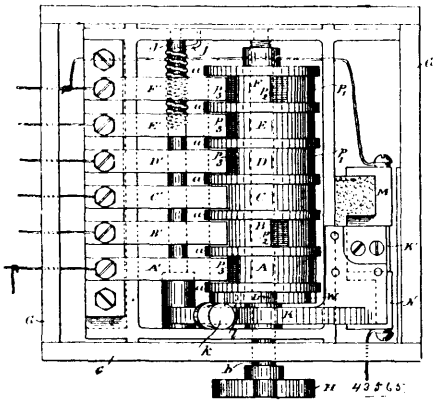
No. 43,565. Electric Switch. (*Aiguille électrique.*)

The Consolidated Car Heating Company, assignee of James Finney McElroy, both of Albany, New York, 11th July, 1893; 6 years.

Claim.—1st. In an electric switch, a cylinder composed of a series of discs constructed of a non-conducting substance, a spindle upon which said cylinder is mounted, a metallic plug placed in one or more of said discs, a means for connecting said metallic plug or plugs with an electric heater together with a means for connecting said metallic plug or plugs with the poles of a battery, substantially as described and for the purpose set forth. 2nd. In an electric

switch, a cylinder composed of a series of discs constructed of a non-conducting substance, each disc containing one or more metallic

Fig. 1



plugs, said metallic plugs arranged in series, metallic connections between said discs of the cylinder and wires connected with an electric heater, a means for connecting the current of electricity to said metallic connections, with a ground wire extending from one of said metallic connections, substantially as described and for the purpose set forth. 3rd. In an electric switch, a cylinder composed of a series of non-conducting discs, each disc containing one or more metallic plugs, a spindle upon which said cylinder is mounted, a series of metallic springs in contact with said discs, one of said springs attached to a wire carrying the current of electricity to the switch, one of said springs attached to a wire connected with the ground, substantially as described and for the purpose set forth. 4th. An electric switch, composed of a series of non-conducting discs, one or more metallic plugs placed in each disc, said discs arranged in a cylinder in such a manner that the metallic plugs are in a series, the series of metallic conductors arranged to come into contact with said metallic plugs in the course of the revolution of the cylinder, in such a manner that all the metallic plugs in each series will be in contact with their corresponding conductors simultaneously, with a means of connecting said metallic plugs to each other, substantially as described and for the purpose set forth. 5th. In an electric switch, the combination of a cylinder composed of a series of non-conducting discs, one or more metallic plugs placed in each disc, said discs arranged in such a manner that the metallic plugs are in a series, a series of metallic conductors arranged to come in contact with said metallic plugs in the course of the revolution of the cylinder, in such a manner that all of the metallic plugs in each series will be in contact with their corresponding conductors simultaneously, with a means of connecting said metallic plugs to each other, a spindle upon which said cylinder is mounted, said spindle journalled in a suitable frame with a knob at the end of said spindle, by means of which the cylinder may be rotated, substantially as described and for the purpose set forth. 6th. An electric switch, consisting of a cylinder composed of a series of non-conducting discs, one or more metallic plugs in each of said discs, said discs arranged in such a manner that the metallic plugs are in series, a series of metallic conductors arranged to come in contact with said metallic plugs in the course of the revolution of the cylinder, in such a manner that all of the metallic plugs in each series will be in contact with their corresponding conductors simultaneously, with a means of connecting said metallic plugs to each other, a spindle upon which said cylinder is mounted, said spindle journalled in a suitable frame, with a knob at the end of said spindle, by means of which the cylinder may be rotated, a rocking shaft mounted in said frame, a bell crank lever secured to said rocking shaft, a metallic disc on one arm of said bell crank lever, adapted to make and brake the circuit by entering and leaving the space between the two poles of the switch, substantially as described and for the purpose set forth. 7th. In an electric switch, the combination of a cylinder composed of a series of non-conducting discs, one or more metallic plugs placed in each disc, said discs arranged in a cylinder in such a manner that the metallic plugs are in series, a series of metallic conductors arranged to come into contact with said metallic plugs in the course of the revolution of the cylinder, in such a manner that all of the metallic plugs in each series will be in contact with their corresponding conductors simultaneously, with a means of connecting said metallic plugs to each other, one end of said cylinder provided with a wheel with a notched or corrugated periphery, a lever mounted upon a shaft, said shaft suitably journalled in the frame of the switch, one arm of said shaft provided with a lug fitted to engage in the notches or corrugations in said wheel, by means of which said cylinder may be locked, with a disk at the end of said lever arm adapted to fit between the poles of the switch, with a series of metallic conductors arranged to come in contact with the metallic plugs in the discs of the cylinder, substantially as described and for the purpose set forth. 8th. In an electric switch, the combination of a suitable frame, a metallic post insulated from said frame connected with the electricity bearing wire, a similar metallic post insulated from said frame, and separated from first mentioned post a short distance, and connected by wire to a metallic conductor, a rocking shaft mounted in said frame and carrying a pivotally mounted lever, a metallic disc secured to said lever but insulated therefrom, capable of fitting snugly between said metallic posts, a cylinder mounted upon a spindle journalled in said frame, a wheel secured to one end of said cylinder having a notched periphery, a lug protruding from said lever capable of engaging with the notches in said wheel, said cylinder composed of a series of discs, each carrying one or more metallic plugs, with a series of metallic conductors resting upon said disks and coming in contact with said metallic plugs as the cylinder is revolved, one of said metallic conductors connected by wire to the ground, or to the negative pole of the battery, substantially as described and for the purpose set forth. 9th. In an electric switch, the combination of a cylinder composed of six metallic discs, a metallic conductor in contact with each of said discs, three of said discs containing each three metallic plugs, one of said discs containing two metallic plugs, one containing five metallic plugs, and one containing one metallic plug arranged in such a manner that the metallic plugs in the fourth and sixth discs shall be connected together by a metallic rod and be brought simultaneously in contact with their respective metallic conductors, and the metallic plugs in the second and sixth connected by a metallic rod, and be brought simultaneously in contact with their respective metallic conductors, and the metallic plugs in the first and fourth will be connected by a metallic rod, and fifth and sixth connected by a metallic rod and brought simultaneously in contact with their respective metallic conductors, and the first and second be connected by a metallic rod, and the third and sixth connected by a metallic rod and be brought simultaneously in contact with their respective metallic conductors, the first and second connected by a metallic rod, third and fourth connected by a metallic rod, and the fourth and sixth connected by a metallic rod and be brought simultaneously in contact with their respective metallic conductors, the current supply wire connected with one of said metallic conductors, an out wire connected to another of said metallic conductors, a means for making and breaking the circuit between the poles of the switch, substantially as described and for the purpose set forth. 10th. In an electric switch, the combination of a rotary cylinder, a wheel keyed to the shaft upon which said cylinder is mounted, with a lever suitably mounted, said lever engaging with said wheel in such a manner as to prevent the rotation of the wheel, substantially as described and for the purpose set forth.

No. 43,566. Electric Motor. (*Moteur électrique.*)

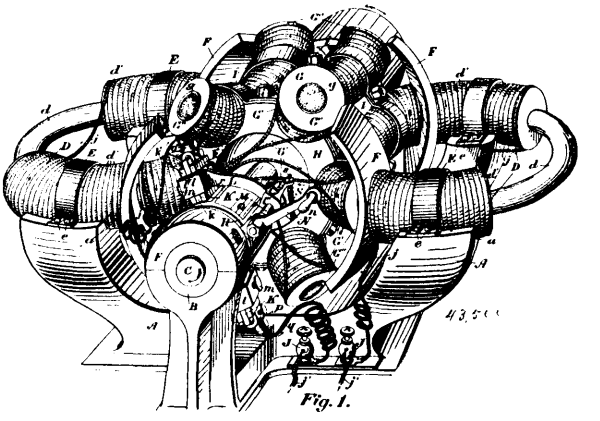


Fig. 1.

William Joseph Still and Randolph MacDonald, both of Toronto, Ontario, Canada, 11th July, 1893; 6 years.

Claim.—1st. In an electro magnetic motor the combination with the magnets and armature, of the arc shaped or curved plates formed substantially, as shown, and secured to the ends of the magnets, as and for the purpose specified. 2nd. In an electro magnetic motor, the combination armatures, magnets and end plates constructed as specified, of a commutator and brushes co-acting in such a manner that a reverse current is thrown into an armature immediately upon its being de-magnetized, as and for the purpose specified. 3rd. In an electro magnetic motor, the combination with the arc shaped magnets, of the arc shaped armatures secured to the main shaft of the machine and located when opposite the poles of the arc shaped magnets directly in the path of the lines of force between such poles, as and for the purpose specified. 4th. In an electro magnetic motor, the combination with the arc shaped magnets having the curved end plates extending above and below the coils of the magnets, of the arc shaped armatures secured on the hub attached to the shaft of the machine, the ends of such armatures being constructed so that they rotate laterally parallel to the plates the concave of which plates are located next the shaft and the curve of the plate described from a radius less in diameter than the circle

described by the ends of the armatures in their rotation so that the ends of the plates are nearer to the armature and the central portion farther away as the armature rotates, as and for the purpose specified. 5th. The combination with the arc shaped electro magnets and arc shaped armatures secured to the hub on the main shaft of the machine and designed to co-act with such magnets, one end of the coils of each armature being connected to one section of the commutator while the other end of the coil of the armature is connected to the adjacent section of the commutator, of the stationary brushes designed to co-act with the commutator so as to supply the current to the armatures, short circuit such current and change its direction so as to change the polarity of the armatures as they rotate, as and for the purpose specified. 6th. The combination with the arc shaped magnets D, secured in the concave recess *a*, in the top of the frame A, by metal straps E, and having the end plates F, constructed as specified, of the arc shaped armatures G, secured in the concave recesses in the hub H, by the metal straps I, the said armatures being constructed as specified and means whereby the current is conveyed to the coils of the magnets and armatures, as and for the purpose specified. 7th. The combination of the arc shaped magnets D, constructed as specified, and having the solid soft iron core *d*, of the arc shaped armatures G, constructed as specified and having the core *g*, formed of a bundle of twisted insulated wires and means whereby the current is conveyed to the coils of the magnets and armatures, as and for the purpose specified. 8th. The combination with the magnets and the armatures constructed as specified, one end of the wire of the coil of each armature being connected to one section of the commutator while the other end is connected to the adjacent section of the commutator, of the brushes K, the upper one of which conveys the current passing through the magnets over the wire *j*, to the commutator and through the armatures as indicated out on the lower brush the brushes in each case being formed of the central plate *k*, of a conducting material of low resistance and the side plates k^1, of a conducting material of high resistance and the commutator being formed of metallic sections Q, separated from each other by the partition *r*, formed of insulating material as and for the purpose specified. 9th. In an electric motor the combination with the magnets armatures and commutator formed of metallic sections and insulating partitions between the sections, of the brushes formed of a central plate of a conducting material of low resistance and the side plates of a conducting material of high resistance, as and for the purpose specified. 10th. In an electric motor the combination with the magnets, armatures and commutator formed of metallic sections and insulating partition between the sections, of the brushes formed as specified and insulated from the holder by the insulating plates l^1, l^2, as and for the purpose specified. 11th. In an electric motor the combination with the magnets armatures and commutator formed of metallic sections and insulating partitions between the sections, of a plate of conducting material of low resistance and a plate of conducting material of high resistance situated behind the plate of low resistance as to its direction of rotation, as and for the purpose specified.

No. 43,567. Process of Making Butter.

(*Procédé de fabrication du beurre.*)

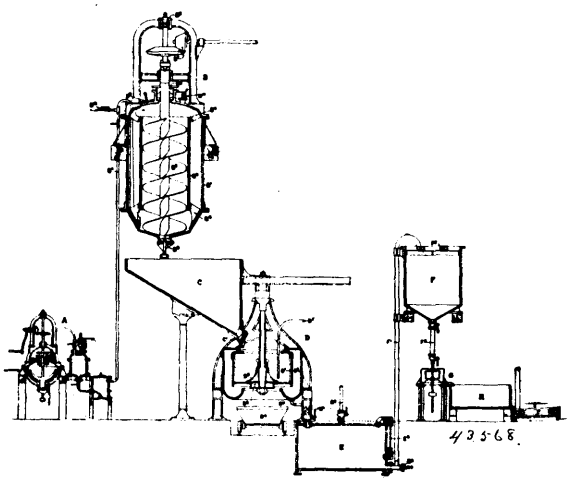
Douglas A. Thurston, Toronto, Ontario, Canada, assignee of Thomas E. Hall, Chicago, Illinois, U.S.A., 11th July, 1893; 6 years.

Claim.—1st. The process described, of removing the solids of milk or cream in the form of butter, which consists in churning matured or soured milk or cream until seeds of butter appear, then uniting with the partially churned cream or milk, butter which has been melted to an oil by heat, the temperature of which may vary from eighty-five to ninety-five degrees, the uniting of such butter oil to the partially churned cream or milk, thereby gathering up the solids in such cream or milk, and removing them in the form of butter, substantially as and for the purpose specified.

No. 43,568. Wet Process for Extracting Gold and Silver. (*Procédé pour l'extraction de l'or et de l'argent.*)

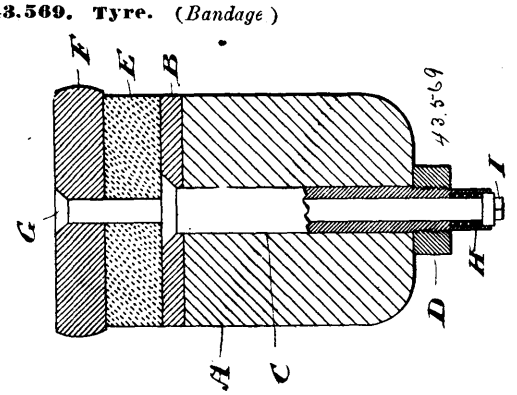
Joseph William Sutton, Eagle Street, Brisbane, Australia, 11th July, 1893; 6 years.

Claim.—1st. In the wet process for the extraction of gold or gold and silver from pulverized ores or other finely divided material, subjecting the ore in the chlorinating chamber to constant circulation by means of a screw conveyor, substantially as hereinafter described and explained. 2nd. In the wet process for the extraction of gold or silver from pulverized ores or other finely divided material, separating and washing or leaching out the solution containing the gold or silver from the ore in a hydro extractor substantially as hereinbefore described and explained. 3rd. In the wet process, for the extraction of gold or silver from pulverized ores or other finely divided material, filtering the gold or silver precipitate from the liquid in a hydro extractor, substantially as hereinbefore described and explained. 4th. In the wet process for the extraction of gold or silver from pulverized ores or other finely divided material, evaporating the surplus spent liquid so as to prevent any losss of gold or silver which might be caused by imperfect precipitation or filtration, substantially as hereinbefore described and explained. 5th. My improved process for the extraction of gold or silver or both from pulverized ores or other finely divided material, consisting essentially in subjecting the pulverized ore or other material in the chlorinating chamber to constant circulation by means of a screw conveyor, separating and leaching out the



solutions containing the gold or silver, by means of a hydro extractor, filtering the gold or silver precipitates in a hydro extractor, and evaporating all the surplus spent liquid, substantially as hereinbefore described and explained. 6th. In an apparatus for the extraction of gold or silver or both by chlorine from pulverized ores or other finely divided material, the combination, with a chlorinating chamber or vessel, of a screw conveyor such as B^2, provided with a casing such as B^3, having suitable supports such as B^4, substantially as illustrated in the drawing.

No. 43,569. Tyre. (*Bandage*)



Woodburn Langmuir, Toronto, Ontario, Canada, 11th July, 1893; 6 years.

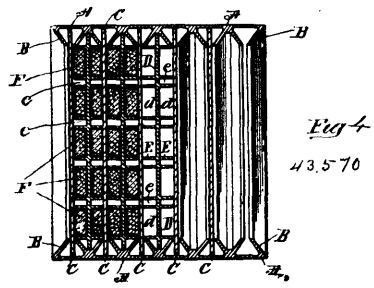
Claim.—1st. An improved cushion tire, consisting of an inner metal band secured to the felloe, an outer metal band, a rubber band placed between the inner and outer metal bands and a pin projecting through the metal, and rubber bands to prevent lateral movement without interfering with the compressibility of the rubber cushion, substantially as and for the purpose specified. 2nd. An improved cushion tire, consisting of an inner metal band bolted to the felloe by a hollow bolt, an outer metal band, a rubber band placed between the inner and outer metal bands, a bolt projecting through the metal, and rubber bands, and held in position by a nut and spring, substantially as and for the purpose specified.

No. 43,570. Storage Battery. (*Batterie secondaire.*)

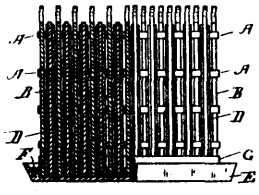
Edward Preston Usher, Grafton, Massachusetts, U.S.A., 11th July, 1893; 6 years.

Claim.—1st. In a storage battery, a flexible wrapper, for the series of plates, such wrapper having inwardly projecting inclined lips to hold the separator sheets and lead plates in proper alternate position, substantially as set forth. 2nd. In a storage battery, the flexible wrapper of rubber compound with yielding inclined lips thereon, in combination with the positive and negative plates, and the separators thereby held in position, substantially as set forth. 3rd. The receptacle lined with rubber having yielding lips with inclined surfaces, in combination with the alternate plates and the interposed separators, substantially as set forth. 4th. The flexible wrapper having yielding inclined lips in parallel rows, and the separator sheets held thereby, in combination with the leaden plate or frame formed with projecting ribs or flanges, and with active material introduced into the space between said flanged frame and separators, substantially as set forth. 5th. In a storage battery, flanged plates or frames combined with active material in tablet form, and with

interposed separators, substantially as set forth. 6th. In a storage battery, a tablet of active material enveloped in lead foil, substantially as set forth. 7th. In a storage battery, a tablet of active material enveloped in lead foil, finely perforated, substantially as set forth. 8th. In a storage battery, the flanged leaden plate D E, having lateral spaces for active material, and open vertical wells separating the same, substantially as set forth. 9th. A storage battery all comprising the following detachable parts, viz.: a flexible wrapper having yielding lips, separators held by such lips, flanged plates alternating with said separators, tables of active material between such plates and separators, all adapted to be placed within the receptacle enclosing such parts with the electrolytic liquid, substantially as set forth.



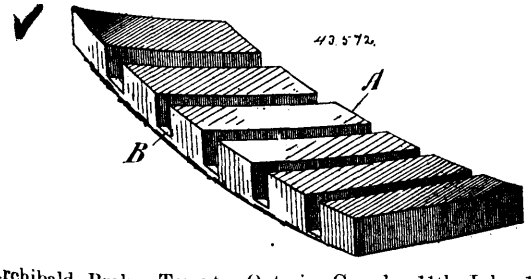
No. 43,571. Storage Battery. (*Batterie secondaire.*)



Edward Preston Usher Grafton, Massachusetts U.S.A., 11th July, 1893; 6 years.

Claim.—1st. In combination, with the plates of a secondary cell, two wooden separator plates applied closely on each side of each positive plate, two or more rubber bands or their equivalent interposed between each negative plate and the adjacent separator, leaving an open space on each side of said negative plate, substantially as described. 2nd. A battery cell composed of alternate positive and negative plates with interposed separator plates, in combination with a sealing substance or compound, in which the lower edges only of said plates are embedded, such substance or compound not adhering to the jar, substantially as set forth. 3rd. A battery cell composed of alternate positive and negative plates and interposed separator plates, in combination with sealing strips applied to the vertical edges of the several plates along the lower portion thereof, substantially as set forth. 4th. The described method of sealing and uniting the several plates and interposed separators of a battery, consisting in erecting such plates and separators in a shallow mass of hot viscous gum and allowing said gum to cool and harden around the base of the plates and separators, and finally applying a strip of similar material to the lower vertical edges of said parts, substantially as set forth.

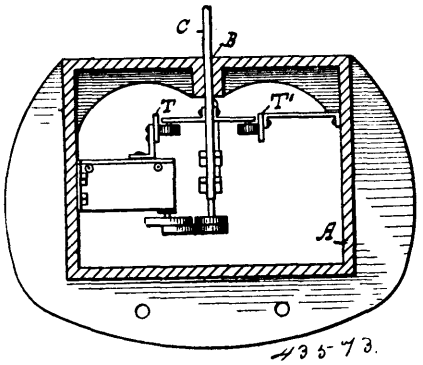
No. 43,572. Brake Shoe. (*Sabot de frein.*)



Archibald Brake, Toronto, Ontario, Canada, 11th July, 1893; 6 years.

Claim.—A brake shoe having its rubbing surface made of soft and hard metal arranged alternately diagonally across its surface, substantially as and for the purpose specified.

No. 43,573. Electric Railway. (*Chemin de fer électrique.*)

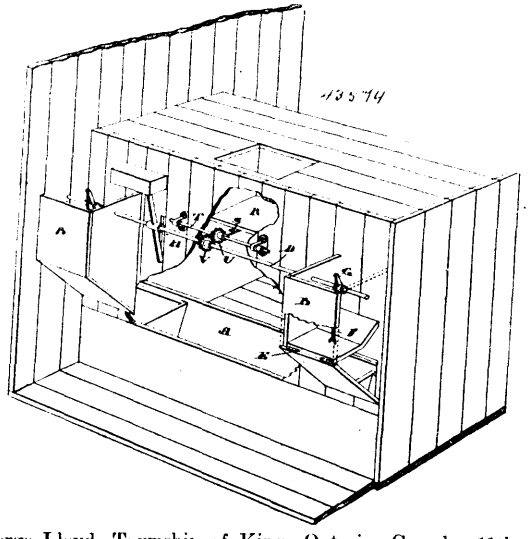


Oscar Axel Enholm, New York, State of New York, U.S.A., 11th July, 1893; 6 years.

Claim.—1st. The combination in an electric railway of an open conduit arranged beneath the surface of the street, an insulated main or bus wire, an exposed supplementary circuit and means, substantially as shown and described, for energizing the supplementary circuits by the passage of the vehicle. 2nd. The combination in an electric railway of an open conduit arranged beneath the surface of the street, an insulated main or bus wire, an exposed supplementary circuit connected to the main wire, means, substantially as shown and described, for energizing the supplementary circuit by the passage of the vehicle and a continuous insulated return circuit, as set forth. 3rd. The combination in an electric railway of an open conduit arranged beneath the surface of the street, an insulated main or bus wire, a series of sectional supplementary circuits and one or more levers arranged within the open conduit and adapted to operate the switch by the passage of the vehicle, substantially as described. 4th. The combination in an electric railway of an open conduit arranged beneath the surface of the street, a main or bus wire insulated as shown, supplementary sectional conductors having exposed faces and being connected by switching apparatus to the main conductor and permanently to the return conductor with said return conductor and a depending shank or plow extending from beneath the vehicle arranged to operate the switch, as and for the purposes set forth. 5th. The combination in an electric railway, of an open conduit arranged beneath the surface of the street, a main insulating wire, supplementary sectional exposed conductors, interposing switches between the sectional conductors and the main conductors, said switches being provided with levers extending into the conduit and pivoted therein as shown, a water tight box in which the switching apparatus is located, all the parts being properly insulated and adapted to operate, as and for the purposes set forth.

No. 43,574. Stock Feeder.

(*Appareil pour nourrir le bétail.*)

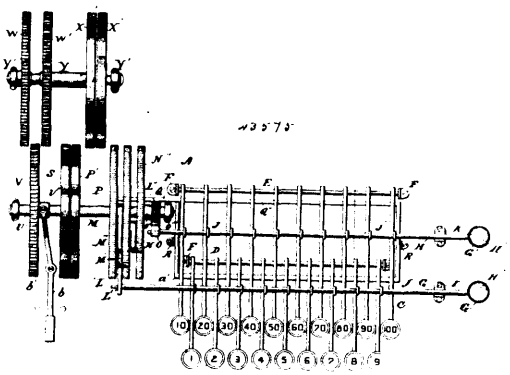


George Lloyd, Township of King, Ontario, Canada, 11th July, 1893; 6 years.

Claim.—1st. A clock, a series of bins each having a trap door, a shaft D, between said bins, an arm H, on said shaft, pulleys on said shaft corresponding to the number of bins, each having a cord connecting it with its corresponding trap door, and the lever I, arranged to keep said doors closed, in combination with mechanism, substantially as described, between said lever I, and the clock to release said lever, as and for the purpose specified. 2nd. A bin

provided with a trap door E, and connected to a revolvable shaft D, by a rope F, a lever H, fixed to the said shaft D, and supported by the hinged plate I, resting in the notch *b*, made in the pivoted lever J, in combination with the link *c*, pivoted lever K, weight L, cord N, weight M, cord O, and alarm clock Q, substantially as and for the purpose specified.

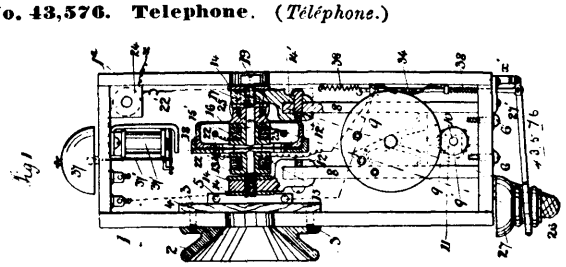
No. 43,575. Adding Machine. (*Machine à additionner.*)



John H. Jackson, Pen Argyl, Pennsylvania, and Chandler A. Oates, New York, all in the United States of America, 11th July, 1893; 6 years.

Claim.—1st. In an adding machine, a pair of numbering wheels, substantially as described, in combination with a pair of ratchet wheels, and pawls actuated by a series of key levers, and a pair of long levers extending at right angles to and loosely connected with the key levers, as set forth. 2nd. In an adding machine, the combination of numbered wheels and ratchets, substantially as described, a lever extending in a direction substantially parallel with the axis of said wheels, and a series of key levers loosely connected at equi-distant points along said lever, as and for the purpose described. 3rd. The combination in an adding machine, of registering wheels having numbered peripheries, a pair of pawl connected ratchet wheels secured to rotate with one of the registering wheels, a pinion and rack, and a lever having a series of equidistant keys loosely connected thereto, as set forth. 4th. The herein described adding machine, provided with a key lever, in combination with a lever passing at right angles to the lever, and having its end connected with ratchet wheels, whereby a ratchet wheel and numbering wheel are given a complete revolution at one stroke, as specified. 5th. In an adding or registering machine, a pair of circular discs or wheels having numbers on their peripheries, one of the wheels being provided with a single internal tooth, and the other with an internal annular gear, in combination, with a pinion mounted on a bearing fixed in relation to the numbered wheels and having a number of teeth equal to a decimal of the number of teeth in the annular gear, whereby a movement caused by the single tooth will advance the larger numbered wheel one one-hundredth of a revolution, as described. 6th. In an adding machine or registering device, substantially as described, a pair of co-operating registering numbered wheels, in combination, with a laterally movable gear wheel, a pair of gear wheels mounted on an independent shaft with their teeth arranged to be engaged by said laterally movable gear, and a pair of mounted registering wheels, secured to revolve with the gear wheels on said independent shaft, substantially as described. 7th. In combination, with a pair of numbered registering wheels, a laterally movable gear, and a pair of numbering wheels mounted on an independent shaft and provided with gears with which said laterally movable wheel is adapted to engage and disengage, in the manner and for the purpose substantially as described.

No. 43,576. Telephone. (*Téléphone.*)

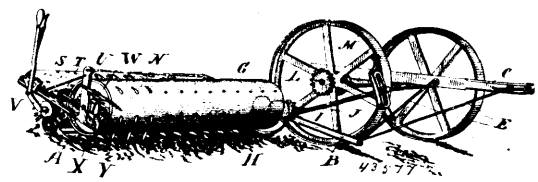


Sir Charles Stewart Forbes, London, England, 11th July, 1893; 6 years.

Claim.—1st. The combination of the compound ringing magnets having soft iron pole pieces carried by one end with a tympan box, and tympan and adjustable polar extensions, each carrying an inducing bobbin filled with a conducting wire, connecting line and earth, and the generator at the reverse end, operating substantially as described. 2nd. The combination of the compound magnets having at one end pole pieces supporting the cylinder, the ring *s* through which the said cylinder is supported by said pole pieces, the two tympan plates carried by said cylinder and polarized by the adjustable screwed cups, and the T-shaped extension carrying the inducing bobbins, the microphone and induction coil operating therewith, and the generator mounted in the reverse end of said magnets for actuating the bell by means of the switching gear as described. 3rd. In a magneto telephone combination, the T-shaped extension carrying inducing coils operating in the manner set forth.

No. 43,577. Pea Harvester.

(*Machine à récolter les pois.*)



John Bearman, Elderslie, Bruce, Ontario, 11th July, 1893; 6 years.

Claim.—1st. A revolving cylinder or roller suspended above the cutter bar and provided with projecting fingers, in combination with a travelling apron set in proximity to a revolving cylinder or roller and made to travel at right angles to the forward movement of the machine, substantially as and for the purpose specified. 2nd. A revolving cylinder or roller suspended above the cutter bar and provided with fingers arranged in rows and with mechanism by which they are at stated intervals made to protrude from and recede into the surface of the cylinder or roller in combination with a travelling apron set in proximity to a revolving cylinder or roller and made to travel at right angles to the forward movement of the machine, substantially as and for the purpose specified. 3rd. A revolving cylinder or roller suspended above the cutter bar and provided with fingers arranged in rows and with mechanism by which they are at stated intervals made to protrude from and recede into the surface of the cylinder or roller, a supplemental cutter projecting in front of and at the end of the frame B, above the cutter bar A, in combination with mechanism for operating the knife of the said cutter, substantially as and for the purpose specified.

No. 43,578. Electric Motor. (*Moteur électrique.*)

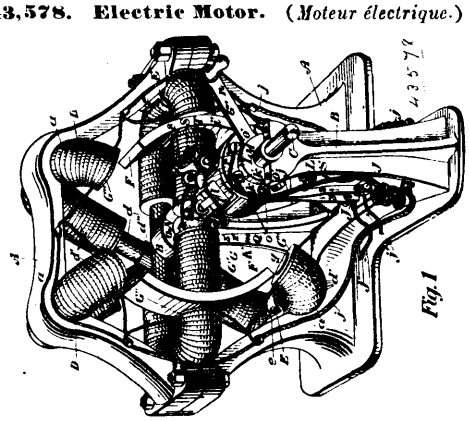


Fig 1

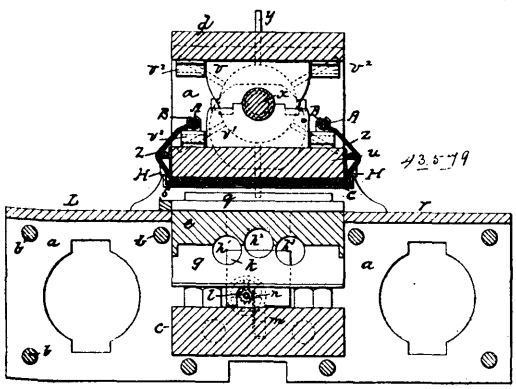
William Joseph Still, Toronto, Ontario, 12th July, 1893; 6 years.

Claim.—1st. In an electro magnetic motor the combination with the magnets and armature, of the arc shaped or curved plates formed substantially as shown and secured to the ends of the armature, as and for the purpose specified. 2nd. In an electro magnetic motor the combination with the armatures, magnets and end plates constructed as specified, of a commutator and brushes co-acting in such a manner that a reverse current is thrown into a magnet immediately upon its being de-magnetized, as and for the purpose specified. 3rd. In an electro magnetic motor the combination with the arc shaped magnets of the arc shaped armature secured to the main shaft of the machine and located when opposite the poles of the arc shaped magnets directly in the path of the lines of force between such poles, as and for the purpose specified. 4th. In an electro magnetic motor the combination with the series of arc shaped magnets, of the arc shaped armature secured on the hub attached to the shaft of the machine and having end plates constructed so that they rotate laterally parallel to the ends of the magnets the curve of the plates being described from a circle greater in diameter than the circle in which the ends of the magnets are placed so that the end of the plates are nearer to the magnets and the central portion farther away from such magnets as the armature rotates, as and for the purpose specified. 5th. The combination, with the series of arc-shaped electro-magnets and arc-shaped armature

secured to the hub of the main shaft of the machine and designed to co-act with such magnets, one end of the coils of each armature being connected to one brush while the other end of the coils is connected to the other brush, both of which brushes are held in arms secured to a shaft and rotate with such shaft, of a stationary commutator designed to co-act with the brushes so as to supply the current to the magnets, short circuit such current and change its direction, so as to change the polarity of the magnets as the armature rotates, as and for the purpose specified. 6th. The combination, with the arc-shaped magnets D, secured in the concave recesses *a*, in the frame A, by metal straps E, and having the plates constructed as specified, of the arc-shaped armature G, having the plate F, constructed as specified and secured to the hub H, the said armature being constructed as specified, and means whereby the current is conveyed into the coils of the armatures and magnets, as and for the purpose specified. 7th. The combination, with the arc-shaped magnets D, constructed as specified and having the core *d*, formed of a bundle of twisted insulated wires and the armature G, constructed as specified and having a soft solid iron core *g*, as specified and means whereby the current is conveyed to the coils of the magnet and armatures, as and for the purpose specified. 8th. The combination, with the armature and magnets constructed as specified, and the wires running through the commutator to their corresponding magnets connected together in two series, of the rotating brushes K, the lower one of which conveys the current passing through the armatures over the wires *j*, to the brushes thence through the commutator to the magnets, the plates of the brushes being insulated from the holder and being formed of a central plate *k*, of a conducting material of low resistance and the side plates k^1, of a conducting material of high resistance and the commutator being formed of insulated sections Q, separated from each other by the partition *r*, formed of insulating material, as and for the purpose specified. 9th. The combination, with the armatures and magnets constructed as specified, of the rods 2, and 3, the split ring upper end of which surrounds the rings 4, and 5, respectively, of the insulated wires G^1, leading from the ring 5, to and through the armature and back through one brush K, to the commutator thence through the magnets to the commutator and out by the other brush, wire *j*, ring 4, and rod 2, as and for the purpose specified.

No. 43,579. Mould for Stereotyping.

(*Moule stéréotype.*)

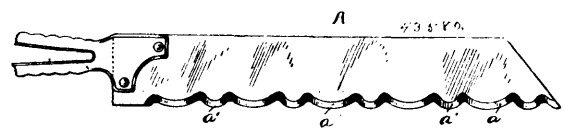


George Eastwood, Norwich, England, 12th July, 1893; 6 years.

Claim.—1st. In the production of matrices or moulds for stereotyping, the process which consists in, first, the partial drying of the moist flong by means of heat until the superfluous moisture is driven out and the adhesive and other substances of which the flong is composed are consolidating, and, second, in the pressing of the flong while hot, and in the act of consolidating upon the forme so as to take an impression of same, substantially as and for the purpose hereinbefore described. 2nd. The process of producing matrices or moulds for stereotyping, which consists, first, in partially drying the moist flong while it is suspended between a platen at the top of a heating chamber which also constitutes the type bed; secondly, in taking the required impression upon the partially dried flong while hot, between a forme on said type bed and said platen, and, thirdly, in drying the resulting matrix or mould while it is suspended between said platen and the top of said heating chamber, substantially as and for the purpose set forth. 3rd. In apparatus for producing matrices or moulds for sterotyping, a heating chamber provided with openings at top for the outlet of heated air, the top of said chamber also constituting a type bed, in combination with a platen adapted to be brought down and to press a flong upon a forme placed upon said type bed, substantially as and for the purpose hereinbefore described. 4th. In the heating chamber of an apparatus for producing matrices or moulds for stereotyping and the top of which chamber constitutes the type bed, transverse flues for hot air, in combination with vertical side passages and openings in top of said chamber whereby the hot air escapes by said openings, substantially as and for the purpose hereinbefore described. 5th. In the heating chamber of an apparatus for producing matrices or moulds for stereotyping, the combination, with the transverse flues, vertical side passages and top openings for the passage of hot air, as set forth, of shutters or slides whereby the flow or passage of hot air can be regulated, substantially as hereinbefore described. 6th. In apparatus for producing matrices or moulds for stereotyping, the combination, with a platen adapted to be brought down towards the forme of type of guides or slideways on the under side of said platen adapted to receive a frame or holder containing the flong to be impressed, substantially as and for the purpose hereinbefore described. 7th. In apparatus for producing matrices or moulds for stereotyping, the combination, with the platen adapted to be brought down towards the form of type, of spring arms on the under side of said platen, and guides or slideways carried by said arms and adapted to receive a frame or holder containing the flong to be impressed, whereby when the platen is brought down to produce the impression, the guides somewhat yield and when the platen is again lifted the guides, together with the flong and its frame are moved out of contact with the blanket and platen, substantially as and for the purpose hereinbefore described. 8th. The combination of a heating chamber *c*, the top of which constitutes a type bed, hot air outlets *j*, *j*, in top of said chamber, a frame D, adapted to hold a flong, guides or slideways C, C, to receive the sider of said frame, a platen *u*, carrying said guides, and means for lowering and raising said platen, whereby a flong held in said frame when in said guides can be forced down upon a forme on said type bed to take an impression of said forme and be then raised clear of said forme while still held in said frame in said guides.

No. 43,580. Knives for Bread and Cake.

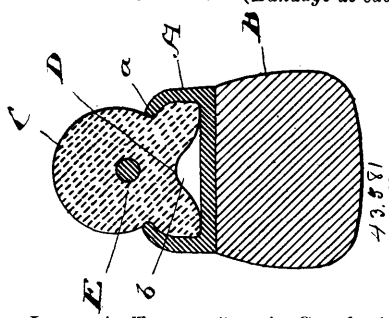
(*Couteau à pain et gâteau.*)



John Henry Clauss, Fremont, Ohio, U.S.A., 12th July, 1893; 6 years.

Claim.—1st. A knife blade, the cutting edge whereof comprises alternating long and short ridges or elevations, substantially as and for the purpose set forth. 2nd. A knife blade, the cutting edge whereof comprising alternating long or short ridges or elevations, with the short ridges more nearly approximating the shape of a cross cutting saw tooth, substantially as shown for the purpose specified. 3rd. A blade for a bread or cake knife, precisely as shown for the purpose specified.

No. 43,581. Rubber Tire. (*Bandage de caoutchouc.*)



Woodburn Langmuir, Toronto, Ontario, Canada, 12th July, 1893; 6 years.

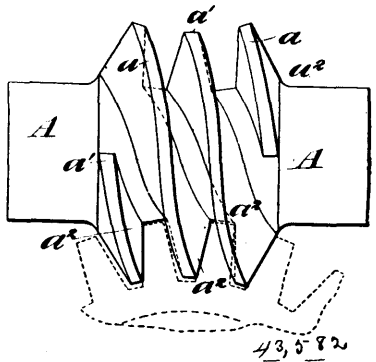
Claim.—1st. A metal band secured to the felloe, and having inwardly curved flanges to form a space around the wheel, a rubber tire having a base shaped to spring between the flanges and fit into the said space, in combination with means to force the base of the tire against the bottom and flanges of the metal band, substantially as and for the purpose specified. 2nd. A metal band secured to the felloe and having inwardly curved flanges to form a space around the wheel, a rubber tire having a base with a grooved channel extending longitudinally through it, in combination with means to force the base of the tire against the bottom and flanges of the metal band, substantially as and for the purpose specified. 3rd. A metal band secured to the felloe and having inwardly curved flanges to form a space around the wheel, a rubber tire having a base with a grooved channel extending longitudinally through it, in combination with a rod extending longitudinally through the rubber, and provided with a nut to draw the ends of the rod together, and means to force the base of the tire against the bottom and flanges of the metal band, substantially as and for the purpose specified.

No. 43,582. Worm Gear. (*Engrenage à vis sans fin.*)

James Franklin Welch, Brooklyn, New York, U.S.A., 12th July, 1893; 6 years.

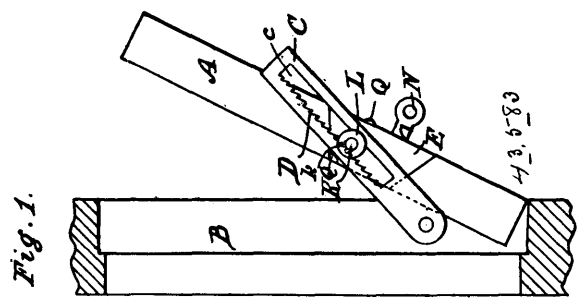
Claim.—A worm and a worm wheel, a tooth of the worm being set in a curved plane corresponding to the curve of the circum-

ference of the worm wheel, and having its driving or contact side varied along its length to assume different pitches relative to the



axis of the worm, and the teeth on the worm wheel, having their contact sides formed in a compound curved plane, having a general oblique direction across the face of the wheel to correspond to the face of the worm tooth, substantially as set forth.

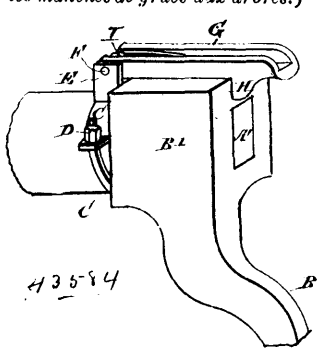
No. 43,583. Apparatus for Regulating Fanlights and Analogous Articles. (*Appareil pour régler les fenêtres en éventail et autres articles analogues.*)



Robert Adams, 67 Newington Causeway, London, England, 12th July, 1893; 6 years.

Claim.—1st. The combination, with a bar, pivoted to the frame of a fanlight, window or door, a slot formed in the free end of this bar, a rack formed on one side of said slot, of a lever pivoted in a casing secured on the side of the said fanlight window or door, a projection passing through a slot in the said casing, having teeth engaging the rack in the said bar, and means for disengaging the said teeth from the said rack, substantially as set forth. 2nd. The combination, with the lever J, pivoted on a stud *i*, in a suitable casing, the projection K and teeth *k*, spring *m*, the operating lever M, pivoted on the said stud *i*, the spring *n*, the recess P, engaging the projection *p*, on the lever J, of the bar C, having slot *c*, and teeth D, substantially as set forth. 3rd. The combination with the catch R, of the projection *p*, on the operating lever M, substantially as set forth.

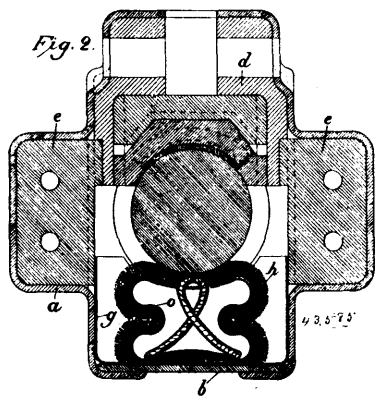
No. 43,584. Method of Securing the Handles of Cranes to their Shafts. (*Méthode d'assujétir les manches de grues aux arbres.*)



Thomas Hodder Heard and William Kirkley Birkinshaw, both of Derby, England, 12th July, 1893; 6 years.

Claim.—1st. As a means of securing a winch handle to its shaft, the combination with said shaft, of a spring controlled catch, substantially as specified. 2nd. In apparatus for securing a winch handle to its shaft, the combination with the shaft, of a jaw carrying gripping ring, substantially as specified. 3rd. In apparatus for securing a winch handle to its shaft, the combination with the shaft, and the jaw carrying gripping ring of the spring, controlled arm, having a projecting catch, substantially as specified. 4th. In apparatus for securing a winch handle to its shaft, the combination, with the squared end of the shaft and handle, of the jaw carrying gripping ring C, arm G, projecting catch H, and spring I, substantially as specified.

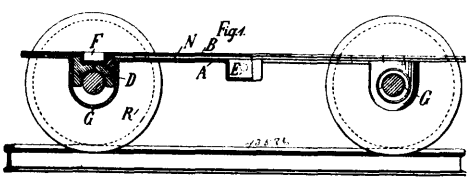
No. 43,585. Axle Box for Railway Carriages.
(*Boîte à graisse pour voitures de chemin de fer.*)



Hermann Sichelschmidt, Dortmund, Prussia, 12th July, 1893; 6 years.

Claim.—1st. An axle box for railway carriages characterized by several parts pressed out of the sheet steel and shaped after the style of the wheel box, which parts are put together and welded to each other by means of electricity in such a way that the whole represents a compact closed box into which, through a removable lid, the axle bearing parts are introduced, substantially as described. 2nd. In an axle box an automatic lubricating arrangement consisting of two oil containers *g* which hold a woollen cushion *h* with an elastic frame *o* of perforated sheet steel bent or arched in a double sense and through which an oil wick has been drawn, substantially as described.

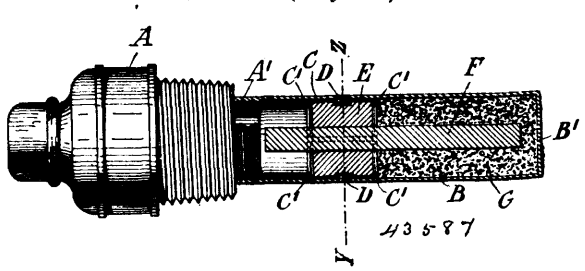
No. 43,586. Railway Vehicles.
(*Voitures de chemin de fer.*)



Hermann Sichelschmidt, Dortmund, Prussia, 12th July, 1893; 6 years.

Claim.—1st. Axle boxes and bearings for the wheels of contractors, colliery and similar wagons, constructed and arranged, substantially as hereinbefore described, and as illustrated by the accompanying drawings. 2nd. In combination with the axle box and bearing of a contractors, colliery and similar wagon, a lubricant chamber, and a wick channel and wick connecting the chamber with the oil hole of the bearing, constructed and arranged substantially as hereinbefore described, and as illustrated by the accompanying drawings. 3rd. In contractors, colliery and similar wagons, wheels pressed out of a single plate, and having a cap welded or otherwise secured thereon, substantially as hereinbefore described, and as illustrated by the accompanying drawings.

No. 43,587. Projectile. (*Projectile*)



Harry Allen, London, England, 12th July, 1893; 6 years.

Claim.—1st. The combination of a shell and a high explosive of the nature specified without any detonator, as and for the purpose

described. 2nd. The combination of a shell and a charge composed of a mixture of nitrate of ammonia without any detonator, as and for the purpose specified. 3rd. The combination of a shell and a charge composed of a mixture of nitrate of ammonia and napthaline, (or mono nitro naphthaline, or di-nitro naphthaline, or their compounds) without any detonator, as and for the purpose specified. 4th. In the manufacture of shells the use of high explosives of the kind specified which in themselves or in combination are inert and non-explosive by any ordinary means but which explode without the use of a detonator upon meeting a body of resistance when the shell is discharged from a gun, as and for the purpose specified. 5th. The combination with a fuse of a case B B¹, detonator such as F, and anti-concussion holding block such as E, substantially as described and illustrated in the accompanying drawings. 6th. The combination in a shell of a detonating device composed of a fuse, a case B B¹, detonator F, and anti-concussion holding block E, with high explosives of the nature specified, as and for the purpose specified. 7th. The use of the explosive bodies herein specified in shells with time or other fuses, substantially as and for the purposes described.

No. 43,588. Process of Treating Ores.

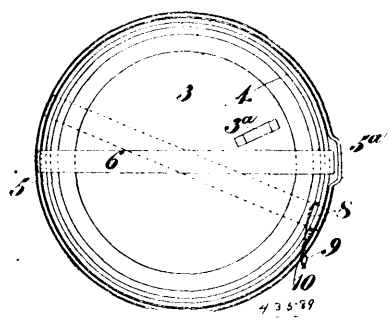
(*Procédé pour le traitement des minerais.*)

Thomas Alva Edison, Llewellyn Park, New Jersey, U.S.A., 12th July, 1893; 6 years.

Claim.—1st. The process of separating nickeliferous from non-nickeliferous pyrrhotite, where both occur in the same ore, consisting in subjecting the crushed material to a magnetic action of such strength that, due to the difference in magnetic capacity of the nickeliferous and non-nickeliferous pyrrhotite, the non-nickeliferous pyrrhotite will be acted upon magnetically, while the nickeliferous pyrrhotite will not be thus acted upon, substantially as set forth. 2nd. The process of treating ores containing nickeliferous and non-nickeliferous pyrrhotite, consisting in first crushing the ore to free the particles of pyrites from the gangue and other metals, passing the material through a magnetic separator of a sufficient strength to withdraw all the magnetic pyrites, then passing the magnetic pyrites through another magnetic separator having a sufficient strength to act upon the non-nickeliferous pyrrhotite, but not upon the nickeliferous pyrrhotite, substantially as set forth.

No. 43,589. Method of Sealing Receptacles.

(*Méthode de cacheter les réceptacles.*)

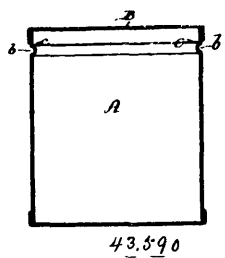


Jean Leembruggen, 9 P. C. Hoofstraat, Amsterdam, the Netherlands, 12th July, 1893; 6 years.

Claim.—1st. In a receptacle of the kind hereinbefore referred to, having an internal rib or flange, a cover having a rim adapted to be supported by said rib or flange, and a spring arranged to bear upon said cover, and having its ends retained by the wall of said receptacle, substantially as herein described. 2nd. A food or other receptacle having an internal rib or flange, a cover having its rim adapted to be supported by said rib or flange, a ring or suitable packing material interposed between said rib or flange and said rim, and a spring arranged to bear upon said cover, said receptacle being formed to engage the ends of said spring and hold said spring firmly against said cover, substantially as herein described for the purpose specified. 3rd. A food or other receptacle having an internal rib or flange, a cover having a rim adapted to be supported by said rib or flange and formed with an air opening, a spring arranged to bear upon said cover and held at its ends by said receptacle, and a stopper or a piece of obturating material adapted to close the opening in said cover and to be held in place by pressure of the spring and by the external pressure of the atmosphere when a partial vacuum is set up within said receptacle, substantially as herein described for the purpose specified. 4th. A food or other receptacle formed of sheet metal or other material, with an internal annular rib or flange, a convex cover formed of sheet metal or other material and having its rim adapted to be supported by said rib or flange packing material arranged between said rib or flange and said rim, and a bent metal spring arranged to bear upon the top of said cover and having its ends engaged with the wall of said receptacle, substantially as herein described for the purpose specified. 5th. A food or other receptacle formed of sheet metal or other material, with an internal annular rib or flange and with an annular groove or recess located above said rib or flange, a cover of sheet metal or other material having a raised central portion and a rim adapted to be supported by said rib or flange, packing material interposed between said rib or flange and said rim, and a bent spring arranged to bear upon the convex portion of said cover and having its ends arranged to enter the annular groove formed in said receptacle, the upper edge of said receptacle being bent away at one part above said groove, substantially as herein described for the purpose specified. 6th. The combination, with a receptacle having an annular internal rib or shoulder, a cover or closing device having its rim adapted to be supported by the rib or shoulder in said receptacle, and a spring for holding said cover or closing device upon its seat, of a wire thread passed around said spring and through a hole or holes in the wall of said receptacle, and having its ends secured by a lead or other seal, substantially as hereinbefore described for the purpose specified.

No. 43,590. Sheet Metal Receptacle.

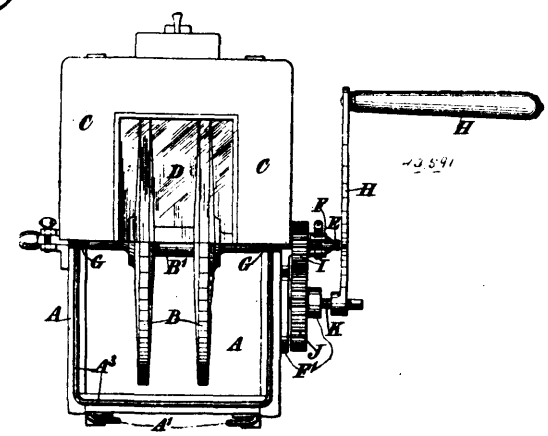
(*Réceptacle de métal en feuille.*)



Gustavus A. Waeber and Arthur E. Kleinfeldt, both of New York, State of New York, U.S.A., 12th July, 1893; 6 years.

Claim.—1st. A sheet metal vessel or receptacle provided with a somewhat deep circumferential corrugation at any convenient point between the extremities of its body or between the top and bottom edge of its head or cover, in combination with another circumferential corrugation immediately adjacent to the first one, such corrugations being so formed and combined that the vessel can be readily opened by rupturing in the manner described, and incisions, strip sections, tongue and key can be dispensed with, substantially as set forth. 2nd. A sheet metal vessel or receptacle, provided with a somewhat deep circumferential corrugation at any convenient point between the extremities of its body or between the top and bottom edges of its head or cover, in combination with a groove or incision made partly through the metal along or adjacent to the line of the said corrugation, whereby the vessel is rendered capable of being opened by rupturing it in the manner described, so as to dispense with both a strip section or tongue and other prolongation of a strip section, and with a key or other device for tearing out a portion of the material, substantially as set forth.

No. 43,591. Method of and Apparatus for Making Butter. (*Méthode et appareil pour la fabrication du beurre.*)

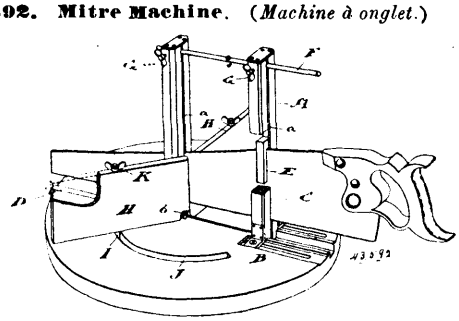


John H. H. Duncan, London, England, 12th July, 1893; 6 years.

Claim.—1st. The herein described method of making butter which consists in causing cream to assume the form of a thin layer or sheet, throwing the same outward by centrifugal force, and subjecting it to concussive action by contact with a fixed surface, substantially as herein described. 2nd. The herein described method of washing butter granules which consists in placing said butter granules in water to which a rapid rotary or circulating movement is imparted, whereby the butter granules are drawn down and caused to circu-

late in the water, substantially in the manner herein described. 3rd. A churn or apparatus for making butter, comprising a vessel to contain the cream to be treated, one or more discs mounted so as to be partly immmersed in said cream, and so as to be capable of turning motion, and a guard or baffle against which cream is thrown by centrifugal force by said disc or discs, substantially as herein described for the purpose specified. 4th. A churn or apparatus for making butter, comprising a vessel to receive the cream to be treated, one or more discs mounted to rotate in said vessel, and a guard or guards arranged above said disc or discs, and a trough shape in cross section, substantially as herein described for the purpose specified. 5th. An apparatus for use in the manufacture of butter, comprising a vessel with removable cover and one or more rotary discs arranged within said vessel, the sides of said vessel being arranged to extend above said discs to contain water for the purpose of washing, and it may be brining butter granules, substantially as described. 6th. Apparatus for making butter, comprising a vessel A having a removable cover with glazed aperture, one or more discs mounted to rotate within said vessel below said cover, and means for rotating said disc or discs, substantially as described. 7th. An apparatus or churn, comprising a closed vessel made in two superposed parts, and provided with a removable cover, one or more rotary discs fixed upon a spindle mounted in bearings between the two parts of said vessel, packing material arranged to form a water tight joint between the juxtaposed parts of said vessel, and between these parts and said spindle, and means for clamping or fixing said parts of the vessel together, substantially as herein described. 8th. In a churn, the combination of the closed vessel A, having the removable cover C, with hanging partitions C^1, and glazed aperture D, the rotary discs B located within said closed vessel and toothed gearing for driving said discs, said gearing comprising a pinion I fixed upon the disc spindle, and a toothed wheel J fixed upon a separate spindle, and each spindle being adapted to receive a crank handle, substantially as described. 9th. In a churn, the combination of the closed vessel A, having the removable cover C with hanging partitions C^1, and glazed aperture D, the rotary disc B located within said closed vessel, and a handle H^1 provided with two apertures H^2 and H^3 for varying the power and speed, substantially as described. 10th. In a churn, the combination of a closed vessel A, formed with a discharging aperture or apertures at the bottom, and made in two parts hinged or jointed together at one end, packing material arranged between such parts, and a clamping device for securing the other ends of said parts together, a cover C with hanging partitions C^1 and glazed aperture D, rotary discs located in said vessel, and toothed wheels I and J fixed on spindles adapted to receive a crank handle, and whereby the discs can be driven at a high rate of speed at the beginning of the churning operation, substantially as described.

No. 43,592. Mitre Machine. (*Machine à onglet.*)



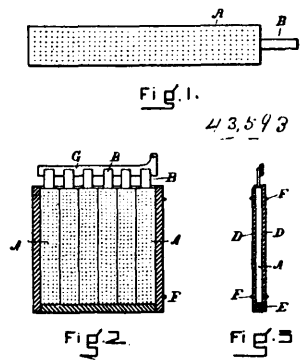
Rudolph B. Dettweiler, Galt, Ontario, Canada, 12th July, 1893; 6 years.

Claim.—1st. Two posts placed opposite to each other at a short distance apart, a vertical slot or parting being made in each post to permit the passage of an ordinary saw, in combination with two wings carried on movable pivots and located opposite to each other on either side of the saw, substantially as and for the purpose specified. 2nd. Two posts placed opposite to each other at a short distance apart, a vertical slot or parting being made in each post to permit the passage of an ordinary saw, a block E, fitting over and guiding the saw, in combination with two wings carried on movable pivots and located opposite to each other on either side of the saw between the posts, substantially as and for the purpose specified. 3rd. Two posts placed opposite to each other at a short distance apart, a vertical slot or parting being made in each post to permit the passage of an ordinary saw, a block E, fitting over and guiding the saw, and a block D, movably supported in the bed plate B, immediately below the saw, substantially as and for the purpose specified.

No. 43,593. Battery Plate. (*Plaque de batteries.*)

Edward Preston Usher, Grafton, and William Franklin Draper, Hopedale, both in Massachusetts, U.S.A., 12th July, 1893; 6 years.

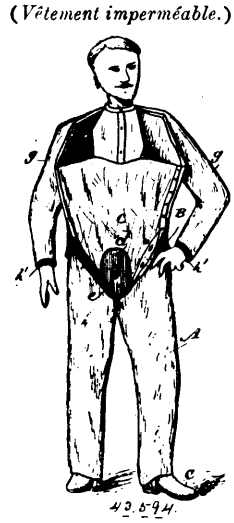
Claim.—1st. A unit of active material for battery plates, consisting of a tablet of lead oxide or its equivalent, formed of a wrapper of lead foil and a filling of dry powder, with a conducting strip embedded therein and protruding therefrom, substantially as set



forth. 2nd. A battery plate, consisting of a series of connected tablets A, each composed of a wrapper of lead foil and a filling of oxide of lead as active material, and each having a protruding conducting strip B, united to a transverse strip or bar G, substantially as set forth. 3rd. A battery plate having a series of tablets, each composed of a wrapper of lead foil and a filling of oxide of lead as active material, and each furnished with a protruding conducting strip B, united to a transverse bar G, such tablets having the transverse binders or spacing strips H, substantially as set forth. 4th. A battery plate, composed of a series of parallel tablets of active material, enclosed in a wrapper of perforated lead foil, with a conducting strip protruding from each tablet, and a transverse connecting bar, in combination with wooden separators at each side of the series of tablets and a marginal frame, substantially as set forth. 5th. A battery plate, composed of a series of parallel tablets, each composed of a wrapper of lead foil and a filling of oxide of lead as active material, and each having a protruding conducting strip, said tablets being firmly held with an open space between each tablet and the next one on said plate, substantially as set forth.

No. 43,594. Waterproof Garment.

(*Vêtement imperméable.*)

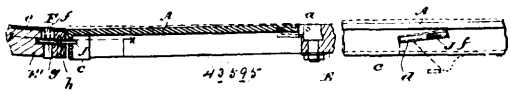


Otto Van Oostrum, Portland, Oregon, U.S.A., 12th July, 1893; 6 years.

Claim.—1st. A waterproof garment, comprising a jacket and trousers, joined to provide a depending flap or skirt for the jacket, substantially as described. 2nd. A waterproof garment, comprising trousers with flies adapted to be closed with buttons or equivalent means, a jacket open in front, overlapping the trousers waistband and secured thereto, and also adapted to be closed by buttons or like connecting devices, substantially as described. 3rd. A waterproof garment, comprising trousers open in front, and adapted for closure with buttons or equivalent means, a jacket secured near its lower edge upon the waistband of the trousers and overlapping said waistband, and a folding and laterally extensible lining piece secured by its edges to the inner surface of the jacket and trousers near their flap edges, substantially as described. 4th. A waterproof garment, composed of trousers and a jacket joined together, a folding interior lining all adapted for outward extension when the jacket and trousers are open in front, and sleeves and legs for the composite garment, adapted to form water tight joints with the wrists and foot covering of the wearer; substantially as described. 5th. In a waterproof garment, the sleeves having the elastic inner cuffs

adapted to clasp the wrists of the wearer, substantially as described. 6th. In a waterproof garment, the trousers, the jacket joined to the trousers, and both open in front, and folding and laterally extensible lining within, and the removable disk in an aperture formed in an elastic diaphragm attached upon the lower portion of the lining, substantially as described. 7th. In a waterproof garment, a jacket having flaps and tabs adapted to fold outwardly at the neck portion thereof, and provide an aperture equal to the diameter of the girth of the jacket, substantially as described. 8th. In a waterproof garment, a jacket provided with outwardly and inwardly folding flaps or tabs at the neck, and which are adapted to be secured together detachably when inwardly folded, substantially as described. 9th. In a waterproof garment, a jacket provided with contractile bands at its wristbands, substantially as described. 10th. In a waterproof garment, trousers enveloping waterproof boots, and secured thereto at the upper edges of said boots, substantially as described. 11th. In a waterproof garment, trousers secured to the lower edge of a jacket portion, and enveloping waterproof boots which are secured by their upper edges to the edges of the trousers, substantially as described. 12th. In a waterproof garment, a body portion or jacket attached permanently or removaly upon the waistband of trousers, the body portion having sleeves which are contractile at the wristbands, said body portion also having flaps or tabs at the neck to provide a capacious opening, and the legs of the trousers furnished with straps that pass below boots, which boots are water proof and have their upper edges secured interiorly upon the legs of the trousers, substantially as described.

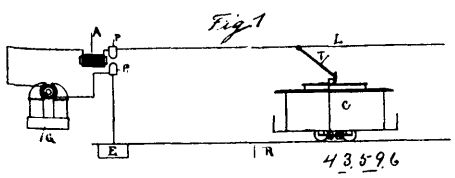
No. 43,595. Sewing Machine. (*Machine à coudre.*)



Charles Wesley Davis, Montreal, Quebec, Canada, 13th July, 1893; 6 years.

Claim.—1st. The combination, with the table and the hinged head of a sewing machine, of a horizontally movable locking finger located beneath the surface of said table and adapted to be engaged with said hinged head for the purpose set forth. 2nd. The combination, with the table and the hinged head of a sewing machine, of a horizontally movable locking finger located beneath the surface of said table and adapted to be engaged with said hinged head, and an actuating body portion or bolt connected with said finger and extending vertically through said table and being flush with the surface thereof, for the purposes set forth. 3rd. The combination, with the table and the bed plate of the hinged head of a sewing machine having an inclined slot in its face, of a horizontally movable locking finger located beneath the surface of said table, and adapted to be inserted within and to traverse such slot and means for operating such finger, as and for the purposes set forth. 4th. The combination, with the table having vertical shouldered annular aperture and horizontal recess *h*, and the hinged head of a sewing machine, of a locking device consisting of a rotatable body portion located in said vertical shouldered annular aperture, a plate for holding same in place, and a horizontally movable locking finger connected with and operated by said body portion to engage said body portion to engage said hinged head, as set forth. 5th. The combination, with the table having horizontal recess *h*, and the hinged head of a sewing machine, the bed plate of which has inclined slot *d*, of vertical bolt or spindle F, horizontally movable finger J, having angular connection therewith, and plate *e*, substantially as shown and described.

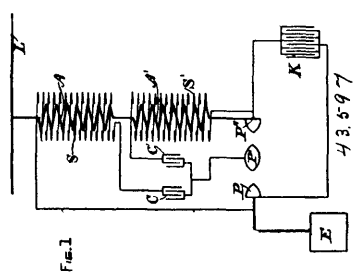
No. 43,596. Lightning Arrester. (*Paratonnerre.*)



Elihu Thomson, Swampscott, Massachusetts, U.S.A., 13th July, 1893; 6 years.

Claim.—1st. The herein described means of grounding a lightening arrester in shunt to a dynamo electric machine or other protected apparatus consisting essentially of grounding the arrester and machine through a common earth connection. 2nd. The combination, with an electric line, and dynamo machine connected to such line and to ground, of a lightening arrester consisting of two electrodes normally insulated from one another by a narrow insulating space, and placed in a shunt around the dynamo from the line to the wire or connection leading from the dynamo to ground. 3rd. The combination, with a line wire and apparatus such as electric motors fed from such line to and through a ground return circuit, of a lightening arrester one of whose separated plates or electrodes is attached to the line and the other of whose plates or electrodes is attached to a ground connection or ground wire to which ground wire is also attached the terminal of the dynamo which is normally to be kept grounded, while the other terminal is connected to the line, and arc rupturing devices for preventing the formation and continuance of an arc between the separated plates of the lightening arrester.

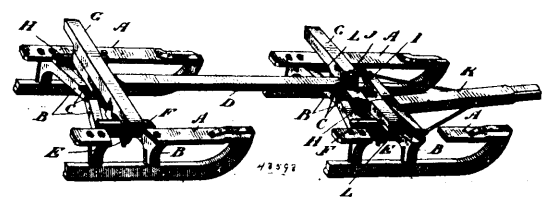
No. 43,597. Lightning Arrester. (*Paratonnerre.*)



Elihu Thomson, Swampscott, Massachusetts, U.S.A., 13th July, 1893; 6 years.

Claim.—1st. The herein described means for breaking down the dialectric and enabling the passage of an electric discharge over the spark gap, of a lightning arrester, consisting essentially of an induction device arranged to induce a magnified electric strain across the spark gap or gaps greater than that of the discharge itself. 2nd. The combination, of a protective spark gap or set of gaps, and means controlled by the discharge current for breaking down the dialectric in the gap by the momentary exhibition thereat, of a potential or electric strain greater than that which would be due to the discharge itself, as set forth.

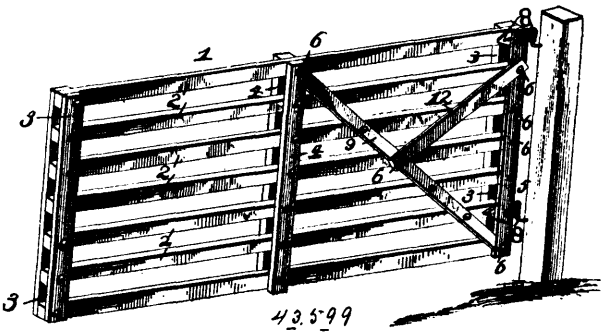
No. 43,598. Sleigh. (*Traîneau.*)



George V. Wyant, Petrolea, Ontario, Canada, 13th July, 1893; 6 years.

Claim.—1st. In a sleigh, a shaft F connected to the bolster G, or other part supporting the load, in combination, with runners A, journalled on the said shaft, substantially as and for the purpose specified. 2nd. In a sleigh, a shaft F, carried by bearing boxes H, attached to the plate I, in combination with the bents B, extending from the runners A, and journalled on the shaft F, by means of the bearing boxes C and E, substantially as and for the purpose specified. 3rd. In a sleigh, in which the two runners are capable of an independent rocking motion, a tongue pivoted to the bents of the said runners, substantially as and for the purpose specified.

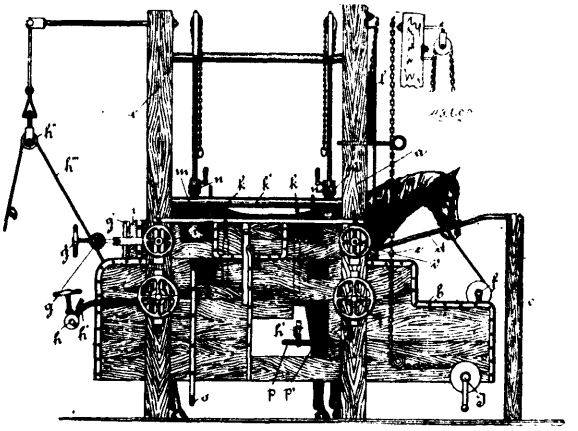
No. 43,599. Gate Brace. (*Aisselier de barrière.*)



Christian C. A., Sienknecht, Kingston, Tennessee, U.S.A., 13th July, 1893; 6 years.

Claim.—The combination, with a wooden gate, comprising horizontal rails and vertical bars, of an independent metal brace secured to the gate to prevent sagging, and composed of the vertical bar 5, arranged at the inner end of the gate, the inclined bar 9, connected to the lower end of the bar 5, and extending therefrom to the top of the gate at the middle thereof, and the oppositely disposed inclined bar 12, extending from the middle of the bar 9, to the top of the bar 5, and connected to the same, substantially as described.

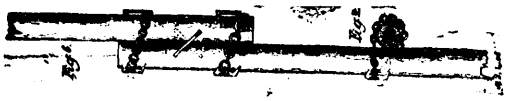
No. 43,600. Stand for Quadrupeds.
(*Support pour quadrupèdes.*)



Carl Hühn, Bockenheim, Germany, 13th July, 1893, 6 years.

Claim.—1st. A stand or holding apparatus for quadrupeds, especially for horses, having adjustable boards capable of being pressed against the ribs and hind quarters respectively, of the horse or other animal, the head of the animal resting upon suitably placed iron rods, whilst the neck is hung round by a suitably proportioned yoke, and the withers and shoulders of the animal are held fast by bows or spring arms across same, whilst at the same time the lying down of the animal is prevented by belly bands, all substantially in the manner and for the purpose hereinbefore set forth. 2nd. The combination with a stand or holding apparatus for quadrupeds, of the bows serving for the holding of the withers and shoulders, working against springs for the purpose of not hindering the breathing of the animals, substantially as and for the purposes hereinbefore set forth. 3rd. The combination with a stand or holding apparatus for quadrupeds, of an adjustable hoof holder, for the purpose of more securely holding the hoof to be operated on, substantially as and for the purposes hereinbefore set forth.

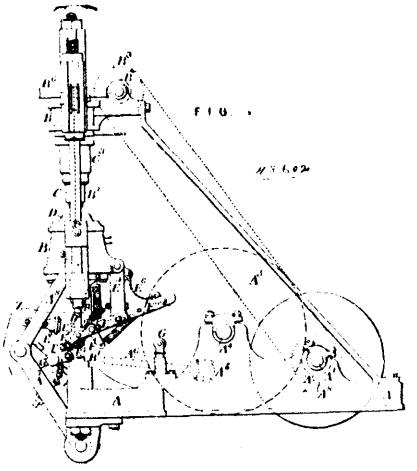
No. 43,601. Fastener for Scaffolds.
(*Appui d'échafaudages.*)



Albin Kühn, Heidelberg, Baden, Germany, 13th July, 1893; 6 years.

Claim.—A scaffold holder or appliance characterized by a brace *d*, with points *e*, bent downwards, a ring *a*, chain *b*, add hook *c*, intended to secure the rapid and sure connecting of scaffold poles and other like objects of any form or stoutness and at any desired angle, as well as the rapid disconnecting of the same, substantially as described.

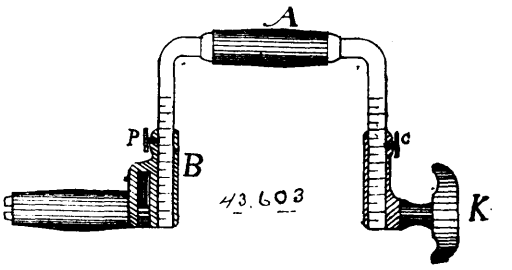
No. 43,602. Mould for Earthenware Articles.
(*Moule pour objets de poterie.*)



William West, Roseville, Roundhay, Leeds, York, England, 13th July, 1893; 6 years.

Claim.—1st. In apparatus for moulding clay or earthenware articles, a core fixed on a spindle slowly rotated by worm gear within a steam jacketted sleeve, inside the core a sliding bottom and punch urged by a spring down to stops, and outside the core a sliding sleeve urged by springs down to stops, substantially as and for the purpose set forth. 2nd. In apparatus for moulding clay or earthenware articles, a steam jacketted mould having a valve bottom with stem swivelled to a counterweighted lever, an arm on the stem with spring, and a tapped pawl on a toggle arm for partly turning the stem, a spring trigger on the lever holding the stem down, an adjustable tappet on the base to meet the lever and lower the stem, and an adjustable tappet pawl on toggle arm to met the trigger and lever and raise the stem, substantially as and for the purpose set forth. 3rd. In apparatus for moulding clay or earthenware articles, the combination of a frame carrying in its upper part a core presented downwards, a vertically guided cross head which holds a mould presenting its mouth upwards and which is jointed to toggle arms linked by a connecting rod to a revolving crank, substantially as described.

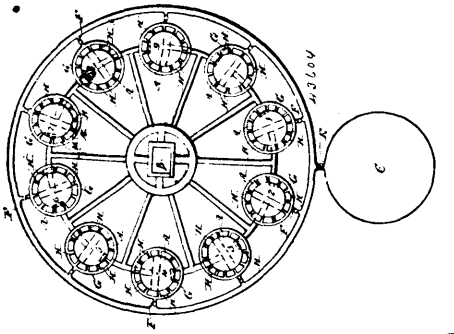
No. 43,603. Brace.
(*Vilebrequin.*)



Ephraim Alphaugh, Preston, Ontario, Canada, 13th July, 1893; 6 years.

Claim.—1st. The combination, with a brace of the bitholder and knob, arranged so as to move to, and fasten at any point of the shanks, for the purpose of making a longer or shorter crank, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with a brace of the reversible knob and bitholder, substantially as and for the purpose hereinbefore set forth. 3rd. The combination, with the movable bitholder and knob, of the ratchet, substantially as and for the purpose hereinbefore set forth.

No. 43,604. Kiln System. (*Système de four.*)



Wallace Cuthbert Trotter and George Clayton, both of St. John's, Quebec, Canada, 13th July, 1893: 6 years.

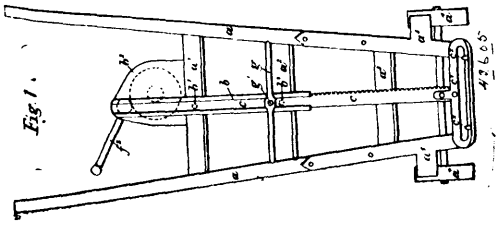
Claim—1st. A kiln system comprising two or more kilns interconnected, whereby, upon firing one, the waste heat therefrom can be passed through one or more of the others, as and for the purpose set forth. 2nd. A kiln system comprising two or more kilns with interconnecting flues and a common chimney, whereby, upon firing one, the waste heat can be caused to pass either direct to said chimney of first through one or more of the others and then to said chimney, as and for the purpose set forth. 3rd. In a duplex or multiple kiln system, the combination, with one or more kilns, of a curtain flue, as *f*, within the kiln or kilns, and connecting flues between the interior of said kiln or kilns and such curtain flue or flues, as set forth. 4th. In a duplex or multiple kiln system, the combination, with a series of kilns, interconnected as described, of a gas supply consisting of a source or generator, a main feed pipe arranged concentrically of the system, subsidiary feed pipes encircling each kiln, connections between said main and subsidiary feed pipes, and branches from the latter into the fire holes of the kiln, as set forth.

No. 43,605. Lifting Apparatus for Sack Barrows.
(*Appareil pour soulever les brancards à sac.*)

William Robinson, and Frederick D. Ferguson, both of Makotuku New Zealand, 13th July, 1893; 6 years.

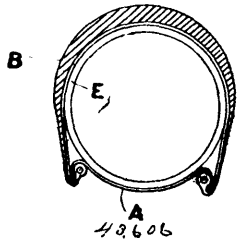
Claim.—1st. In a lifting apparatus for sack barrows, the guide *b* attached to the slats a^1 and a^2, and resting on the top of slat a^1,

substantially as described herein, and illustrated on the accompanying drawings. 2nd. In a lifting apparatus for sack barrows, the



combination, with a sack barrow of the guide of the bed *b*, with rack *c* and pinion *d*, as and for the purposes substantially as described herein, and illustrated on the accompanying drawings. 3rd. In a lifting apparatus for sack barrows, the combination of a sack barrow with guide or bed *b*, with rack *c*, pinion *d*, wheel b^2, and pinion *f*, having axle f^1, and handle f^2, as and for the purposes substantially as described herein, and illustrated on the accompanying drawings. 4th. In a lifting apparatus for sack barrows, the combination of a sack barrow with guide or bed *b*, rack *c*, having foot c^1, pinion *d*, wheel b^2, and pinion *f*, having and axle f^1, and handle f^2, and case b^2, as and for the purposes substantially as described herein, and illustrated on the accompanying drawings. 5th. The lifting apparatus for sack barrows constructed arranged and operating, substantially as described herein, and illustrated on the accompanying drawings.

No. 43,606. Method and Means of Securing Pneumatic Tyres on Wheels. (*Méthode et moyen d'assujétir les bandages pneumatiques aux roues.*)

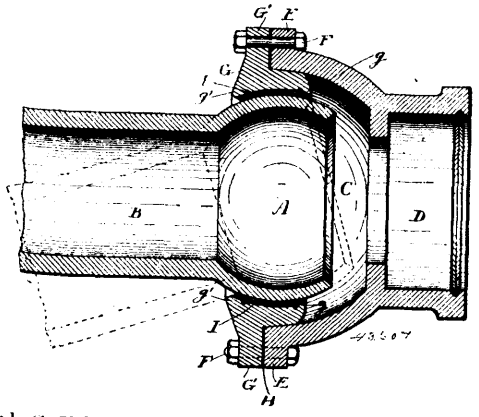


Albert Whitehouse, Bridgetown, Stafford, England, and Arthur Whicher and William Nassau Black, both of Dublin, Ireland, 14th July, 1893; 6 years.

Claim.—The means for and mode of securing pneumatic tires on wheels, consisting of the combination of the flange or projection a^1, on the inside circumference of the rim and the compression wire D, such as shown upon the drawings and as herein set forth.

No. 43,607. Ball and Socket Joint.

(*Joint à boulet et joint sphérique*)

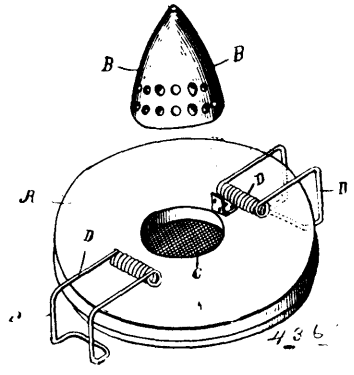


Joseph G. Falcon, Evanston, Illinois, U.S.A., 14th July, 1893; 6 years.

Claim.—1st. In a joint, the combination with a ball, of a ring surrounding the ball in a diametrical plane and extending in both directions from said plane, packing between the ball and ring, and a socket in which the ring fits, substantially as set forth. 2nd. In a joint, the combination, with a ball, of a ring surrounding the ball in a diametrical plane and extending in both directions from said plane, packing between the ball and ring, and a socket in which the ring fits, said ring being of less internal diameter at its ends than at an intermediate point, substantially as set forth. 3rd. In a joint, the combination, with a ball, of a ring surrounding the ball in a diametrical plane and extending in both directions from said plane, said ring having a tapering exterior, a socket having a flaring mouth in which the tapering ring fits, and means for forcing the ring and socket together and securing them, substantially as set forth. 4th. In a joint, the combination, with a ball, of a ring surrounding the ball in a diametrical plane and extending in both directions from said plane, said ring being of less internal diameter at its ends than at an intermediate point and having a tapering exterior, packing between the ring and ball, a socket having a flaring mouth in which the tapering ring fits, and means for forcing the ring into the socket and securing them together, substantially as set forth. 5th. In a joint, the combination, with a ball, of a ring surrounding the ball in a diametrical plane and extending in both directions from said plane, said ring having a tapering exterior and a radial external flange, a socket having a flaring mouth in which the tapering portion of the ring fits, and having a radial external flange, and means securing said flanges together, the ring being of less external diameter at its ends than at an intermediate point, substantially as set forth. 6th. In a joint, the combination, with the ball, of the ring G, surrounding the ball in a diametrical plane and having its exterior tapered and provided with the flange G^1, the socket C, having the flaring mouth in which the tapering ring fits, and having the flange E, bolts securing said flanges together, and packing between the inner surface of the ring and outer surface of the ball, the ring being of less internal diameter at its ends than at an intermediate point, substantially as set forth.

No. 43,608. Cover for Milk Pans.

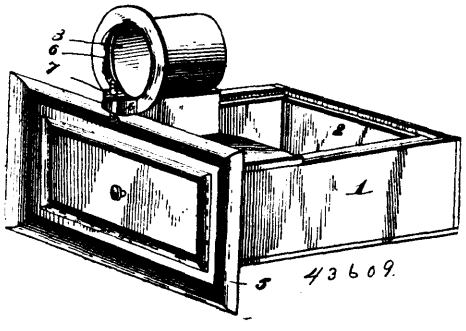
(*Couvercle pour terrine à lait.*)



Sarah Newell, Versailles, Illinois, U.S.A., 14th July, 1893; 6 years.

Claim.—1st. A lid of the class described comprising a cover having a central opening with a gauze fabric closing the same, and a hollow perforated cone hinged to said cover at one side of and arranged to close over the said central opening, substantially as described. 2nd. A lid of the class described, comprising the centrally perforated cover A, the gauze fabric closing said perforation, the hollow, perforated cone B, inclosing said fabric, and the hook shaped spring clamps D for securing the lid to the vessel which it covers, substantially as described.

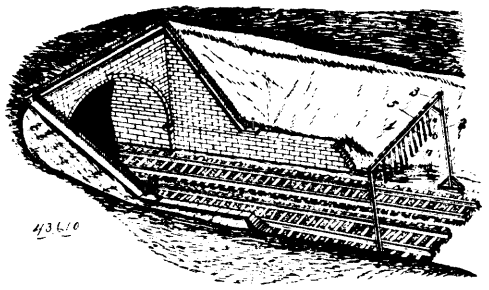
No. 43,609. Chimney. (*Cheminée.*)



Richard B. Holmes, Marcus, Iowa, U.S.A., 14th July, 1893; 6 years.

Claim.—1st. An attachment for chimneys comprising a rectangular casing having an open front and top and provided at its top with a transversely disposed horizontal plate 10, a supporting block 9 arranged centrally on the upper face of the plate 10, a removable soot pan arranged in the casing, and a stove pipe thimble mounted on the block and provided with means for clamping a stove pipe, substantially as described.

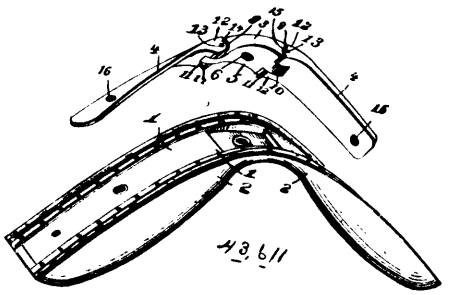
No. 43,610. Signal for Tunnels. (*Signal pour tunnels.*)



George W. Thompson, Leadville, Colorado, U.S.A., 14th July, 1893; 6 years.

Claim. 1st. In a device of the class described, a supporting frame and pendent arms having upper rigid members and lower flexible members, substantially as specified. 2nd. In a device of the class described, the combination with a supporting frame having a cross bar, of rigid pendent arms, and ropes or cords connected to their lower ends, substantially as specified. 3rd. In a device of the class described, the combination with a supporting frame, of rigid arms and flexible members or extensions, equal in length to the arms, substantially as specified. 4th. In a device of the class described, the combination with a supporting frame, of rigid arms slitted or quartered at their free ends, and cords or ropes engaged in the said slitted or quartered ends, substantially as and for the purpose specified.

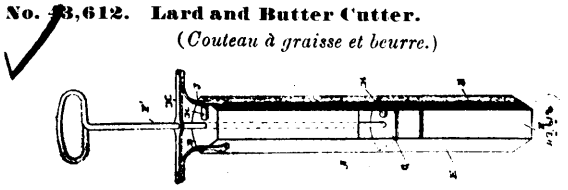
No. 43,611. Harness Saddle. (*Sellette.*)



Henry Schmitz, Wymore, Nebraska, U.S.A,, 14th July, 1893; 6 years.

Claim.—In a harness saddle, the combination, with the upper and lower burr pieces, the pad leathers, the sheathing strap, and the terret rings and check hook, of a tree consisting of a central hook plate formed with an under concaved side and a central screw opening, and having the opposite ends provided with oppositely extending lugs or ears that are apertured transversely, and the outer parts of the ends of said ears concaved partially through their thickness to form upper and lower projecting edges 10, and side sections with inner bifurcated ends to form oppositely disposed ears 12 that are of a greater thickness than the remaining portions of the said sections, and having upper and lower shoulders 14, arranged to engage the said edges 10, to thereby limit the upper and lower movements of the said sections, substantially as described.

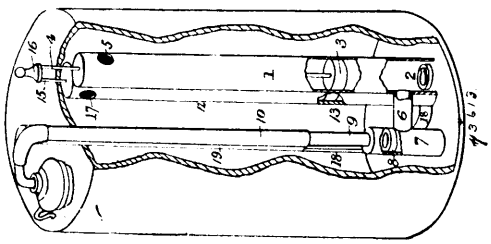
No. 43,612. Lard and Butter Cutter.
(*Couteau à graisse et beurre.*)



Samuel Murray and Charles Epps, both of St. George, New Brunswick, Canada, 14th July, 1893; 6 years.

Claim.—1st. In a device of the character described, the combination of a tube, and a head movable therein, substantially as shown and described. 2nd. In a device of the character described, the combination of a tube closed at its upper end, a head movable longitudinally therein, an upwardly opening valve carried by the head, and an outwardly opening valve at the upper end of the tube, substantially as shown and described. 3rd. An improved lard and butter cutter, comprising a tube having one convex side for the purpose stated, and a means for discharging the contents of the tube, substantially as shown and described. 4th. An improved lard and butter cutter, comprising a tube having one convex side, two angular sides converging from the edges of the convex side a narrow side or wall connecting the edges of the said converging sides, and a means for discharging the contents of the tube, substantially as shown and described. 5th. An improved lard and butter cutter, comprising a tube having one convex side, two converging sides leading from the edges of the convex side, a narrow wall or side connecting the adjacent edges of the said converging sides, a piston head movable longitudinally in the tube, an upwardlly opening valve carried thereby, an outwardly opening valve at the upper end of the tube, and a rod for operating the said head, substantially as shown and described. 6th. An improved lard and butter cutter, comprising a tube sharp at its lower end, a handle at the upper end of the tube, and a piston head movable longitudinally in the head, substantially as shown and described. 7th. An improved lard and butter cutter, comprising a tube, a means for removing the contents thereof, and handles formed by extending a bar transversely across the upper end of the tube, and which bar is secured to the tube, by turning backward and downward its end to the tube sides, substantially as shown and described.

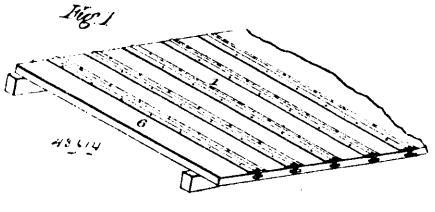
No. 43,613. Oil Pump. (*Pompe à huile.*)



Robert Orlando Graham and Fred. Clinton Smith, both of Bloomington, Illinois, U.S.A., 14th July, 1893; 6 years.

Claim.—1st. In a pump of the character described, the combination, with the supply barrel, having an upwardly opening valve in its lower end, the solid piston or plunger and its operating rod, the lateral pipe above said valve, the barrel connected with said pipe provided with upwardly opening valves, and the supply pipe adapted to be inserted into a lamp, of the return barrel closed at its lower end, and having an escape opening near its upper end, a piston or plunger provided with an upwardly opening valve of such construction as to allow of the siphoning or drawing back of the liquid through the return barrel, the operating rod connected with the operating rod of the supply barrel, and the upwardly extending pipe connected with the lower end of the said return barrel, and adapted to be inserted in the filling aperture of a lamp, substantially as set forth. 2nd. In a pump of the character described, the combination, with the supply barrel, having an upwardly opening valve in its lower end, the solid piston or plunger and its operating rod, the lateral pipe connected with the barrel above said valve, the barrel also connected with said pipe provided with an upwardly opening valve, the vertical pipe connected with the barrel and the adjustable pipe fitting upon said vertical pipe, having its upper end soldered into the funnel of the supply and return nozzle adapted to be inserted into the filling aperture of a lamp, of the return barrel closed at its lower end and having an escape opening near its upper end and an upwardly opening valve near its lower end, a piston or plunger having an upwardly opening valve, allowing of the siphoning or drawing of the liquid from the lamp back into the can through the return barrel, an operating rod connected with said piston and with the operating rod of the piston in the supply barrel, the upwardly extending pipe connected with the lower end of said return barrel, and the adjustable pipe fitting upon said vertical pipe, and having its upper end soldered into the funnel of the supply and return nozzle adapted to be inserted in the filling aperture or opening of a lamp, substantially as specified.

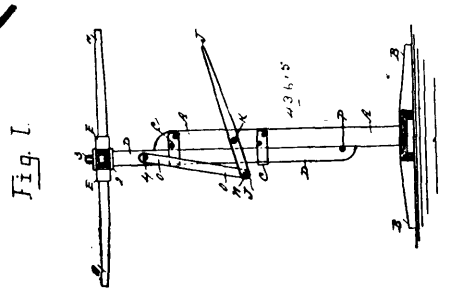
No. 43,614. Roofing Joint. (*Joint de toitures.*)



William H. Jellison, Petrolia, Pennsylvania, U.S.A., 14th July, 1893; 6 years.

Claim.—1st. A sheet metal joint for roofs, consisting of the head of the horizontal rib, the webs, and the flanges constructed, substantially as described. 2nd. In a roof, the combination, with the boards, having horizontal slots in their edges, of the joints consisting of the head having the horizontal rib, the webs and the flanges, substantially as and for the purpose described.

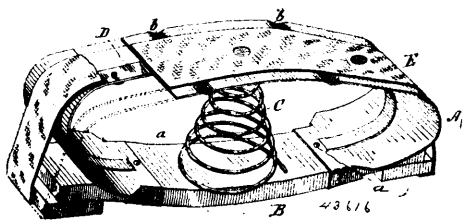
No. 43,615. Clothes Dryer. (*Séchoir à linge.*)



Thomas C. Searls, Hamilton, Ontario, Canada, 14th July, 1893; 6 years.

Claim.—1st. In a clothes drying machine, the vertical standard A having base B, and upper and lower metallic guide C secured thereto, the vertical sliding post D provided with plate 2, with vertical pivot pin 3, and rotating casting with sockets E, having horizontal bars H, the hand lever J, pivotted at K, connecting rod O, and the stop pin P, all formed, arranged and combined substantially as described and for the purposes set forth.

No. 43,616. Seat Spring. (*Ressort pour sièges.*)

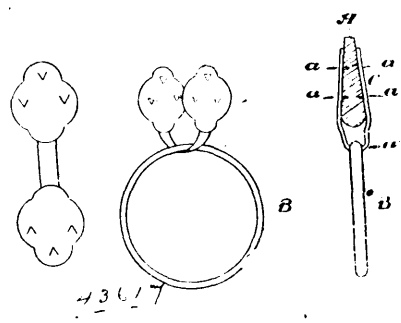


George Coxon, Toronto, Ontario, Canada, 14th July, 1893; 6 years.

Claim.—1st. A seat spring composed of a series of light curved metal plates having one or more crimps made across it, and strengthened by a narrow strip of steel crimped to correspond with and rivetted to the metal plate, substantially as for the purpose specified.

No. 43,617. Pull Plate for Shades.

(*Plaque pour abat-jour.*)



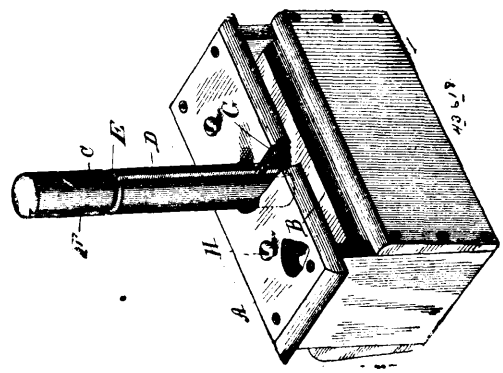
Samuel Raymond Scottron, Toronto, Ontario, Canada, 14th July, 1893; 6 years.

Claim.—1st. A metallic shade pull plate having one or more points that may serve the purpose of tacks or nails turned down or pressed out of the same sheet of metal perpendicular to its surface and in such manner as to enable one to secure the said plate to a shade stick without other means. 2nd. The combination of the pointed plate with the lower ring or bar of the shade pull, as and for the purpose named and hereinbefore shown and set forth.

No. 43,618. Butter Mould. (*Moule à beurre.*)

Charles Boeckh, Junr., Toronto, Ontario, Canada, 14th July, 1893; 6 years.

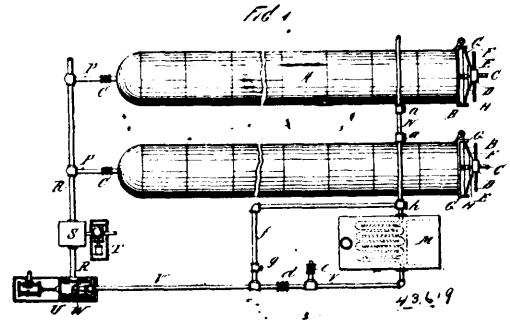
Claim.—1st. A butter mould provided with a plunger having a handle with a longitudinal groove made in it, in combination with



a pin G, annular groove E, and short groove F, arranged substantially as and for the purpose specified.

No. 43,619. Method of Preparing Wood.

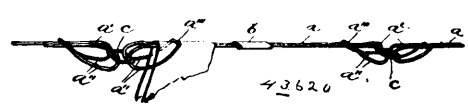
(*Méthode de préparer le bois*)



Charles Howard, New York, State of New York, U.S.A., 14th July, 1893; 5 years.

Claim.—1st. The herein described method of vulcanizing wood which consists essentially in enclosing the wood to be treated in a chamber while cold creating a partial vacuum within said chamber, and then applying heat to the wood while in said chamber and vacuum. 2nd The herein described method of vulcanizing and drying wood which consists essentially in inclosing the wood to be treated in a chamber creating a partial vacuum within said chamber applying heat to the wood while in the vacuum, and then causing a circulation of the remaining air and vapour through said chamber and vacuum producing mechanism. 3rd. The herein described method of vulcanizing and drying wood which consists in first inclosing the wood in a cold condition in a chamber, then drawing the moisture of the external layers of the wood to the surface by the action of a partial vacuum, then applying heat to the wood within the chamber, and then removing the external moisture and vulcanizing the wood and contained sap by a circulation of the remaining heated air through the chamber, the absorbed moisture being removed from said air by condensation.

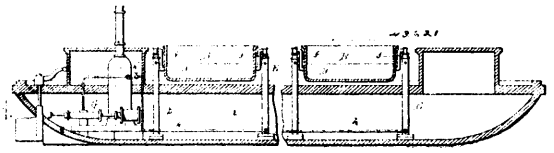
No. 43,620. Clothes Line. (*Corde à linge.*)



Fernando G. Lane, John W. Kelly, and Fred Sterzing, all of Austin, Texas, U.S.A., 15th July, 1893; 6 years.

Claim.—1st. A clothes line consisting of a series of sections loosely connected together, each of said sections consisting of a piece of double wire having its ends curved downwardly and backwardly to form the spring loops a^1, said loops embracing and bearing down resiliently on the main portion of the section, as and for the purpose described. 2nd. A wire section for clothes line consisting of a single piece of wire having its ends bent back upon its main portion and secured thereto, the strands of the doubled ends being bent downwardly and backwardly, and spread apart, forming the spring sides a^{11} of the loops a^1, the closed ends a^{111} of these loops embracing and bearing resiliently on top of the main portion of the section substantially as described.

No. 43,621. Dumping Scow. *(Bateau à bascule.)*

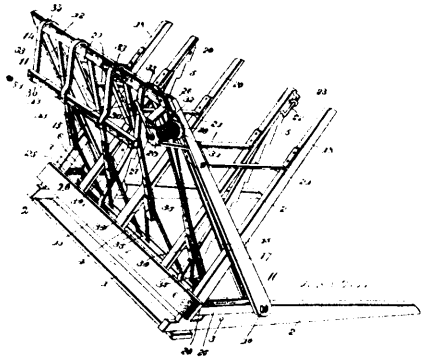


Harry Stanley Griffin, Philadelphia, Pennsylvania, U.S A., and Edward Wakefield Blackhall, Toronto, Ontario, Canada, 15th July, 1893; 6 years.

Claim.—1st. The combination with a scow or barge, of a dumping receptacle or compartment arranged on its deck and capable of tilting toward either side of the scow, and means for tilting the receptacle, substantially as set forth. 2nd. The combination, with the scow or barge, of a dumping receptacle or compartment arranged on its deck and capable of tilting toward the side of the scow, and hydraulic jacks whereby the receptacle is tilted, substantially as set forth. 3rd. The combination with a scow or barge, of a transverse dumping receptacle or compartment arranged on its deck and provided in both its port and starboard ends with discharge doors, and a set of hydraulic jacks for tilting the receptacle arranged on opposite sides of the middle of the latter, substantially as set forth. 4th. The combination with a scow or barge, of a transverse dumping receptacle or compartment arranged on its deck, and capable of tilting toward either side of the scow, hydraulic lifting jacks, and links connecting the plungers of said jacks with the receptacle, substantially as set forth. 5th. The combination with the scow or barge, of a dumping receptacle arranged on its deck and capable of tilting toward either side of the scow, a pair of hydraulic jacks arranged on each side of the centre of the dumping receptacle, and independent water supply pipes each connected with a pair of jacks and each provided with a valve, substantially as set forth.

No. 43,622. Tree Baler.

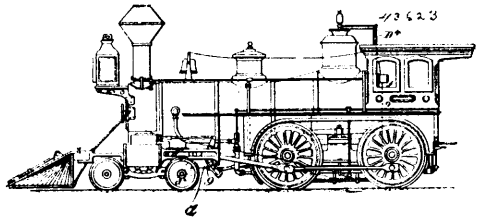
(Appareil pour mettre les arbres en ballot.)



Henry O. Thomas, Kimball, Nebraska, and Christopher Cusack and John W. Stevenson, both of North Bend, Nebraska, U.S.A., 15th July, 1893; 6 years.

Claim.—1st. In a machine of the class described, the combination with a front and a rear frame, the same crossing or arranged at an angle to each other, of supporting straps connecting the frames above their angle, and draft straps having their free ends adapted for removable connection with one of the frames, and means for applying to said draft straps, substantially as specified. 2nd. In a machine of the class described, the combination with a front and a rear frame crossing each other at an angle of intermediate supporting straps connecting the frames above the angle, draft straps adapted for removable connection with one of the frames, and an evener device connecting the opposite ends of the draft straps with the same frame, substantially as specified. 3rd. In a machine of the class described, the combination with a front and a rear inclined frame the same crossing at an angle, of intermediate supporting straps connecting the frames above their angle, a winding device, a series of draft straps adapted for removable connection with one of the frames, pulleys on the ends of the straps and below the same, and a draft cable permanently attached to the machine at one end, passed alternately around the upper and lower pulleys, and connected to the winding mechanism, substantially as specified. 4th. In a machine of the class described, the combination, with a base, an inclined frame pivoted at its lower end to the base, an oppositely inclined frame loosely connected to the first mentioned frame and carried thereby, and supporting straps between the two frames, of inclined rack bars pivoted to the frame eccentrically with relation to the first mentioned frame and loosely connected with the second mentioned frame, baling straps secured to the machine at their lower ends and a cross bar connecting the upper ends of the baling straps and adapted to be swung over the bale and connected to the teeth of the rack bars, substantially as specified. 5th. In a machine of the class described, the combination, with the base, the inclined rearwardly disposed frame pivoted thereon, a second forwardly inclined frame loosely connected with the first mentioned, and straps between the two frames above their angle, of a rocking bar journalled in the base between the lower ends of the frames, rack bars inclining forwardly from the rocking bar, a sliding connection between the upper end of each rack bar, and the bars of the forwardly inclined frame, draft or baling straps connected to the connecting bar, and a cross bar connecting the free ends of the draft or baling straps and adapted to engage removably with the teeth of the rack bars, substantially as specified. 6th. In a machine of the class described, the combination, with the base, the rearwardly inclined frame rising therefrom and pivoted thereto, the forwardly inclined frame loosely connected with the first frame and crossing the same, the straps connecting the two frames above their angle, of a slotted rocking bar journalled in the base between the ends of the two frames, rack bars rising from the slotted rocking bar, eyes extending from the rack bars, slides extending from the forwardly inclined frame and loosely engaging the eyes, pulleys arranged in the slot of the rocking bar, a winding device supported by the machine, a series of draft straps located within the rearwardly inclined frame, sheaves at the lower ends of the draft straps, an evener rope or cable secured at one end to the machine and passed alternately through the sheaves and under the pulleys and connected to the winding device, and a cross bar connecting the free ends of the baling straps, and adapted to be removably engaged with the teeth of the rack bars, substantially as specified. 7th. In a machine of the class described, the combination, with the rear transverse sill and the forwardly extending longitudinal sills, the inclined slotted bars 11, pivoted to the bars 2, by the bolts 10, the cross bar 12, connecting the upper ends of the bars 11, and having the depending intermediate bars 13, the opposite inclined bars 18, arranged in the slots of the bars 11, straps pivoted thereto and to the bars 11, at the upper ends of their slots, lower straps 25, pivoted to the bolts 10, and to the lower ends of the bars 18, a rear cross bar 19, connecting the bars 18, the bars 20 rising therefrom at intervals and the supporting straps 21, of the slotted rocking bar 4, journalled as at 3, in the bars 2, and in rear of the bolts 10, the pulleys 9, arranged in the slot, the rack bars 5, extending from the rocking bar, the slides 22, extending from the bars 20, the eyes 23, extending from the rack bars and engaging the slides, the draft straps 33, the connecting bar 36, connecting the same, the sheaves 35, at the lower ends of the draft straps, the winding drum and its mechanism, and the draft rope secured to the rocking bar, passed alternately through the sheaves and under the pulleys and connected to said winding drum, substantially as specified.

No. 43,623. Speed and Whistle Recorder for Locomotive Engines. *(Registre de vitesse et sifflet pour machines de locomotive.)*

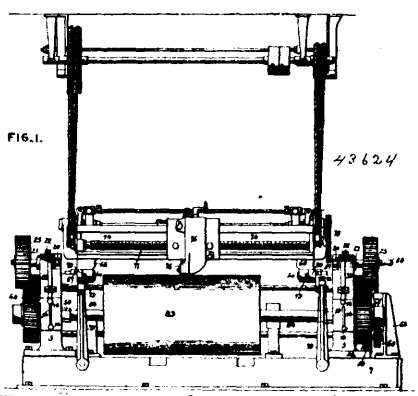


Benjamin F. Stockford, South Bend, Indiana, U.S.A., 15th July, 1893; 6 years.

Claim.—1st. The combination, with a clock train and two wheels, one actuated by the clock train and the other by the travel of the locomotive, of two ribbons, one passing over each wheel, a marking point resting over both ribbons, and a device actuated at regular intervals by the clock train for forcing the marking point toward the ribbon, substantially as set forth. 2nd. The combination, with a clock train and two ribbons, one moved longitudinally by the clock train and suitable feeding mechanism and the other by devices actuated by an axle of the locomotive, of a marking point resting over both ribbons, and a device actuated by the clock train for forcing said marking point toward the ribbons, substantially as set forth. 3rd. The combination, with a clock train and two wheels, one actuated by the clock train, and the other by the travel of the locomotive, of two ribbons, one passing over each wheel, a marking point adapted to make an impression on both ribbons, and a device connecting such marking point, and the whistle actuating device, substantially as set forth. 4th. The combination, with a clock train and two ribbons, one actuated by the clock train, and the other by devices connecting it with a car axle, of a device actuated by the whistle operating devices for forcing the marking point toward the ribbons and making impressions thereon, substantially as set forth. 5th. The combination, with a wheel having characters on its periphery, devices for actuating said wheel by the travel of the locomotive, a second wheel having characters on its periphery, and a clock train for actuating said latter wheel, of a ribbon passing over each wheel, and a marking point adapted to strike the ribbons intermittingly and impress thereon the characters immediately below the marking point, substantially as set forth. 6th. The combination,

with a wheel actuated by the travel of the locomotive, a time train, and a wheel actuated by the time train, both wheels having characters on their peripheries, and ribbons resting on said wheels and adapted to move therewith, of a roller for holding a portion of one ribbon continuously in contact with the periphery of its wheel and an intermittingly actuated marking point adapted to force both ribbons into contact with their respective wheels, substantially as set forth. 7th. The combination, with a clock train and two ribbons, one actuated by the travel of the locomotive, and the other by the clock train, of devices for marking the distance travelled on one ribbon, and devices for marking intervals of time on both ribbons. 8th. The combination, with a clock train and two wheels, one actuated by the travel of the locomotive and provided with characters, each character representing a mile or fraction of a mile, and the second wheel actuated by the clock train, and provided with characters each representing a fraction of an hour, of a ribbon for each wheel, and means for impressing on one of the ribbons the characters representing a mile or fraction thereof, and devices for making impressions on both ribbons at regular intervals of time, substantially as set forth. 9th. The combination, with a clock train, two wheels, one actuated by the travel of the locomotive, and the other by the clock train, and a ribbon passing over each wheel, of devices for making impressions on both ribbons at regular intervals of time and devices for making impressions on both ribbons every time the whistle is opened and closed, substantially as set forth. 10th. The combination, with a clock train and two independent ribbons, one moved by the travel of the locomotive and the other by the clock train, of devices for marking on one ribbon characters representing the miles and fractions of a mile and devices for marking characters on both ribbons at regular intervals of time, substantially as set forth. 11th. The combination, with a clock train and two independent ribbons, one actuated by the travel of the locomotive and the other by the clock train, of devices for marking on one ribbon characters representing miles and fractions of miles travelled and devices for imprinting characters on both ribbons, each of the latter characters representing a fraction of an hour. 12th. The combination, with a clock train and two ribbons free to move at equal speeds, one ribbon actuated by the travel of the locomotive and the other by the clock train, of means for imprinting on one ribbon characters each representing the fraction of a mile, devices actuated by the clock work for imprinting on both ribbons characters each representing a fraction of an hour, and a device connected to the whistle blowing mechanism and adapted to make impressions on both ribbons every time the whistle is opened and closed, substantially as set forth.

No. 43,624. Machine for Cutting Cycloidal Revolvers. (*Machine à raboter les surfaces cycloïdales.*)



John T. Wilkin, Connersville, Indiana, U.S.A., 15th July, 1893; 6 years.

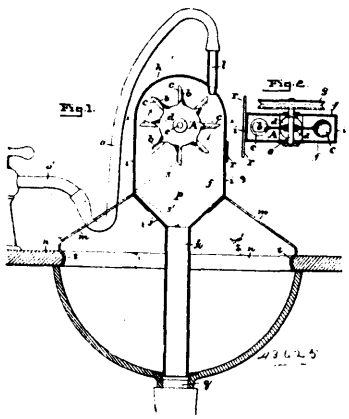
Claim.—1st. In a machine of the class described, the combination with opposite supports, means for supporting a blank between the same, of a tool carrying device, means for reciprocating the same longitudinal of the blank and transversely feeding it upon cycloidal lines, substantially as specified. 2nd. In a machine of the class described, the combination with means for supporting a blank, of a tool carrying device located adjacent thereto, and means for moving the tool upon cycloidal lines over the face of the blank, substantially as specified. 3rd. In a machine of the class described, the combination with the opposite side frames provided with bearings, a blank carrying shaft mounted for rotation therein, and means for revolving the shaft, of a superimposed tool carrying device, means for reciprocating the device between the side frames, and means for transversely feeding the device upon cycloidal lines to the blank, substantially as specified. 4th. In a machine of the class described, the combination with the opposite side frames having bearings, a transverse revolver carrying shaft mounted therein, tool carrying devices located above the shaft, means for reciprocating the devices, for rotating the shaft, and for moving the tool carrying devices upon hypocycloidal and epicycloidal lines to the blank, substantially as specified. 5th. In a machine of the class described, the combination with the opposite side frame, and the blank supporting shaft, a superimposed tool carrying device, means for reciprocating said device between the frames and for feeding the same in cycloidal lines to the blank, substantially as specified. 6th. In a machine of the class described, the combination with the opposite side frames having bearings, a transverse blank carrying shaft mounted in the opposite bearings therein, means for revolving the shaft, of a crank shaft for each of the standards, standards rising from the crank shafts, a tool carrying bar connecting the standards, and means for revolving the crank shafts, substantially as specified. 7th. In a machine of the class described, the combination with a framework having openings, rings mounted in the openings and provided with eccentric bearings, crank shafts journalled in the bearings, pinions mounted upon the shafts at the opposite sides of the frame, segmental gears carried by the cranks of the shafts and engaging the inner pinions, a tool carrying frame secured to the segmental gears, of a support for the work, shafts located at one side of the crank shafts, gears mounted adjustably on the shafts and adapted to engage the outer pinions, means for driving the gears, shafts at opposite sides of the crank shafts, gears mounted on the same and engaging the other gears, and means for adjusting the gear thus engaging and for rotating the rings, substantially as specified. 8th. In a machine of the class described, the combination with the opposite frames having circular openings, rings mounted in the openings and having eccentric bearings, crank shafts mounted in the bearings, tight pinions carried upon the outer ends of the crank shafts, stationary pinions encircling the inner portions of the crank shafts, segmental gear internally toothed and mounted upon the crank pins and having their teeth engaging the inner pinions, standards loosely mounted on the crank pins, circular grooves formed in the outer faces of the segmental gears, bolts passed through the standards into the grooves, nuts mounted on the bolts, and a tool supporting frame carried by the standards, of upper and lower bearings formed in the frames, shafts located in the upper bearing, spur gears mounted adjustably on said shafts, shafts located in the lower bearings, spur gears adjustably mounted on said shafts and adapted to engage the teeth of the upper spur gears and of the outer pinions when the latter are in their elevated positions, and means for rotating said lower gears, substantially as specified. 9th. In a machine of the class described, the combination, with the opposite frames having circular openings, rings mounted in the openings and having eccentric bearings, crank shafts mounted in the bearings, pinions fixed on the outer ends of the crank shafts, fixed pinions encircling, but independent of the inner portions of the crank shafts, segmental gears internally toothed and mounted upon the crank pins and engaging the inner gears, means for temporarily arresting the motion of the crank shaft at each rotation thereof, shafts located diametrically opposite the crank shafts and extending beyond the outer ends thereof, gears adjustably mounted upon said shafts and intermeshing with each other and adapted to intermesh with the pinions upon the outer ends of the crank shafts, and means for rotating said gears, substantially as specified. 10th. In a machine of the class described, the combination with the opposite frames, having circular openings, rings mounted for rotation in the openings and provided with eccentric bearing recesses formed at one side of the bearings, pins mounted in the recesses and provided near their inner ends with shoulders, coiled springs mounted upon the pins and interposed between the shoulders and the outer ends of the recesses, crank shafts journalled in the bearings, pinions mounted fixedly on the outer ends of the crank shafts, fixed pinions extending from the inner sides of the frame and loosely encircling the crank shafts, segmental gears loosely mounted on the crank pins and internally toothed to engage the said fixed pinions, a tool carrying frame supported by the segmental gears and cavities formed in the crank shafts in line with the pins, of shafts located at diametrically opposite sides of the crank shafts, adjustable gears mounted thereon and engaging each other, and adapted for engagement with the outer pinions of the crank shafts, in accordance with the positions of the same, and means for rotating the gears, substantially as specified. 11th. In a machine of the class described, the combination with a framework having opposite openings, movable bearings mounted in the openings, crank shafts mounted in the bearings and adapted to revolve, pins located upon said shafts at the inner and outer sides of the bearings, segmental L-shaped gears mounted on the inner or cranked ends of the shafts, and a tool carrying frame secured to and supported by the segmental gears, of a support for the work, shafts located at one side of each of the crank shafts, gears mounted thereon and adapted to be shifted into and out of mesh with the outer pinions of the crank shafts when the latter are lowered to their lowest positions and in a horizontal plane with said pinions when said crank shafts are elevated to their highest positions, gears located at those sides of the outer pinions of the crank shafts, at which the first mentioned gears are located, means for shifting and driving said gears and for communicating motion from them to the work support, substantially as specified.

No. 43,625. Water Motor. (*Moteur à eau.*)

John Bolgiano, Baltimore, Maryland, U.S.A., 15th July, 1893; 6 years.

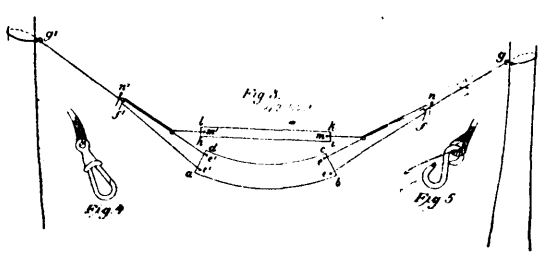
Claim.—1st. The herein described water motor comprising the vertical case, having straight vertical sides *i*, converging at the

bottom to a discharge pipe, a vertical wheel in the case having a thin centre disc provided with peripheral tangs *b*, with a quarter



turn or twist, and cups on the tangs, a vertical inlet nozzle entering the case top, and a spacious chamber *p* in the case below the wheel, as shown and described. 2nd. A portable water motor having a vertical case A, provided with a vertical discharge pipe in its lower end, a vertical wheel in the case and two spring arms *m*, each attached to the case at a side opposite the other said arms, having at their free end an ogee curve or bend *t*, as and for the purpose set forth.

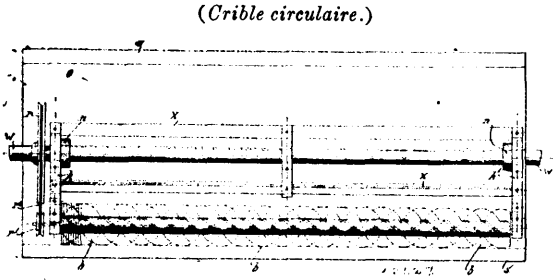
No. 43,626. Rustic Seat. (*Siège rustique.*)



Albert Graf, Rykon, Swiss Republic, 15th July, 1893; 6 years.

Claim.—1st. A hammock seat constructed and arranged substantially as hereinbefore described and as illustrated in the accompanying drawings. 2nd. In a hammock seat, a seat constructed independently of the back rest, the seat being suspended by means of suitable cords and hooks, and the back rest being tied to the seat cords when in use, substantially as hereinbefore described and as illustrated by the accompanying drawings.

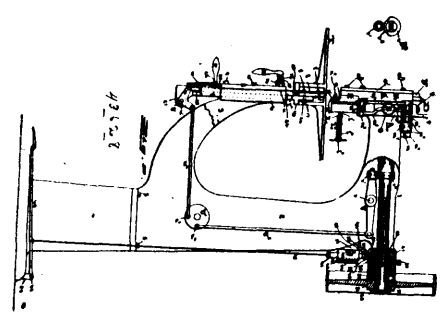
No. 43,627. Circular Sifting Machine.
(*Crible circulaire.*)



Ernst August Weinhold, of Louvain, Belgium, 15th July, 1893; 6 years.

Claim.—1st. In a sifting machine, the combination of the drum with a brush or brushes arranged inside the sieve or cover, for the purpose described. 2nd. In a shifting machine, the combination of the drum with a rotating brush or brushes arranged inside the sieve or cover, for the purpose described. 3rd. In a sifting machine the combination of the drum, with a cylindrical brush or brushes arranged inside the sieve or cover, said brush or brushes being rotated, for the purpose as described. 4th. In a sifting machine, the combination of the drum with a brush or brushes having its bristles in a spiral line, and being arranged inside the sieve or cover, said brush or brushes being rotated, for the purpose as described. 5th. In a sifting machine, the combination of the drum, with a brush or brushes arranged inside the sieve or cover on the shaft of the drum, for the purpose as described. 6th. In a sifting machine, the combination of the drum with a rotating brush or brushes arranged inside the sieve or cover on the shaft of the drum, for the purpose as described. 7th. In a shifting machine, the combination of the drum, with a cylindrical brush or brushes arranged inside the sieve or cover on the shaft of the drum, said brush or brushes being rotated, for the purpose as described. 8th. In a sifting machine, the combination of the drum, with a brush or with brushes, having the bristles in a spiral line and being arranged inside the sieve or cover on the shaft of the drum, said brush or brushes being rotated for the purpose, as described. 9th. In a sifting machine, the combination of the drum, with a brush or brushes held inside the sieve or cover by arms or levers loosely attached to the shaft of the drum, for the purpose, as described. 10th. In a sifting machine, the combination of the drum, with a rotating brush or brushes held inside the sieve or cover by arms or levers loosely attached to the shaft of the drum, for the purpose, as described. 11th. In a sifting machine, the combination of the drum with a cylindrical brush or brushes held inside the sieve or cover by arms or levers loosely attached to the shaft of the drum, for the purpose, as described. 12th. In a sifting machine, the combination of the drum, with the brush or brushes having its axis in a spiral line, and being held inside the sieve or cover by arms or levers loosely attached to the shaft of the drum, for the purpose as described. 13th. In a sifting machine, the combination of the drum with a brush or brushes held inside the sieve or cover by arms or levers having brackets with displaceable counterweights, and being loosely attached to the shaft of the drum, for the purpose as described. 14th. In a sifting machine, the combination of the drum, with the rotating brush or brushes held inside the sieve or cover by arms or levers, having brackets with displaceable counterweights, and being loosely attached to the shaft of the drum, for the purpose as described. 15th. In a sifting machine, the combination of the drum, with a cylindrical brush or brushes held inside the sieve or cover by arms or levers having brackets, with displaceable counterweights, and being loosely attached to the shaft of the drum, said brush or brushes being rotated for the purpose as described. 16th. In a sifting machine, the combination of the drum with the brush or brushes, having its bristles in a spiral line, and being held inside the sieve or cover by arms or levers, having brackets with displaceable counterweights, and being loosely attached to the shaft of the drum, said brush or brushes being rotated, for the purpose as described. 17th. In a sifting machine, the combination of the drum with a cylindrical brush or brushes arranged inside the sieve or cover, said brush or brushes being rotated from the shaft of the drum, for the purpose as described. 18th. In a sifting machine, the combination of the drum, with the brush or brushes, having its bristles in a spiral line and being arranged inside the sieve or cover, said brush or brushes being rotated from the shaft of the drum, for the purpose as described.

No. 43,628. Wire Stapling Machine.
(*Machine à brocher au fil de fer.*)



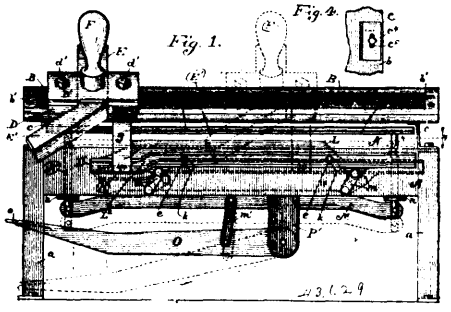
Eldridge R. Johnson, Camden, New Jersey, U.S.A., 15th July, 1893; 6 years.

Claim.—1st. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar, a lever hinged to said arm and pivotally connected to said bar, and the feed jaws, and means whereby said lever is limited in its pivotal movement by one of said jaws, substantially as and for the purpose specified. 2nd. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar, a lever hinged to said arm and pivotally connected to said bar, the feed jaws, and a projection carried by said lever and limiting its pivotal movement by contact with one of said jaws, substantially as and for the purpose specified. 3rd. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar secured to a rock shaft, a bearing for the latter, a nut on said shaft, a cushion between said nut and bearing a lever hinged to said arm and pivotally connected to said bar, the feed jaws, and a projection carried by said lever and limiting its pivotal movement by contact with one of said jaws, substantially as and for the purpose specified. 4th. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar provided with a wire gripping device, a lever hinged to said arm and pivotally connected to said bar and having a limited pivotal

movement in both directions, substantially as and for the purpose specified. 5th. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar secured to a rock shaft, a bearing for the latter, a nut on said shaft, a cushion between said nut and bearing, a lever hinged to said arm, and pivotally connected to said bar, and having a limited pivotal movement in both directions, substantially as and for the purpose specified. 6th. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar, the feed jaws, a lever hinged to said arm and pivotally connected to said bar, a stop for limiting the pivotal movement of the lever in one direction, and means whereby said lever is limited in its other direction of movement by one of said jaws, substantially as and for the purpose specified. 7th. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar, the feed jaws, a lever hinged to said arm and pivotally connected to said bar, a stop for limiting the pivotal movement of the lever in one direction, and a projection carried by said lever and limiting its movement in the other direction by contact with one of said jaws, substantially as and for the purpose specified. 8th. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, a swinging feed bar, a lever hinged to said arm and secured to a rock shaft in said bar, a stop for limiting the pivotal movement of the lever in one direction, the feed jaws, and a projection on said rock shaft adapted to strike one of said jaws, and limit the movement of said lever in the other direction, substantially as and for the purpose specified. 9th. In a wire stapling machine, the combination of a driving shaft, a reciprocating arm actuated thereby, the feed bar, the feed jaws, a lever hinged to said arm and pivotally connected to said bar, an adjustable stop carried by the latter and limiting the pivotal movement of the lever in one direction, and means whereby said lever is limited in its other direction of movement by one of said jaws, substantially as and for the purpose specified. 10th. In a wire stapling machine, the combination of a driving shaft, having thereon an eccentric, the eccentric strap provided with an arm, a feed bar secured on a suitable shaft, a bearing for the latter, a nut on said shaft, a cushion between said nut and bearing, a lever hinged to said arm and secured to a rock shaft in said bar, an adjustable stop carried by the latter and limiting the pivotal movement of the lever in one direction, the feed jaws, and a projection on said rock shaft and limiting the movement of said lever in the other direction by contact with one of said jaws, substantially as and for the purpose specified. 11th. In a wire stapling machine, the combination of a driving shaft, having thereon an eccentric, a swinging feed bar, the forming bar and the driving bar, said bars being connected with and actuated by said eccentric through the eccentric arm respectively, substantially as and for the purpose specified. 12th. In a wire stapling machine, the combination of a driving shaft, the feed mechanism, the forming bar, a revoluble pin actuated by said shaft, a pitman pivoted at one end on the pin, and at the other end similarly connected with said forming bar, the driving bar, the bell crank lever pivotally connected at one end with said driving bar, and a link connecting the other end of the bell crank lever with said pin, substantially as and for the purpose specified. 13th. In a wire stapling machine, the combination of the driving shaft having thereon an eccentric, a swinging feed bar, the eccentric arm actuating the latter, the forming bar, a pin carried by the eccentric, a pitman pivoted at one end on the pin and at its other end similarly connected with said forming bar, the driving bar, a bell crank lever pivotally connected at one end with said driving bar, and a link connecting the other end of the bell crank lever and said pin, substantially as and for the purpose specified. 14th. In a wire stapling machine, the combination of an anvil, a former, and a guide located back of the path of said former, in close relation with and leading the wire to the back part of said anvil, and means for bringing it from such position into the path of the former, substantially as and for the purpose specified. 15th. In a wire stapling machine, the combination of an anvil, a cutting block, a cutter and former, and a guide located back of the path of said cutter and former, in close relation with and leading wire to the back part of said anvil, and means for bringing said wire from such position forwardly into the path of the cutter and former substantially as and for the purpose specified. 16th. In a wire stapling machine, the combination of an anvil, a cutter and former, a cutting block having a longitudinal groove in its rear side, mechanism for bringing the wire from such position into said groove and the path of the cutter and former, substantially as and for the purpose specified. 17th. In a wire stapling machine, the combination of an anvil, a cutter and former, the feed mechanism, a guide block back of the path of the cutter and former, the cutting block, said blocks having registering parallel grooves, the groove in the guide block ending at and leading wire to the back part of the anvil, and the groove on the cutting block permitting said wire to be brought from such position into said path, substantially as and for the purpose specified. 18th. In a wire stapling machine, the combination of an anvil adjustable cutting block, a detachable cutter and former, and a guide located back of the path of said cutter and former, in close relation with and leading wire to the back part of said anvil, and means for bringing said wire from such position into the path of the cutter and former, substantially as and for the purpose specified. 19th. In a wire stapling machine, the combination of an anvil, an adjustable cutting block, a detachable cutter and former, and a guide block located back of the patch of said cutter and former, and having one end in close relation with the anvil, said blocks having registering parallel grooves in their meeting surfaces, forming a slot for the passage of the wire, the groove in the guide block ending at and serving to lead such wire to the back part of the anvil and the groove in the cutting block permitting the wire to be brought from such position into the path of the cutter and former, substantially as and for the purpose specified. 20th. In a wire stapling machine, the combination of an anvil, an adjustable cutting block, and a presser bar, the latter having detachably secured thereto a former provided with depending legs adapted to embrace said anvil, one of such legs having a cutting edge adapted to be brought into relation with said block, substantially as and for the purpose specified. 21st. In a wire stapling machine, the combination of a stationary anvil, the staple forming and driving mechanism, a pusher at each side of said anvil, means for leading wire to the back part of the latter, and means whereby the pushers operate to shove such wire from this position into the path of the former, and subsequently, shove the completed staple from said anvil, into the path of the driver, before the admission of another length of wire thereto, substantially as and for the purpose specified. 22nd. In a wire stapling machine, the combination of a stationary anvil, the staple former, the staple driver, a pivoted arm at each side of the anvil, means for leading wire to the back part of the latter, and a suitable spring for actuating said pushers forwardly until such wire is in the path of the former and further forwardly for shoving the completed staple from said anvil, into the path of the driver, before the admission of another length of wire thereto, substantially as and for the purpose specified. 23rd. In a wire stapling machine, the combination of a stationary anvil, the staple former, the driving bar, a pivoted arm at each side of the anvil, provided each with a cam shoulder, means for leading wire to the back part of the anvil, and a suitable spring for actuating said pushers forwardly until said shoulders contact with said former and such wire is in the path of the former and further forwardly, upon the release of such contact, for shoving the completed staple from said anvil into the path of the driver, before the admission of another length of wire thereto, said driving bar being adapted to thereafter strike said shoulders and effect the return of the arms to their initial positions, substantially as and for the purpose specified. 24th. In a wire stapling machine, the combination of a stationary anvil, the staple former, the staple driver, and a spring controlled pivoted arm at each side of the anvil, provided each with a cam shoulder and diminished portion and adapted, when free, to swing forwardly under the spring pressure and shove a length of wire from the back part of the anvil into the path of the former, said shoulders, by their contact with said former, barring further movement of the arms, and when released from such contact, permitting said arms to swing further forwardly and the diminished portions to project into the space between said anvil and former, and shove the staple formed of such length into the path of the driver, the contact of the driving bar with said shoulders effecting the return of the arms to their initial positions, substantially as and for the purpose specified. 25th. In a wire stapling machine, the combination of an anvil, a cutting block, a cutter and former, a guide block back of the path of the cutter and former, and having one end in close relation with the anvil, said blocks having registering parallel grooves in their meeting surfaces, the grooves in the guide block leading wires to the back part of the anvil, and a pusher on each side of the latter, adapted to shove such wire from this position into the groove in the cutting block, and to the front of the anvil, into the path of said cutter and former, and subsequently shove the staple formed of said wire, off the anvil into the path of the driver, before the admission of another length of wire thereto, substantially as and for the purpose specified. 26th. In a wire stapling machine, the combination of a presser bar, having therein a longitudinal groove, a driving bar sliding on the presser bar, a driver on said groove and actuated by the driving bar, a staple former detachably secured to the presser bar and extending wholly across one end of said groove, and a guide projecting partly over each side of the other end of the latter, substantially as and for the purpose specified. 27th. In a wire stapling machine, the combination of a presser bar having its lower end thickened or enlarged, a longitudinal groove in such enlargement, a former detachably secured to the latter and extending across the groove, a driving bar sliding on the presser bar, a driver in said groove and actuated by the driving bar, and a guide projecting partly over each side of the lower end of the groove, substantially as and for the purpose specified. 28th. In a wire stapling machine, the combination of a box or casing having therein an adjustable standard, a table supported by the latter, and a fixed projection on said standard below the lower edge of the box or casing, the space between such edge and projection permitting of the insertion thereinto of the article to be stapled and corresponding with the space between the lowest point of descent of the presser bar and the top of said table, substantially as and for the purpose specified. 29th. In a wire stapling machine, the combination of a box or casing having therein an adjustable standard, a table supported by the latter, and a handle secured to said standard below the lower edge of the box or casing, the space between such edge and the shank of said handle permitting of the insertion thereinto of the article to be stapled and corresponding with the space between the lowest point of descent of the presser bar and the top of said table, substantially as and for

the purpose specified. 30th. In a wire stapling machine, the combination of a box or casing, a standard adjustably sustained in said box or casing, a table supported by said standard, a longitudinal groove or slideway in the latter, a reciprocating rod or bar having freedom of lengthwise movement in said slideway, the clinchers, the clincher slide connected to and actuated by said rod or bar, and a pair of links each pivotally connected to a clincher and to said slide, substantially as and for the purpose specified. 31st. In a wire stapling machine, the combination of a pair of pivoted clinchers, a slide suitably actuated and a pair of links connected each to a clincher and to said slide and having their clincher ends inclined inwardly from the vertical axis of their slide ends, all arranged within a suitable casing, said clinchers being limited in their return movement by the sides of the casing, substantially as and for the purpose specified. 32nd. In a wire stapling machine, the combination of a fixed and a movable straightening roller on opposite sides of the interposed wire, and an axially adjustable curved plate supporting the movable roller over the periphery of which the wire passes prior to its introduction to said rollers, substantially as and for the purpose specified. 33rd. In a wire stapling machine, the combination of a fixed and a movable straightening roller on opposite sides of the interposed wire, an axially adjustable curved plate supporting the movable roller, over the periphery of which the wire passes prior to its introduction to said roller, and a spring controlled detent in contact with said wire in its passage over said plate, substantially as and for the purpose specified.

No. 43,629. Bevelling Machine for Bookbinding Purposes. (*Machine à onglet pour la reliure des livres.*)



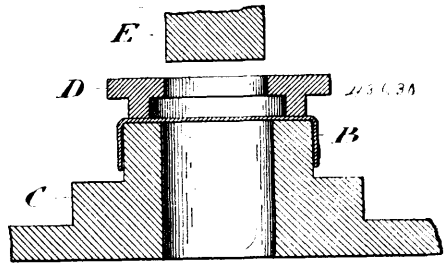
Ross Gillmore, Oscar Rapp and Anton Rapp, all of Chicago, Illinois, U.S.A., 15th July, 1893; 6 years.

Claim.—1st. In a bevelling machine, the combination of a main frame with a guide piece for a knife carrier secured to its top, the knife carrier or follower adapted to operate on said guide piece, and having a handle and knife, and means to ajustably secure the knife, the arm G, having the roller H to engage the groove of the gage, the gage operated by the movement of the knife carrier, the clamp plate having spring connections with a foot lever, and the foot lever to operate the clamp plate, substantially as described. 2nd. In a bevelling machine, the combination of a main frame, with a guide piece for a knife carrier adjustably secured to its top, the knife carrier or follower adapted to fit and operate in a groove in the guide piece, and having a transverse mortise for the reception and retention of a knife, and a securing plate and handle, a knife having a shank to fit in said mortise, the arm G, having the roller H to engage the groove of the gage, the said gage operated by the movement of the carrier, the clamp plate having spring connections with a foot lever, and a foot lever to operate the clamp plate, substantially as described. 3rd. In a bevelling machine, the combination of the main frame A, having a top *a*, and side plate or board K, having the slots *k*, with the guide piece B, having the dove tailed groove C, the arms *c* having the slots c^4, and inclined upper ends to which is secured the guide piece, the knife carrier D, having a dove tailed tenon to operate in the groove of the guide, and a mortise to receive the knife, the plate D^1 secured to the carrier and having the handle F, the knife F^1 having the shank E, the arm G secured to the carrier, and having the roller H, the gage L having the groove L^1, provided with the curve L^2, and the pins *c* to operate in the slots *k*, the clamp plate P having the spring actuated pins N, the bars M secured to the lower portion of the pins N, and having the connecting arm *m*, the lever O fulcrumed to the arm P, and engaging with the bar M by means of the arm *m*, substantially as described.

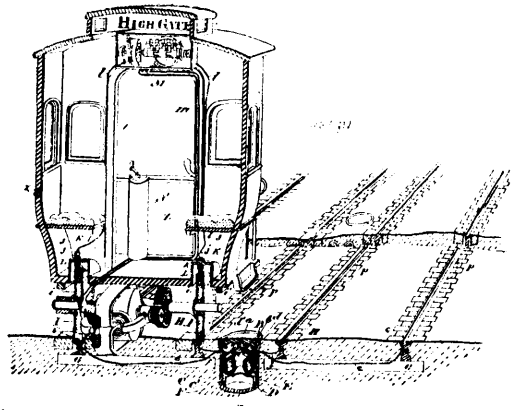
No. 43,630. Hub Band. (*Doublure de moyeu.*)

George Monteith, Cincinnati, Ohio, U.S.A., 15th July, 1893; 6 years.

Claim.—1st. A wrought metal hub band made of sheet metal and having the outer end turned over on itself to strengthen the point of the band, substantially as shown and described. 2nd. The process of forming a wrought metal hub band having its outer end turned over on itself, which consists in first forming a shallow cup out of sheet metal, then pressing this cup wrong side out, reducing the diameter of the cup to the size of the finished band, and then turning in the bottom of the cup, substantially in the manner and for the purpose described.



No. 43,631. System for Electrically Propelling Cars. (*Système de propulsion électrique des chars.*)



William Joseph Still and Randolph Macdonald, both of Toronto, Ontario, Canada, 15th July, 1893; 6 years.

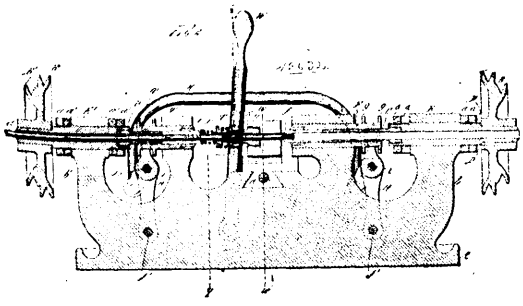
Claim.—1st. An improved system for the electrical propulsion of cars consisting of two alternating current wires suitably insulated and supplied with current of a high voltage from the generator, a series of transformers located at desired distances apart and having their primary coils connected to the alternating current wires and their secondary coils connected to the rails, and means whereby the alternating current of reduced voltage is conveyed from the rails to the transmuter located in the car as the car is caused to move along the track and from such transmuter as a constant current to the motor of the car as and for the purpose specified. 2nd. An improved means for the electrical propulsion of cars consisting of two alternating current wires suitably insulated and supplied with current of a high voltage from the generator a transformer situated intermediately between the main alternating current wires, and a transmuter which is so actuated from the alternating current derived from the transformer, as to change such current into a constant current for the driving of the motor, as and for the purpose specified. 3rd. The combination, with the main alternating current wires A and B, connected by the wires, *a* and *b*, to the transformer, of the branch alternating current wires *e a* and *f*, leading from the transformer to the rails through the rims i^1 of the wheels I, shoes J, rods *j*, and wires *l* to the transmuter M, and the wires *m*, leading from the transmuter M, to and through the motor O, as constant current wires as and for the purpose specified. 4th. In a system for the electrical propulsion of cars of the class described, a series of pit casings D, containing the transformers C, and wires *a* and *b*, connected to the transformers throughout the length of the system, the wires A and B, being carried through insulated cylindrical sleeves provided with annular corrugated rings extending throughout the length of the conduit pipes, couplings 11, being provided to connect the pipes 10, together and the couplings, the space in the pipes 10, around the cylindrical sleeves and the space in the pit casing around the transformer being filled with oil, as and for the purpose specified.

No. 43,632. Machine for Making Metal Balls. (*Machine pour faire des boules en métal.*)

Ernest Gustav Hoffman, New York, State of New York, U.S.A., 15th July, 1893; 6 years.

Claim.—1st. In a machine for making balls and other like articles from a metal rod which is adapted to rotate, the combination of a cutting and forming device adapted to form or fashion two or more balls on said rod at the same time, and to completely sever one of said balls so formed while the others are forming, and means for holding the said ball so severed in position so that it may be further

operated upon by said cutting device to remove any fins or projections that may be left thereon. 2nd. In a machine for making balls

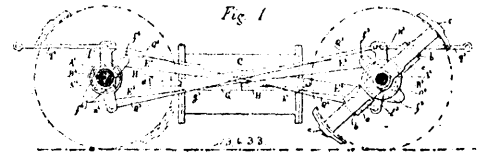


and other like articles from a metal rod which is adapted to rotate, the combination of a cutting and forming device adapted to form or fashion two or more balls on said rod at the same time and to completely sever one of said balls so formed while the others are forming and means for holding the said ball so severed in position so that it may be further operated upon by said cutting device to remove any fins or projections that may be left thereon, said holding means being adapted to rotate so as to rotate the severed ball while the cutting device is removing the fins or projections therefrom. 3rd. In a machine for making balls and other like articles from a metal rod, which is adapted to rotate, the combination of a cutting and forming device adapted to form or fashion two or more balls on said rod at the same time and to completely sever one of said balls so formed while the others are forming, and means for holding the said ball so severed in position so that it may be further operated upon by said cutting device to remove any fins or projections that may be left thereon, and means for advancing the rod so that another ball may in like manner be severed therefrom and finished by the said cutting and forming device while still others are being formed on the rod. 4th. A machine for making balls and other articles from a metal rod or bar, which has in combination means adapted to rotate so as to rotate the rod or bar, means for forming thereon two or more balls at the same time, means for severing one of said balls while the others are being formed, means to hold the severed ball while any fins or projections which may remain thereon are being removed or cut therefrom, means adapted to rotate said holding, means to rotate the severed ball while said fins or projections are being removed and means for advancing the rod or bar so that other balls may be formed, severed and finished, all arranged so that they will operate substantially as and for the purpose herein set forth. 5th. In a machine for making balls and other articles from a metal rod or bar which is adapted to rotate, the combination of a cutting and forming device adapted to be moved to and away from said rod, said cutting and forming device being also adapted to form two or more balls thereon at the same time and to completely sever one of said balls so formed while the others are forming and means for removing the fins on each side of the ball. 6th. In a machine for making balls from a metal rod, the combination with means for holding or clutching the rod at two points, said means being adapted to rotate in order to rotate said rod, of a cutting and forming device adapted to form or fashion two or more balls on said rod at the same time and to completely sever one of said balls so formed while the others are forming, and means for holding the severed ball so that it may be operated upon to remove any fins or projections that may be left thereon. 7th. In a machine for making balls and other articles from a metal rod or bar, the combination, with means for rotating said rod, of a cutting and forming mechanism located a little below the center of said rod, said cutting and forming device being adapted to form two or more balls on said rod at the same time and to completely sever one of said balls so formed while the others are forming, and a device for raising the cutting mechanism to remove any gas or projections that may be left on the severed ball. 8th. In a machine for making balls and other articles from a metal rod, the combination, with two chucks or clutches adapted to rotate, said clutches being adapted to operate to clutch said rod which is passed therethrough in order to rotate said rod, of a cutting and forming device located between said clutches slightly below the center of said rod adapted to form two or more balls thereon at the same time, and to completely sever one of said balls so formed while the others are forming, one of said clutches being arranged to hold the severed ball, and to rotate it so that it may be further operated upon the cutting device in order to remove any fins or projections that may be left thereon. 9th. In a machine for making balls and other articles from a metal rod which is adapted to rotate, of a cutting and forming device adapted to form two or more balls thereon at the same time, and to completely sever one of said balls while others are forming, consisting of a circular metal piece having grooves and edges on its periphery of varying depths and lengths, substantially as set forth. 10th. In a machine for making balls and other articles from a metal rod which is adapted to rotate, of a cutting and forming device adapted to form two or more balls thereon at the same time and to completely sever one of said balls while others are forming, consisting of a circular metal piece having grooves and edges on its periphery of varying depths and lengths, said circular piece having a portion of its periphery cut away, adapted to be raised so that one edge of the cut away portion will operate to sever the fins on the balls as the device is raised, substantially as set forth. 11th. In a machine for making balls and other articles from a metal rod which is adapted to rotate, of cutting and forming device adapted to form two or more balls thereon at the same time, and to completely sever one of said balls while others are forming, and means for advancing the rod a predetermined distance so that another ball may in like manner be severed therefrom by the cutting and forming device. 12th. In a machine for making balls and other articles from a metal rod which is adapted to rotate, the combination, with a cutting and forming device adapted to form or fashion two or more balls on said rod at the same time, and to completely sever one of said balls so formed while others are forming, and means for advancing the rod a predetermined distance so that another ball may in like manner be severed therefrom while others are forming, consisting of a chuck or clutching device adapted to operate by the movement of a lever in the opposite direction to advance the rod a predetermined distance before the clutch opens, substantially as set forth. 13th. In a machine for making balls from a metal rod or bar, the combination, with the chucks C and C^1, adapted to be operated to clutch the rod by the movement of the lever I, in one direction, of the cutting and forming device L, adapted to be moved backwards and forwards by the lever Q, and raised by the lever O, the chucks C and C^1, being adapted to be simultaneously opened to release the rod by the movement of the lever I, in the opposite direction, substantially as and for the purpose set forth. 14th. In a machine for making balls from a metal rod or bar which is adapted to rotate, the combination, with the chucks C and C^1, adapted to be operated to clutch the rod by the movement of the lever L, in one direction, and to be opened to release the rod by the movement of said lever in the opposite direction, the cutting and forming device L, being adapted to be moved backwards and forwards by the lever Q, and to be raised by the lever O, the clutch S, adapted to be operated by the lever W, to clutch the rod, the spring Z, and spring 10, said spring 10 operating to move or advance the rod a predetermined distance when the lever I is moved to open the chucks C and C^1, substantially as set forth. 15th. In a machine for making metal balls and other articles from a metal rod which is adapted to rotate, the combination, with a cutting and forming device adapted to form or fashion two or more balls on the same rod at the same time and to completely sever one of said balls so formed while the others are forming and means for advancing the rod a predetermined distance so that other portions of the rod may be presented to the cutting and forming device for operation, consisting of a chuck or clutching device adapted to clutch the rod and a spring to force or move said clutch and with it the rod a predetermined distance before said clutch is opened, substantially as set forth.

No. 43,633. Car Starter and Brake.

(*Appareil de mise en mouvement et frein de chars.*)

Fig 1

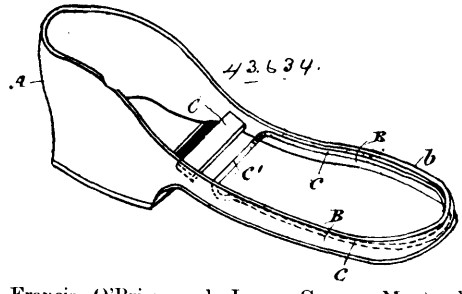


Carlo Sacco, Turin, Italy, 15th July, 1893; 6 years.

Claim.—1st. A car starter or reaction brake, comprising crank sleeves on the axles, brake shoes carried by the same, means for setting the brake shoes on the wheels, an accumulator, and the crossed connecting rods coupled at their ends to the cranks of the respective crank sleeves, the elements of the accumulator being coupled to the respective connecting rods, whereby the rotation of the sleeves is converted into rectilinear movement of the accumulator, or *vice versa*, substantially as set forth. 2nd. In a car starter or reaction brake, the combination to form an accumulator, of a closed cylinder, a piston therein, a piston rod connected to said piston, and a yoke, the cross piece of which is connected to the piston rod, and the slide bars mounted in guides on the cylinder. 3rd. In a car starter or reaction brake, the combination, with the crank sleeve B, the axles, provided with arms *b*, the brake shoes, the carriers therefor mounted on said arms, the ring O, coupled by links to said carriers, the said links, the screw sleeve L, mounted on the crank sleeve B, the box nut N, mounted on the sleeve L, and means substantially as described for rotating the sleeves L and N with respect to each other whereby the brake shoes are set, substantially as set forth. 4th. In a car starter reaction brake within the setting of the brakes serves to compress air in a cylinder, the combination, with the accumulator cylinder, its piston and piston rod, and the yoke H, provided with ratchet teeth, of a

pawl I, adapted to engage said teeth normally, disengaging lever K on the cylinder connected with the pawl, the floating bar Z, connected to two levers z, and adapted when either lever z is moved, to strike and operate the lever K, in whatever position the cylinder may be occupying, the said levers z, and means substantially as described for operating said levers from the respective ends of the car, substantially as set forth. 5th. In a car starter or reaction brake, the combination, with a brake shaft T^1, on the car, an elbow lever U^1, coupled at each end to the brake shaft by a chain, the said chains, the levers V^1, fulcrumed on one arm, of the lever U^1, the lever S^1, the rod W^1, coupled at one end to one arm of the lever V^1, and at the other end to the lever S^1, the lever z^1, the rod X^1, coupled at one end to the other arm of the lever V^1, and having a slotted connection at its other end with the lever z^1, the floating bar Z, coupled to the lever z^1, and a stop device to limit the endwise movement of the rod X^1 in one direction, said mechanism serving to enable the operator to operate the mechanism for setting and releasing the brakes and for setting free the piston of the accumulator, substantially as set forth.

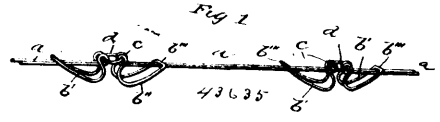
No. 43,634. Rubber Overshoe. (*Claques.*)



John Francis O'Brien and James Cooper, Montreal, Quebec, Canada, 17th July, 1893; 6 years.

Claim.—1st. A rubber overshoe, having a heel counter portion of desired height, and a rim provided with a centripetally acting stiffener adapted to present a semi-rigid rib or bead to clasp the sole of the boot. 2nd. In a rubber overshoe, the combination of a heel counter portion, a rim provided with a centripetally acting resilient band or rib c, adapted to clasp the sole of the boot. 3rd. In a rubber overshoe, the combination of a back heel portion and a forward sole rim provided with the metal strip c, located between the lining and cover of the rim, as shown and for the purposes described.

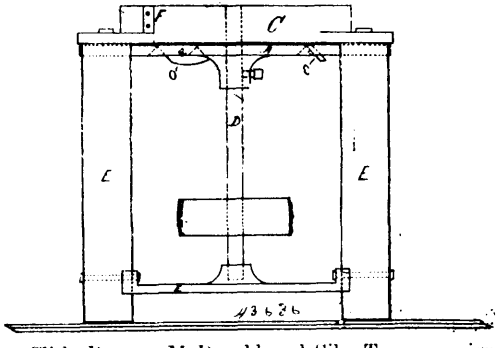
No. 43,635. Clothes Line. (*Corde à linge.*)



Fernando G. Lane, John W. Kelly and Fred. Sterzing, all of Austin, Texas, U.S.A., 17th July, 1893; 6 years.

Claim.—A pinless clothes line formed of metallic sections, each section being formed of spring wire, bent to form the main portion and the end clamping loops, eyes, as c, carried by the main section at the ends thereof, and links or loops for connecting the sections, said links or loops passing through said eyes, substantially as described and for the purpose set forth.

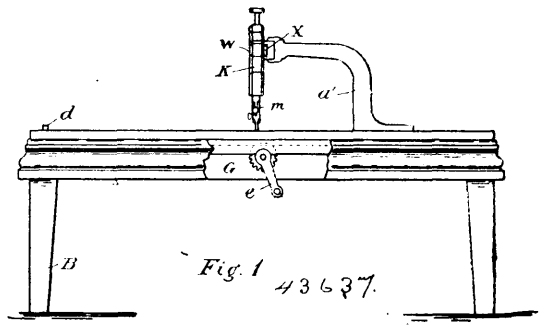
No. 43,636. Machine for Jointing Shingles and Short Boards. (*Machine pour joindre les bardeaux et bouts de planche.*)



Gardner Clish, Duncan McDonald and Silas Tupper, assignees of Robert Smallwood, Truro, Nova Scotia, Canada, 17th July, 1893; 6 years.

Claim.—The combination of the disc or wheel A, and the frame c, c, c, c, substantially as and for the purpose hereinbefore set forth.

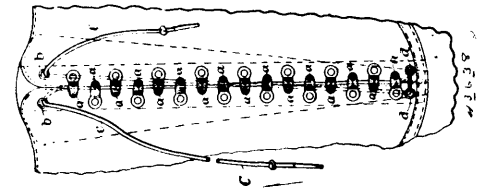
No. 43,637. Glazier's Table. (*Table de vitrier.*)



Joseph Cloutier, Hull, Quebec, Canada, 17th July, 1893; 6 years.

Claim.—1st. A glass cutting implement, having a sliding table moved by means of a rack, pinion, shaft and crank, and having on its edge a dimension scale and a cutting tool sliding in a grooved guide bar across said sliding table, substantially as described. 2nd. In a glass cutting implement, having a sliding table, a cutting tool, consisting of the body K, the cutter bar m, set in a chamber in said body, carrying a glass cutting instrument and adjusted vertically by the springs S and T, and screw t, the lever V, and cross bar X, arranged to be carried by the guide bar Y, which is supported by the brackets a^1, substantially as described. 3rd. The combination of the frame A, sliding table C, having the stop d, and scale I, with a cutting tool chambered to receive an adjustable cutter bar m, for carrying a steel disc or other cutting instrument, and having a dovetailed cross bar X, to engage in a groove in the guide bar Y, supported from the frame A, by the brackets a^1, all substantially as shown and described.

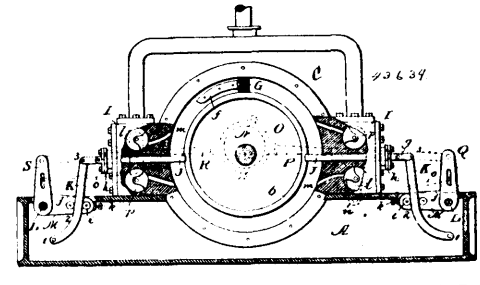
No. 43,638. Fastening for Boots, Shoes, Gaiters, etc. (*Agrafe pour chaussures, guêtres, etc.*)



Mary Sanders Hungerford, The Island, Clonakilty, Cork, Ireland, 17th July, 1893; 6 years.

Claim.—As a means for lacing boots, shoes, gaiters and the like, the employment of a number of loops secured alternately to the opposite meeting edges or edge and side of a boot or shoe upper or gaiter, and the use thereof with a lace or laces passed therethrough, substantially as hereinbefore set forth and described and illustrated in the accompanying drawings.

No. 43,639. Rotary Steam Engine. (*Machine à vapeur rotatoire.*)

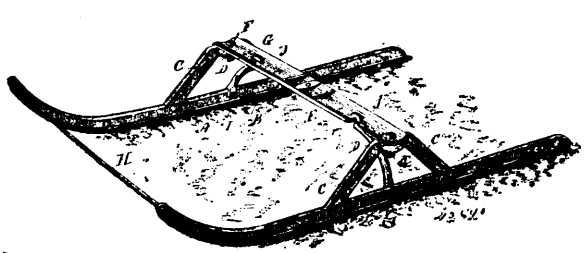


Joseph Hill, Williamsport, Pennsylvania, U.S.A., 17th July, 1893; 6 years.

Claim. 1st. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core within said cylinder or casing and a wing, rotatively mounted in the space between said cylinder or casing and said outer core, substantially as set forth. 2nd. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core, a disc, revolvingly mounted within said cylinder or casing, and a wing carried by the said disc and rotating within the space between said cylinder or casing and said centre core, substantially as set forth. 3rd. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core, a disc mounted within said cylinder or casing, so as to divide the space formed between said cylinder or casing and said centre core into two parts of

different capacities, and wings carried by said disc and rotating within said spaces, substantially as set forth. 4th. In a rotary steam engine, the combination of an outer cylinder or casing C, the cylinder heads B, secured to the same, the rings *b*, *b*, integral with said cylinder heads, and constituting a centre core, a disc E, mounted between said rings and bearing against the same, and wings G, H, carried by said disc and rotating within the space formed between the said cylinder or casing and said centre core, substantially as set forth. 5th. In a rotary steam engine, the combination, of an outer cylinder or casing, a centre core, a disc mounted within said cylinder or casing, a wing carried by said disc and rotating within the space between said cylinder or casing and said centre core, and gate valves J, J, arranged diametrically within said cylinder or casing, and adapted to be moved into and out of engagement with said centre core, substantially as described. 6th. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core, a disc mounted within said cylinder or casing, a wing carried by said disc and rotating within the space between said cylinders or casing and said centre core, a recess *e*, in said centre core, at diametric points, and gate valves J, J, adapted to be moved into and out of engagement with said recess *e*, in each side of said centre core, substantially as set forth. 7th. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core, a disc mounted within said cylinder or casing, a wing carried by said disc and rotating within the space between said cylinders or casing and said centre core, gate valves J, J, arranged diametrically within said cylinder or casing, and adapted to be moved into and out of engagement with said centre core and an exhaust valve, and a live steam valve on each side of the engine, one being above the gate valve, and the other being below the gate valve, substantially as set forth. 8th. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core, a disc mounted within said cylinder or casing, a wing carried by said disc and rotating within the space between said cylinder or casing and said center core, gate valves J, J, arranged diametrically within said cylinder or casing, and adapted to be moved into and out of engagement with said centre core, a cam lever K mounted adjacent to each gate valve and connected therewith, and an eccentric on the main shaft for actuating said cam levers, substantially as set forth. 9th. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core, a disc mounted within said cylinder or casing, a wing carried by said disc and rotating within the space between said cylinder or casing and said centre core, gate valves J, J, arranged diametrically within said cylinder or casing, and adapted to be moved into and out of engagement with said centre core, a cam lever K mounted adjacent to each gate valve and connected therewith, the rocker shaft L mounted in the base of the engine adjacent to each cam lever K, a rocker arm M on each rocker shaft L, and carrying rollers *i* and *j*, engaging each cam lever K, a rocker arm S, Q, on each of the rocker shafts L, an eccentric N on the engine shaft, and connections from the eccentric N to the rocker arms S and Q, substantially as described. 10th. In a rotary steam engine, the combination of an outer cylinder or casing, a centre core, a disc mounted within said cylinder or casing, a wing carried by said disc and rotating within the space between said cylinder or casing and said centre core, gate valves J, J, arranged diametrically within said cylinder or casing, and adapted to be moved into and out of engagement with said centre core, a cam lever K mounted adjacent to each gate valve and connected therewith, the rocker shaft L mounted in the base of the engine, adjacent to each cam lever K, a rocker arm M on each rocker shaft L, and carrying rollers *i* and *j* engaging each cam lever K, a rocker arm S, Q, on each of the rocker shafts L, an eccentric N on the engine shaft, an exhaust valve I on each side of the engine, connecting rods *o*, from said exhaust valves to said rocker arms S, Q, and connecting rods P, R, from said eccentric to said rocker arms S, Q, substantially as described.

No. 43,640. Sleigh. (*Traîneau.*)

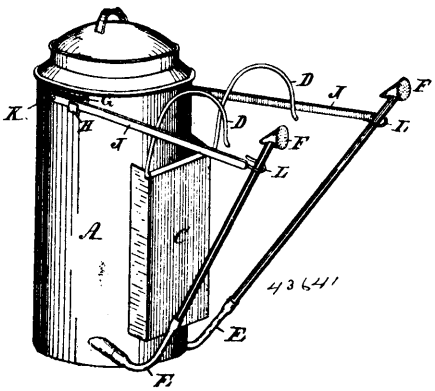


Joseph McIntyre, of Camlachie, and William Dodds, Markdale, both in Ontario, Canada, 17th July, 1893; 6 years.

Claim.—1st. In a sleigh, the runners having slotted bearings formed on top of the raves, in combination with a bent held to the bearings by bolts passing through the slots, substantially as and for the purpose specified. 2nd. In a sleigh, the runners having slotted bearings formed on top of the raves, in combination with a bent held to the bearings by bolts passing through the slots, the runners being braced together and also to the bent by flexibly connected braces, substantially as and for the purpose specified.

No. 43,641. Potato Vine Sprinkler.

(*Arrosoir pour patates.*

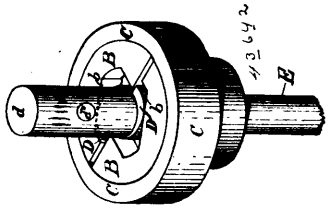


Hector T. Sutherland, assignee of Charles H. McKay, both of New Glasgow, Nova Scotia, Canada, 17th July, 1893; 6 years.

Claim.—1st. A sprinkling can A, having hooks D, D, for the purpose set forth. 2nd. A sprinkling can A, having arms J, J, as set forth for the purpose described. 3rd. A sprinkling can A, having hooks D, D, and arms J, J, as and for the purposes set forth.

No. 43,642. Friction Ratchet Clutch.

(*Embrayage à friction.*)



Robert F. Hargraves, Providence, Rhode Island, U.S.A., 17th July, 1893; 6 years.

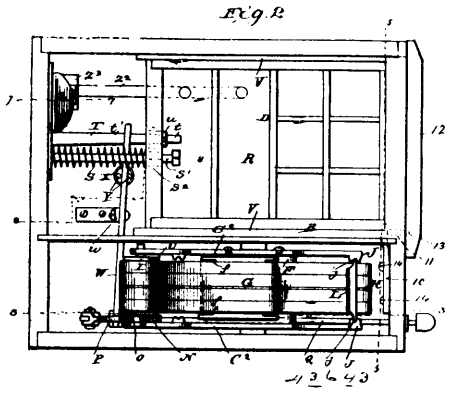
Claim.—1st. The improved friction ratchet clutch herein described, consisting of an annular flange or rim forming a portion of a head or pulley, a stud or shaft on which said head or pulley is fastened, one or more friction pawls mounted within said annular flange or rim, a handle having one or more cams, and a socket to fit upon said stud all arranged and operating substantially as and for the purposes specified. 2nd. The combination of shaft E having the stud *e* and channel e^1, the annular flange or rim C forming a portion or part of a head or pulley secured to said stud or shaft, the handle A having set screw F and socket or hole d^1 to receive said stud, the cams D extending from said handle and the pawls B within and conforming to the shape of the annular flange or rim C, substantially as described. 3rd. The combination of the shaft E having the stud *e* and the channel e^1, the annular flange or rim C forming a portion of a head or pulley secured to said stud or shaft, the handle A having set screw F and socket to receive said stud, the cams D extending from said handle and the pawls B mounted in said annular flange or rim, substantially as specified.

No. 43,643. Cash Recorder. (*Registre de monnaie.*)

Wooster B. Metcalfe and Frank A. Ziegler, Hanover, Pennsylvania, U.S.A., 17th July, 1893; 6 years.

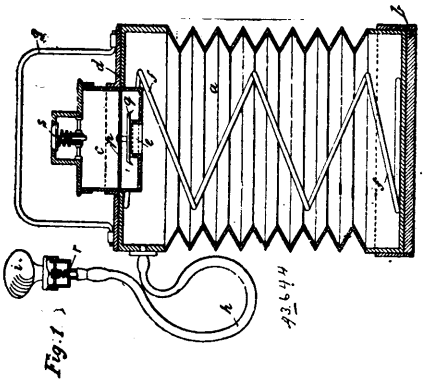
Claim.—1st. In an apparatus, substantially as described, the combination of the frame or casing, the drawer, the latch by which to hold such drawer closed, the cross lever by which to release such latch, and the main lever arranged to operate such cross lever, all substantially as and for the purposes set forth. 2nd. The combination, substantially as described, of the casing having a partially glazed sight opening and the table below such opening and provided at its ends with projected side guides, all substantially as described and for the purposes set forth. 3rd. The combination, in an apparatus, substantially as described, of the roller supporting the record slip, the uprights having slots, the friction bar fitted at its ends in said slots and over and partially around which the record strip is passed, and the tension bar fitted at its ends in said slots and bearing upon the record strip passed over the friction bar, all substantially as set forth. 4th. In an apparatus, substantially as described, the roller I, provided at its ends with notches *j*, the band sprung into said notches and extended across the roller, and the slip held by said band, all combined substantially as set forth. 5th. The combination of the box or casing, the drawer movable into and out of the same and provided at its inner end with a bearing for engagement by the hook, the hook supported in the casing at the inner end of the drawer recess and arranged to engage the bearing of the drawer, the cross lever arranged to move said hook out of such

engagement, and the hand lever arranged to operate such cross lever, substantially as set forth. 6th. The combination of the box



or casing, the drawer, the latch for holding the drawer closed, the cross lever arranged to release said latch, a spring arranged to actuate said cross lever, and the main lever connected with the cross lever, whereby it may operate such cross lever and be also actuated by the spring which actuates the cross lever, substantially as set forth. 7th. The combination, substantially as described, of the box or casing having a partially glazed opening, the record slip and its rollers, one of which has a ratchet wheel, the main or hand lever pivoted between its ends and projecting at its front end through a slot in the casing, a pallet supported on the rear end of the main lever and arranged to engage the ratchet wheel, the detent pawl, the cross lever pivoted between its ends and connected at one end with the inner arms of the main lever, the spring arranged to actuate said cross lever, the drawer and the latch by which to hold the drawer closed, said latch being arranged for operation by the cross lever, all substantially as and for the purposes set forth. 8th. In an apparatus, substantially as described, the combination of the casing, a lock device, and a drawer provided with a laterally movable false front arranged and adapted to operate said lock device, substantially as set forth. 9th. In an apparatus, substantially as described, the combination of the box or casing, the record slip, the drawer having a bearing piece for engagement by its securing latch, the latch movable into and out of engagement with said bearing piece, the mechanism for advancing the slip, and the latch releasing devices arranged for operation by the said mechanism, the said bearing piece being adjustable, whereby it may be set to effect the release of the drawer at different points of movement of the releasing devices, all substantially as and for the purposes set forth. 10th. In an apparatus, substantially as described, the combination of the box or casing, the pivoted main lever, and intermediate operating and supporting devices whereby the said lever may operate to advance the record slip, and the lock consisting of a bolt movable into and out of engagement with said lever whereby to lock and unlock the same, substantially as and for the purposes set forth. 11th. In a cash recorder, the combination, substantially as described, of a casing, mechanism for supporting and advancing a record strip, a locking device to lock said mechanism, and a drawer provided with a laterally movable false front extending beyond the side of the drawer, and adapted to conceal a portion of the said locking device located alongside such drawer, substantially as described and for the purposes set forth. 12th. The combination, substantially as herein described, of the box or casing, the main lever, the slide bolt for locking said lever, and the drawer having a laterally movable false front, the false front and side bolt being provided with interengaging parts, whereby the lateral movement of the front may adjust the bolt into and out of engagement with the lever, substantially as and for the purposes set forth. 13th. In an apparatus, substantially as described, the combination with the box or casing, the bolt, and the part to be locked by such bolt, of the drawer provided with a false front movable laterally, and arranged to adjust the said bolt into and out of locked position, substantially as set forth. 14th. The combination of the box or casing, the drawer, a latch within the casing by which to hold the drawer closed, mechanism by which such latch may be released to permit the drawer to open, and a bolt by which to lock such mechanism, substantially as set forth. 15th. The combination, substantially as described, of the box or casing, a latch within said casing, mechanism by which said latch may be adjusted to unlatched position, said mechanism including a main or hand lever, the bolt by which said lever may be locked from movement, and the drawer arranged to be held closed by the said latch, and provided with a laterally sliding false front arranged to operate the bolt into and out of locked position, substantially as and for the purposes set forth. 16th. In an apparatus, substantially as described, the combination with the box or casing, and the sliding bolt having a forwardly projected pin or stud, of the drawer having a laterally sliding false front, having in its inner face a socket or seat arranged to receive the end of said pin or stud, whereby the movement of the front may operate to set the bolt into and out of locked position, substantially as set forth.

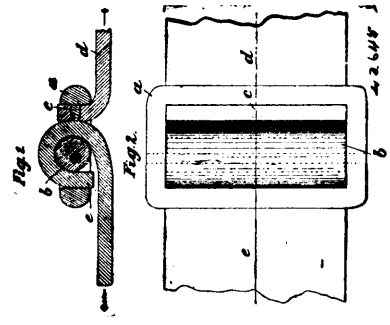
No. 43,644. Inhaler. (*Inhalateur.*)



John Joseph Hartnett, London, England, 17th July, 1893; 6 years.

Claim.—An apparatus for the inhalation of compressed dry or medicated air, consisting of a collapsible chamber, in combination, with a chamber or case for containing the absorbent material, and provided with a suction valve, sieve plate and slots or openings in a bottom flange through which slots the sir saturated with the medicaments, or dried, is sucked in, in order to be pressed out only by a tube, the mouthpiece of which is provided with a back pressure valve, substantially as described and shown in the drawing.

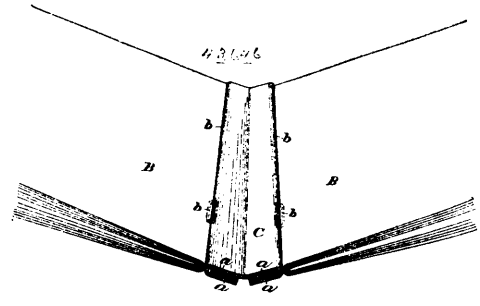
No. 43,645. Buckle. (*Boucle.*)



Wilhelm Stefan H. Schmidt, Iserlohn, Prussia, 17th July, 1893; 6 years.

Claim.—1st. In a fastener for connecting the ends of bands, belts, straps and the like, the combination, and arrangement in and with a rectangular frame, of an eccentric roller mounted near to and parallel with one side of the frame, and a projection or projections on the inner face of the opposite side of the frame, substantially as hereinbefore described and illustrated by the accompanying drawings. 2nd. A fastener or buckle for bands, belts, straps and the like, constructed substantially as hereinbefore described and as illustrated by the accompanying drawings.

No. 43,646. Blank Book. (*Blanc de livre.*)

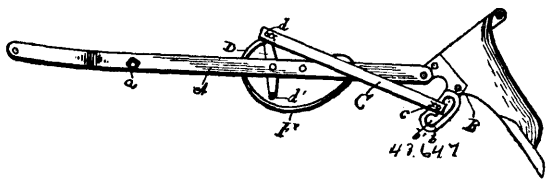


Hermann H. Hoffman and Francis Hermann Hoffman, both of Chicago, Illinois, U.S.A., 17th July, 1893; 6 years.

Claim.—1st. A blank book, comprising sections or signatures, a series of stubs, each composed of a strip folded in the centre and then each half folded, said sections or signatures being secured to the side folds, substantially as described. 2nd. A guard or hinge for blank books, comprising a strip of canvas or like material folded with one central and two side folds, with filling strips secured be-

tween the folds, substantially as described. 3rd. A blank book comprising sections or signatures, a series of stubs, each stub composed of a strip folded once in the centre and then each half folded, and filling strips secured to said folded strip between the folds, said sections or signatures being secured to the folds in said strip, substantially as described. 4th. A blank book, comprising sections or signatures, a series of stubs, each composed of a strip of canvas or other fabric, folded with one central and two side folds, filling strips secured to the fabric between the folds, and on the under side of said fabric, and means for securing the leaves of the section or signature together, and to the side folds, substantially as described.

No. 43,647. Support for the Hoes and Agricultural Implements. (*Support de houes pour instruments d'agriculture.*)



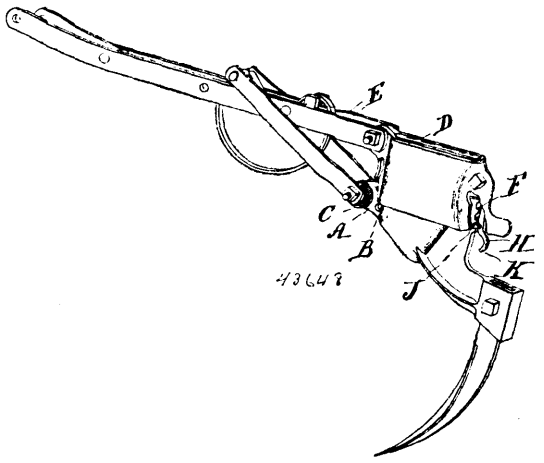
Robert Galloway, Macedon, New York, U.S.A., 18th July, 1893; 6 years.

Claim.—1st. In an agricultural implement, the combination with the drag bar, the tooth bracket pivotally connected to the rear end thereof and having the forward extension notched upon the under side, the braces on each side of the drag bar and a pin on the braces co-operating with any one of the notches in the tooth bracket, of the pivoted locking lever pivotally connected to the braces at the upper end and having the T shaped lower end projecting beneath and out on each side of the drag bar and engaging the under side of the braces to hold them in engagement with the notches, and the spring passing through and connected to the drag bar in rear of the locking lever at one end, and passing through and pivotally connected to the upper end of the locking lever at the opposite end, substantially as described. 2nd. In an agricultural implement, the combination with the drag bar, the spring pressed locking lever pivotally connected thereto and the brace pivotally connected to the upper end of the locking lever, of the tooth bracket pivoted to the rear end of the drag bar and having the forward extension provided with the segmental slot with its upper wall notched and the pin on the brace for co-operating with said notches whereby the tooth may be adjusted, but the detachment of the brace and bracket is prevented, substantially as described. 3rd. In an agricultural implement, the combination with the drag bar, the spring pressed locking lever pivotally connected there, the laternal extensions on said lever below the centre, and braces pivotally connected to the upper end of said lever and resting on said lateral extensions, of the tooth bracket pivotally connected to the rear end of the drag bar and having the segmental slot therein with the upper wall notched and the pin on the braces held in co-operation with said notches by the spring pressed locking lever, whereby said braces may be depressed to adjust the tooth without becoming detached therefrom, substantially as described. 4th. The combination with the drag bar formed by the two separate side pieces the locking lever pivoted between said side pieces, the spring co-operating with said locking lever and the braces pivotally connected to the locking lever and passing down on each side of the drag bar, of the tooth bracket pivoted between the sides of the drag bar and having the slotted and notched extension at the bottom for co-operating with the braces formed of a thickness corresponding to the thickness of the drag bar whereby the ends of the braces are held apart and work freely outside of the drag bar, substantially as described. 5th. In an agricultural implement, the combination with the drag bar, the spring pressed locking lever pivotally connected thereto, and the brace pivotally connected to the upper end of the locking lever, of the tooth pivoted to the rear end of the drag bar and having the forward extension provided with the segmental slot with its upper wall notched, the lower or outer wall protecting said notches and the pin on the braces held in co-operation with said notches by the spring pressed locking lever, whereby said braces may be depressed to adjust the teeth without becoming detached therefrom, substantially as described.

No. 43,648. Cultivator. (*Cultivateur.*)

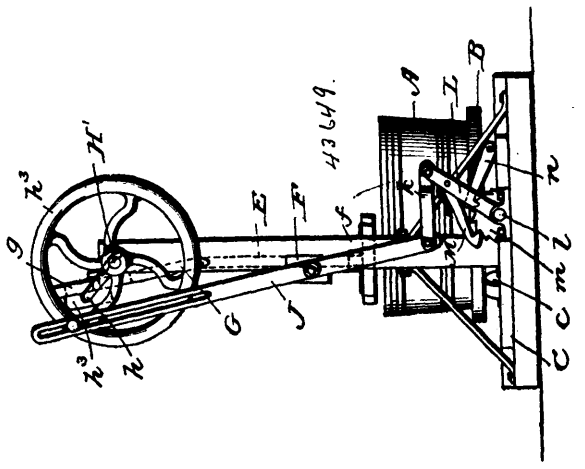
Richard Sylvester, Lindsay, Ontario, Canada, 18th July, 1893; 6 years.

Claim.—1st. A drill hoe or tooth having on it or a projection thereof, a point formed to rest on the bearing made on the head block to which the drag bars are attached, a series of notches made on the drill hoe or projection thereon, in combination, with a spring latch arranged to engage with any of the said notches, substantially as and for the purpose specified. 2nd. A drill hoe to tooth having one or more notches made in it, and a pivot point to rest on a bearing made on the head block or frame, in combination, with a spring



latch arranged to engage with any of the said notches, substantially as and for the purpose specified.

No. 43,649. Washing Machine. (*Machine à blanchir.*)



Robert H. Wilson, Baggs, Wyoming, U.S.A., 18th July, 1893; 6 years.

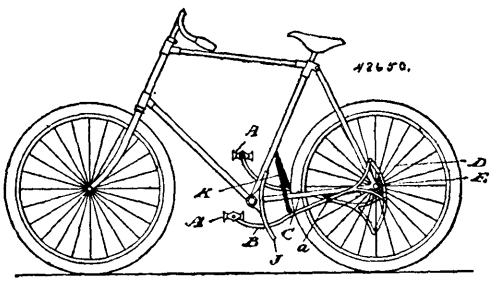
Claim.—1st. In a washing machine, the combination of a vertically reciprocable pounder, the horizontal tub holding turn table, the crank shaft having an adjustable connection with the pounder, and the mechanism driven from said shaft to rotate the turn table consisting of the pivoted bar J, having elongated slot receiving a stud on the fly wheel, the pivoted arm L, the pawl carried by the latter, the ratchet wheel to be moved by said pawl, and the roller connected with the ratchet wheel and frictionally engaging the turn table, substantially as described. 2nd. The combination, with the tub, the turn table mounted on a central shaft, the platform on which the same is supported, and the rollers beneath the turn table, of a horizontal shaft journalled in bearings on the said platform, said shaft carrying at its inner end one of said rollers, the ratchet wheel fixed on said shaft, the radial arm L, pivoted on said shaft, the link *k* connected with said radial arm, and the pivoted arm J connected with said link, all substantially as shown and for the purpose specified.

No. 43,650. Cycle. (*Cycle.*)

James Lochrie, Toronto, Ontario, Canada, 18th July, 1893; 6 years

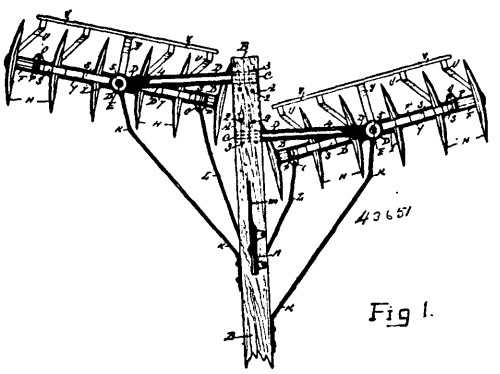
Claim.—1st. An improved driving power for a cycle, consisting of a foot lever pivoted on the frame of the cycle, and having a segmental rack connected to it, and meshing with a pinion loosely journalled on the axle of the driving wheel which is itself loosely journalled on its axle, a ratchet connection being formed between the hub of the driving wheel and the pinion, so that the motion of the pinion may be conveyed to the said driving wheel, substantially as and for the purpose specified. 2nd. As an improved driving power for a cycle, a lever B, supported by the spring K, pivoted on the cycle frame, and having a segmental rack D, fixed to it and

rranged to mesh with a pinion E, loosely journalled on the axle F, in combination, with the hub G, loosely journalled on the driving



shaft and connected to the pinion E, by a pawl and ratchet connection, substantially as and for the purpose specified.

No. 43,651. Disc Harrow. (*Herse à disque.*)



William J. Copp, assignee of James McCreath, both of Hamilton, Ontario, Canada, 18th July, 1893 ; 6 years.

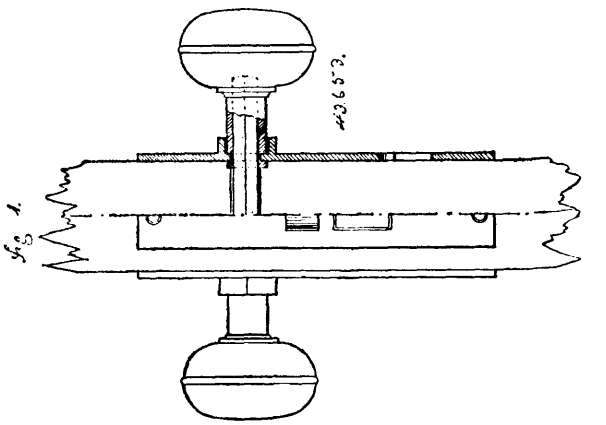
Claim.—1st. In a disc harrow machine, the combination of the metallic beam D, constructed as described, and the springs S, centrally attached thereto, substantially as described and set forth. 2nd. In a disc harrow, the beam D provided with springs S, the straps P, the through shafts provided with ferrules and sleeves, and discs in combination with lever H, pivoted to segmental ratchet, and the brake rods L, connected to said lever and sleeve, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of the beam and springs, the central standard E, having collars 5 and 6 and pin 8 and pivoted at J, to the central sleeves I, the bent braces K, and the springs S with straps P, attached at T to ferrules F, the lever M, ratchet H, the brace rods L, attached to lever and to ferrule at O, and the sections of discs tightened and secured on their shafts, substantially as and for the purpose hereinbefore set forth. 4th. In a disc harrow, the combination of the through shafts provided with ferrules F and sleeves I, and discs H, and the twisted and bent scrapers U, secured to bars V, with supports Y, attached to lugs on central sleeves, substantially as and for the purpose hereinbefore set forth. 5th. In a disc harrow, the combination of the springs to the shafts P, and the holes X, substantially as and for the purpose hereinbefore set forth.

No. 43,652. Method of Making Non-Alcoholic Ale or Beer. (*Méthode de fabrication de bière non-alcoolique.*)

Amos Herbert Hobson, 9 Victoria Street, London, England, 18th July, 1893 ; 6 years.

Claim.—1st. The herein described process of manufacturing a non alcoholic beverage, which consists essentially in heating the wort obtained from a strong mash to a temperature sufficient to arrest the diastatic action of the malt, without however boiling the wort, then straining the wort through spent hops in order to precipitate out nitrogenous organic matter, adding the previously obtained hop infusion or extract to the wort, concentrating at a low temperature, then cooling and filtering the liquid, and finally adding water to reduce the strength to that required for a beverage, the whole operation being carried out, substantially in the manner specified. 2nd. In a process of making beer such as herein described, heating the strong wort separately from the hops to a degree sufficient to arrest the diastatic action of the malt, but without boiling the wort, as specified. 3rd. In the herein described process of making beer, concentrating at a comparatively low temperature the mixed wort and hop extract, and filtering the same at a low temperature, as specified. 4th. The herein described non-alcoholic beverage made from malt (or malt and some partial substitute such as unmalted grain) and hops, substantially in the manner specified.

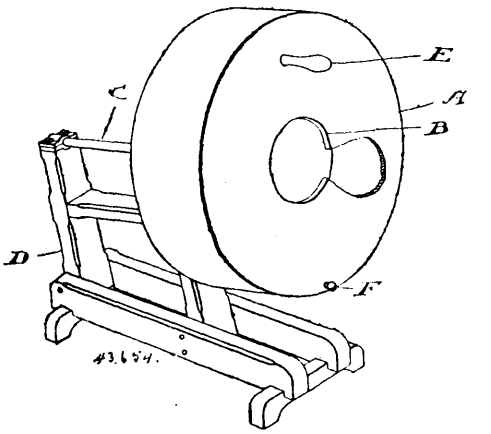
No. 43,653. Door Knob. (*Bouton de porte.*)



Francis Lattimer, Halifax, Nova Scotia, Canada, 18th July, 1893 ; 6 years.

Claim.—The combination of escutcheon plate, aperture in plate and dove tail slide, substantially as and for the purpose hereinbefore set forth.

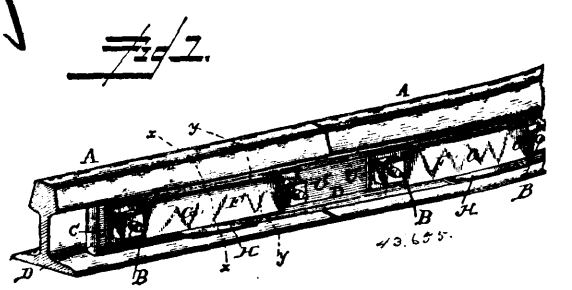
No. 43,654. Churn. (*Baratte.*)



Eli Danner, Black Creek, Willoughby, Ontario, Canada, 18th July, 1893 ; 6 years.

Claim.—As an improved churn, a cylinder having a hole at one end in the centre of its periphery, the said cylinder being carried at an angle and revolved with its periphery, substantially as and for the purpose specified.

No. 43,655. Nut Lock. (*Arrête-écrou.*)



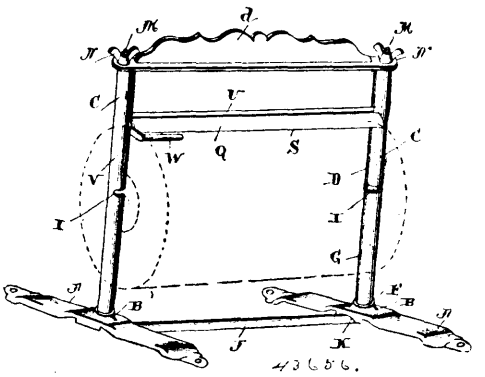
Israel Wolfe, Goshen, Indiana, U.S.A., 18th July, 1893 ; 6 years.

Claim.—1st. The combination with the washer plate E, having offset e^1, of the locking plate F, having the overlapping part G, and provided with the outwardly projecting finger-piece H, and inwardly projecting lugs or catches *f*, *f*, adapted to engage under the lower edge of the washer plate, substantially as and for the purpose shown and set forth. 2nd. The combination, with the rails of a railway joint, of the bolts, nuts, washer plate E, having offset e^1, forming side shoulders *c*, *c*, and the removable locking plate F,

made of spring metal, having the overlapping bent part G, and provided with the finger piece H, and inwardly projecting catches *f*, *f*, adapted to engage with the under side of the offset on the washer plate, substantially as and for the purpose shown and set forth.

No. 43,656. Holder and Cutter for Paper Rolls.

(Appareil à tenir et à couper les rouleaux.)

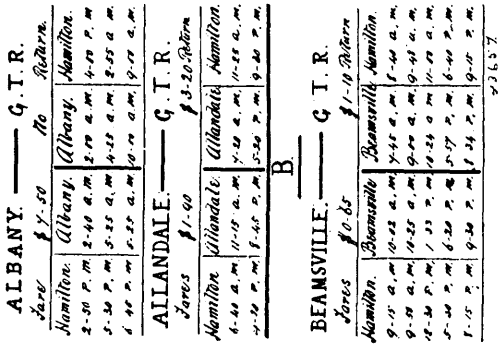


Nelson R. Streeter, Groton, New York, U.S.A., 18th July, 1893; 6 years.

Claim.—1st. A paper roll holder, comprising hollow standards, having vertical slots at their inner sides, which extend from end to end, vertical plugs within the standards and resting upon the base for supporting a paper roll shaft, transverse slots communicating with the vertical slots above the upper ends of the plugs, a tie bar for the upper ends of the standards, and clamping bolts which pass through the base, the standards and the tie bar, substantially as described. 2nd. A paper roll holder, comprising hollow standards, having means for supporting a paper roll shaft, a base having sockets provided with inwardly extending projections at one side, the lower ends of the standards having slots to receive the said projections, a tie bar for the upper ends of the standards, and clamping bolts which pass through the base, standards and tie bar, substantially as shown. 3rd. A paper roll holder, comprising a supporting frame, a paper roll journalled therein, a cutter, a paper raiser or blade supported in front of the cutting edge of the cutter, and resting upon the paper roll, a support for the said blade, substantially as specified. 4th. In a paper roll holder and cutter, the combination, with a cutter bar having a cutting edge, of a paper raising blade pivoted, and having its free end engaging the paper roll in front of the said cutting edge, and a support to which the said blade is pivoted. 5th. In a paper roll holder and cutter, the combination with a cutter, of a short paper raising blade, supported at one end of the paper roll and engaging therewith in front of the cutter, as and for the purpose described. 6th. A cutter for the paper roll holders, having a paper raising blade connected thereto, and engaging the paper roll in front of the said cutter, as and for the purpose specified. 7th. A cutter for paper roll holders, having a short paper raising blade connected thereto at one end, and extending inward and engaging the paper roll in front of the cutter, for the purpose described. 8th. A cutter for paper roll holders, having a forward extension at one end and a paper raising blade pivoted thereto, the free end of the blade extending inward and resting upon the paper roll in front of the cutter, as and for the purpose set forth.

No. 43,657. Railway Guide.

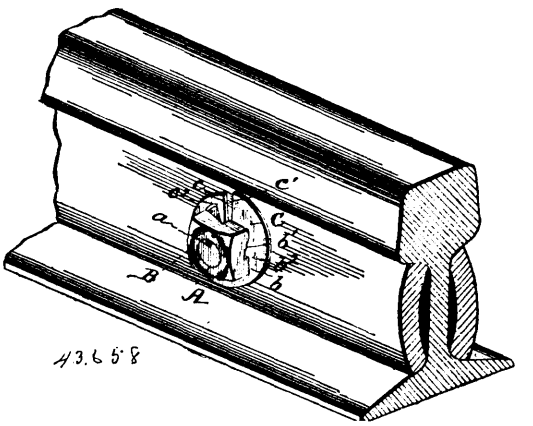
(Guide de chemin de fer.)



Herbert Ellsworth, Hamilton, Ontario, Canada, 18th July, 1893; 6 years.

Claim.—1st. A railway guide in pocket book form, with the names of all stations arranged in alphabetical order, and hours of departure and arrival of trains, substantially as and for the purpose hereinbefore set forth. 2nd. The combination in a railway guide in pocket book form, of the names of all stations arranged in alphabetical order, the hours of departure and arrival of all trains, and the rate of fare, both single and return, all arranged substantially as and for the purpose hereinbefore set forth.

No 43,658. Nut Lock. *(Arrête-écrou.)*



Gerolt Gibson, St. Louis, Missouri, U.S.A., 18th July, 1893; 6 years.

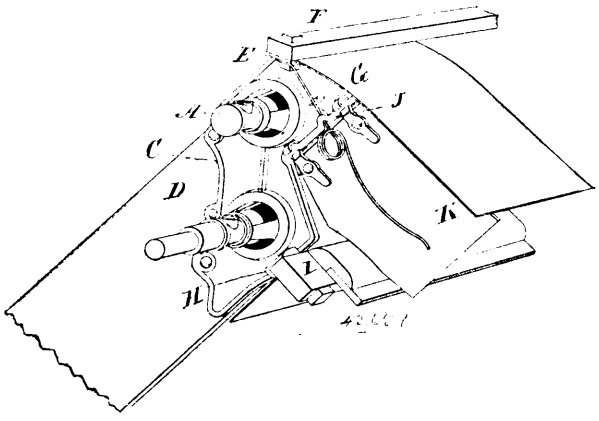
Claim.—1st. In a nut lock, the combination, with a nut whose base is provided with a series of notches or ratchets, of a longitudinally grooved bolt, and a locking washer or plate having a tongue engaging the groove of said bolt, and a spring stop or detent, the point of connection of said stop with its spring and the spring itself, being outside of the base of the nut, substantially as and for the purpose set forth. 2nd. In a nut lock, the combination with a nut whose base is provided with a series of notches or ratchets, of a locking plate or washer having a radial or transverse slot, and radial or transverse spring detent or pawl standing above, and in alignment with, said slot, the point of connection of the detent with its spring, and the spring itself, being outside of the base of the nut, substantially as and for the purpose set forth. 3rd. In a nut lock, the locking plate or washer, having a detent or pawl standing transversely to the axis of the bolt and adapted to engage a notched or ratchet faced nut, and having its integral spring constituting a segment of the washer and curved or inclined outward or upward along the outer edge of said washer, out of alignment or engagement with said nut, substantially as set forth. 4th. In a nut lock, the combination, with a nut whose base is provided with a series of notches or ratchets, of a locking plate or washer having a spring detent or pawl, the point of connection of said pawl or detent with its spring, and the spring itself, being outside of the base of the nut, substantially as and for the purpose set forth. 5th. In a nut lock, the combination, with a series of nuts whose bases are provided with notches or ratchets, of a washer having a series or plurality of bolt openings and a series of spring detents or pawls, the points of connection of said detents or pawls with their springs, and the springs themselves, being outside of the bases of the nuts, substantially as and for the purpose set forth. 6th. In a nut lock, the combination, with a series of nuts whose bases are provided with notches or ratchets, of a washer having a series or plurality of bolt openings, and a series of detents or pawls, each consisting of a spring arm, the arm proper being at right angles to the spring, and the points of connection of the arms with the springs, and the springs themselves, being outside of the bases of the nuts, substantially as set forth. 7th. In a nut lock, the combination, with a plurality of nuts whose bases are provided with notches or ratchets, of a washer having a plurality of bolt openings and a plurality of pawls or detents, each consisting of a spring arm, the arm proper being at right angles to the spring, and relatively conformed to said bolt opening and adapted to engage the notches or ratchets of said nuts, the points of connection of said arms with their springs, and the springs themselves, being outside of the bases of the nuts, substantially as specified. 8th. In a nut lock, the combination, with a plurality of nuts whose bases are provided with notches or ratchets, of a washer having a series of diffently relatively arranged bolt openings, and a series of spring pawls or detents relatively conformed to said bolt openings, and adapted to engage the notches or ratchets of said nuts, the points of connection of the detents or pawls with their springs, and the springs themselves, being outside of the bases of the nuts, substantially as specified.

No. 43,659. Harvester Binder. *(Moissonneuse-lieuse.)*

Thomas Henry Noxon, Ingersoll, Ontario, 18th July, 1893; 6 years.

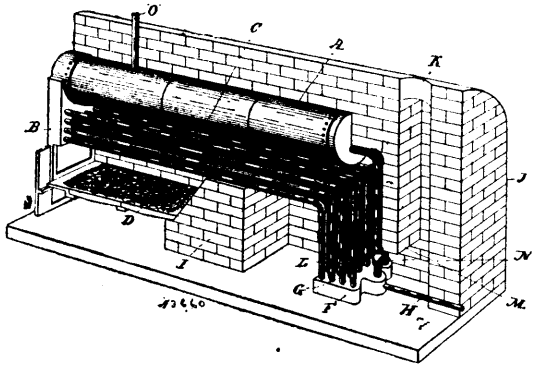
Claim.—1st. As an improved support for a roller spindle, a metal bearing box having a lug formed on one side of it and loosely fitting a hole made in a plate bolted to the side of the elevator frame, and

having a slot on one side of the hole to permit the passage of the lug, and a notch to receive the lug when the box is adjusted to be



locked, substantially as and for the purpose set forth. 2nd. A metal plate arranged to support the roller spindles, and having cast integral with it a lug to carry the cross bar for the deflector, a lug to support the cross bar of the binder deck, and a flange to form one-half the hinge for the header board, substantially as and for the purpose specified.

No. 43,660. Steam Boiler. (*Chaudière à vapeur.*)

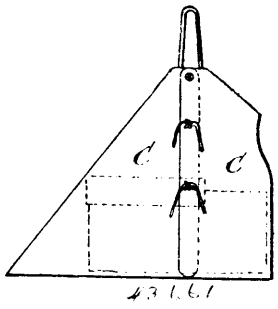


Robert W. King, Montreal, Quebec, Canada, 18th July, 1893; 6 years.

Claim.—1st. A steam boiler, consisting of a hollow cylinder connected to a hollow head, a series of tubes connected at one end to the said hollow head, and extending horizontally in a bunch below and close to the cylinder, a furnace formed below the tubes, hollow head and cylinder, and a smoke flue located near the end of the cylinder remote from the furnace, and a casing enclosing the furnace, tubes and cylinder, substantially as and for the purpose specified. 2nd. A steam boiler, consisting of a hollow cylinder connected to a hollow head, a series of tubes connected at one end to the said hollow head and extending horizontally in a bunch below and close to the cylinder, each tube connecting with a vertical tube extending to and connecting with a water base, and connected with the return pipe, a smoke flue near the hollow base and a casing enclosing the furnace, pipes and cylinder, substantially as and for the purpose specified. 3rd. A steam boiler, consisting of a hollow cylinder connected to a hollow head, a series of tubes connected at one end to the said hollow head and extending horizontally in a bunch below and close to the cylinder, each tube connecting with a vertical tube extending to and connecting with a water base located between the bridge wall and smoke flue opening, a pipe connecting the hollow base with the return pipe, and a casing enclosing the furnace, pipe and cylinder, substantially as and for the purpose specified. 4th. A steam boiler consisting of a hollow cylinder connected to a hollow head, a series of tubes connected at one end to the said holllow head and extending horizontally in a bunch below and close to the cylinder, each tube connecting with a vertical tube extending to and connecting with a water base located between the bridge wall and smoke flue opening, a pipe connecting the cylinder to the steam heating system, the return pipe connecting the steam heating system with the hollow base, a pipe provided with a stop valve and connecting the hollow base to the hollow cylinder, substantially as and for the purpose specified.

No. 43,661. Stirrups for Riding Saddles.

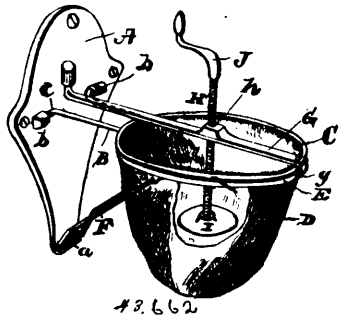
(*Etrier pour selles.*)



Joseph A. Krewson and Thomas J. Smith, of Rogersville, Missouri, U.S.A., 18th July, 1893; 6 years.

Claim.—1st. The combination of a riding stirrup having attached to the loop thereof a hollow casing, an oil burner adapted to be secured within said hollow casing, and flaps attached to the loop of the stirrup to provide a covering for the foot of the rider and lamp casing, substantially as shown, and for the purpose set forth. 2nd. The combination in a riding stirrup, of a foot warmer consisting of a metal case having an end door and a line of perforations in the side walls thereof, of flaps carried by the stirrup and adapted to retain the heat given off from the foot warmer, for the purpose set forth. 3rd. In a riding stirrup, the combination of a loop, carrying a foot warmer, a strip attached to the loop, and a cover secured to the loop and adapted to contact with said strip, substantially as shown, whereby the cover is kept out of contact with the heated portion of the foot warmer, for the purpose set forth.

No. 43,662. Fruit Press. (*Presse à fruits.*)

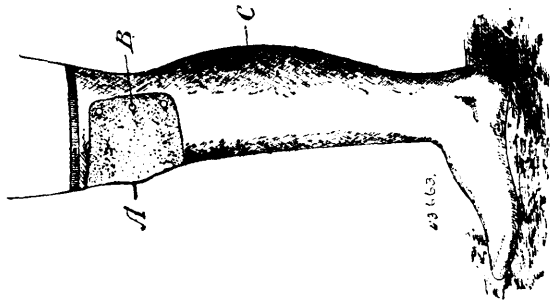


Sarah Rosaline Thompson, Henrietta, Texas, U.S.A., 18th July, 1893; 6 years.

Claim.—1st. In a fruit press, or device for expressing and straining the juice of fruits, the combination with a bracket plate adapted to be connected to a wall or other support, of an arm pivotally connected to the bracket plate and carrying a ring at its outer end adapted to support a fruit receptacle, a suitable means for supporting the arm and ring in a horizontal position, the arm G adapted to be manipulated to express the juice from the fruit, substantially as specified. 2nd. In a fruit press or device for expressing and straining the juice of fruits, the combination with a bracket plate adapted to be connected to a wall or other support, an arm pivotally connected to the bracket plate and carrying the ring *c*, at its outer end the ring E, adapted to be placed upon the ring *c*, to secure a straining cloth thereto, and a suitable means for supporting the arm and rings in a horizontal position, of the arm G pivotally connected to the bracket plate so as to swing in a horizontal plane and having a hook at its free end adapted to embrace the rings *c* E, and devices carried by the arm G, adapted to be manipulated to express the juice from the fruit, substantially as specified. 3rd. In a device for expressing and straining the juice of fruits, the combination with the bracket plate adapted to be connected to a wall or other support, and having the hook *a*, of an arm pivotally connected to the bracket plate and carrying the ring *c*, at its outer end adapted to support a fruit receptacle, the bail loop pivotally connected to the ring *c*, and adapted to engage the hook of the bracket plate, the arm G, pivotally connected to the bracket plate, and devices carried by said arm G, adapted to be manipulated to express the juice from the fruit, substantially as specified. 4th. In a fruit press or device for expressing the juice from fruits the combination with the bracket plate having the hook *a*, the arms *b*, pivotally connected to the bracket plate and carrying the ring *c* at their outer ends, the bail loop pivotally connected to the ring *c*, and adapted to engage the hook of the bracket plate, and the ring E, adapted to secure a straining cloth to the ring *c*, of the arm G pivotally connected to the bracket plate so as to swing in a horizontal plane and having the hook *g* at its outer

end and devices carried by said arm adapted to be manipulated to express the juice from the fruit, substantially as specified.

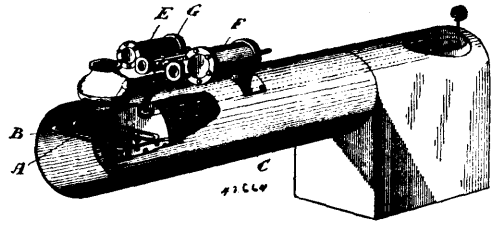
No. 43,663. Knee Cap. (*Genouillère.*)



William Redford Mulock, Winnipeg, Manitoba, Canada, 18th July, 1893; 6 years.

Claim.—A knee cap made of rubber or other flexible material and buttoned in position to the stocking of the wearer, substantially as and for the purpose specified.

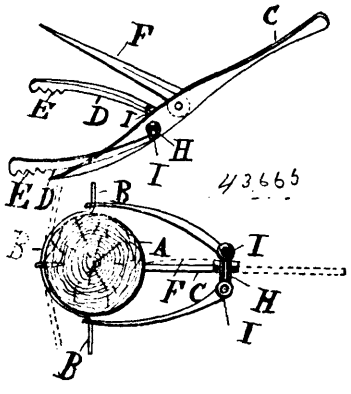
No. 43,664. Steam Engine. (*Machine à vapeur.*)



John Abell, Toronto, Ontario, Canada, 18th July, 1893; 6 years.

Claim.—1st. A pipe A, arranged to convey the feed water through the smoke box before admitting it into the boiler, substantially as and for the purpose specified. 2nd. A pipe arranged to convey the exhaust steam from the first cylinder through the steam space of the boiler before admitting it into the next cylinder, substantially as and for the purpose specified.

No. 43,665. Machine for Tightening Fence Wire Strands. (*Outil pour tendre les torons de fil de fer pour clôtures.*)

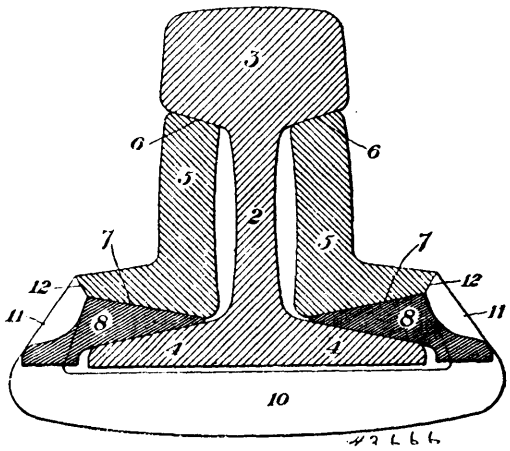


William Whittaker, McCook, Nebraska, U.S.A., 19th July, 1893; 6 years.

Claim.—1st. The implement herein described, comprising the lever, the swinging arms connected thereto and provided with toothed ends and the holding prong having a hinged connection with said lever, substantially as and for the purposes described. 2nd. The implement herein described, comprising the lever, the toothed arms hinged to the bolt pivotally connected with the lever, and the holding prong having a hinged connection with the lever, substantially as and for the purposes described. 3rd. The implement herein described, comprising the lever, having laterally swinging toothed arms pivotally connected with the lever, substantially as and for the purposes described. 4th. The implement herein described, comprising a lever and two arms connected with the lever to swing to and from each other and from the lever, and provided with hook ends, the connection of the lever to the arms being at a distance from the lower end of the lever, whereby said arms are adapted to lie on opposite sides of a fence post and engage a fence strand on opposite sides of the post, substantially as and for the purposes described.

No. 43,666. Nut Lock.

(*Appareil automatique ou fermeture pour joints de rail.*)

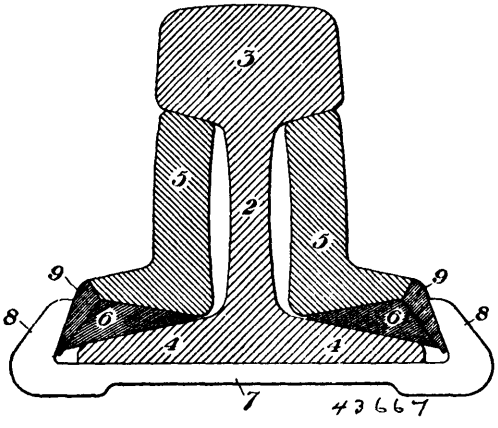


John Lang Pope, Cleveland, Ohio, U.S.A., 19th July, 1893; 6 years.

Claim.—1st. In a rail joint, the combination, with the angle plates, of wedge plates upon which they rest, and a chair passing beneath the joint, and having projections in contact with the wedge plates and angle plates, substantially as described. 2nd. In a rail joint, the combination, with the angle plates and wedge plates upon which they rest, of a connecting plate extending beneath the joint, having bent up projections provided with bevelled faces in contact with similar faces upon the angle plates, substantially as described.

No. 43,667. Nut Lock.

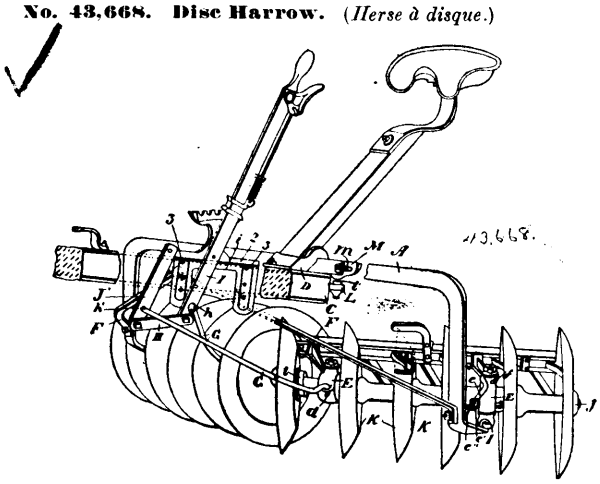
(*Appareil de sécurité pour joints de rails.*)



John Lang Pope, Cleveland, Ohio, U.S.A., 19th July, 1893; 6 years.

Claim.—1st. In a rail joint, the combination, with the fish or angle plates, of wedge plates upon which they rest, a connecting piece or plate passing beneath the joint, and having projections, and keys inserted between the wedge plates and said projections, substantially as described. 2nd. In a rail joint, the combination, with the fish or angle plates, of wedge plates fitting between the same, and the base flanges or foot of the rail, a connecting piece or plate passing beneath the joint, and having projections upon the outer sides of the fish or angle plates, and keys fitting between said projections and the wedge plates, and bearing against the fish or angle plates, substantially as described. 3rd. In a rail joint, the combination, with the fish or angle plates having an inwardly bevelled lower outer edge, of wedge plates fitting between the same and the base flanges of the rail, a connecting piece passing beneath the joint and having projections upon the outer sides of the fish or angle plates, and keys fitting between said projections and the wedge plates and having outwardly bevelled upper edges bearing against the bevelled edges of the fish or angle plates, substantially as described.

No. 43,668. Disc Harrow. (*Herse à disque.*)



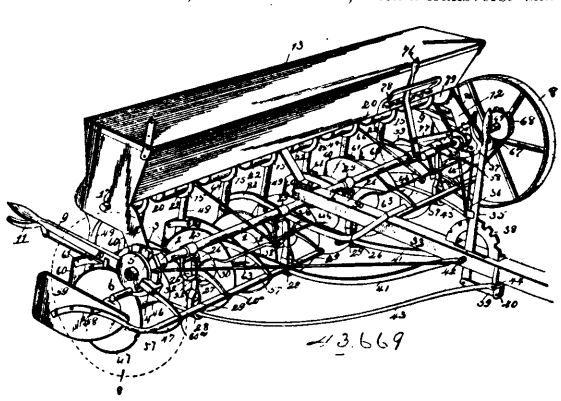
Jay Spencer Corbin, Prescott, Ontario, Canada, 19th July, 1893; 6 years.

Claim.—1st. In a disc harrow, the combination with the gangs, of the draught rods connected to the tongue, and means whereby the forward ends may be vertically adjustable independently of the working angle at which the gangs are set, as and for the purpose specified. 2nd. In a disc harrow, the combination with the gangs, of the draught rods hinged at the rear end to the axles of the gangs, and connected at the forward ends to the lever T, and bar Y^1, which are pivotally connected to the bracket 2, and means whereby such bracket may be vertically adjustable, as and for the purpose specified. 3rd. In a disc harrow, the combination with the gangs, of the draught rods, hinged at the rear end to the axles of the gangs, and connected at the forward ends to the levers I, and bars J^1, which are pivotally connected to the bracket 2, which is provided with downwardly extending legs, having a series of holes through which and the tongue are passed, the bolts r, r^1, as and for the purpose specified. 4th. In a disc harrow, the combination with the gangs hinged to the cross beam, of means whereby the hinges of such gangs are vertically adjusted, as and for the purpose specified. 5th. In a disc harrow, the combination, with the hinged connection between the gangs and the cross beam, which connection is capable of vertical adjustment, of draught rods and means whereby their forward ends are vertically adjusted, as and for the purpose specified. 6th. In a disc harrow, the combination with the gangs, of a cross beam, having the rearwardly extending portion hinged to the axle of the gangs at points in advance of the axes of the gangs by universal joints, as specified. 7th. In a disc harrow, the combination with the cross beam, having the rearwardly extending portions hinged to the axles of the gangs at points in advance of the axes of the gangs by universal joints, as specified, of the links, having the rear looped end secured upon the oil box, and the forward end threaded and extending into the swinging links e^1, attached to the cross beams, as and for the purpose specified. 8th. In a disc harrow, the combination with the gangs, of fender pulleys attached to the cross beam, as and for the purpose specified. 9th. In a disc harrow, the fender pulleys L, pivoted on a pin attached to or forming part of the slotted bracket M, which is adjustably secured in position by the bolts m, as and for the purpose specified. 10th. In a disc harrow, disc gangs hinged to a frame or cross beam, and having vertical vibration thereon, and means for restricting the scope of such vibration, as and for the purpose specified. 11th. In a disc harrow, the tie rods N, connected at the top of the cross beam and having a loop shaped bottom end, through which extends the draught rods g, as and for the purpose specified.

No. 43,669. Harrow. (*Attache pour herse.*)

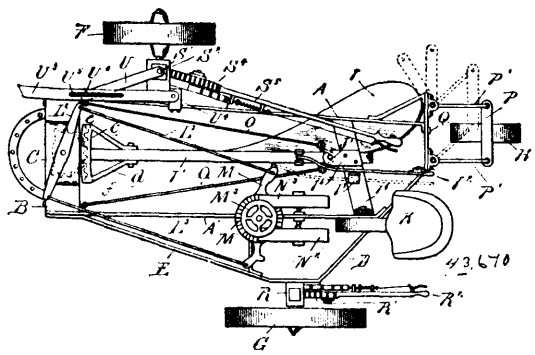
Marcus S. Henry, Minneapolis, Kansas, U.S.A., 19th July, 1893; 6 years.

Claim.—1st. In a machine of the class described, the combination, with the framework and a superimposed hopper, of opposite gangs of harrow discs, a series of seed tubes depending from the hopper adjacent to each disc and in rear of the same, and a series of fenders loosely connected with the tubes and extending in rear and at the side of the same, substantially as specified. 2nd. In a machine of the class described, the combination, with a transverse shaft, standards rising therefrom, a superimposed hopper having seed openings, a series of cups in which the cut-offs or discs are mounted under the openings, and means for operating the seed cylinder, of a series of seed tubes depending from the cups, opposite gangs of harrow discs located at the sides of the seed tubes and in advance of the same, a draft tongue secured to the main shaft, knees rising from the shafts of the harrow discs, draft bars loosely connected at their rear ends to the knees and pivotally connected at their front ends to the tongue, and fenders loosely connected to the seed tubes at the opposite sides thereof at which the discs are located, and a lever for swinging said gangs, substantially as specified. 3rd. In a machine of the class described, the combination, with a transverse shaft, a



superimposed hopper, a draft tongue supported upon the shaft, cups depending from the shaft, bails loosely connected to the cups and adapted for vertical movement therein, and means for locking the bails in an elevated position, of a pair of harrow disc gangs in rear of the bails, a series of fenders mounted on the bails, a series of seed tubes depending from the cups between the discs and fenders and loosely connected to the latter, and a series of draft bars loosely connected to the shafts of the gangs and at their front ends to the tongue, substantially as specified. 4th. In a machine of the class described, the combination, with the transverse main shaft, the tongue, the superimposed hopper, the series of brackets having their ways depending from the transverse shaft, T-shaped plates mounted in the ways and terminating at their lower ends in stirrups, inner and outer pairs of draft bars loosely mounted in the stirrups, the inner pair being pivoted to the tongue, straps pivotally connected to the tongue and at their lower ends to the outer draft bars, a lever for swinging the straps of opposite gangs of harrow discs the shafts of which are loosely connected with the rear ends of the draft bars, transverse bails mounted on the draft bars, a series of fenders loosely connected at their front ends to the bails and at their rear ends extending beyond the harrow discs, notches formed in the stirrups, link latches loosely depending from the brackets and adapted to engage the notches, means for raising the latches, and a series of seed tubes depending from the cups between the discs and the fender, substantially as specified. 5th. In a machine of the class described, the combination, with a transverse shaft terminating at its ends in segmental toothed flanges, discs pivoted to the flanges and provided with levers carrying locking pawls for engaging the flanges, spindles depending from the discs, ground wheels journalled on the spindles, a sprocket wheel secured to one of the ground wheels, of superimposed cups, a feed shaft therein having a sprocket wheel, a counter shaft supported on the main shaft and provided with a spline, a rigidly mounted sprocket wheel at the outer end of the counter shaft, a sprocket chain connecting the same with that sprocket wheel connected to the ground wheel, an adjustable loose sprocket wheel on the counter shaft adapted to engage the spline, a chain connecting the same with the sprocket wheel of the feed shaft, a spring for normally throwing the loose sprocket wheel into engagement with the spline, and a lever fulcrumed adjacent to the countershaft loosely engaging the same, and means for locking the levers, substantially as specified. 6th. In a machine of the class described, the combination, with the framework, superimposed cups, a perforated bar arranged below and in rear out of line with the cups, of seed cylinders located in the cups, eye bolts located in and depending from the perforated bar, and a series of seed tubes provided with trunnions at their rear upper corners engaging said eye bolts and extending forward under the cups, substantially as specified. 7th. In a machine of the class described, the combination, with the framework, a hopper mounted therein and provided with seed cups having openings, of a feed shaft journalled below the hopper in the cups, a feed wheel and a feed disc mounted opposite each opening, means for adjusting the shaft, and a seed tube located in rear of the opening, and adapted to receive seed from either the disc or wheel, substantially as specified. 8th. In a machine of the class described, the combination, with the framework, the hopper, and cups having seed openings, the feed cylinders mounted in the cups and provided with flutes and orifices, and means for adjusting said cylinders, of a shaft passing through the cylinders and cups, rosettes located in said cups and receiving the cylinders, and sprouts located under the cups, substantially as specified. 9th. In a machine of the class described, the combination, with the hopper having seed openings, of seed cups and tubes below the same, bails in front of the tubes, fenders at the sides of the tubes, and links connected loosely to the bails, and to the tubes, and rigidly between their ends to the fenders, substantially as specified. 10th. In combination, with the framework, the convex harrow discs 47, the tubes 49 terminating at their lower ends in deflected mould boards 50 at the convex side of the discs, and the fenders 60 loosely coupled to the tube 49, and arranged alongside of the mould boards, as set forth.

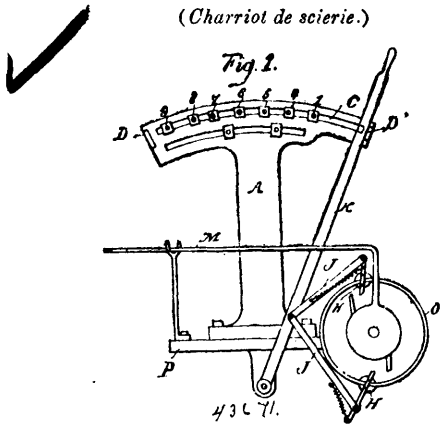
No. 43,670. Sulky Plow. (*Charrue à siège.*)



Perry Ries, Goodrich, Michigan, U.S.A., 19th July, 1893; 6 years.

Claim.—1st. In a sulky plow, the wheeled frame comprising the substantially rectangular main portion, formed of longitudinal bars A A¹, front cross bar B and the diagonal cross bar D, extending beyond the main frame, and the bar E connecting the outer end of the diagonal cross bar with the forward end of the main frame, substantially as described. 2nd. In a sulky plow, the combination with the wheeled frame, of the plow beam supported in the frame, draft rods connecting the rear end with the front of the frame, and means for adjusting the front end of the plow beam laterally, substantially as described. 3rd. In a sulky plow, the combination with the wheeled frame, of a plow beam carrying a plow, a support for the forward end of the beam, a lateral adjustment in said support, draft rods connecting the front of the frame with the rear of the plow beam and a vertical adjustable support for the rear end of the plow beam, substantially as described. 4th. In a sulky plow, the combination with a wheeled frame, of a plow beam carrying a plow thereon, supported in the frame, and a vertical and lateral adjustment for the forward end of said plow, substantially as described. 5th. In a sulky plow, the combination with the wheeled frame, of a plow beam carrying a plow thereon, supported in the frame, a support for the forward end of the plow beam, having vertical and lateral adjustments, a vertical adjustable rear support for said beam, and draft rods connecting the front of the frame with the rear end of the plow beam, substantially as described. 6th. In a sulky plow, the combination with the wheeled frame, of the plow beam carrying the plow supported in the frame, a rack segment at the forward end of the beam, a pinion journalled in the frame and engaging said rack, and levers connecting the pinion with an adjusting device under the control of the operator, substantially as described. 7th. In a sulky plow, the combination with the frame, the plow and plow beam supported in the frame, of a rack segment at the forward end of the plow beam, the over hanging flanges *e*, the pinion R engaging the rack within said flanges and means for actuating the pinion, substantially as described. 8th. In a sulky plow, the combination with the frame, the plow and plow beam supported in the frame, of the rack segment at the forward end of the plow beam, the pinion journalled in the frame and engaging said segment, a lever L² secured to the shaft of said pinion, a lever M pivoted in proximity to the driver's seat, connecting rods between the ends of the two levers, and pawls for holding the levers in their adjusted positions, substantially as described. 9th. In a sulky plow, the combination of the plow beam, adjusted at its forward end by means of a rack and pinion, the levers L² and N for actuating said rack, the oppositely arranged ratchets N and N¹ on the lever M, and the foot pawls N² N³ adapted to engage said ratchets, substantially as described. 10th. The combination with the frame and traction wheels of a sulky plow, of a caster wheel having its frame connected to the plow frame by means of parallel links pivoted at each end, substantially as described. 11th. In a sulky plow, the combination, with the frame and traction wheels, of a caster wheel journalled in a frame, of parallel links pivoted in the frame at their forward ends and to the caster wheel frame at their rear ends and inclined from their forward ends downward, substantially as described. 12th. In a sulky plow, the combination, with the frame and traction wheels, of a caster wheel journalled in a frame, of the links P¹, having oppositely turned cranks at each end, pivoted respectively in the plow frame and caster wheel frame and inclined from their forward ends downwardly, and a stop Q, on the frame, substantially as described. 13th. In a sulky plow, the combination, with the frame, of a traction wheel normally rigid, a steering pole having a limited play and a connection from said steering pole to the caster wheel, whereby when the steering pole is moved beyond its limit of movement said traction wheel swivels, substantially as described. 14th. In a sulky plow, the combination, with the frame and the traction wheels, one of said wheels being a swivel wheel, a lock applied to the swivel, a steering pole having a connection to said lock and adapted to release the same after a limited lost motion, substantially as described. 15th. In a sulky plow, the combination, with the frame and traction wheels, one of said wheels being a swivel wheel a spring lock applied to the swivel, a steering pole having a connection to said lock adapted to release the same after a limited lost motion, and to lock the same when returned to its normal straight position, substantially as described. 16th. In a sulky plow, the combination, with the frame and traction wheels, one of said wheels being a swivel wheel normally held locked in a straight position, a steering pole controlling said lock and means for vertically adjusting said wheel, substantially as described.

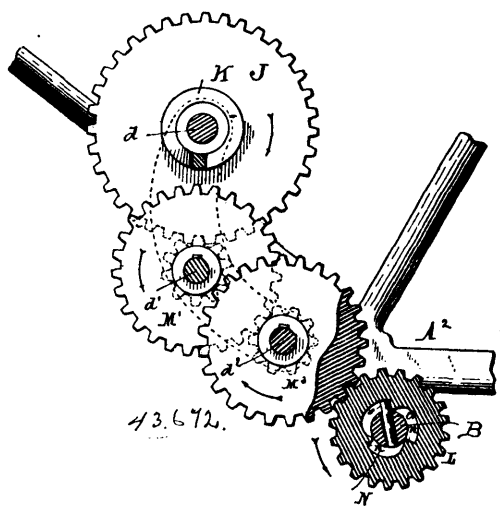
No. 43,671. Set Work for Saw Mills.
(*Charriot de scierie.*)



Hector Gawley, Grand Rapids, Michigan, U.S.A., 19th July, 1883; 6 years.

Claim.—1st. In a set work for saw mills, in combination, with the operating lever, an upright support containing a series of adjustable stop pins and a series of blocks supporting said stop pins adjustable in a slot in said upright frame, substantially as described. 2nd. In set works, in combination with an operating lever, an upright frame containing one or more slots, socket blocks adjustable in said slots and pins, one in each socket block having a longitudinal motion therein, and said blocks adjustable to any required point in said slots for the purpose of measuring the throw of the lever, substantially as described.

No. 43,672. Velocipede. (*Vélocipède.*)

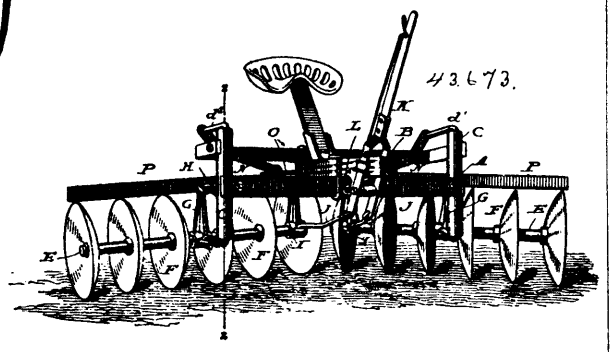


William R. Jarmain and George E. Coleman, both of London, Ontario, Canada, assignee of John Goulding Stamp, Buffalo, New York, 19th July, 1893; 6 years.

Claim.—1st. The combination, with an axle or journal of a velocipede or other vehicle and a stationary supporting frame mounted on the vehicle, of a ratchet or winding wheel, and a gear wheel both journalled in said frame, a power spring connecting said gear wheel with said winding wheel, an actuating device engaging with said winding wheel and connected with a vibrating part of the vehicle, and intermediate gearing whereby said axle or journal is rotated from said gear wheel, substantially as set forth. 2nd. The combination, with the axle or journal of a velocipede or other vehicle, and a stationary supporting frame mounted on the vehicle, of a ratchet or winding wheel and a gear wheel, both journalled in said supporting

frame, a power spring connecting said gear wheel with said winding wheel, an actuating device for turning said winding wheel connected with a vibrating part of the vehicle, a gear wheel mounted loosely on said axle, and receiving motion from the gear wheel connected with the power spring, and a clutch device applied to said loose gear wheel, which couples the axle to turn with its gear wheel when the axle rotates slower than the gear wheel, and allows the axle to rotate without restraint when turning faster than its gear wheel, substantially as set forth. 3rd. The combination, with a velocipede having a seat capable of vibrating vertically and a crank shaft, of a supporting frame attached to the velocipede, a ratchet wheel, and a gear wheel mounted in said supporting frame, a spiral spring connecting said gear wheel and ratchet wheel, a vibrating arm carrying an actuating pawl engaging with said ratchet wheel, a rod connecting said arm with the seat, and intermediate gearing whereby the motion of said gear wheel is transmitted to the crank shaft, substantially as set forth. 4th. The combination, with a velocipede having a seat capable of vibrating vertically, and a crank shaft, of a supporting frame attached to the velocipede, a ratchet wheel and a gear wheel journalled in said frame and having notched or recessed hubs, a spiral spring surrounding said shaft, and having its ends seated in the notches of said wheel hubs, a vibrating actuating pawl engaging with said ratchet wheel and operated from the seat of the velocipede, and intermediate gearing whereby the motion of said gear wheel is transmitted to the crank shaft, substantially as set forth. 5th. A motor for utilizing the power of the seat vibrations of velocipedes consisting of a supporting frame, a ratchet wheel mounted in said frame, a gear wheel also mounted in said frame and adapted to be geared with the driving shaft to the velocipede, a spiral spring secured at one end to said ratchet wheel, and at its opposite end to said gear wheel, a vibrating arm adapted to be connected with the seat of the velocipede and carrying an actuating pawl engaging with said ratchet wheel, and a detent which prevents retrograde movement of the ratchet wheel, substantially as set forth.

No. 43,673. Disc Harrow. (*Herse à disque.*)



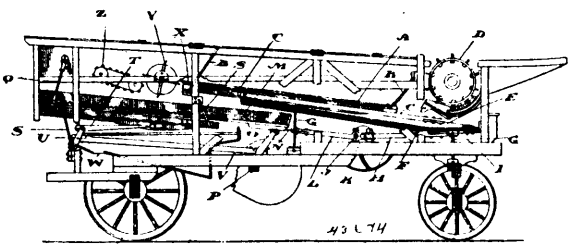
D. M. Osborne & Co., assignee of Charles Stephen Sharp, all of Auburn, New York, 19th July, 1893; 6 years.

Claim.—1st. In a disc harrow, the combination of a draft frame, two disc gangs jointed thereto, and devices operated by the end thrust of the gangs, and acting to apply a downward pressure to the gangs at one end. 2nd. In a disc harrow, a draft frame, gangs connected thereto by laterally swinging draft devices, so that the gangs may be moved endwise, and pressure devices operated by the end motion of the gangs, and acting to hold the gangs down at one end. 3rd. In a disc harrow, the draft frame, the forwardly diverging gangs, their boxes, the upright shafts having crank arms at their upper and lower ends, the lower arms connected with the axle boxes, the levers N connected with the upper crank arms, and the bearing plates carried by the gangs and acted upon by the levers, substantially as described and shown. 4th. In a disc harrow, the combination of a draft frame, an axle provided with a series of discs, a box on the axle, a vertical shaft mounted in the frame and having crank arms at both ends, a direct connection between the lower crank arm and the axle box, and a lever connection between the lower crank arm and the axle box, and a lever connection between the upper crank arm and the end of the axle, whereby pressure is applied by longitudinal movement of the axle. 5th. The combination of the draft frame, the axles, and rotatable discs, boxes for the axles, vertical crank shafts mounted in the frame and having their crank arms connected directly to the axle boxes, and means for controlling the angular relation of the axles, substantially as shown and described.

No. 43,674. Separator. (*Séparateur.*)

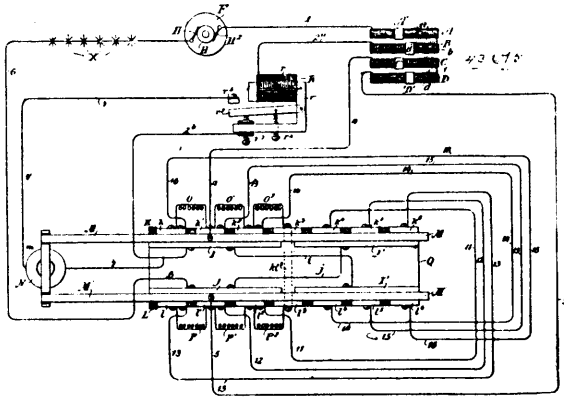
Alice Morris, assignee of George W. Morris, all of Brantford, Ontario, Canada, 19th July, 1893; 6 years.

Claim.—1st. A separator, in which the straw decks, grain decks and shoe are all arranged in relation to each other and driven from a single crank shaft in such a manner as to counterbalance each other, substantially as and for the purpose specified. 2nd. The straw deck A, suspended by the hangers B, and connected by the pitman C, and spring plate E, to the grain deck F, supported by the hangers G, in combination with the pitman H, spring plate I, and cranks J, substantially as and for the purpose specified. 3rd. The straw deck M, supported at one end by the arm O, and at its other end by the hanger Q, in combination with the pitman L, journalled on the crank J, and connected to the straw deck M, by the spring plate N, substantially as and for the purpose specified. 4th. The tray R, supported by the hangers S, and provided with



the pitman T, to connect it to the arm U, in combination with the pitman V, arranged to connect the arm U, to the arm O, substantially as and for the purpose specified. 5th. A shoe W, rigidly connected to and supported by the pitman V, in combination with the arm O, pitman L, and crank J, arranged substantially as and for the purpose specified. 6th. The deck M, supported by the arm O, and hanger Q, the tray R, supported by the hangers S, the pitman T, arranged to connect the tray R, to the arm U, the pitman V, arranged to support the shoe W, and connect the arm U, to the arm O, in combination with the pitman L, deck M, and crank J, substantially as and for the purpose specified. 7th. The deck M, supported by the arm O, and hanger Q, the tray R, supported by the hangers S, the pitman T, arranged to connect the tray R, to the arm U, the pitman V, arranged to support the shoe W, and connect the arm U, to the arm O, a pitman L, connecting the deck M, to the crank J, in combination with the crank J, pitman H, grain deck E, pitman C, and straw deck A, substantially as and for the purpose specified. 8th. The straw deck A, having tines X, projecting from its end, in combination with the revolving tines Y, located between the deck A, and rake Z, substantially as and for the purpose specified.

No. 43,675. Method of and Apparatus for Regulating Dynamos and Motors. (*Méthode et appareil pour régler les dynamos et moteurs.*)



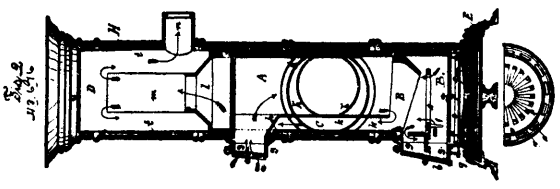
The Reliance Electric Manufacturing Co., Waterford, Ontario, Canada, assignee James Watson Easton, New York, State of New York, U.S.A., 19th July, 1893; 6 years.

Claim.—1st. The method of regulating dynamos or motors, which consists in causing the induction to take place in a field of force created by the interaction of inductions of substantially uniform power, and inductors of which the power is variable, substantially as shown and described. 2nd. The method of regulating dynamos or motors, which consists in causing the induction to take place in a field of force created by the interaction of inductors of substantially uniform power and invariable polarity, and inductors of variable power and polarity, substantially as shown and described. 3rd. The method of regulating dynamos or motors, which consists in causing the induction to take place in a field of force created by the interaction of inductors of substantially uniform power, and inductors the power of which is variable in accordance with variations in the external load or resistance, or the speed

of the machine, substantially as and for the purposes set forth. 4th. The method of regulating dynamos or motors, which consists in causing the induction to take place in a field of force created by the interaction of inductors of substantially uniform power and invariable polarity, with inductors the power and polarity of which is variable in accordance with variations in external load or resistance or speed of the machine, substantially as shown and described. 5th. The method of regulating dynamos or motors, which consists in passing through the coils which energize a portion of the inductors, a current of substantially uniform volume, and varying the volume of the current in the coils, energizing the remainder of the inductors, substantially as and for the purposes set forth. 6th. The method of regulating dynamos or motors, which consists in passing through the coils which energize a portion of the inductors, a current of substantially uniform volume, and varying the volume of the current in the coils, energizing the remainder of the inductors, in accordance with variations in external load or resistance of speed of machine, substantially as and for the purposes set forth. 7th. The method of regulating dynamos or motors, which consists in passing through the coils which energize a portion of the inductors, a current of substantially uniform volume, in a continuous direction, and varying the volume and reversing the direction of the current in the coils, energizing the remainder of the inductors, substantially as and for the purposes set forth. 8th. The method of regulating dynamos or motors, which consists in passing through the coils which energize a portion of the inductors a current of substantially uniform volume, in a continuous direction, and varying the volume and reversing the direction of the current in the coils energizing the remainder of the inductors, in accordance with variations in external load or resistance, or speed of the machine, substantially as and for the purposes set forth. 9th. In a dynamo electric generator or motor, the combination of a plurality of inductors of substantially uniform power with an equivalent number of inductors of variable power, substantially as shown and described. 10th. In a dynamo electric generator or motor, the combination of a plurality of inductors of substantially uniform power, with an equivalent number of inductors, the power of which is variable in accordance with variations in external load or resistance or speed of machine, substantially as shown and described. 11th. In a dynamo electric generator or motor, the combination of a plurality of inductors of substantially uniform power and invariable polarity, with an equivalent number of inductors of variable power and polarity, substantially as shown and described. 12th. In a dynamo electric generator or motor, the combination of a plurality of inductors of substantially uniform power and invariable polarity, with an equivalent number of inductors the power and polarity of which is variable in accordance with variations in external load or resistance or speed of machine, substantially as shown and described. 13th. In a dynamo electric generator or motor, the combination of a plurality of inductors, adapted to be energized by a current substantially uniform in volume, with an equivalent number of inductors adapted to be energized by a current of which the volume is variable, substantially as shown and described. 14th. In a dynamo electric generator or motor, the combination of a plurality of inductors adapted to be energized by a current substantially uniform in volume, with an equivalent number of inductors to be energized by a current of which the volume is variable, in accordance with variations in external load or resistance or speed of the machine, substantially as shown and described. 15th. In a dynamo electric generator or motor, the combination of a plurality of inductors adapted to be energized by a current substantially uniform in volume and of continuous direction, with an equivalent number of inductors adapted to be energized by a current of which the volume is variable and the direction reversible, substantially as shown and described. 16th. In a dynamo electric generator or motor, the combination of a plurality of inductors adapted to be energized by a current substantially uniform in volume, and of continuous direction, with an equivalent number of inductors adapted to be energized by a current of which the volume is variable and the direction reversible, in accordance with variations in external load or resistance or speed of machine, substantially as shown and described. 17th. In a dynamo electric generator or motor, the combination of a plurality of inductors, the coils of which are located in the main circuit of the machine, and mechanism, substantially as described, for varying the strength of the current in a part only of said coils, substantially as shown and described. 18th. In a dynamo electric generator or motor, the combination of a plurality of inductors, the coils of which are located in the main circuit of the machine, and mechanism, substantially as described, for varying the strength of the current in a part only of said coils, said mechanism being actuated by variations in external load or resistance or speed of machine, substantially as shown and described. 19th. In a dynamo electric generator or motor, the combination of a plurality of inductors, the coils of which are located in the main circuit of the machine, and mechanism, substantially as described, for varying the strength and reversing the direction of the current in a part only of said coils, substantially as shown and described. 20th. In a dynamo electric generator or motor, the combination of a plurality of conductors, the coils of which are located in the main circuit of the machine, and mechanism, substantially as described, for varying the strength and reversing the direction of the current in a part only of said coils, said mechanism being actuated by variations in external load or resistance or speed of machine, substantially as shown and described. 21st. In a dynamo electric generator or motor, the combination of a plurality of inductors, the coils of which are located in the main circuit of the machine, of resistance arranged in shunt circuit around the coils of a part only of said inductors, and mechanism, substantially as described, for opening and closing said shunt circuit, substantially as shown and described. 22nd. In a dynamo electric generator or motor, the combination with a plurality of inductors, the coils of which are located in the main circuit of the machine, of resistance arranged in shunt circuit around the coils of a part only of said inductors, and mechanism, substantially as described, actuated by variations in external resistance of main circuit, or by load or speed of machine for opening and closing said shunt circuit, substantially as shown and described. 23rd. In a dynamo electric generator or motor, the combination with a plurality of inductors, the coils of which are arranged in the main circuit of the machine, of a series of resistance arranged in a shunt circuit around the coils of a part only of said inductors, and mechanism, substantially as described for varying the resistance of said shunt circuit, substantially as shown and described. 24th. In a dynamo electric generator or motor, the combination with a plurality of inductors, the coils of which are arranged in the main circuit of the machine, of a series of resistances arranged in a shunt circuit around the coils of a part only of said inductors, and mechanism, substantially as described, actuated by variations in external resistance or load or speed of machine for varying the resistance of said shunt circuit, substantially as shown and described. 25th. In a dynamo electric generator or motor, the combination with a plurality of inductors, the coils of which are arranged in the main circuit of the machine, of resistances arranged in shunt circuit around the coils of a part only of said inductors, and mechanism, substantially as described, for reversing the direction of the current in said shunt circuit, substantially as shown and described. 26th. In a dynamo electric generator or motor, the combination with a plurality of inductors, the coils of which are arranged in the main circuit of the machine, of resistances arranged in shunt circuit around the coils, of a part only of said inductors, and mechanism, substantially as described, actuated by variations in external resistance or load or speed of machine for reversing the direction of the current in said shunt circuit, substantially as shown and described. 27th. In a dynamo electric generator or motor, the combination with a plurality of inductors, the coils of which are arranged in the main circuit of the machine, of resistances arranged in shunt circuit around the coils of a part only of said inductors, and mechanism, substantially as described, for varying the resistance of said shunt circuit and reversing the direction of the current therein, substantially as shown and described. 28th. In a dynamo electric generator or motor, the combination with a plurality of inductors, the coils of which are arranged in the main circuit of the machine, of resistances arranged in shunt circuit around the coils of a part only of said inductors, and mechanism, substantially as described, actuated by variations in external resistances or load or speed of machine for varying the resistance of said shunt circuit and reversing the direction of the current therein, substantially as shown and described. 29th. In combination with a dynamo electric generator or motor, having a plurality of inductors arranged in the main circuit of the machine, of a series of resistances arranged in shunt circuit around a part only of said inductors, a removable circuit closer for throwing said resistances into and out of circuit successively, a solenoid or magnet arranged in the main circuit of the machine, and arranged to actuate said circuit closer by variations in the volume of current passing through its coils, substantially as shown and described. 30th. In combination, with a dynamo electric generator or motor, having a plurality of inductors arranged in the main circuit of the machine, of a series of resistances arranged in a shunt circuit around a part only of said inductors, a movable circuit closer for throwing said resistances into and out of circuit successively, a solenoid or magnet arranged to actuate said circuit closer, and a circuit controlling device arranged to vary the volume of current in the coils of the solenoid or magnet, in accordance with the variations in the external load or resistance or speed of machine, substantially as shown and described. 31st. In an electric curved regulator or rheostat, the combination of a series of resistances and curved rocking connector blades, arranged to make and break connections between the external circuits and the resistance coils successively, substantially as shown and described. 32nd. In an electric current regulator or rheostat, the combination, of a series of resistances, curved connector blades arranged to make and break connections between the external circuit and the resistance coils, and a solenoid or magnet connected with said blades, so as to vary the position of the blades in accordance with variations in volume of current in the solenoid or magnet coils, substantially as shown and described. 33rd. In a regulator of the character described, the combination, of the contact bars I, J, contact plates K, K^1, K^2, K^3, l, l^1, l^2, l^3, conductor K, l^3, coils O, O^1, O^2, P, P^1, P^2, curved connector blades M, M^1, and mechanism for operating said blades, substantially as shown and described. 34th. In an electric current regulator or rheostat, the combination, of a series of resistances, curved connector blades arranged to make and break connections between the external circuit and the resistance coils successively, and mechanism for controlling the movement and position of said blades, substantially as shown and described. 35th. In an electric current regulator, the combination, of a series of resistances, curved

connector blades arranged to make and break connections between the external circuit and the resistance coils, a solenoid or magnet N, connected with said blades, and a circuit controller or switch arranged in the main circuit of the machine to vary the strength of the current flowing through the coils of N, in accordance with variations in volume of current in the main circuit, substantially as shown and described. 36th. In a regulator for electric machines, the combination, of the contact bars I, I^1, J, J^1, contact plates K, K^1, K^2, K^3, K^4, K, K^5 K^6, l, l^1, l^2, l^3, l^4, l^5, l^6, conductor k, l^3, coils O, O^1, O^2, P, P^1, P^2, curved connector blades M, M^1, and mechanism or operating said blades, substantially as shown and described.

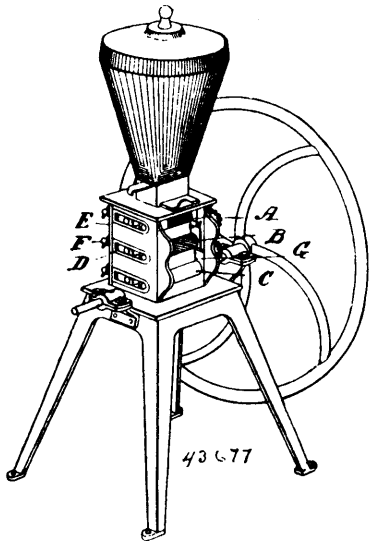
No. 43,676. Stove. (*Poêle.*)



Bernhardt Hellmann and Bohumiel Ludikar and Franz Suda, all of Prague, Austria, 19th July, 1893; 6 years.

Claim.—1st. In heating and ventilating stoves, the combination of the flame cylinder h, with the feed cylinder h^1, together forming the crescent shaped flame space C, constructed, combined and arranged, substantially as and for the purposes described. 2nd. In heating and ventilating stoves, the ventilating chamber F, and the ash pit B^1, having openings v, leading to the annular space J, between the cylinders h and H, substantially as and for the purposes described. 3rd. Ventilating and heating stoves, constructed, combined and arranged, substantially as described and set forth in the specification.

No. 43,677. Coffee Mill. (*Moulin à café.*)



George Coleman, Toronto, Ontario, Canada, 19th July, 1893; 6 years.

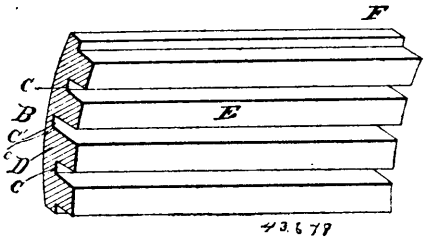
Claim.—A series of corrugated rollers arranged in pairs, one above the other, and caused to revolve by a suitably arranged gearing, the lower rollers having a quicker grinding capacity than the upper rollers so as to carry the ground coffee freely away, a suitable scraper for each roller, being provided so as to prevent any clogging, substantially as and for the purpose specified.

No. 43,678. Lath for Sheathing Purposes.

(*Latte pour doublage.*)

Andrew Baldwin, Viroqua, Wisconsin, U.S.A., 19th July, 1893; 6 years.

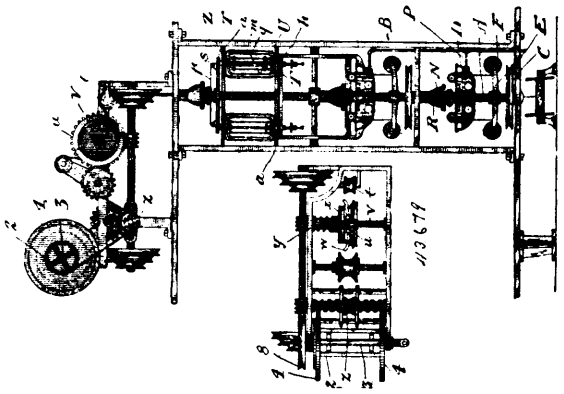
Claim.—As an improved article of manufacture, the herein described concave convex sheathing lath of wood, having parallel shallow grooves C, and a deeper middle groove C^1, and lateral rabbets F, F, said grooves and rabbets being cut at an angle deflecting



slightly from the longitudinal grain or fibre of the wood, substantially as and for the purpose shown and set forth.

No. 43,679. Machine for Covering Wire.

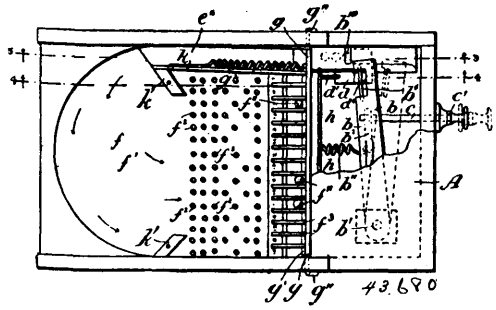
(*Machine pour couvrir le fil.*)



Walter Herbert Avis and Robert Charles Fisher, both of Toronto, Ontario, Canada, 19th July, 1893; 6 years.

Claim.—1st. In a machine for covering wire with insulating material, one or more arms carrying bobbins of yarn or similar material and attached to a revolving spindle through which the wire to be covered is carried, in combination with a disc containing a suitable insulating compound and fixed to the revolving spindle, substantially as and for the purpose specified. 2nd. In a machine for covering wire with insulating material, one or more arms carrying bobbins of yarn or similar material and attached to a revolving spindle through which the wire to be covered is carried, a disc containing a suitable insulating compound and fixed to the revolving spindle, in combination with rollers arranged to direct the yarn through the said compound on to the wire, substantially as and for the purpose specified. 3rd. In a machine for covering wire with insulating material, one or more arms carrying bobbins of yarn or similar material and attached to a revolving spindle through which the wire to be covered is carried, a disc containing a suitable insulating compound and fixed to the revolving spindle, in combination with rollers arranged to direct the yarn through the said compound on to the wire, in combination with mechanism for drawing the covered wire through the hollow spindle and winding the same upon a collapsible reel, substantially as and for the purpose specified. 4th. In a machine for covering wire with insulating material, one or more arms carrying bobbins of yarn or similar material and attached to a revolving spindle through which the wire to be covered is carried, a disc containing a suitable insulating compound and fixed to the revolving spindle, rollers to the wire, in combination with a series of bobbins, each bobbin pivoted on an independent flier, the yarn from the various bobbins being each directed through a hole in the centre of the flier to be twisted and then to the centre of the hollow spindle where the twisted yarns thus conducted are wound upon the wire, substantially as and for the purpose specified. 5th. A spiral groove made in the wire between the bobbin and the hole in the centre of the flier, substantially as and for the purpose specified. 6th. A series of revolving fliers, independently carried in separate grooves made in a disc and thrown against a friction ring by the centrifugal force of the revolving disc, substantially as and for the purpose specified. 7th. A bobbin carrier supported longitudinally on a spring contained in a hollow spindle, and actuated by a nut, substantially as and for the purpose specified. 8th. A series of fingers pivoted on a revolving disc and arranged in connection with the stationary cam for the purpose of rocking the pivoted fingers, and causing them to grasp and release at predetermined intervals the covered wire or cord passing from the covering mechanism described, substantially as and for the purpose specified.

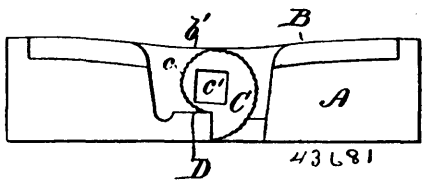
No. 43,680. Coin and Slot Machine. (*Appareil de vente actionné par une pièce de monnaie.*)



Charles P. Young and Charles Frederick Spangler, both of York, Pennsylvania, U.S.A., 19th July, 1893; 6 years.

Claim.—1st. The combination of a casing, a coin slot therein, a movable part below said slot, said movable part being also provided with a coin slot, another movable part below the last named part, and provided with a notch or slot for the coin to rest in, ejecting means connected to one of the parts, and means for holding said movable parts in their normal positions, and an inclined guide support for one of the movable parts, whereby when a coin is inserted and one of the parts is moved both parts will move in unison to a predetermined point, as and for the purpose described. 2nd. The combination of a casing, having an upwardly inclined exhibiting chamber rounded at its upper end, an upwardly inclined ejecting tube extending up into the exhibiting chamber and terminating near its upper end, a series of scattering pins on the surface of the exhibiting chamber, and a series of pockets at its lower end, directing guides k^1 on each side of the chamber, and spring actuated mechanism for ejecting the articles employed, substantially as described. 3rd. The combination of a casing having a coin slot, a movable slotted part mounted below this slot, one of the walls of this slot being adjustable, an ejecting device below said movable part, and an inclined guide for said ejector, substantially as described. 4th. The combination of a casing having a coin slot, a slotted movable lever below this slot, a slotted sliding ejector block below the slot in said part, a lateral ejecting lug carried by said ejecting block, an inclined slotted tube in which said ejecting lug works, and means for spring actuating said lever and block, substantially as described. 5th. The combination of a casing having an inclined surface, pockets at its lower end, a gate closing the lower ends of the pockets, an inclined trough leading into the tube, substantially as described.

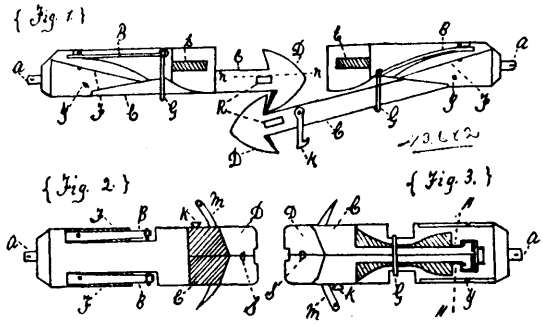
No. 43,681. Quoin for Printers' Use.
(*Coin d'imprimerie.*)



John W. O'Neill, Chicago, Illinois, assignee of Robert Warg and August Lindemann, both of Milwaukee, Wisconsin, all in the U.S.A., 20th July, 1893; 6 years.

Claim.—1st. A printer's quoin, comprising two sections, one of which is slotted at its ends, and the other provided with tongues or ribs adapted for engagement with the slots in the end of the first mentioned section, and suitable means for spreading said sections, apart, substantially as described. 2nd. A printer's quoin, comprising two sections movably engaged with each other, a suitable cam journalled in one section and adapted for operative engagement with the other section to force the two sections apart, and suitable guides for maintaining said sections in alignment with each other, substantially as described. 3rd. A printer's quoin, comprising two sections movably engaged with each other, and a suitable cam journalled in one section, and adapted for operative engagement with the other section, substantially as described. 4th. A printer's quoin, comprising two sections movably engaged with each other, a suitable cam or eccentric revolubly journalled in one section, and adapted for operative engagement with the other section, and one or more radial slots in the first mentioned section adjacent to the bearing of said cam or eccentric, substantially as described. 5th. A printer's quoin, comprising two sections movably engaged with each other, a suitable cam or eccentric revolubly journalled in one section, and adapted for operative engagement with the other section to force said sections apart, suitable slots arranged in the first mentioned section adjacent to the bearing for said cam or eccentric, one of said sections being provided at opposite ends with suitable slots or grooves, and the other section being provided with suitable tongues or ribs adapted for engagement with said slots or grooves, substantially as described. 6th. A printer's quoin, comprising two sections movably engaged with each other, a suitable cam or eccentric journalled in one section, and adapted for operative engagement with the other section, the section in which the said cam or eccentric is journalled being provided adjacent to said journal bearing with one or more radial slots, and having suitable projecting bearing points upon its outer face adjacent to its opposite ends, substantially as described.

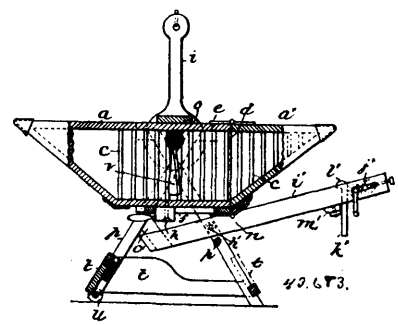
No. 43,682. Car Coupler. (*Attelage de chars.*)



James Gates and George Reid, both of the Township of Sombra and Thomas Elliott, of Goderich, all in Ontario, Canada, 20th July, 1893; 6 years.

Claim—1st. In a car coupler, the combination of the spring draw bars C C, having the form hereinbefore described with the lever M, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the springs B B, and the clevice G, and the bumper as in figure 5, with the spring draw bars C C, substantially as and for the purpose hereinbefore set forth.

No. 43,683. Washing Machine.
(*Machine à blanchir.*)

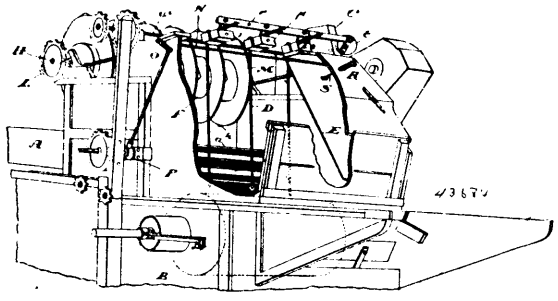


James Austin, Brooklyn, New York, U.S.A., assignee of Robert Austin, Surrey Hills, Sydney, New South Wales, Australia, 20th July, 1893; 6 years.

Claim.—1st. A washing machine consisting of a rocking or swinging box, which is rhomboidal in plan and tapering at each end and is provided with a lid or cover, substantially as herein described and explained, and as illustrated in my drawings. 2nd. A washing machine consisting of a rocking or swinging box, which is rhomboidal in plan and tapering at each end and is provided with a lid or cover, such box having a fixed horizontal shaft arranged transversely across the centre of its upper portion to which are attached two or more depending legs or blades which by preference are twisted, substantially as and for the purposes herein described and explained, and as illustrated in my drawings. 3rd. A washing machine consisting of a rocking or swinging box, having reverse laterally inclined ends, adapted to transfer the goods descending along one side of the box to the opposite side, substantially as described. 4th. A washing machine consisting of a rocking or swinging box, in which the bottom and one side converge to a point level with the top or thereabout at one side of the box, and the bottom and the other side similarly converge at the opposite side of the other end, substantially as described. 5th. A washing machine consisting of a rocking or swing box, made in two parts hinged together end to end, and having the clamping yoke and eccentric button fastening, substantially as described. 6th. A washing machine consisting of a rocking or swing box, having reverse laterally inclined ends, adapted to transfer the goods descending along one side of the box to the opposite side, the fluted inner surfaces of the sides and the feathering blades suspended within the box from a fixed support, substantially as described. 7th. The combination of the rocking or swinging box, and the feathering blades suspended within the box from a fixed support, substantially as described.

8th. The combination, with the rocking or swinging box made in two parts divided transversely and hinged together end to end of the wringer support, pivoted to the frame, the wringer and wringer board mounted on said support, and a fastener connecting the wringer board with the box in the upright position, substantially as described.

No. 43,684. Band Cutter and Feeder for Threshing Machines. (*Coupe-hart et alimentateur pour machines à battre.*)



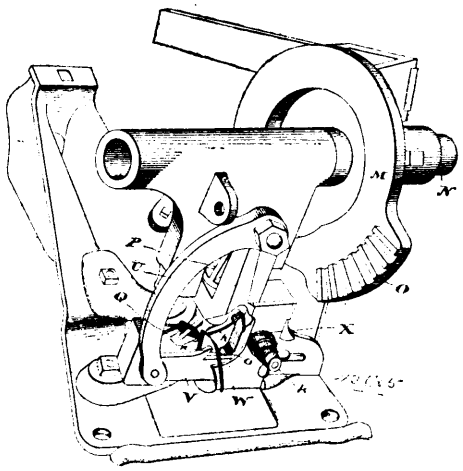
Alice Morris, assignee of George William Morris, all of Brantford, Ontario, Canada, 20th July, 1893; 6 years.

Claim.—1st. In a threshing machine, a revolving band cutter, located on top of the machine behind the threshing cylinder, in combination with a travelling rake, located below the band cutter and arranged to throw the straw on top of the threshing cylinder, substantially as and for the purpose specified. 2nd. In a threshing machine, the revolving band cutter, located on top of the machine behind the threshing cylinder, a traveller rake located below the band cutter and arranged to throw the straw on top of the threshing cylinder, in combination with tines projecting into the threshing receptacle, and having a reciprocating motion in line with the axis of the threshing cylinder, substantially as and for the purpose specified. 3rd. In a threshing machine, a revolving band cutter, located on top of the machine behind the threshing cylinder, a travelling rake located below the band cutter and arranged to throw the straw on top of the threshing cylinder, in combination with tines projecting into the threshing receptacle, and having a reciprocating motion in line with the axis of the threshing cylinder, and of a packing plate, having a rocking packing movement, substantially as and for the purpose specified. 4th. A travelling rake, composed of a series of slats connected to sprocket chains carried on sprocket wheels, fixed to spindles suitably journalled in a frame having a bottom to it, the said frame being hinged to the frame of the machine, in proximity to the threshing cylinder and having raised sides at the side end, substantially as and for the purpose specified. 5th. A series of discs fitted on to a sheet metal drum, each disc having a series of cutters *h*, riveted to its periphery, and each cutter having a serated edge, substantially as and for the purpose specified. 6th. A series of discs secured to a sheet metal drum by angle irons, which drum is provided with a suitable shaft, centrally located in the ends of the drum and journalled in boxes vertically movable in stationary brackets, in combination, with a series of cutters *h*, secured to the discs and having serrated edges pointing in the direction opposite to the direction of the revolution of the disc, substantially as and for the purpose specified. 7th. A tine D, provided with a cutter head *j*, and fitted into a socket *k*, pivoted on a bracket *m*, deriving a rocking movement from a suitable moving part of the machine, substantially as and for the purpose specified. 8th. A tine D, fitted into a socket *k*, pivoted on a bracket *m*, in combination with a rod and spring designed to act against the pivoted socket *k*, substantially as and for the purpose specified. 9th. A packing plate E, connected to the rod N, which is provided with a crank O, connected to the eccentric P, on the driving shaft *c*, in combination with the spindle S, and spiral spring R, substantially as and for the purpose specified.

No. 43,685. Harvester Binder. (*Moissonneuse-lieuse.*)

Mercer Bros. and Company, assignee of John S. Mercer and William Greatrex, all of Alliston, Ontario, Canada, 20th July, 1893; 6 years.

Claim.—1st. A hinged trip plate, against which the grain to form the sheaf is packed, a support arranged to carry the said trip plate and mechanism arranged to connect the support to the trip by which the needle shaft and parts connected therewith are put into action, substantially as and for the purpose specified. 2nd. A hinged trip plate, against which the grain to form the sheaf is packed, an upright extending from an arm journalled on the needle shaft and extending below the needle fixed to its shaft, substantially as and for the purpose specified. 3rd. A hinged trip plate, against which the grain to form the sheaf is packed, an upright extending from an arm journalled on the needle shaft and extending below the needle fixed to its shaft, a drop board hinged to the grain table and supported by an extension projecting from the journalled arm, substantially as and for the purpose specified. 4th. A hinged trip plate, against which the grain to form the sheaf is packed, an upright extending from an arm journalled on the needle shaft, a



bolt J, connected to the journalled arm and arranged to engage with the curved plate H, in combination with a heel projecting from the needle, substantially as and for the purpose specified. 5th. A bolt J, connected to the arm C, and supported by a spring K, a hook formed on the end of the bolt to engage with a curved plate H, in combination with a heel projecting from the needle, substantially as and for the purpose specified. 6th. An arm fixed to a spindle journalled in the knotter frame and arranged to engage with a cam wheel, an arm fixed to the opposite end of the said journalled spindle and arranged to support one end of the plate V, which extends behind the tension plate W, where it is supported by the pin Z, extending through the slot *e*, in the knotter frame T, in combination with the spring X, stud *g*, and nut *f*, substantially as and for the purpose specified. 7th. A knife Y, pivoted on the inner side of the knotter frame T, in combination with a pin Z, extending from the push plate V, into a slot *f*, made in the knife Y, substantially as and for the purpose specified. 8th. A knife Y, pivoted on the inner side of the knotter frame T, and having a hook *m*, formed on its back, in combination with a pin Z, extending from the push plate V, into a slot *f*, made in the knife Y, substantially as and for the purpose specified. 9th. A tension plate W, formed with a curved extension *o*, in combination with a push plate V, having a hook *n*, substantially as and for the purpose specified. 10th. The plate *p*, fixed to the frame T, in proximity to the bill hook, substantially as and for the purpose specified. 11th. A breast plate having a half-moon recess *q*, formed on one side of the cord slot *r*, one end of the plate in which the half moon recess is formed projecting over the plate *s*, fixed on the opposite side of the said slot and having a curved or hook shaped point *t*, projecting into the half-moon recess, substantially as and for the purpose specified. 12th. A breast plate having a half-moon recess *q*, formed on one side of the cord slot *r*, one end of the plate in which the half moon recess is formed projecting over the plate *s*, fixed on the opposite side of the said slot and having a curved or hook shaped point *t*, projecting into the half-moon recess, the point *v*, of which having a downward projection *w*, formed on its bottom, substantially as and for the purpose specified.

No. 43,686. Car Coupler. (*Attelage de chars.*)

Lemuel S. Manning, Alessandro, California, U.S.A., 20th July, 1893; 6 years.

Claim.—1st. In a car coupling, a cylindrical draw-head spring cushioned against percussion and draft strain, conically recessed at its front, and provided with a pivoted latch block adapted to interlock with an elongated slotted link, substantially as described. 2nd. In a car coupling, a cylindrical draw-head loosely engaging perforated wall plates forming a portion of a car frame, and coiled springs enveloping the draw-head body and pressing against said plates, substantially as shown and described. 3rd. In a car coupling, a cylindrical draw-head body, comprising two integral axially aligned portions of different diameters, the forward portion of the draw-head being conically recessed, and furnished with a latching device adapted to automatically interlock with a slotted link, substantially as described. 4th. A coupling link for a draw-head having a conical recess at its front end, comprising a link body having nearly parallel side walls, top and bottom walls tapered toward each end from the centre of length, and similarly slotted near each end to receive the tongue of a latch block in the conically recessed draw-head, substantially as described. 5th. In a car coupling, the combination with a cylindrical draw-head comprising a front portion A of large diameter, conically recessed at its front end and rectangularly recessed above the conical recess, the latter terminating at the rear in a globular chamber, which chamber is apertured in its base, a solid body portion A^1 of less diameter than the portion A, the

part A^2 having a collar secured thereon, spiral springs on the portions A^1, A^2, of the draw-head, a clamping case on the front portion A,

Fig. 1.

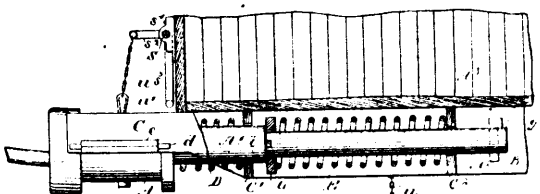
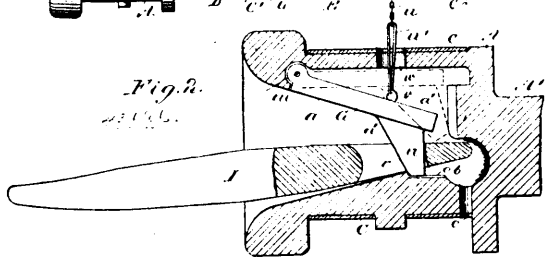


Fig. 2.



guide plates projected oppositely at the sides of said case, a latch block hinged within the front portion of the draw-head, a depending tongue thereon adapted to seat in a groove in the conical recess, and a device on the front of the car adapted when manipulated, to raise the latch block, substantially as described.

No. 43,687. Wire Drawing Machine.

(*Machine à étirer le fil de fer.*)

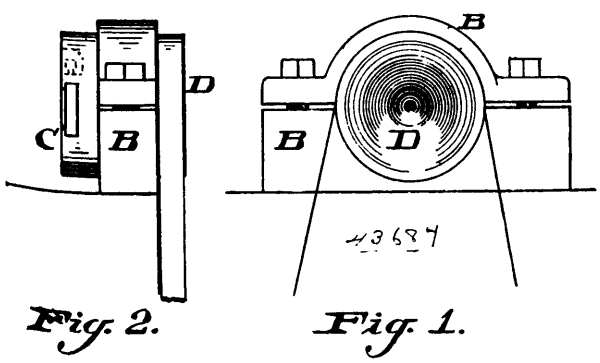


Fig. 2. Fig. 1.

Charles Henry Haag, Cleveland, Ohio, U.S.A., 20th July, 1893; 6 years.

Claim.—1st. A rotary wire drawing die constructed, substantially as described, in combination, with a wire drawing machine, as and for the purpose set forth.

No. 43,688. Cloth Measure.

(*Mesure pour le drap.*)

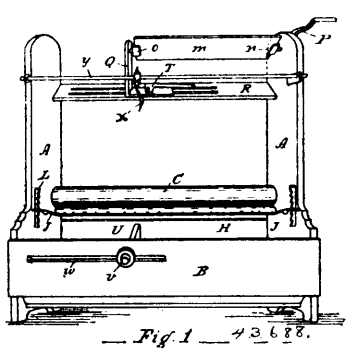
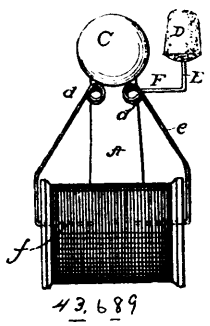


Fig. 1

Abraham Calvert Scarr, Harriston, Ontario, Canada, 20th July, 1893; 6 years.

Claim.—1st. A cloth measuring machine in which the roll of measured cloth is formed vertically over the measuring roll, and the bracket Q is clamped to the shelf R by means of the staple *s*, and eccentric lever T, as shown and described. 2nd. In a cloth measuring machine the binding roll H, supported by a spring lever J, arranged to engage with the toothed rack L, which are fixed to the standards A, substantially as shown and described. 3rd. In a measuring machine, a reservoir or box B, having a movable partition U, adjustable by means of clamp screw *v*, which extends through slot *w*, formed in the box, as shown and described. 4th. In a cloth measuring machine, the combination, with the standards A, carrying rollers, etc., of a box or reservoir B, having adjustable movable partition U, a shelf R carrying eccentric lever T, spring levers J, engaging in toothed racks L, fixed on said standards, all substantially as set forth, and for the purposes described.

No. 43,689. Spool Holder. (*Porté-bobine.*)

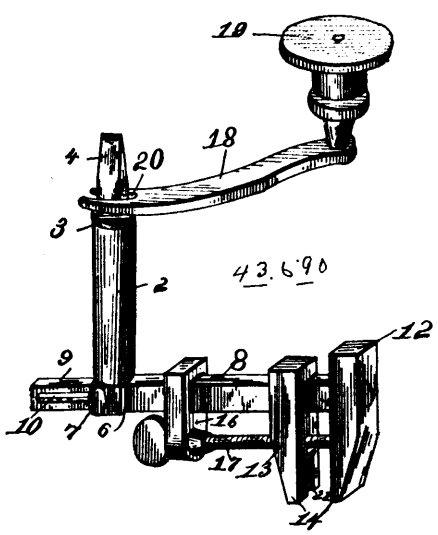


Alfred F. Morgan, Clinton, Wisconsin, U.S.A., 20th July, 1893; 6 years.

Claim.—1st. In a spool holder, substantially as described, the combination, with the friction plate or strip, of a spool holder formed from a piece of wire secured midway of its length to the rear side of the plate or strip adjacent to the upper end thereof and having the coils *d*, arranged upon the forward side of the strip or plate, and extending forwardly therefrom, the downwardly converging branches *e*, and the inwardly extending journal branches *f*, the said coils *d* being designed and adapted to press the branches *e* toward the friction plate or strip, so as to press the cotton of the spool against said plate, substantially as and for the purpose specified.

No. 43,690. Combination Tool.

(*Outil à combinaison.*)



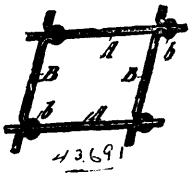
John N. Parker and Melvin E. Peters, both of Coldwater, Michigan, U.S.A., 20th July, 1893; 6 years.

Claim.—1st. In a combination tool, the combination, with a wrench stock, of a handle, devices for securing the handle upon the end of the stock either in line with or at an angle thereto, and a brace arm removably connected with the opposite end of the handle, substantially as specified. 2nd. In a combination tool, the combination, with a wrench stock, a handle terminating at one end in a screw driver and provided at opposite sides and at one edge with a reduced portion, devices for securing the handle in line with or at an angle to the stock, and the brace arm having the swivelled head at one end and its opposite end shaped to form a claw removably engaging the said reduced portion of the shank of the screw driver, substantially as specified. 3rd. In a combination tool, the combina-

tion, with the wrench stock, of the handle provided at one end with a screw driving blade, devices for removably connecting the opposite end of the handle either in line with or at an angle to the end of the stock, and the curved brace arm having a handle at one end and its opposite end bifurcated to engage with the screw driver blade, substantially as specified. 4th. In a combination tool, the combination, with the stock, having a reduced lower end provided with a longitudinal slot, of a shank bifurcated at one end to receive said end of the stock and at its opposite end terminating in a screw driving blade, provided with a shank V-shaped in cross-section, a hollow handle mounted on the shank and terminating short of the ends thereof, a binding screw passed through the bifurcations of the shank and slot of the stock, and the curved brace arm having the swivelled head at one end, and its opposite end provided with a claw for engaging the V-shaped portion of the blade, substantially as specified.

No. 43,691. Wire Netting and Method of Making Wire Netting. (*Filet en fil de fer et méthode de fabrication.*)

Fig 6



Lysaght Brothers and Company, Sydney, New South Wales, Australia, assignees of Frederick John Corbett, East Melbourne, Victoria, Australia, 20th July, 1893 ; 6 years.

Claim.—1st. As a new article of manufacture, wire netting in which one set of wires has been forced or placed in approximately U-shaped bends in another set of wires extending across the first set, and in which the necks of such bends have subsequently been pinched together, such joints being strengthened if preferred, by being passed through molten metal, such as zinc, substantially as and for the purposes herein described and explained, and as illustrated in the accompanying drawings. 2nd. The method of manufacturing wire netting, substantially as herein described and explained.

No. 43,692. Method of Extracting Metals from Ores and Other Compounds. (*Méthode d'extraire les métaux des minerais et autres composés.*)

Bernard Charles Molloy, London, England, 20th July, 1893 ; 6 years.

Claim.—1st. The method of extracting gold and other metals from ores and other compounds by (*a*) dissolving out the metals by solvents and obtaining the metals in solution, (*b*) causing such solutions containing the metals to come into contact with a body of mercury in a vessel, (*c*) charging the mercury with an alkaline metal produced in the anode chamber using the mercury as the cathode and a suitable anode resting in the electrolyte, and a current of electricity, and so (*d*) producing nascent hydrogen and an oxide of the alkaline metal on the surface of the mercury over which the solution passes, the hydrogen and the oxide of the alkaline metal being obtained by the decomposition of the water of the solution by the action thereon of the alkaline metal in the mercury, (*e*) rendering the solution alkaline by the oxide of the alkaline metal, (*f*) precipitating the metal out of solution by nascent hydrogen on to the mercury, (*g*) amalgamating this precipitated metal in such mercury. 2nd. The method of precipitating gold and other metals from solutions containing them by rendering such solutions alkaline if not previously so precipitating the metals therefrom by nascent hydrogen and amalgamating the precipitated metal with mercury containing an alkaline metal. 3rd. The method of precipitating metals from solutions containing them by rendering such solutions alkaline and precipitating the metals out of solutions by nascent hydrogen. 4th. The described process of extracting gold from its ores and compounds by means of a solvent of gold, an oxide of an alkaline metal nascent hydrogen a suitable mercury cathode and an anode and a suitable agneous electrolyte in conjunction with a current of electrical energy. 5th. The herein described method of extracting gold and other metals from ores and other compounds by dissolving out the metal by any suitable salt of cyanogen and the reproduction of the cyanogen salt decomposed by the nascent hydrogen in precipitating the metal by an oxide of an alkaline metal obtained by the decomposition of the water of the solution by the action thereon of alkaline metal previously introduced into the mercury.

No. 43,693. Ash Pan for Locomotives.

(*Cendrier pour locomotives.*)

John Williams, Sterling, Illinois, U.S.A., 20th July, 1893 ; 6 years.

Claim.—1st. In combination, an ash pan for a locomotive, a steam tight chamber enclosed against the same provided with a steam inlet, and means for the escape of water, substantially as set forth. 2nd. In a locomotive engine, the combination of the ash pan D, thereof, a steam tight chamber G, enclosed against said ash pan,

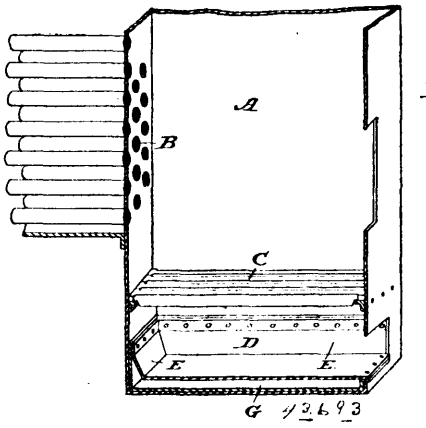
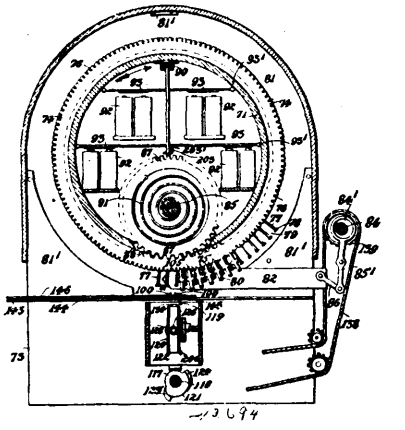


Fig. 1.

and means substantially as shown, for admitting heated steam within said chamber, for the purpose specified.

No. 43,694. Method of and Apparatus for Producing Matrices for Stereotyping. (*Méthode et appareil pour la production des matrices pour stéréotyper.*)

Fig 10.

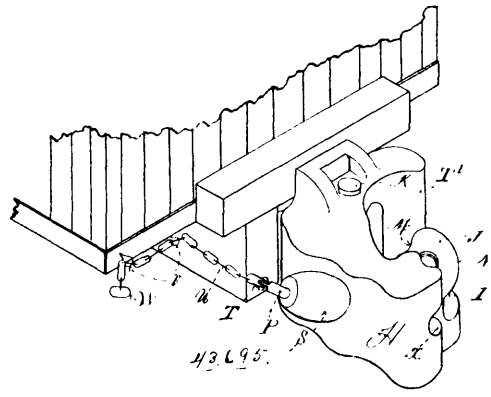


Earl Vinton Beals, Muskegon, Michigan, U.S.A., 20th July, 1893; 6 years.

Claim.—1st. The herein described method of setting or composing type by the aid of electricity, by feeding a perforated strip or sheet of paper or similar material in relation to needles which are adapted to enter the perforations and thus effect the required electrical connections to control the setting or adjustment of revolving type-carrying rings, substantially as hereinbefore described and for the purpose specified. 2nd. The improved method of producing matrices for stereotyping, consisting in composing the type by the aid of electrically controlled type-carrying rings, the setting or adjustment of which is regulated or determined by means of perforated strips or sheets of paper or similar material, and impressing the lines of type successively in the paper or other substance to form the matrix, substantially as hereinbefore described. 3rd. In the setting of type for the production of matrices for stereotyping the employment, in combination with each other, of a perforator for perforating paper or similar material, a liner provided with needles to coincide with the lines or rows of perforations in the paper or similar material, and type carrying rings operated and controlled by electricity through the medium of the said needles, substantially as hereinbefore described. 4th. The combination in a perforator, of keys marked with letters or other characters, punches operated by the said keys and adapted to be moved laterally over the strip or sheet to be perforated, and means for moving or feeding forward the said strip or sheet after being punched, for the purposes above specified. 5th. The combination, of a series of punches carried by a punch beam, keys for operating the said punches through the medium of punch levers, a screw threaded shaft and means for revolving the same through the medium of the punch levers to move the said punch beam back to its original position, substantially as and for the purposes above specified. 6th. The combination, with the perforating punches and

the keys and levers for operating the same, of rolls at each end of the perforator carrying a strip of paper beneath the punches, a cylinder mounted on a shaft and having a ratchet surface, rings actuated by springs and surrounding the said cylinder, pawls carried by the said rings and engaging with the said ratchet surface, and intermediate connections between the said shaft and the rolls for revolving the same, substantially as and for the purposes above specified. 7th. The combination, in the perforator, with the rings actuated by springs, of a stepped covering partly surrounding the said rings, and projections upon the rings adapted to come in contact with the steps of the said covering, substantially as and for the purposes above specified. 8th. The combination, with the perforator, of a register for indicating or determining the length of the line perforated, substantially as hereinbefore described. 9th. The combination, of a series of keys, a punch beam carrying punches operated by the said keys, and a pointer or register actuated by the keys and returned by the punch beam, substantially as described. 10th. The combination of a cylinder, type carrying rings surrounding the same, a shaft mounted in the said cylinder and carrying toothed discs geared with the said rings, and means for electrically controlling the movement of the said toothed discs through the medium of a strip of perforated paper or similar material, for the purposes above specified. 11th. The combination, with the electrically controlled type carrying rings, of means for taking an impression therefrom, substantially as and for the purpose above specified. 12th. The combination, with a cylinder and type carrying rings mounted thereon, of posts between the type forming channels, and a compression device adapted to hold the assembled type while the impression is being taken, substantially as and for the purposes above specified. 13th. The combination, with the perforating punches and the keys for operating the same, of supplemental punches and means for operating them, substantially as and for the purpose above specified. 14th. The combination, with the needles which coincide with the main perforations to electrically control the type carrying rings, of supplemental needles which coincide with the supplemental perforations, and are adapted to control the feeding of the perforated paper beneath the needles, substantially as and for the purpose above specified. 15th. The combination, with a series of type carrying rings, and means for operating and controlling the same to set or compose the type, of means for feeding paper, pulp or similar plastic substance beneath the type and a plunger provided with means for heating the same and for raising it to press the paper, pulp or other plastic substance against the type, and thus form matrices from the said type and, at the same time dry the said matrices. 16th. The combination, with a main shaft actuating a cylinder having type carrying rings mounted thereon, of a supplemental cylinder actuated by the said shaft and carrying the perforated paper and needles adapted to coincide with the perforations in the paper, and thus close the electric circuits between an electric generator and the electro magnets controlling the said rings, substantially as described. 17th. The combination, with the type carrying rings, of bars for aligning the type, a base or bed rod, and mechanism for pressing the type together prior to making an impression for stereotyping, substantially as described. 18th. The combination of rings carrying posts forming channels, types placed in the said channels and arranged to be pressed together, and springs on the type which allow them to automatically adjust themselves in the channels in their respective rings, substantially as described. 19th. The combination, with the type carrying rings, of a shaft operating an impression device, means for automatically feeding paper or pulp between the line of type and the impression devices, and means for drying the paper or pulp automatically, substantially as described. 20th. A type for the matrix machine, having laterally projecting levers, and springs for operating the said levers, whereby the types are expanded to their normal position after the pressure of the compression device is removed. 21st. The combination, with the type carrying rings, of a frame for carrying the matrix material, propelled by a screw threaded shaft working in a nut revolved by intermediate connection with the main shaft, and a reversible plunger located beneath the paper to make the impression and heat and dry the paper ready for stereotyping, as described. 22nd. The combination, with the cylinder, provided with type carrying rings, of toothed discs engaging with the said rings, bars adapted to engage with the said discs, wires secured in a circular plate or disc, electro-magnets the armatures of which are connected with the said bars and wires connecting the electro-magnets with the wires in the said disc, substantially as and for the purposes above specified. 23rd. The combination of a cylinder, a series of type carrying rings encircling the same, internal toothed wheels or discs geared with teeth formed upon the inner sides of the rings, and electrical connections for locking the said toothed wheels or discs, substantially as and for the purposes above specified. 24th. A vertically movable reversible plunger, carrying a heating device, one end of the said plunger being compressible while its opposite end is of rigid metal, for the purpose above specified. 25th. The combination of a cylinder mounted upon the shaft, a toothed ring upon the cylinder, projections upon the ring and cylinder to cause the same to move in unison, a toothed disc geared with the ring and provided with a pawl, a ratchet disc in engagement with the pawl, a toothed disc controlled by a spring and formed with a projection, a projection upon the ratchet disc in engagement therewith and electrically controlled bars or levers adapted to be projected between the teeth of the last named disc, substantially as and for the purposes above specified.

No. 43,695. Car Coupler. (*Attelage de chars.*)



Claudius A. Dunn, Denver, Colorado, U.S.A., 20th July, 1893; 6 years.

Claim.—1st. The combination in a car coupler of a curved laterally swinging coupling hook pivoted and encased in a laterally arranged chamber in the coupling head, of a coupling rod journalled in said head and pivotally attached to the back of said coupling hook, of an expansive spiral spring surrounding said coupling rod and arranged to force and keep the said coupling hook in yielding position for coupler, the said coupler hook arranged to abutt against a lug, projection or wall of said coupling head operating to prevent the said coupling hook being thrown too far forward by the spring, as specified. 2nd. The combination in a car coupler of a draw-head having a recessed projection coupling head arranged horizontally to one side of its axis, and an interiorally curved projection on the opposite side operating as a buffer with a curved, laterally swinging coupling hook pivoted in said recess having a rabbeted or lapping groove in its inner curved extremity, and a coupling rod pivoted to the said hook and extending through a hub forming a part of said coupling head at an angle toward the car, and a spiral spring surrounding said rod and encased in a recess in said hub operating expansively against a shoulder on said rod and consequently against said coupling hook, and a chain pivotly connected to said rod, and arranged conveniently at the end of the car adapted to draw the said hook back in the coupling head, and thus uncouple it, and a projection extending from the hub of said coupling hook arranged to abutt against the wall of the draw-head, all arranged as herein set forth and described. 3rd. In a car coupler, the combination of a recessed coupling head arranged horizontally to one side of its axis provided with a central lateral slot at its extremity adapted to receive a common coupling link, and a forward curving projection extending from the head, operating as a buffer to an opposite head with a curved, laterally swinging coupling hook pivoted to said head provided at its outer extremity with a lapping groove, and a central lateral slot for the reception of a common coupling link, and a link pin hole passing centrally through its curved end, and a coupling rod surrounded by a spring pivotally attached to said hook and extending through a recessed projection of the said coupling head toward the car, and a chain freely and suitably connecting the said rod to the end of the car, and a projection of the hub of said coupling hook abutting against a part of said draw-head, all arranged as and for the purposes herein specified. 4th. In a car coupler a curved, swinging hood having a pivoting hub and a projection therein arranged to abut against the draw-head, and a sharply curved extremity forming a lip, a curved rabbet on its inner or coupling face to match a projecting curve on a similar hook, a lateral slot centrally through its curved end for the reception of a coupling link, a link pin hole vertically through its curved end, a recess or projection formed in or on it for attaching a coupler or uncoupling device, as herein specified. 5th. In a draw-head, the combination of a coupling rod journalled in a hollow inclined projection forming a part of said head, a spring surrounding said rod in the chamber of the said projection a chain suitably connecting the end of said rod and end of car, with a curved laterally swinging coupling hook pivoted in said draw-head and to the said coupling rod having a lapping groove in its inner curved extremity adapted to match a similar curved projection on a similar hook, and a projection on its hub arranged to bear against a portion of said draw-head, as herein specified.

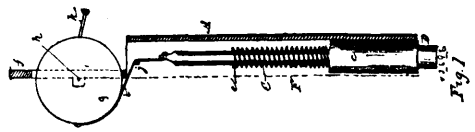
No, 43,696. Bolt and Bar for Doors.

(*Boulon et barre pour portes.*)

John Alexander Leggatt, Walkerton, Ontario, Canada, 20th July, 1893; 6 years.

Claim.—1st. In combination with a door, a combined bolt and bar, consisting of a rod having a lower socket end containing a cork

of elastic substance, as rubber, a spiral spring surrounding the rod to push it downwards, a wheel carried in the bolt frame, and a con-



nection made between the said wheel and the upper end of the bolt rod, with devices for holding the wheel when the bolt is drawn up, substantially as specified. 2nd. A combined bolt and bar for doors, consisting of the metal case A, rod C, enlargement *c*, yielding cork D, spiral springs F, wheel *g*, cord or chain *i*, pin *j*, pin *k* in the wheel, and devices for holding the wheel to retain the bolt when up, all constructed substantially as and for the purpose specified.

No. 43,697. Medicinal Compound.

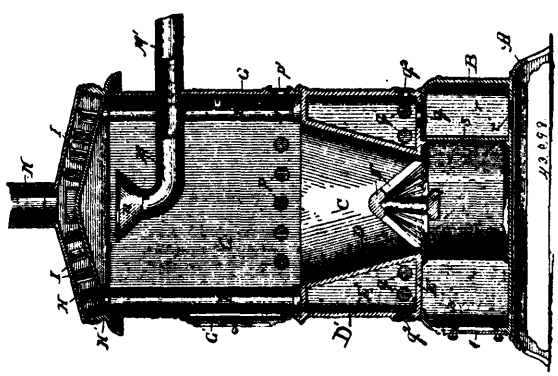
(*Composition médecinale.*)

John Morrison McLeod, Goderich, Ontario, Canada, 20th July, 1893; 6 years.

Claim.—1st. A medical compound composed of water, lemons, onions, extract of gentian, sulphate of iron, re-crystallized sulphate of ammonia, sulphate of quinine, sulphuric acid, tincture of assafoetida, tincture of camphor compound, extract of buchu fluid, tincture of cinchonae compound, extract of belladonna fluid and tincture benzoine compound, mixed and prepared, and in the proportions hereinbefore set forth.

No. 43,698. Air Heating Stove.

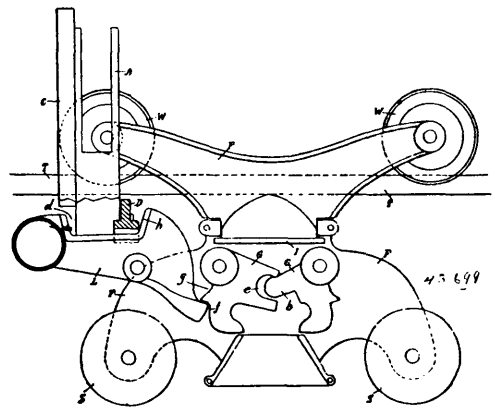
(*Poêle de chauffage à air.*)



Lyman Prentice Converse, Chicago, Illinois, 21st July, 1893; 6 years.

Claim.—1st. In an air heating stove, in combination with the fire box having double walls affording an interior chamber for air, and provided with perforations to admit air at the base and permit air to pass out of the top thereof, and with the combustion chamber surmounted by an air heating chamber provided with upward projecting plates, pipes leading from the chamber in the fire box to the chamber surmounting the combustion chamber, substantially as described. 2nd. In a heating stove, the combination with the fire chamber, of a combustion chamber surmounting the fire chamber, and provided near its lower end above the fire box with controllable apertures, whereby air may be admitted to assist combustion when desired, substantially as described. 3rd. The combination with a heating stove, having the combustion chamber C closed at the top by a plate H^1, and surmounted by an air heating chamber, of a chimney M, M^1, having the upward extending flaring inner end *n*, terminating at a central point in the combustion chamber below the raised center of the top H^1, substantially as described. 4th. In a heating stove, the combination with the fire box containing a grate and a combustion chamber, of an air heating chamber E, surrounding the fire box and formed therewith in a single casting, and having air inlets in its base portion and air outlets in its upper end, a plate H^1 concave on its upper side, and forming the base of a hot air chamber H, pipes L leading from the chamber E to the chamber H through the combustion chamber, between the walls of which and the said pipes space is afforded for the passage of the products of combustion, and the chimney M, M^1, leading from a point in the combustion chamber below the raised centre of the plate h^1, substantially as described. 5th. The combination with the fire box having the double walls and air space between said walls, the combustion chamber above said fire box, the air heating chamber above said combustion chamber, and pipes passing through the combustion chamber and affording a communication between the air chamber n the wall of the fire box and the air heating chamber, the cone haped grate in the fire box, substantially as described.

No. 43,699. Hay Carrier. (*Monte-foin.*)

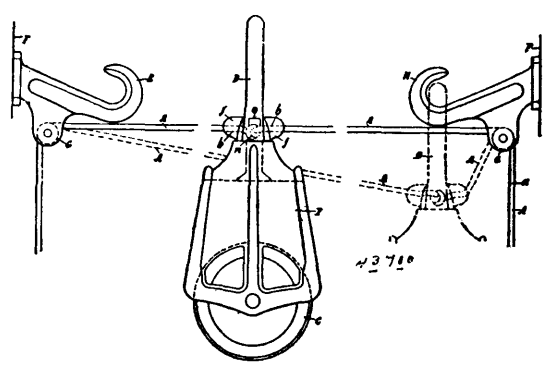


William H. Wortman and Andrew B. McKay, both of London, Ontario, Canada, 21st July, 1893; 6 years.

Claim.—1st. In a hay car or carrier, the grapples G, G, one formed with a projection *b*, and the other with a recess *e*, substantially as shown and described, and for the purpose specified. 2nd. The latch L, formed with a recess *d*, in combination with the grapples G, G, one formed with a projection *b*, and the other with a recess *e*, and one of the grapples provided with the shoulders *f*, *g*, substantially as shown and described, and for the purpose specified. 3rd. A gate A, formed with a pocket P, and a suitable support for said gate, in combination with a cross bar D, having a pivotal lateral movement, and the trip rope H, substantially as shown and described, and for the purpose specified. 4th. A gate A, formed with a pocket P, and a suitable support for said gate, in combination with a cross bar D, having a pivotal lateral movement, and provided with a weighted end or with a weight E, and the trip rope H, substantially as shown and described, and for the purpose specified. 5th. A gate A, provided with a cross bar D, and a pocket P, in combination with the latch L, in which a recess *d*, is formed, and the grapples G, G, substantially as shown and described, and for the purpose specified. 6th. A hay car or carrier frame F, and the grapples G, G, in combination with the latch L, the gate A, provided with a pocket P, the cross bar D, the trip rope H, substantially as shown and described, and for the purpose specified.

No. 43,700. Pulley for Hay Carriers.

(*Poulie pour monte-foin.*)



William H. Wortman and Andrew B. McKay, both of London, Ontario, Canada, 21st July, 1893; 6 years.

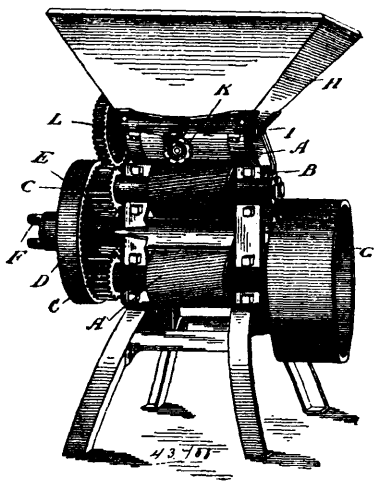
Claim.—1st. The combination in a hay carrier pulley of a rope, a pulley block secured thereto, and suitable means placed at two different points, over which said rope passes, substantially as shown and described, and for the purpose specified. 2nd. A rope A, and a pulley block B, secured thereto, and provided with a loop or hook D, in combination with hooks or loops E, and H, and sheaves G, substantially as shown and described. 3rd. A rope A, formed with a knot *n*, a pulley block B, a loop or hook D, secured thereto, and provided with an opening *d*, recess *e*, and flanges *f*, in combination with the hooks or loops E, H, and the sheaves G, substantially as shown and described, and for the purpose specified.

No. 43,701. Grain Grinder. (*Broyeuse de grain.*)

John McLachlan, Cannington, Ontario, Canada, 21st July, 1893; 6 years.

Claim—1st. In a grain crusher, a pair of grinding rollers geared together, in combination with an internally geared spur wheel jour-

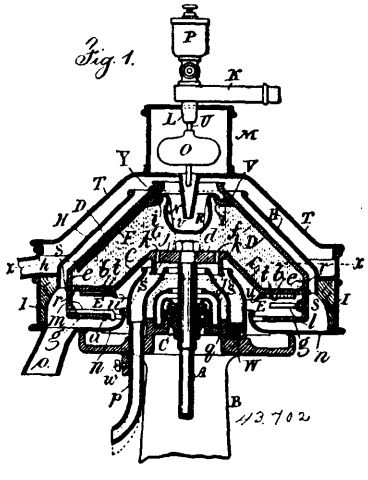
naled on the frame of the machine, and meshing with a pinion connected to the spindle of one of the rollers, substantially as and for



the purpose specified. 2nd. In a grain crusher, two pairs of grinding rollers, one roller of each pair being adjustable and geared to the non-adjustable roller, in combination with an internally geared spur wheel meshing with pinions fixed to the spindles of one roller in each pair, substantially as and for the purpose specified. 3rd. In a grain crusher, a corrugated feed roller geared to the grinding rollers, in combination with an adjustable pan pivoted below the said feed roller, substantially as and for the purpose specified. 4th. In a grain crusher, a pair of grinding rollers geared together, in combination with an internally geared spur wheel journalled on the frame of the machine, and meshing with a pinion connected to the spindle of one of the rollers, a pulley being fixed to the other end of the spindle of the said rollers, substantially as and for the purpose specified.

No. 43,702. Separator for Cream and Butter.

(*Séparateur pour la crème et le beurre.*)



Adolph Wahlin, Bainbridge, New York, U.S.A., 21st July, 1893; 6 years.

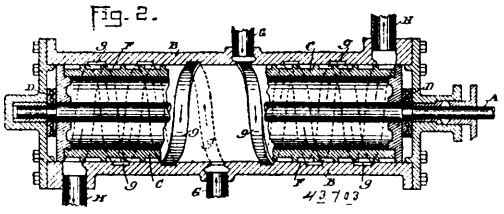
Claim.—1st. In a centrifugal apparatus for separating cream from milk, the combination with a holding vessel in which the cream is separated from the milk to a greater or less extent, of a surface connected to and revolving with the separating vessel upon which the cream is delivered and exposed to a centrifugal action that separates the watery portions from the buttery portions, for concentrating the cream and causing the buttery particles to coalesce, substantially as set forth. 2nd. The combination in a separating apparatus of the following elements: a cream separating vessel, an inclined surface upon which the cream passes for further separation, an annular receiving vessel in which the buttery particles are caused to coalesce, substantially as specified. 3rd. The combination in a separating apparatus, of a rotating auxiliary milk receiving vessel R that acts as a partial cream separator and detains foreign substances, said vessel being separable from the cream separating vessel, substantially as set forth. 4th. The combination in a separating apparatus, of a cream separator and a butter separator, and a movable receiver which when brought into use takes off the cream before it passes to the butter separator, substantially as set forth. 5th. In a centrifugal separating apparatus, a bowl having a conical bottom rising within the separating chamber, and having an opening passing downward through the bottom and adjacent to the smaller diameter of the conical portion, so that the cream as delivered from the cream separating bowl is passed downwardly and spread upon the conical under surface of the bowl for the separation of the watery from the buttery portions, substantially as set forth. 6th. The combination in a centrifugal separating apparatus, of a bowl, means for supplying milk into such bowl, a conical bottom rising within the separating chamber of the bowl, and having openings therethrough for the downward delivery of the cream from the cream separating bowl upon the under conical surface of the bowl, and an annular butter separating chamber below the bottom portion of the bowl, and an annular chamber for the reception of the buttery and watery portions from the butter separating chamber, substantially as set forth. 7th. A combined cream and butter separating bowl, having a conical bottom rising within the separating chamber, and having cream discharge openings through the bottom and a downwardly projecting rim upon the bottom and around the cream discharge openings for delivering the cream from the edge of the rim upon the conical butter separating surface, substantially as set forth. 8th. A combined cream and butter separating bowl, having a conical bottom rising within the separating chamber, and cream discharge openings through the bottom, and a downwardly projecting rim upon the bottom and around the cream discharge openings, for delivering the cream from the edge of the rim upon the conical butter separating surface, and an annular butter separating chamber below the bowl, and into which the buttery and watery particles pass from the conical surface, substantially as set forth. 9th. A combined cream and butter separating bowl, having a conical bottom, cream discharge openings through the bottom and downwardly projecting rim upon the bottom and around the cream discharge openings for delivering the cream from the edge of the rim upon the conical butter separating surface, an annular butter separating chamber below the bowl, and into which the buttery and watery particles pass from the conical surface, a lip below the conical surface and around the larger diameter thereof, and tubular outlets from such rim into the butter separating chamber, substantially as set forth. 10th. The combination, with a centrifugal cream separating bowl, having a butter separating surface, cream discharge openings, and an annular rim around the cream discharge openings, of a movable cream receiver adapted to pass around the annular rim for intercepting the cream before it reaches the butter separating surface, so as to change the centrifugal butter separating apparatus into a cream separator, substantially as set forth. 11th. The combination, with a centrifugal cream separator, of a separate auxiliary milk receiving and separating vessel of smaller diameter than the opening in the top of the cream separator, so that such auxiliary vessel may be removed or replaced, and means for supporting said auxiliary vessel with its annular upper edge below the top of the cream separator, whereby the milk is subjected to a centrifugal action and delivered in a thin layer over the upper edge of the auxiliary separator to the interior of the cream separator, substantially as set forth. 12th. The centrifugal cream separating bowl, having a conical cream separating chamber, a conical bottom to the bowl, forming on its under side a butter separating surface, cream delivery openings through the bottom, in combination, with an annular cream receiver below the bottom and adapted to being raised or lowered in relation to the cream separating outlets, and a rim on pan for the reception of the buttery and watery portions from the butter separator, substantially as set forth. 13th. A centrifugal cream and butter separating bowl, having a conical bottom extending up into the cream separating chamber, and having cream openings extending downwardly through the bottom of the bowl, through which the cream passes to the conical under surface of the bottom for the watery portions, to separate from the buttery portions by the centrifugal action, an annular butter separating chamber below and around the conical butter separating surface, the bottom of the cream separator also having one or more openings near the inner surface of the cream separating bowl, for allowing the skim milk or watery portions from the cream separating chamber, to pass into the said annular butter separating chamber, substantially as set forth.

No. 43,703. Rotary Engine. (*Machine rotative.*)

The Consolidated Car Heating Company, assignee of James F. McElroy, all of Albany, New York, U.S.A., 21st July, 1893; 6 years.

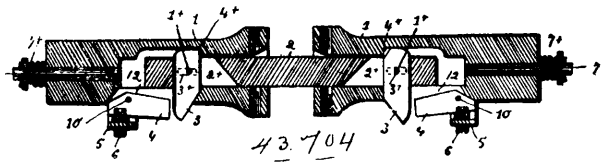
Claim.—1st. In a rotary engine, the combination of a piston, a cylinder secured thereto, a series of pits or pockets in the circumference of said cylinder, a shell enveloping said cylinder, a groove cut in the inner surface of said shell in which steam or air may be placed in such a manner that the steam or air passing through the groove shall come in contact with the walls of the pits within the surface of said cylinder, thus driving the rotating cylinder in the direction in which the pressure is exerted upon the walls of the pits, substantially as described and for the purpose set forth. 2nd. In a rotary engine, the combination of a piston, a cylinder secured thereto, a series of pits cut out of the circumference of said cylinder, a shell enveloping said cylinder, a groove cut in the inner surface of

said shell, an inlet pipe communicating with said groove, an exhaust pipe communicating with said groove in such a manner that the



fluid from the inlet pipe shall pass through the groove and come in contact with the walls of the pits imparting a rotary motion to said cylinder, substantially as described and for the purpose set forth. 3rd. In a rotary engine, the combination of a piston, a cylinder secured thereto, a series of pits or pockets in the circumference of said cylinder, a shell enveloping said cylinder, a spiral groove cut in the inner surface of said shell, an inlet pipe communicating with said groove about midway between the ends of the shell, an exhaust pipe communicating with said groove near the end of said shell, substantially as described and for the purpose set forth.

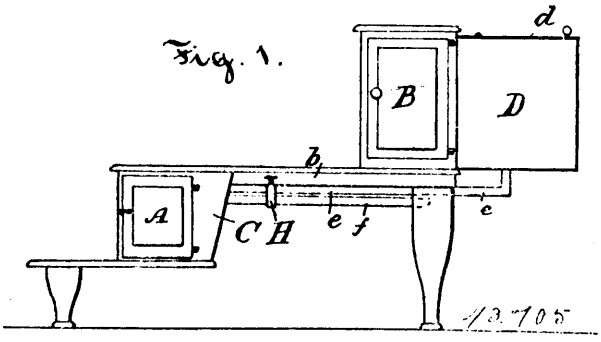
No. 43,704. Car Coupler. (*Attelage de chars.*)



J. E. Catterson, Dayton, Washington, U.S.A., 21st July, 1893; 6 years.

Claim.—1st. In a coupling link for car couplings having a recess near each end, and a gravity dog arranged in each recess, and having its pivot working in a longitudinal slot in the link, as set forth. 2nd. The combination with the draw-head, and the lever pivoted at the under side thereof and working in a recess in the under side of the draw-head and a coupling link provided with a gravity dog adapted to engage behind the lever, as set forth. 3rd. The combination with the draw-head and the lever pivoted on the under side thereof, of the coupling link provided with gravity dog, and a chain connected to the lever, as set forth. 4th. The combination with the draw-head provided with mouth and slot upon its under side of the lever, pivoted to work in said slot, a coupling link provided with a gravity dog pivoted in a recess in the link, and having its pivot arranged to work in a longitudinal slot in the link and having inclined face, and a chain connected with the lever, substantially as and for the purpose specified.

No. 43,705. Cooking Stove. (*Poêle de cuisine.*)



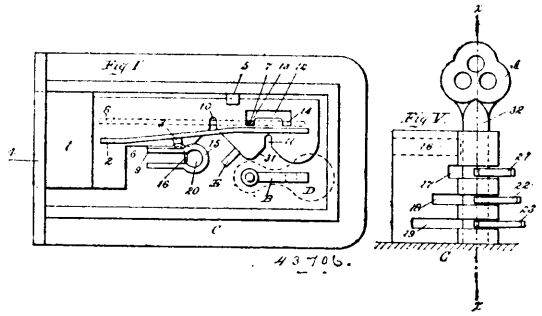
Ophiny Louis Gadoury, St. Placide, Quebec, 21st July, 1893; 6 years.

Claim.—1st. In a cooking stove, the combination, with a boiler forming the fire back of the said stove, of a tank divided into two compartments, the said tank being placed above the level of the said boiler, tubes connecting the said compartment with the said boiler, and a draw off cock connected to one of the said tubes, substantially as set forth.

No. 43,706. Lock. (*Serrure.*)

Frederick William Harris, Woodstock, Ontario, Canada, 21st July, 1893; 6 years.

Claim.—1st. In a lock, the combination, with the case and the bolt, of a spring carrying a lug, one end of the spring being attached to the bolt, the spring pressing the lug against a suitable projection when so required, substantially as and for the purpose hereinbefore



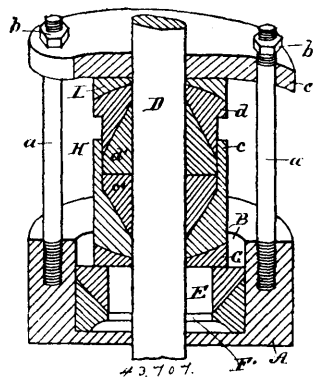
set forth. 2nd. In a lock, the combination, with the bolt and the case, of a spring carrying a lug, one end of the spring being fastened to the case, the lug on the spring engaging or disengaging in notches in the bolt when so required, substantially as and for the purpose set forth. 3rd. In a lock, the combination, with the bolt and the case, of a keyhole piece having open spaces, which cut the keyhole piece parallel to each other, and in a direction at right angles to the direction of the length of the keyhole, these open spaces are capable of being varied in different locks to permit the forks of a key rotating in these open spaces, substantially as and for the purpose hereinbefore set forth. 4th. In a lock, the combination, with the keyhole piece, of a spring which presses down into the keyhole, thereby obstructing the entrance of a key, substantially as and for the purpose hereinbefore set forth. 5th. In a lock, the combination, with the case and the bolt of an interior key, having a weighted key handle, which tends to keep the key in a certain position, with the forks of the key clear of the bolt and springs, substantially as and for the purpose hereinbefore set forth. 6th. In a lock, the combination, with the case and the bolt, of an interior key, an inclined projection on the case, a bevelled face on the lower surface of the bolt, the bevelled face sloping away from that recess in the bolt, into which recess the middle fork of the interior key engages, while being operated to move the bolt, when the interior key is forced up the inclined projection on the case, the interior key may remain fixed with the end of the centre fork, of the interior key, securely butting against the bevelled face on the lower surface of the bolt, substantially as and for the purpose hereinbefore set forth. 7th. In a lock, the combination with the case and the bolt, of a key having parallel forks, attached to, and projecting outward from the shank of the key, at right angles to that shank. The forks of the key being so spaced, and of the proper width, to pass through open, parallel spaces, in the keyhole piece, substantially as and for the purpose hereinbefore set forth. 8th. In a lock, the combination with the lock, the key, and the forks of the key, of inclined surfaces on the forks of the key, the inclined surfaces being so placed on the forks of the key as to raise the spring, which is projecting down into and obstructing the keyhole, the spring being thus raised by the inclines, permits the key to enter and leave the keyhole, substantially as and for the purpose hereinbefore set forth. 9th. In a lock, for doors, drawers, etc., of the character above described, the combination, with the case and the bolt, of a spring carrying a lug, one end of the spring being attached to the bolt, a spring carrying a lug, one end of the spring being attached to the case, the lug engaging or disengaging in notches in the bolt, a keyhole piece attached to the case, the keyhole piece having open, parallel spaces to permit the forks of a key passing through these spaces, a spring attached to the keyhole piece, the spring entering and obstructing the keyhole, an interior key, having bearings in the case, the interior key being provided with a weighted key handle, an inclined projection on the case, so placed that the interior key, when resting on this projection, is in a position to butt against a bevelled face on the lower surface of the bolt, a key having attached at right angles to its shanks, parallel forks, which may rotate in parallel spaces in the keyhole piece, and inclined surfaces on the forks, of the key, which, on entering the keyhole piece, the inclined surfaces force the spring, which is projecting down into the keyhole, up clear of the keyhole, allowing the key to enter and be withdrawn from the keyhole, all substantially as and for the purpose hereinbefore set forth.

No. 43,707. Stuffing Box. (*Boîte à garniture.*)

George H. Hitchcock, Danville, Illinois, U.S.A., 21st July, 1893; 6 years.

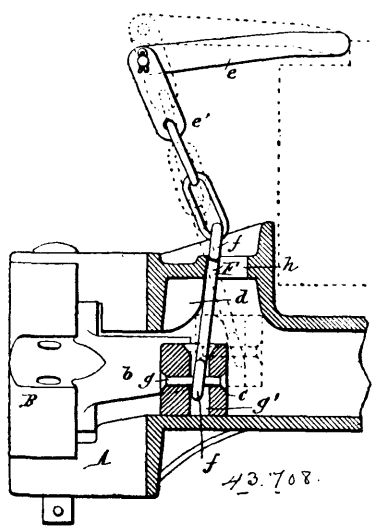
Claim.—1st. In combination, with the cylinder head provided with a piston rod aperture of greater diameter than the rod, and having a counter bore B, of the two expansible rings F, E, in the base of the counter bore and of greater lateral diameter than the piston rod, and having bevelled engaging surfaces, the lower edge of the ring F being exposed to the steam within the chamber formed by said rings, the stuffing box secured to the cylinder head with its lower end closing the upper end of the steam space formed by the rings E, F, and means for securing the stuffing box in place, substantially as set forth. 2nd. The combination with the cylinder

head provided with a piston rod aperture of greater diameter than the rod, and having a counter bore B, of the bevelled expansion



rings E, F, in the lower end of the counter bore and of greater internal diameter than the piston rod, thereby forming a steam space to receive steam through the piston rod opening, the flat ring G resting on the ring E, and closing said steam space, the annular telescopic stuffing box sections *c*, *d*, recessed on their inner walls and forming a packing space, the flat ring I, and the follower C mounted on the bolts or studs *a*, substantially as set forth. 3rd. The combination with the piston rod stuffing box of a steam engine, of concaved rings fitted to the stuffing box, and an auxiliary stuffing box having convex ends fitted to the concave rings, substantially as specified.

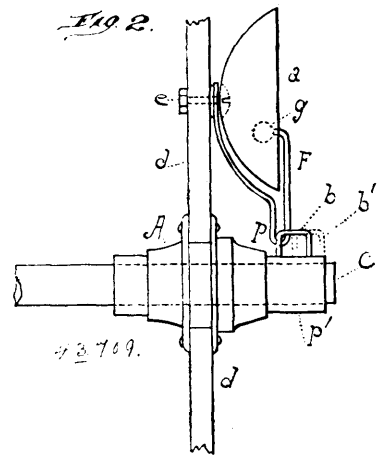
No. 43,708. Car Coupler. (*Attelage de chars.*)



The Gould Coupler Company, of the city of New York, assignee of Willard Fillmore Richards, Buffalo, State of New York, U.S.A., 21st July, 1893; 6 years.

Claim.—1st. The combination with the draw-head, the coupling jaw and the vertically moving lock of the jaw, of a rigid lifting bolt extending upwardly from the lock and above the top of the draw-head, and adapted to be connected at its upper end with the unlocking device of the coupling, substantially as set forth. 2nd. The combination with the draw-head having an opening in its top, of the coupling jaw pivoted to the draw-head, the vertically movable lock for holding the jaw in its closed position, and a rigid lifting bolt attached at its lower end to the lock, extending upwardly through the opening of the draw-head, and terminating at its upper end in an eye or attachment which projects above said opening and is adapted to be connected with the lifting chain of the car coupling, substantially as set forth. 3rd. The combination with the draw-head having an opening in its top, of the coupling jaw, a rearwardly swinging lock for holding the jaw in its closed position, a rigid lifting bolt attached at its lower end to the lock and extending upwardly through the opening in the draw-head, a rock shaft arranged above the draw-head and having an arm extending forwardly beyond said lifting bolt, and a connection extending from the projecting upper end of said lifting bolt to the arm of said rock shaft, substantially as set forth.

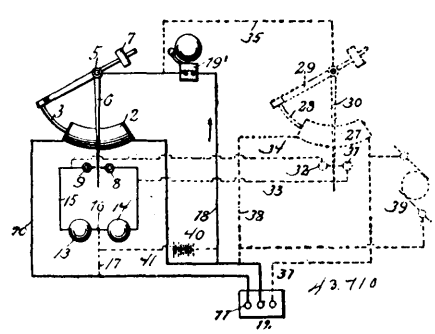
No. 43,709. Chime Apparatus for Wheels.
(*Appareil de cloches pour roues.*)



Angelina M. Freeman, Winamac, Indiana, assignee of Albert E. Lytle and Byron K. Cowles, both of Chicago, Illinois, all in the U.S.A., 21st July, 1893; 6 years.

Claim.—1st. In bell or chime attachments for wheels, the combination of a wheel having bells secured thereto, with clapper arms having clappers which are caused to strike the bells by the revolution of the wheel, substantially as set forth. 2nd. In bell or chime attachments for wheels, the combination of a wheel having bells secured thereto, a series of clapper arms having clappers and projections so secured and placed that the projections will be tripped and cause the clappers to strike the bells, by the revolution of the wheel, substantially as set forth. 3rd. In bell or chime attachments for wheels, the combination of a wheel having a series of bells secured thereto, and mounted on an axle having means to trip the clapper arms with the bells, the clapper arms having clappers and projection so secured and placed that they will be tripped by the means on the axle, substantially as set forth. 4th. In bell or chime attachments for wheels, the combination of a wheel having a series of bells secured thereto, and mounted on an axle having movable projections *b*, the clapper arms F, having the doubled portion *p*, and clapper *g*, all constructed, arranged and operating substantially as shown and described and for the purpose set forth.

No. 43,710. Potential Indicator. (*Indicateur potentiel.*)



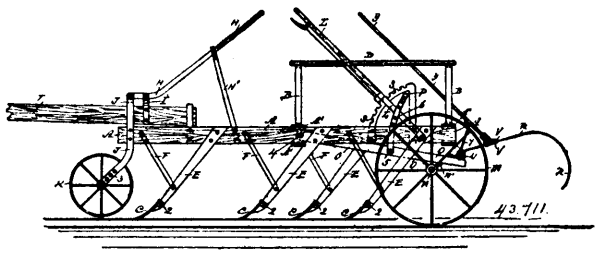
George A. Lintner, Minneapolis, Minnesota, U.S.A. 21st July, 1893; 6 years.

Claim.—1st. The combination, with a solenoid of a main circuit including the same, a core or armature for said solenoid, a pointer arranged to be operated by the movement of said core, contact points or blocks to be engaged separately by said pointer, translating devices included in series between said contact points, and consequently in a normally open circuit, an electric audible signal included in a connection extending from a point between said translating devices to said pointer, and a source of electrical energy included in said connection, substantially as and for the purpose specified. 2nd. The combination in a potential indicator, of a curved solenoid included in a working circuit, with a swinging curved core therefor, a pointer to be operated by the movement of said core, a contact point arranged on each side of each cent lamps included in a series between said contact points, an electro-magnetic bell, a connection extending between said lamps to said pointer and including bell, and a source of electrical energy also so included in said connection whereby a variation of potential on the circuit of the solenoid will result in the ringing of the bell and the illumination of one of said lamps, substantially as and for the purpose set forth. 3rd. The combina-

tion, with a main circuit and a source of electrical energy, of a solenoid included in said circuit, a core for said solenoid, a pointer connected with said core, contact points to be engaged by said pointer, a connection between said pointer and one limb of said circuit, an audible signal included in said connection, signal lamps included in series between said contact points, and a connection from between said lamps to the other limb of said circuit, substantially as and for the purpose set forth. 4th. The combination, in a potential indicator, of two or more main circuits, a solenoid included in each circuit, a core provided with a pointer for each solenoid, two contacts for each pointer, the corresponding contacts of said pointers being electrically connected, two translating devices included in series between one pair of said contacts, a connection extending from a point between said devices to the particular pointer adapted to engage said pair of contacts, and an audible electric alarm, and a source of electricity both included in said connection, whereby a variation of potential on one or more of said main circuits is indicated by the sounding of said alarm, and the illumination of one or both of said lamps, substantially as described. 5th. The combination, with two or more main circuits, of a solenoid for each, the core of each solenoid pointers to be operated thereby, a pair of contact points or blocks for each pointer, to be engaged by said cores, two electric lamps of different colors arranged in series between the contact points of one pair, a connection extending from between said lamps to one limb of one of said main circuits, an electric bell and a connection including the same and extending from said pointer to the other limb of said circuit, substantially as and for the purpose set forth. 6th. The combination, with a solenoid, of two cores extending into opposite ends of said solenoid, a pointer arranged to be operated by the movement of one of said cores, and a graduated scale, across which said pointer operates, substantially as described and for the purpose set forth. 7th. The combination, with a curved solenoid, of a main circuit, including the same, a pivot, two arms independently pivoted thereon, a curved core secured upon each arm, said cores extending into opposite ends of said solenoids, a pointer attached to one of said arms, contact points arranged on opposite sides of said pointer, translating devices included between said contacts, an electrical bell, a connection extending from between said translating devices to said pointer and including both said bell, and a source of electrical energy, substantially as described. 8th. The combination, with a main circuit, of a curved solenoid included therein, the curved core, the swinging arm whereon said core is fixed, a pointer provided in connection with said arm, the curved rods 43 and 44, the slidable contact blocks 8 and 9, arranged thereon to be engaged by said pointer, a reading scale 45, signal lamps included between said contacts, a connection extending from a point between said lamps to said pointer, and an electric bell and a source of electricity both included in said connection, substantially as described and for the purpose specified. 9th. The combination of the curved solenoid composed of several bobbins of wire connected in series, with a pivot post 5, two arms journalled thereon, the curved cores attached to said arms and projecting into opposite ends of said solenoid, lugs 49, on said arms, and an adjustable spring arranged between said lugs, substantially as described and for the purpose set forth. 10th. The combination, with a solenoid, of two cores arranged to enter opposite ends of the same, a pointer arranged in connection with each, electrically connected contacts arranged between the free ends of said pointers, a contact arranged opposite the outer side of each pointer, said contacts being connected, and signal circuits connected with said contacts, substantially as described. 11th. The combination, with the solenoid, of two cores to enter opposite ends thereof, swinging arms 4 and 48, whereto the said cores are attached, pointers 6 and 60, attached to said arms 4 and 48, respectively, a double contact 61, provided between the free ends of said pointers, the contacts 62 and 63, to engage the outer sides thereof, and said contacts being adjustable, substantially as and for the purpose set forth.

No. 43,711. Cultivator, Plow and Rake.
(*Cultivateur, charrue et rateau.*)

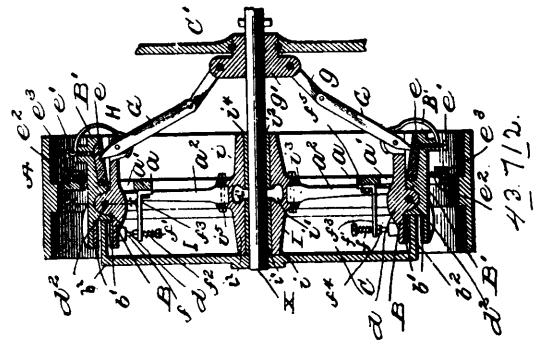
Fig. 1



George Beatty, Beamsville, Ontario, Canada, 21st July, 1893; 6 years.

Claim.—1st. The isosceles triangle frame A, having cross pieces A^1, the angled arms E, having braces F, and steel cultivator teeth C, secured thereto at 2, in combination with the tongue T, lever H, rod H^1, fulcrum strap I, bent side straps J, and the adjustable vertex ground wheel K, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the levers L, pivoted to inner sides of frame, the segmental ratchet teeth S, the adjustable connecting straps P, having apertures for adjusting pin 6, and connected at 5, to the rear lifting bars O, pivoted at 4, to inner sides of frame, the axle N, bearing N^1, and wheels M, substantially as described and set forth. 3rd. The round cross bar U, hinged to the adjustable arms O, the over and under bar V, the series of spring teeth R, the lever Y, with its braces 7, in combination with the frame A, substantially as described and set forth. 4th. In a plow cultivator, with adjustable rake, the frame A, arms E, braces F, teeth C, levers H and L, tongue having fulcrum I, side straps J, and wheels K and M, ratchet teeth S, connecting straps P, with pin 6, and arms O, attached to axle N, in combination with the rake frame hinged to said arms O, and provided with spring teeth R, and lever Y, with its brace 7, substantially as and for the purposes hereinbefore set forth.

No. 43,712. Pulley. (*Poulie.*)

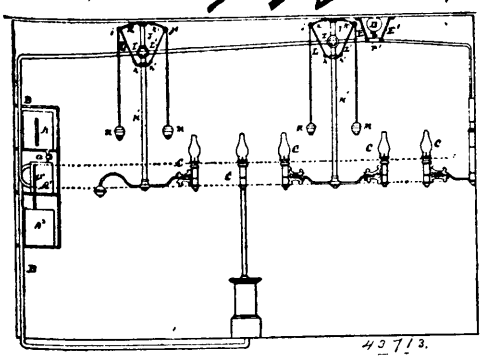


Charles H. Waterous, Brantford, Ontario, Canada, 21st July, 1893; 6 years.

Claim.—1st. A clutch pulley having all of its clutch arms secured to one common bearing or support and designed to be secured to the arms or spokes of the pulley. 2nd. A clutch pulley having a continuous ring or band secured to all of its arms or spokes and having a series of loops in which the clutch arms are located, as set forth. 3rd. A clutch pulley having inner and outer clutch arms and a spring acting on the inner end of said inner clutch arm, as set forth. 4th. A clutch pulley having inner and outer clutch arms, a threaded rod projecting from the inner end of said inner clutch arms, a coil spring encircling said rod, and bearing on the inner end of said spring, and an adjustable nut on said rod adjacent to said bearing with which it is designed to come in contact to limit the movement of said clutch arms, substantially as set forth. 5th. A clutch pulley having inner and outer pivoted clutch arms, and the plate spring engaging the outer ends of said arms, as set forth. 6th. A clutch pulley having its hub provided with independent bearing ends. 7th. A clutch pulley having its hub provided with independent bearing ends and an oil space or channel, or a series of such spaces or channels, as set forth. 8th. A wheel or pulley having its hub removably secured thereto. 9th. A wheel or pulley having its hub composed of two or more parts rigidly secured to its arms or spokes, and parts having independent bearings, as set forth. 10th. A wheel or pulley having its hub composed of two or more parts rigidly secured to its arms or spokes, said parts having independent bearings and being formed in sections bolted together, as set forth. 11th. A clutch, comprising two clutch parts, one fast, the other loose, and lever arms carried by one of said clutch parts and having separable shoes designed to engage the other clutch part, substantially as set forth. 12th. A clutch having lever arms provided with pivoted shoes, as set forth. 13th. A clutch having lever arms provided with projecting studs, and shoes having openings and fitted on said studs, as set forth. 14th. A clutch provided with shoes having a limited movement oblique to the line of revolution of the clutch. 15th. A clutch comprising two clutch parts, one fast, and the other loose, lever arms, and separable shoes connected thereto and having a limited movement oblique to the line of revolution of said clutch parts, substantially as set forth. 16th. A clutch having its lever arms provided with studs, and the shoes having inclined slots in which said studs fit, as set forth. 17th. A clutch having its drive wheel provided with a rim or flange tapering from edge to edge, as and for the purpose set forth. 18th. A clutch comprising a fast drive wheel having a tapered rim or flange, and a loose pulley carrying lever arms having shoes designed to engage said rim or flange, as set forth. 19th. A clutch comprising lever arms carried by one clutch part, and the clutch operating mechanism having lateral arms pivotally connected to the outer ends of both of said lever arms, and having an adjusting screw, substantially as set forth.

No. 43,713. Hydrocarbon Lighting Device.

(*Appareil d'éclairage à hydrocarbone.*)

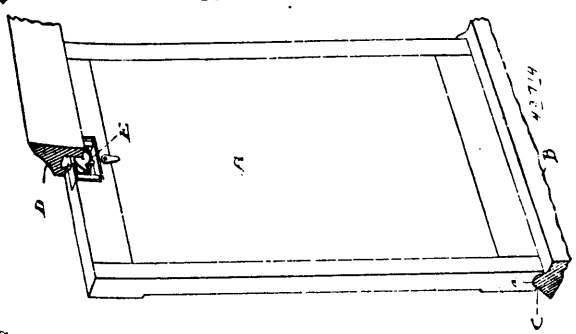


Abraham S. Cody, Midland, Michigan, U.S.A., and Daniel Hinkson, Oshawa, Ontario, Canada, 21st July, 1893; 6 years.

Claim.—In a hydrocarbon lighting system, the combination, with a hydrocarbon distributing pipe provided with a channelled arm *b*, of a removable air receiver provided with a channelled stem *d* removably connected with the arm *b*, whereby said air receiver is communicable with said distributing pipe, said stem and said arm each provided with a valve controlling communication through their respective channels when the air receiver is removed, substantially as described.

No. 43,714. Advertising Device.

(*Appareil de publicité.*)

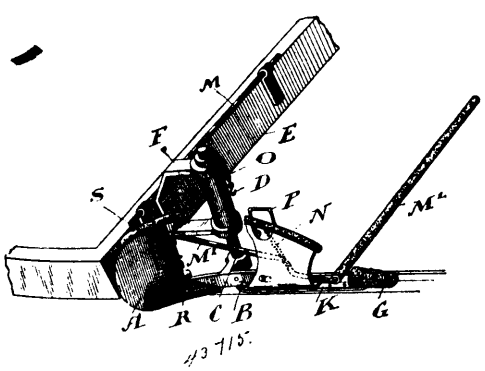


George F. Burton, Toronto, Ontario, Canada, assignee of John Henry Cairncross, of Toronto, aforesaid, 21st July, 1893; 6 years.

Claim.—A frame for holding the advertising device and having a groove or projection formed on or connected to one edge and arranged to engage with a projection or groove formed on or connected to the surface on which the frame is placed, in combination with a spring latch arranged to lock the frame into its holding device, the whole being arranged, substantially as and for the purpose specified.

No. 43,715. Fender for Street Cars.

(*Défense pour chars électriques.*)

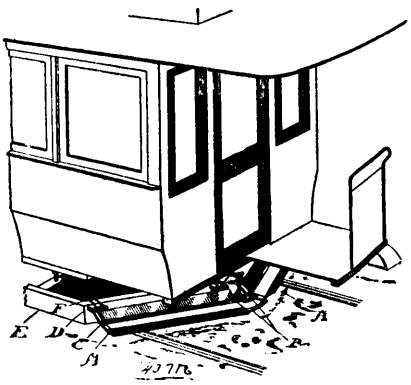


Walter Wormley Peay, Toronto, Ontario, Canada, 22nd July, 1893; 6 years.

Claim.—1st. As an improved street car fender, a mould board shaped foot attached to the end of a vertical spring actuated spindle supported below the car in front of the wheel, substantially as and for the purpose specified. 2nd. A mould board shaped foot attached to the end of a vertical spring actuated spindle below the car in front of the wheel, in combination with a spring actuated brush on the rail behind the mould board, substantially as and for the purpose specified. 3rd. As an improved street car fender, two mould board shaped feet, each one attached to the end of a vertical spring actuated spindle which is supported below the car close to the rail in front of the forward wheel, in combination with a netting extending across the track between the fender, substantially as and for the purpose specified. 4th. As an improved street car fender, a mould board shaped foot A, connected to the end of the spindle C, connected by the frame B, to the guard E, a spring I, fitted into the cylinder D, and arranged to actuate the spindle C, a shoe K, having a soft tip G, fixed to its point, in combination with the pivoted frame M, carrying the netting L, below the car and a spring N, for connecting the netting to the shoe, substantially as and for the purpose specified.

No. 43,716. Fender for Street Cars.

(*Défense pour chars électriques.*)

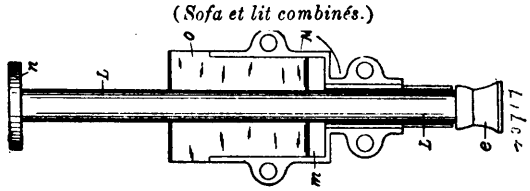


Thomas Davies, Toronto, Ontario, Canada, 22nd July, 1893; 6 years.

Claim.—1st. A hinged plate carried at an angle on springs in front of the wheels and arranged to move towards the ground when striking an obstruction and immediately rebound sufficiently to remove the obstacle off the track, substantially as and for the purpose specified. 2nd. The angular plates A, connected to the bars C, pivoted on the pins D, in combination with the springs F, and adjustable pins G, substantially as and for the purpose specified. 3rd. The angular plates A, provided with a cap or fingers B, connected to the bars C, pivoted on the pins D, in combination with the springs F and H, and adjustable pins G, substantially as and for the purpose specified. 4th. The steel brush or metal scraper I, shaped to fit the top of the rail J, and connected to the spring plate K, on which the sharpened pinion or pointed roller L, is pivoted, in combination with the adjustable spring plate M, arranged substantially as and for the purpose specified.

No. 43,717. Sofa and Bed Combined.

(*Sofa et lit combinés.*)

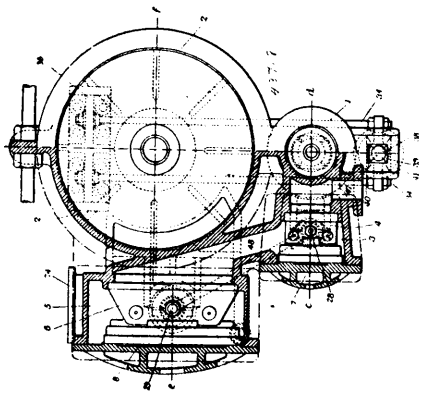


Benjamin T. Lawton, London West, Ontario, Canada, 24th July, 1893; 6 years.

Claim.—1st. In a combined sofa bed, the casting M, formed with an opening *m*, in combination with an adjustable bar or leg L, formed with a flange *n*, substantially as shown and described, and for the purpose specified. 2nd. In a combined sofa bed, an adjustable frame A, and a casting M, formed with an opening *m*, in combination with an adjustable bar or leg L, formed with a flange *n*, substantially as shown and described, and for the purpose specified. 3rd. In a combined sofa bed, the frames A and B, and the casting M, formed with an opening *m*, in combination with an adjustable bar or leg L, formed with a flange *n*, substantially as shown and described and for the purpose specified. 4th. In a combined sofa bed, the frames A, and B, the casting M, and the adjustable bar or leg L, formed with a knob *e*, and with a flange *n*, in combinatien with the frames C and D, formed with the opening P, substantially as shown and described and for the purpose specified. 5th. In a combined sofa bed, the frames A and B, the latter of which is formed with sockets E, E, the casting M, the adjustable bar or leg L, formed with a knob *e*, and flange *n*, in combination

with the frames C and D, formed with an opening P, and the arms G, substantially as shown and described, and for the purpose specified. 6th. In a combined sofa bed, the frames A and B, formed with the sockets F, F, the castings M, formed with the openings *m*, and the adjustable bars or legs L, formed with the flanges *n*, in combination with the frames C and D, and the arms G, substantially as shown and described, and for the purpose specified. 7th. In a combined sofa bed, the frames C and D, and the arms G, G, in combination with the frame B, provided with sockets E, E, substantially as shown and described, and for the purpose specified. 8th. In a combined sofa bed, the arms G, G, formed with the lugs H, H, in combination with the frames C and D, substantially as shown and described and for the purpose specified. 9th. In a combined sofa bed, the frames C and D, and the arms G, G, formed with the barbs or flanges J, in combination with a frame B, formed with the sockets E, E, substantially as shown and described and for the purpose specified. 10th. In a combined sofa bed, the frames C and D, and the arms G, G, in combination with the frames A and B, formed with the sockets F, F, substantially as shown and described and for the purpose specified.

No. 43,718. Engine. (*Machine à vapeur.*)



Walter Charles Church, Brixton, Surrey, England, 24th July, 1893; 6 years.

Claim.—1st. A compound steam engine, having its high and low pressure cylinders arranged side by side, or parallel to one another, the valve or valves of the high pressure cylinder or cylinders having its or their interior cavity or cavities supplied with live steam, and the valve of the low pressure cylinder having its interior cavity or cavities supplied with exhaust steam direct from the valve chest or chests of the high pressure cylinder or cylinders, without the said exhaust steam passing first into a reservoir or receiver, the low pressure cylinder being of a capacity to utilise the pressure of the exhaust steam so received from the high pressure cylinder or cylinders, substantially as hereinbefore described and illustrated by the accompanying drawings. 2nd. In compound condensing steam engines, the combination, with the valve of the low pressure cylinder of a piston working in a cylinder or passage, communicating at one end with the valve chest or casing and at the other end with the atmosphere, so as to sustain the weight of the valve or part of the weight of the valve, by atmospheric pressure, substantially as hereinbefore described and illustrated by the example shown in fig. 4 of the accompanying drawings. 3rd. In combination, with high and low pressure cylinders and their valves, arranged and supplied with steam, as claimed by the first preceding claiming clause, of a cross-head to which both or all of the piston rods of the cylinder are connected, the said cross-head being connected to one crank, substantially as hereinbefore described and illustrated by the examples shown in the accompanying drawings. 4th. In combination, with high and low pressure cylinders and their valves, arranged and supplied with steam, as claimed by the preceding first claiming clause, of a cross-head to which both or all of the pistôn rods of the cylinders are connected, the said cross-head being connected to one crank and another cross-head, to which both or all of the valve rods are connected, so that the valves are operated by one valve-operating device, substantially as hereinbefore described and illustrated by the examples shown in the accompanying drawings. 5th. In steam engines in which the steam exhausts into the valve chest or casing, or valve chests or casings, providing the valve chest or casing, or valve chests or casings with a bottom inner surface so shaped or inclined towards an outlet or exhaust passage that water will readily pass out from the valve chest or casing, or chests or casings, and thereby maintain it or them comparatively dry, substantially as hereinbefore described and illustrated by the accompanying drawings. 6th. In a steam or other fluid pressure engines wherein the piston rod or rods is or are secured to a cross-head, the attachment of the said rod or rods to the cross-head by means which will allow of movement between the rod connection and the cross-head, substantially as and for the purpose hereinbefore described and illustrated by the accompanying drawings. 7th. A cross-head for steam or other motive fluid engines, consisting of slabs or cheeks connected together so as to provide a space or spaces between the slabs or cheeks, gudgeons or trunnions formed on or attached to the piston rod or piston rods, slots in the slabs or cheeks, in which slots blocks are fitted to slide, the said blocks receiving the trunnions on the piston rod or rods, or on one of the piston rods, so that the said trunnions can turn in the blocks, substantially as and for the purpose hereinbefore described and illustrated in figs. 1 and 5 of the accompanying drawings. 8th. In steam or other motive fluid engines, securing the piston rod or rods to the cross-head by means of a collar on one side and a washer nut or the like on the opposite side, the bearing surfaces of the collar and the washer being concaved or rounded to correspond to convexed or reversely rounded surfaces formed on or fitted to slide along the cross-head, so as to prevent lateral strain on the piston rod or rods, substantially as hereinbefore described and illustrated by figs. 6 to 25 of the accompanying drawings. 9th. In steam or other motive fluid engines, securing the piston rod or rods to the cross-head by means of a collar on one side and a washer and nut or the like on the opposite side, the bearing surfaces of the collar and the washer being cup shaped to correspond to spherical convexed surfaces formed on the cross-head, or on pieces fitted to slide thereon, so as to form a universal connection, and to admit of the turning of the piston in the cylinder, and also so as to prevent the piston or the cylinder, and the gland in which the piston rod works, from wearing unequally, and the piston rod from being distorted laterally, substantially as hereinbefore described and illustrated by figs. 26 to 35 of the accompanying drawings. 10th. In steam or other fluid motor engines, wherein the cylinder or cylinders is or are subject to movement under changes of temperature, and the supports carry guides for a cross-head, the connection of the cylinder or one of the cylinders to the supports by a sliding connection, substantially as and for the purpose hereinbefore described and illustrated in figs. 1 and 2 of the accompanying drawings. 11th. In steam or other motive fluid engines wherein the cylinder or cylinders is or are subject to movement under changes of temperature, the combination with guides in which the cross-head works of means for connecting them together, and for admitting of the movement of the cylinder or cylinders, due to the expansion and contraction of the metal thereof, without affecting the parallelism of the guides, substantially as hereinbefore described and illustrated in figs. 6 and 7 of the accompanying drawings. 12th. Connecting the piston rod or piston rods of steam or other motive fluid engines to a cross-head, at a point or at points between the ends or one end of the crosshead and the point where the connecting rod is connected to the cross-head, so as to reduce the friction between the slippers on the cross-head and the guides in which they work, substantially as hereinbefore described and illustrated more especially in figs. 1, 6, 20 and 26 of the accompanying drawings. 13th. Connecting the slide valve rods of a compound steam or other multiple cylinder motive fluid engine to one and the same cross-head, the said cross-head being made in parts connected together so as to be capable of moving telescopically, or to vary its length to accommodate movements of the cylinders owing to the expansion and contraction of the metal thereof, and thereby prevent the valve rods from being distorted, substantially as hereinbefore described and illustrated by figs. 37, 38 and 39 of the accompanying drawings. 14th. In compound or multiple cylinder steam or other fluid pressure engines with slide valve rods connected to and operated from one cross-head, long bosses on the cross-head sliding in guides, substantially as hereinbefore described and shown in figs. 1, 3, 36, 37 and 38 of the accompanying drawings. 15th. Providing the slide valve of steam engines in which live steam is admitted to the interior of the valve, and having a cap or cover which fits over the back of the valve, with a rectangular bearing surface which bears against the interal surface of the valve chest or case, substantially as and for the purpose hereinbefore described and illustrated more especially in figs. 43 to 46 and 50, 51, 53 and 54 of the accompanying drawings.

No. 43,719. Method of Printing. (*Méthode d'imprimer.*)

Charles B. Woodward, St. Louis, Missouri, U.S.A., 24th July, 1893; 6 years.

Claim.—1st. The improvement in the art of printing from photo engravings, lithographs, cuts, etchings or other plates which print shades or colours by means of shade or colour lines or marks having appreciable interruptions in or spaces between them, consisting in making successive impressions slightly out of register with each other, the lines or marks made by each successive impression falling wholly or partly into the interstices or spaces left blank between the shade lines or marks of the prior impression or impressions. 2nd. The improvement in the art of printing from photo engravings, lithographs, cuts, etchings or other plates which print shades or colours by means of shade or colour lines or marks having appreciable interruptions in or spaces between them, consisting in making successive impressions in different colours and slightly out of register with each other, the lines or marks made by each successive impression falling wholly or partly into the interstices or spaces left blank between the shade lines or marks of the prior impression or impressions. 3rd. The improvement in the art of printing from photo engravings, lithographs, cuts, etchings or other plates which print shades or colours by means of shade or colour lines or marks having appreciable interruptions in or

spaces between them, consisting in making successive impressions in different degrees of intensity and out of register with each other, the lines or marks made by each successive impression falling wholly or partly into the interstices or spaces left blank between the shade lines or marks of the prior impression or impressions. 4th. The improvement in the art of printing, which consists in taking a heavy impression from a photo engraving, lithograph, cut, etching or the like, to set or fix the picture, and taking one or more light duplicate impressions out of register with said first impression with link of less body, substantially as and for the purpose described. 5th. The improvement in the art of printing, which consists in taking a series of duplicate impressions in different colours or shades, out of register with one another, from a photo engraving, lithograph, cut, etching or the like, water proofing the picture so produced, and then polishing or burnishing the said picture to resemble photographic prints, substantially as and for the purpose described. 6th. A picture comprising a number of impressions slightly out of register with one another, the marks or lines constituting one impression lying wholly or partly within the blank spaces between or interruptions in the lines or marks of the other impressions, and the different impressions lying too closely together to be readily distinguishable by the eye when the picture is viewed in the ordinary manner, whereby a blending of the different impressions is produced. 7th. A picture comprising a number of impressions differing in shade or colour and slightly out of register with one another, the marks or lines constituting one impression lying wholly or partly within the blank spaces between or interruptions in the lines or marks of the other impressions, and the different impressions lying too closely together to be readily distinguishable by the eye when the picture is viewed in the ordinary manner, whereby a blending of the different impressions is produced. 8th. A picture comprising a number of impressions, one heavy and the others light, and slightly out of register with one another, the marks or lines constituting one impression lying wholly or partly within the blank spaces between or interruptions in the lines or marks of the other impressions, and the different impressions lying too closely together to be readily distinguishable by the eye when the picture is viewed in the ordinary manner, whereby a blending of the different impressions is produced. 9th. A picture comprising a number of impressions slightly out of register with one another, the marks or lines constituting one impression lying wholly or partly within the blank spaces between or interruptions in the lines or marks of the other impressions, the different impressions lying too closely together to be readily distinguishable by the eye when the picture is viewed in the ordinary manner, and said picture having a suitable glaze whereby it is made to resemble photographs.

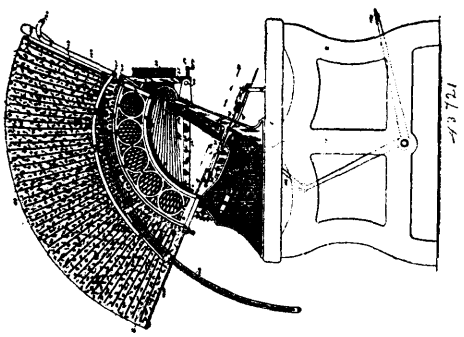
No. 43,720. Paper Board. (*Planche en papier.*)

Robert B. McEwan, Jesse L. McEwan, Richard W. McEwan, all of Whippany, New Jersey, U.S.A., 24th July, 1893; 6 years.

Claim.—As a new article of manufacture, a paper board formed from printed newspaper or the like, ground to a pulp and having the permanent particle of the printers' ink minutely subdivided and uniformly distributed throughout the body of the board, whereby a smooth and even tint is imparted to the board.

No. 43,721. Machine for Justifying Lines of Type.

(*Machine pour justifier les lignes de caractères.*)



Jacobs William Schuckers, Newark, New Jersey, U.S.A., 24th July, 1893; 6 years.

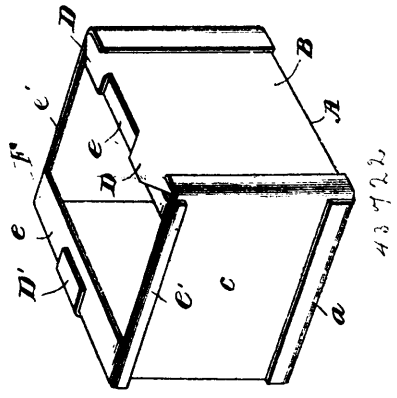
Claim.—1st. The combination of the type and mechanism, substantially as described, for assembling them in line, with justifying wedges adapted to be introduced between the type to form the primary spaces and tapered to constantly increase the spaces between the type as they are advanced and to form justifying spaces at every point of their advancement, and means, substantially as described, for introducing said wedges between the type to form the primary spaces, and for then advancing said wedges to effect the justification, all substantially as described. 2nd. The combination of the type and mechanism, substantially as described, for assembling them in lines, with the justifying wedge 79, and the wedge plates 82, tapered in opposite directions and arranged to be inserted between the type to form the primary spaces and to then be advanced one with relation to the other so as to increase the spaces and effect the justification, substantially as described. 3rd. The combination of the type and mechanism, substantially as described, for assembling them in line, with the justifying wedges 79, and the wedge plates 82, arranged to be inserted between the type to form the primary spaces, and means, substantially as described, for advancing said wedges along said plate to increase the spaces and effect the justification, substantially as described. 4th. The combination of the type mechanism, substantially as described, for assembling them in line, with the justifying wedges 79, the wedge plates 82, carried by said wedges and arranged to be inserted with the wedges between the type to form the primary spaces, and means, substantially as described, for advancing said wedges along said plates to increase the spaces and effect the justification, substantially as described. 5th. The combination of the type and mechanism, substantially as described, for assembling them in line, with the spreading bars having justifying wedges adapted to be introduced one by one between the type to form the primary spaces as they are required and tapered to constantly increase the spaces between the type as they are advanced and to form justifying spaces at every point of their advancement, and means, substantially as described, for introducing said wedges between the type as the type are assembled to form the primary spaces and for then simultaneously advancing said wedges to effect the justification, all substantially as described. 6th. The combination of the type and mechanism, substantially as described, for assembling them in line, with a justifying mechanism consisting of the wedge plates 82, and the spreading bars 75, having the justifying wedges 79, means, substantially as described, for operating the said plates and bars one by one to introduce them into the line as they are required to form the primary spaces, and means, substantially as described, for then advancing all of the bars which have been introduced into the line to increase the spacing and effect the justification, substantially as described. 7th. The combination of the type and mechanism substantially as described for assembling them in line, with the justifying bars A, consisting of the spreading bars 75 having the justifying wedges 79, and the wedge plates 82 carried by said bars, substantially as described. 8th. The combination of the type and mechanism substantially as described for assembling them in line, with the justifying bars consisting of the spreading bars 75 having the justifying weges 79, and the wedge plates 82 carried by said bars, means substantially as described for operating the justifying bars one by one as they are required to be inserted in the line to form the primary spaces, for then simultaneously advancing all of the spreading bars which have been inserted in the line and for simultaneously retracting all of the bars, substantially as described. 9th. The combination of the type and mechanism substantially as described for assembling them in line, with the justifying bars consisting of the spreading bars 75 having the justifying wedges 79, and the wedge plates 82 carried by said spreading bars and movable thereon, means substantially as described for operating said bars one by one to introduce them between the type to form the primary spaces, for simultaneously advancing all of the spreading bars which have been introduced into the line to effect the justification and for simultaneously retracting all of the bars and returning the plates to their normal position, substantially as described. 10th. The combination with the spreading bars 75 having the justifying wedges 79, and the shoulders 88, of the thrust plate 90, substantially as described. 11th. The combination with the rest bar 74, of the wedge plates 82 having the projections 83, and the justifying wedges 79, substantially as described. 12th. The combination, with the spreading bars 75 having the justifying wedges 79, of the rest bar 74, and the wedge plates 82 carried by the spreading bars and having the projections 83, substantially as described. 13th. The combination, with the spreading bars 75 having the justifying wedges 79, and the shoulders 88, of the thrust plate 90, rest bar 74, and the wedge plates 82 having the projections 83, substantially as described. 14th. The combination, with the the rest bar 74 and the thrust plate 90, of the spreading bars 75 having the justifying wedges 79 and the shoulders 88, and the wedge plates 82 carried by said bars and having the projections 83, substantially as described. 15th. The herein described justifying mechanism consisting essentially of a spreading bar 75 having a justifying wedge 79 and a wedge plate 82, said wedge and plate being tapered in opposite directions, substantially as described. 16th. The combination, with the spreading bars 75 having the justifying wedges 79, of wedge plates 82 having the tongue pieces 81 arranged to be moved along said bars, substantially as described. 17th. The combination, with the spreading bars 75 having the justifying wedges 79, of wedge plates 82 having the tongue pieces 81 arranged to move along said bars, and the detents 89, substantially as described. 18th. The combination, with the justifying wedges 79 having channels 78, of the wedge plates 82 having the tongue pieces 81 arranged to move in said channels, substantially as described. 19th. The combination of the type and mechanism substantially as described for assembling them in line with the spreading bars 75 having the justifying wedges 79 and shoulders 88, the wedge plates 82 having the tongue pieces 81 and projections 83, the rest bar 74 and the thrust plate 90, substantially as described.

No. 43,722. Box or Crate. (*Boîte ou caisse.*)

James C. Meem, Buena Vista, Virginia, U.S.A., 24th July, 1893; 6 years.

Claim.—1st. In a box or crate of the class described, the combination with the opposite end sections, the side edges of which are

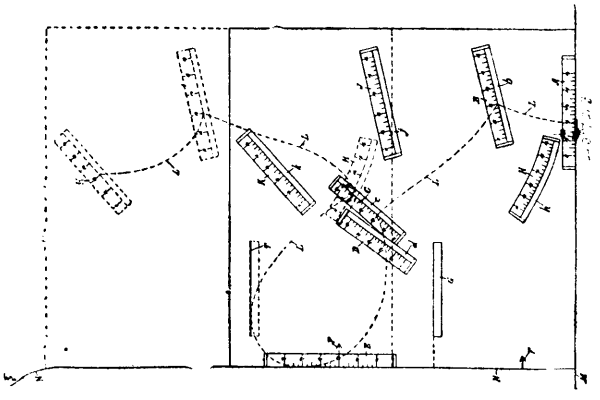
inwardly bent, the bottom section having its ends struck up to embrace the end sections, and the side sections having their lower ends



bent under the bottom, of the open locking frame having its opposite ends downwardly bent to embrace the end sections, and its side edges embraced by the upper bent edges of the side sections, and the cover surmounting the locking frame and covering the opening therein, said cover having its opposite ends downwardly bent similar to and embracing those of the locking frame, and its opposite side edges overlapped by the upper inwardly bent edges of the side sections, substantially as specified. 2nd. A knock down box comprising a bottom having upturned side edges, the side edges having upturned end edges, the end having upturned lower edges and provided at their upper edges, respectively, with ears D, D, and tongue D', open key frame E engaging said ears and tongue and provided with side flanges, and a cover surmounting the key frame, engaged by the ears D, D, and having its ends embracing two of the opposite walls of the box, substantially as specified. 3rd. In a knock down crate or box, the combination with the detachable wall, of the rectangular open key frame fitting the upper end of the box and removably secured in position thereover and adapted to receive a cover, substantially as specified. 4th. The box or crate consisting of opposite side, end and bottom sections or walls removably interlocking at their meeting ends, and the locking or key frame arranged thereover and removably held in interlocking position, substantially as specified.

No. 43,723. Scale for Cutting Garments.

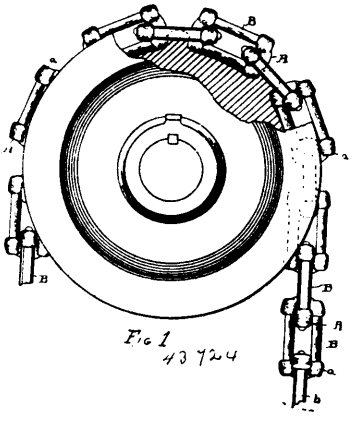
(*Echelle pour découper les vêtements.*)



John I. Smith, London, Ontario, Canada, 24th July, 1893; 6 years.

Claim.—1st. In a scale for cutting coats and vests, the graduated measurements A, formed adjacent to and in line with the lower border edge, in combination with the graduated measurements B, arranged in a line at an angle to said measurements A, and the opening *b* adjacent thereto for the purpose of giving the width of the coat at the neck, substantialy as shown and described. 2nd. In a scale for cutting coats and vests, the combination of the graduated measurements B and C, formed in angular lines, and with the openings *b* and *c* respectively, for the purpose of giving the width of the back at the shoulder seam, substantially as shown and described. 3rd. A scale for cutting coats and vests, having the graduated measurements D formed in an angular line thereto, and with the opening *d* for the purpose of locating the point at which the back seam in the sleeve is joined to the back of the coat, substantially as shown and described. 4th. In a scale for cutting coats and vests, the lower border graduated measurements A, in combination with the left hand border edge of the scale, for the purpose of giving or determining the bottom of the scye, substantially as shown and described. 5th. In a scale for cutting coats and vests, the bottom border edge of said scale and the left hand border graduated measurements E, in combination with the indicating point F, and the indicating opening G, for the purpose of giving or determining the front of the scye, substantially as shown and described. 6th. In a scale for cutting coats and vests, the bottom border edge of said scale, the indicating point F, and left hand border graduated measurements E, in combination with the graduated measurements H, formed in a curved line, and the opening *h* for the purpose of locating the lower shoulder point at the outer or lower end of the shoulder seam, substantially as shown and described. 7th. In a scale for cutting coats and vests, the indicating point F, and the left hand border graduated measurements E, in combination with the graduated measurements H arranged in a curved line, and the graduated measurements J in an angular line, and the openings *h* and *j*, for the purpose of giving the width of front at the shoulder seam, substantially as shown and described. 8th. In a scale for cutting coats and vests, the bottom border edge of said scale, the indicating point F, and the left hand border graduated measurements E, in combination with the graduated measurements J, arranged in an angular line, and the opening *j* for the purpose of locating the upper shoulder point, substantially as shown and described. 9th. In a scale for cutting coats and vests, the graduated measurements J, arranged in an angular line, and the opening *j*, in combination with the left hand border edge of the scale, for the purpose of determining the height to which the shoulder extends above the bottom of the scye, substantially as shown and described. 10th. In a scale for cutting coats and vests, the indicating point F, and the left hand border graduated measurements E, in combination with the graduated measurements J and K, arranged in annular lines, and the openings *j* and *k* for the purpose of giving the length of the gorge, substantially as shown and described. 11th. The combination in a scale in which the lower and left hand border edges are at right angles to one another, and provided with graduated measurements A, and E, the graduated measurements B, C, and D, arranged in angular lines, and the openings *b*, *c* and *d*, in combination with the indicating point F, and opening G, the graduated measurements H, arranged in a curved line, and the opening *h*, and the graduated measurements J and K arranged in angular lines, and the openings *j* and *k*, substantially as shown and described and for the purpose specified.

No. 43,724. Chain. (*Chaîne.*)



Ludwig Herman, Cleveland, Ohio, U.S.A., 24th July, 1893; 6 years.

Claim.—1st. A link for a chain constructed of four separable pieces comprising two end pieces or yokes, having enlarged ends interiorily threaded, and two side pieces whose ends are enlarged in cross section, said enlarged ends being threaded and adapted to engage with the ends of the yokes or end pieces, substantially as and for the purposes set forth. 2nd. A link for a chain constructed of four separable pieces comprising two end pieces or yokes having enlarged ends interiorily threaded and provided with the shoulder *a*, and bearing faces *d*, in combination with two side pieces whose enlarged ends are threaded and adapted to engage with the ends of the end pieces, substantially in the manner and for the purposes set forth.

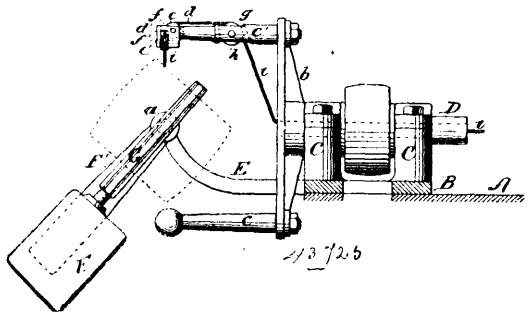
No. 43,725. Flier for Balling Machines.

(*Volant pour machines à peloter.*)

Edwin E. Biederman, Brookyln, New York, U.S.A., 24th July, 1893; 6 years.

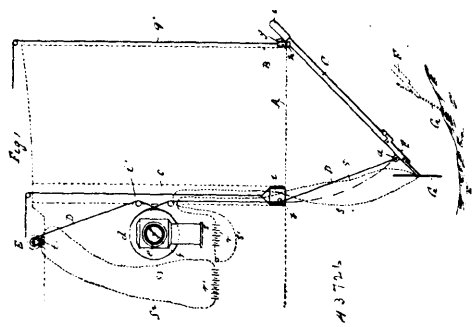
Claim.—The combination with one of the arms of the flier, of a pulley arranged near the end of said arm with its planes of rotation

parallel with the axis of the flier, and a second pulley arranged



nearer the end of said arm with its planes of rotation parallel with the planes of rotation of the flier, substantially as herein set forth.

No. 43,726. Method and Means for Taking and Indicating Soundings. (*Méthode et moyen de prendre et d'indiquer les sondages.*)

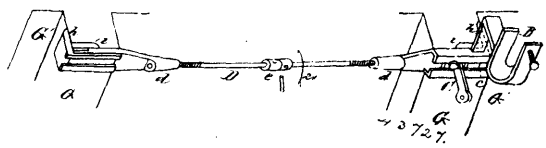


Nicolaus Potschinsky, Odessa, Empire of Russia, 25th July, 1893; 6 years.

Claim.—1st. The herein described method of taking and indicating soundings, consisting in the employment of apparatus wherein a point normally situated at a constant and predetermined distance beneath a vessel is suspended in position by a triangular system or arrangement as hereinbefore set forth, two sides of the triangle being of constant length and composed by the keel and one of the intregral parts of the apparatus, whilst the third side of the triangle, which is composed by another integral part of the apparatus is of variable length, the apparatus being so constructed and arranged as that when the depth decreases and the ground arrives at or near the level of the said point (which is situated at or near the junction of those two sides of the triangle composed of integral parts of the apparatus) the same will be caused to rise by the automatic shortening of that side of the triangle which is of variable length, and will be caused to descend again as the depth increases and the ground recedes from the said point by the automatic lengthening of that side of the triangle which is of variable length, substantially as set forth, and for the purposes described. 2nd. Apparatus for taking and indicating soundings comprising in combination an arm or bar hinged at one end to the vessel at or near the junction of the keel and stem thereof a rope connecting the free end of the said arm or bar with an automatically operated windlass on the vessel, a swinging frame pivoted to the said free end of the arm or bar a cylinder or feather so mounted at the free end of the swinging frame as normally to maintain a vertical position whilst free to be deflected or inclined from such vertical position by contact with the ground, an electrical contact maker disposed within the feather, so constructed and arranged as to complete an electric circuit or circuits which starts the motor of the windlass when the feather assumes an inclined position, and an indicator on the vessel so connected with the rope which raises the arm or bar as to record the amount of movements of such rope in raising or lowering the bar, substantially as and for the purposes described and illustrated. 3rd. Apparatus for taking and indicating soundings, constructed, arranged and combined substantially in the manner described in the last preceding claim, but having in substitution for the hinged arm or bar and swinging frame therein referred to, a wire rope C^1 secured to the vessel at or near the junction of the stem and keel, and a jointed frame for holding the feather (constructed and arranged substantially as described with reference to and illustrated in Figs. 10, 11 and 12), connecting such wire rope with the rope which leads to the windlass and indicator, substantially as and for the purposes described and illustrated. 4th. In apparatus for taking and indicating soundings, a feather G, for automatically indicating by contact with the ground the depth of water beneath the vessel, wherein is disposed an electrical contact maker n, so constructed and arranged as to make contact and complete an electric circuit or circuits after the feather g leaves its vertical position, substantially as and for the purposes described and illustrated. 5th. In apparatus for taking and indicating soundings, a feather G for automatically indicating by contact with the ground the depth of water beneath a vessel, wherein are disposed a series of electrical contact makers n, so constructed and arranged as to make contacts and complete an electric circuit or circuits after the feather G has inclined in any direction from its vertical position, substantially as and for the purpose described and illustrated. 6th. In apparatus for taking and indicating soundings, the combination of the arm C, swinging frame F, feather G and rope D, constructed and arranged, substantially as and for the purposes described and illustrated. 7th. In apparatus for taking and indicating soundings, the combination of the rope C^1, jointed frame F^1 and F^2, feather G and rope D, constructed and arranged, substantially as and for the purpose described and illustrated.

No. 43,727. Curtain Fixtures.

(*Gousset porte-rideau.*)

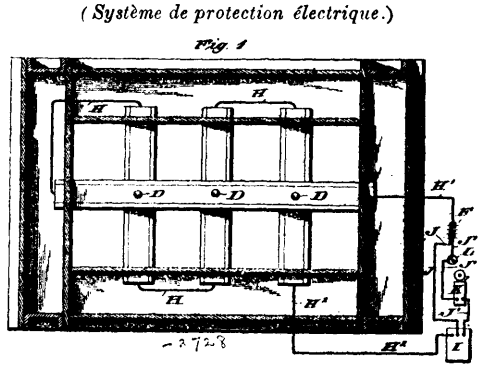


Norman W. Stearns and George E. Bonney, both of Middleboro', Massachusetts, U.S.A., 25th July, 1893; 6 years.

Claim.—1st. As an improvement in curtain fixtures, a bracket supporting plate A, having sockets b, c, in combination with a shade roll bracket capable of adjustment in the socket c, a means of clamping the same therein, and a drapery pole bracket, fitting into the socket b, as described. 2nd. The combination, of a pair of brackets supports A, A, having sockets b, b, c, c, a pair of drapery pole brackets B. B, located in the sockets b, b, a pair of shade roll brackets C, C^1, capable of adjustment, and being clamped within the sockets c, c, a means of holding the bracket supports against the the edges of the casing, and a screw connection D, interposed between them, as set forth. 3rd. A pair of bracket supports, each with its bracket or brackets made separate or integrally, and having a projection adapted to fit over the side of the casing, and a projection for resting on the top of the same, in combination with an intermediate, adjustable screw connection for locating and clamping the pair in position, as specified.

No. 43,728. Electrical Protective System.

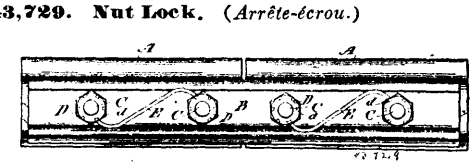
(*Système de protection électrique.*)



William Sharkey Hull, Sheffield, Alabama, U.S.A., 25th July, 1893; 6 years.

Claim.—1st. The combination, of pipes or plates or bars, an intermediate insulated conductor forming a circuit passing therethrough and a battery and alarm included in the circuit of said conductors, as set forth. 2nd. A lattice or plate for jails and the like, comprising pipes or plates, insulated conductors forming a closed circuit passing therethrough, and a battery and alarm in the closed circuit of said conductors, as set forth. 3rd. In jail cells, safes, vaults and the like, a conductor consisting of a channeled bar, a bar held therein and a confined metal plate, insulated as described.

No. 43,729. Nut Lock. (*Arrête-écrou.*)

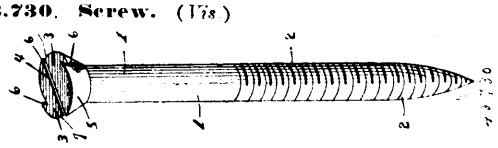


Leopold Richard Blumstengel, Loschwitz, Saxony, Empire of Germany, 25th July, 1893; 6 years.

Claim.—A nut or bolt lock, consisting of a strut bent in the form of an S or ogee, and having each end inserted in a notch provided in each of two adjacent nuts or bolt heads, one of said ends being

on the lower part of the nut or bolt on the side facing its fellow, and the other end being on the upper part of the other nut or head facing the former, substantially as set forth.

No. 43,730. Screw. (*Vis*)

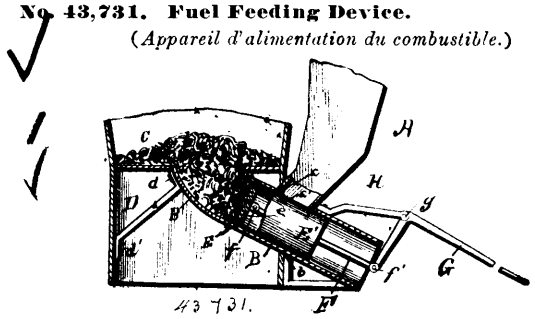


Cullen K. Whittier, Vancouver, British Columbia, Canada, 25th July, 1893; 6 years.

Claim.—1st. As an article of manufacture, a screw having an inverted conical head provided upon its under bevelled surface with laterally projecting cutting shoulders, which vanish at the junction of the head with shank, substantially as described. 2nd. As an article of manufacture, a screw having an inverted conical head provided with lateral undercut or sharpened shoulders which diminish in width toward the junction of the head with the shank, substantially as specified. 3rd. As an article of manufacture, a screw having an inverted conical head, the under bevelled surface of which is provided with lateral cutting shoulders, the cutting edges of which lie in the curved plane of the surface of the head, substantially as specified. 4th. As an article of manufacture, a screw having an inverted conical head with the usual transverse kerf or slot and provided upon its under bevelled surface with cutting shoulders arranged at the terminals of the said kerf or slot, substantially as specified. 5th. As an article of manufacture, a screw having an inverted conical head with a transverse kerf or slot, and provided upon its under bevelled surface with lateral cutting shoulders, two of which are arranged respectively at the terminals of said kerf, and locking shoulders or points arranged at the ends of the kerf respectively, opposite the adjacent cutting shoulders, substantially as specified.

No. 43,731. Fuel Feeding Device.

(*Appareil d'alimentation du combustible.*)



George H. Colton, Hiram, Ohio, U.S.A., 25th July, 1893; 6 years.

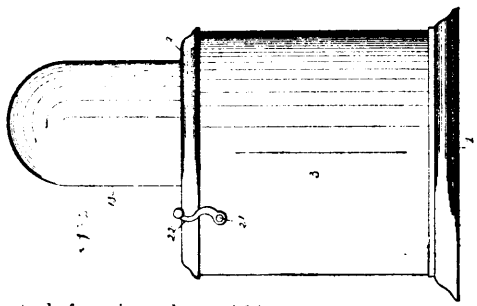
Claim.—1st. In a fuel feeding device for a stove, grate or furnace, the combination, with the fuel chamber of the stove, grate or furnace, of a magazine discharging upward into said fuel chamber, a fuel hopper adapted to discharge fuel into said magazine, and suitable mechanism located within the magazine and adapted to feed the fuel into the fuel chamber of the stove, grate or furnace, the discharging opening of the fuel hopper being gradually reduced or tapering at the forward side, substantially as and for the purpose set forth. 2nd. In a fuel feeding device for a stove, grate or furnace, the combination, with the fuel chamber of the stove, grate or furnace, of an inclined magazine discharging upward into said fuel chamber, a fuel hopper adapted to discharge fuel into said magazine and suitable mechanism located within the magazine and adapted to feed the fuel into the fuel chamber of the stove, grate or furnace, the discharging opening of the fuel hopper being gradually reduced or tapering to a point at the forward side, as at a, a^1, substantially as and for the purpose set forth. 3rd. In a fuel feeding device for a stove, grate or furnace, the combination, with the fuel chamber, of the stove, grate or furnace, of a magazine discharging upward into the bottom of said fuel chamber, a fuel hopper adapted to discharge fuel into said magazine, and suitable mechanism comprising a piston provided with a tube or trunk adapted to close or open the discharging opening of the hopper, said piston being adapted to feed fuel to the fuel chamber of the stove, grate or furnace, and being provided with perforations, as at e, substantially as and for the purpose set forth.

No. 43,732. Coin-Controlled Apparatus.

(*Appareil actionné par une pièce de monnaie.*)

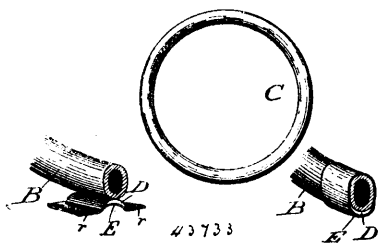
Wyman Boardman, Toledo, Ohio, U.S.A., 25th July, 1893; 6 years.

Claim.—1st. In a game apparatus, a receptacle for the coin, a chute leading therein, a spring attached lever pivoted to extend across the chute, and receive the edge of the coin, a lever for pressing upon the coin to urge the same through the chute, and a disc provided with a depending tappet having a head, said disc being adapted to be moved by the return of the spring actuated lever contacting with the head of said tappet. 2nd. In a game apparatus, a receptacle for the coin, a transparent closure secured upon the top thereof, a disc within the closure having a tappet extending into



the receptacle for coin, a chute within the receptacle for coin, having a downwardly extending arm, a spring actuated lever pivoted thereto having a recess co-incident with the chute, a lever journalled to move radially across the chute and release a coin deposited therein by depressing the spring actuated lever. 3rd. In a game apparatus, a disc, a coin, a controlled mechanism for actuating the same comprising a casting formed with a longitudinal slot extending through the same, a spring actuated lever pivoted to the casting having a recess co-incident with the slot, a shaft journalled transversely of the slot, having a two arm lever secured thereon, one of which has a radial movement in the slot, the other having a movement to contact with the casting, and a spring upon the shaft to withdraw the lever from the slot.

No. 43,733. Pneumatic Tire. (*Bandage pneumatique.*)



John Fullerton Palmer, Riverside, Illinois, U.S.A., 25th July, 1893; 6 years.

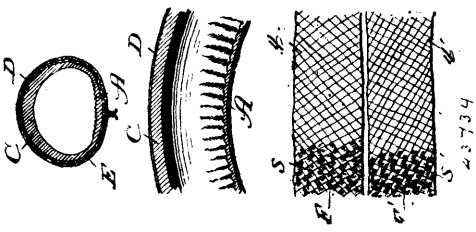
Claim.—1st. In the manufacture of a pneumatic bicycle tire, the method of forming a self closing canvas covered inner rubber air tube therefor, which consists in forming the rubber tube with a lining of canvas, substantially non-stretching, then vulcanizing the tube, then drawing the tube inside out and thereby compressing and densifying the rubber inside the canvas, and joining the ends of the canvas covered tube to render it endless in the form of the tire, substantially as described. 2nd. In the manufacture of a pneumatic bicycle tire, the method of forming a self closing canvas covered inner rubber air tube therefor, which consists in forming the rubber tube with a lining of substantially non-stretching canvas, non-vulcanizing the tube, then drawing the tube inside out and thereby compressing and densifying the rubber inside the canvas, joining the ends of the canvas covered tube to render it endless and puncturing the tube and inflating it through the puncture, substantially as described. 3rd. As a new article of manufacture, the self closing inner air tube, of a pneumatic bicycle tire, formed of rubber permanently confined, compressed and densified independently of the inflating medium inside a substantially non-stretching canvas covering, substantially as described. 4th. As a new article of manufacture, the self closing inner air tube of a pneumatic bicycle tyre, formed of rubber and provided with a covering, extending over only its tread portion, of canvas confining, compressing and densifying the said rubber at the tread portion of the tire, substantially as described. 5th. As a new article of manufacture, the self closing inner air tube of a pneumatic bicycle tire, formed of rubber and having the tread portion only, permanently confined, compressed and densified, independently of the inflating medium by a canvas covering, substantially as described.

No. 43,734. Pneumatic Tyre. (*Bandage pneumatique.*)

John Fullerton Palmer, Riverside, Illinois, U.S.A., 25th July, 1893; 6 years.

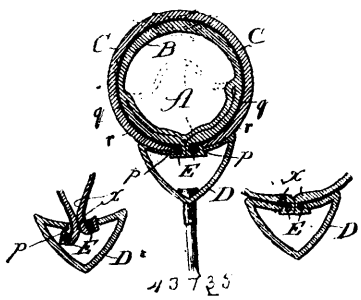
Claim.—1st. As a new article of manufacture, a pneumatic tire, formed with a continuous air passage and having its tread portion thickened and retained under compression by a confining strip of substantially non-stretching fabric extending over the tread portion, substantially as described. 2nd. A tube for forming a pneumatic tire, having before completion an endless tubular concave-convex form with its body thickened on the concave side and provided with a continuous strip of substantially non-stretching material on the exterior at the concave side, substantially as described. 3rd. In a

pneumatic tire, the combination, with a pliable substantially non-extensible outer layer of an internal body of rubber seated against the



outer layer and maintained under compression by the curvature given to the outer layer, whereby the automatic closure of punctures therein is secured, substantially as described. 4th. The method of producing in a pneumatic tire a compressed and thickened tread portion, which consists in forming a tubular ring of rubber thickened on the hub side and having applied thereto a substantially non-stretching ring of fabric, thereupon inverting the relation of parts so that the non-stretching fabric shall be on the tread portion, thereby compressing the thickened body of rubber, substantially as described. 5th. The method of forming a pneumatic tire with a thickened and compressed tread portion on the internal tube, which consists in building the tube in the form of a ring out of soft rubber with a hub-side layer of substantially non-stretching fabric, whereupon vulcanizing the product and inverting the curvature of the fabric and attached parts, substantially as described. 6th. The method of forming a pneumatic tire with a thickened and compressed tread portion on the interior tube, which consists in forming a ring of canvas having the intended curvature of the tread, applying to its convex face a thickened body of rubber and then applying an endless tube of rubber having in one-half a collapsed concave-convex outline to conform to the convexity of the thickened rubber, producing vulcanization in the parts, and thereupon reversing the curvature of the fabric and attached parts with intermediate or subsequent inflation, substantially as described. 7th. The method of making strips of fabric substantially non-stretching for use in forming a pneumatic tire which consists in applying together oppositely cut strips of fabric, each strip having its fibres diagonally arranged with a long fibre on an acute angle and a short fibre on an obtuse angle, whereby stretching of the strip produces a curvilinear form, and when thus produced further stretching in either strip is substantially prevented by the resistance of the other, substantially as described. 8th. A pneumatic tire, having an outer thickened tread portion of rubber inverted and held in position by a substantially non-stretching backing composed of two or more superimposed attached layers of diagonally cut fabric, the fibre in alternate layers being arranged in opposite directions, substantially as set forth.

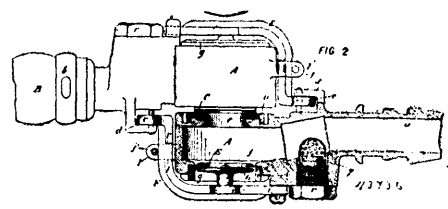
No. 43,735. Pneumatic Tire. (*Bandage pneumatique.*)



John Fullerton Palmer, Riverside, Illinois, U.S.A., 25th July, 1893; 6 years.

Claim.—1st. An inner tube for a pneumatic tire for bicycles, etc., having the thread portion of increased thickness held normally under compression, as described, and having at its hub side a continuous sealed joint, substantially as described. 2nd. The method of producing an inner tube for pneumatic tires, which consists in moulding the rubber therefor with a thickened tread portion on a reverse curvature, causing to adhere to the concave face, substantially non-stretching flexible material, reversing the curvature of the tread portion and non-stretching backing, and finally joining the flaps and sealing the same, substantially as described. 3rd. The method of producing an inner tube for pneumatic tires, which consists first in applying to an annular mandrel, having the proper curvature, a curved non-stretching annular strip of flexible material, moulding upon said mandrel, a strip of rubber having its edges unjoined, thickening the rubber on the outer side of the mandrel or form, vulcanizing the parts together, and thereupon reversing the curvature of the flexible material and thickened portion of the rubber, and joining and sealing the edges of the strip to form air tube, substantially as described. 4th. The method of integrally forming the inner air tube and canvas covered retaining envelope therefor, of a pneumatic tire, which consists in moulding a web A, of rubber with a canvas covered strip B, and forming them into the shape of a tire, substantially as described. 5th. The method of integrally forming the inner air tube and self-sealing canvas covered retaining envelope therefor, of a pneumatic tire, which consists in moulding a web A, of rubber with a canvas covered rubber strip B, on a curve, and then reversing the curve and forming the integral air tube and retaining envelope into an endless tubular tire shaped ring, substantially as described. 6th. The method of integrally forming the inner air tube and self-sealing canvas covered retaining envelope therefor, of a pneumatic tire, which consists in moulding on a curve, a canvas covered rubber strip, with a thickening of the rubber toward its longitudinal centre, and with a web A, of rubber along its thickened portion, and then reversing the curve and forming the integral air tube and retaining envelope into an endless tubular tire shaped ring, substantially as described. 7th. As a new article of manufacture, a pneumatic rubber tire, having its inner air tube and canvas covered retaining envelope integral, substantially as described. 8th. As a new article of manufacture, a pneumatic tire, having its retaining envelope formed of canvas covered compressed rubber provided with a rubber web A, forming with the said envelope the inner air tube, substantially as described. 9th. As a new article of manufacture, a pneumatic tire, having its retaining envelope formed of canvas covered rubber with the rubber compressed and thickened toward the longitudinal centre of the tread portion of the tire and provided along the said thickened portion, with a rubber web A, forming with the said envelope, the inner air tube, substantially as described. 10th. In combination, a slotted folly D, and a pneumatic tire having an inner air tube and an outer retaining envelope formed of canvas covered rubber provided along its edges with beads to enter the slot in the felly and fasten the tire in place, substantially as described. 11th. In combination, the hollow slotted felly D, and a pneumatic tire having an inner air tube and an outer retaining envelope formed of canvas covered compressed rubber thickened toward its edges and provided along the same with beads E to enter the slot in the felly and fasten the tire in place, substantially as described. 12th. In combination, a slotted felly D and a pneumatic tire having its inner air tube and canvas covered retaining envelope integral, said envelope having beads along its edges to enter the slot in the felley and fasten the tire in place, substantially as described. 13th. In combination, the slotted hollow felley D and a pneumatic tire comprising a retaining envelope formed of canvas covered rubber with the rubber compressed and thickened toward the longitudinal centre of the tread portion of the tire and provided along the said thickened portion with a web A forming with the said envelope the air tube, beads E along the edges of the retaining envelope to enter the slot in the felly and fasten the tire in place, and an outward covering C clamped along its edges between the said felly and retaining envelope, substantially as described.

No. 43,736. Hose Coupling. (*Joint de boyaux.*)

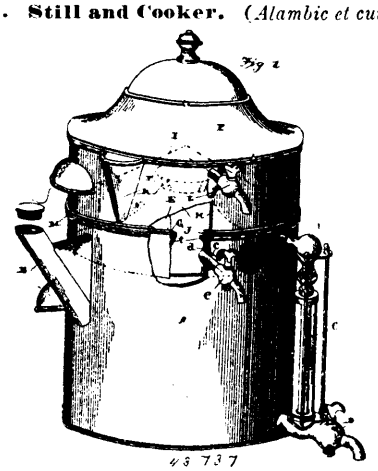


Edward Ethel Gold, New York, State of New York, U.S.A., 25th July, 1893; 6 years.

Claim.—1st. In a pipe coupling, a coupling head having locking faces for coupling it to a reciprocal head, a seat mounted on the abutting side of the head, a diaphragm movable under fluid pressure, arranged at the opposite side of the head, and means for transmitting the outward thrust of said diaphragm to the opposite head to force the seats of the two heads firmly together during the maintenance of fluid pressure with the coupling. 2nd. In a pipe coupling, a coupling head having locking faces for coupling it to a reciprocal head, a seat mounted on the abutting side of the head, a diaphragm movable under fluid pressure, arranged at the opposite side of the head, and a movable part for receiving the thrust of said diaphragm and transmitting it to the opposite head to force the seats of the two heads firmly together during the maintenance of fluid pressure within the coupling. 3rd. In a pipe coupling, a coupling head having locking faces for coupling it to a reciprocal head, a seat mounted on the abutting side of the head, a diaphragm movable under fluid pressure, arranged at the opposite side of the head, and a lever arm arranged to receive the thrust of said diaphragm and transmit it through the locking faces to the opposite head to force the seats of the two heads firmly together during the maintenance of fluid pressure within the coupling. 4th. In a pipe coupling, a coupling head adapted to be coupled with a reciprocal head having a seat mounted on the abutting side of the head, a diaphragm movable under fluid pressure, arranged at the opposite side of the head, and a lever arm arranged to receive the thrust of said diaphragm and formed with a locking face adapted to engage a reciprocal locking face on the opposite head. 5th. The combination

of a pair of reciprocal coupling heads adapted to couple together, formed with seats mounted on their abutting sides and with diaphragms arranged at their opposite sides, combined with movable parts mounted on each of the heads arranged to receive the thrust of the diaphragms and formed with locking faces, by the engagement of which the heads are coupled together, whereby the outward thrust of the diaphragms under fluid pressure is transmitted through the respective locking faces from each head to the other in direction to focre the seats of the two heads firmly together. 6th. In a pipe coupling, a coupling head A, provided with locking projections *c* and *d*, for coupling it to a reciprocal head, a seat mounted on the abutting side of the head, a diaphragm arranged at the opposite side of the head, and a lever arm arranged to receive the thrust of said diaphragm, formed on one end with one of said locking projections and with stops to limit its movement relatively to the coupling head, whereby in coupling it is drawn against said stops by the wedging action of the locking faces and upon the turning on of fluid pressure the thrust of the diaphragm is transmitted through the lever and locking projections to the opposite head. 7th. In a pipe coupling, a coupling head having a rigidly mounted locking projection *d*, a seat mounted on the abutting side of the head, a diaphragm arranged at the opposite side of the head, and a lever arm F, arranged to receive the outward thrust of said diaphragm, and formed with a locking projection *c*. 8th. The combination of a coupling head A, having a seat C, and diaphragm E, on opposite sides and formed with a locking projection *d*, and guiding ears *j*, *j*, with a lever arm F, arranged to receive the outward thrust of said diaphragm, formed with a locking projection *c*, said lever arms guided by said ears *j*, *j*, and formed with opposite stops *l*, l^1, abutting against said lugs to limit its movement. 9th. The combination of a coupling head A, having a seat C, and diaphragm E, on opposite sides and formed with a locking projection *d*, and guiding ears *j*, *j*, with a lever arm F, arranged to receive the outward thrust of said diaphragm, fulcrumed to said head, formed with a locking projection *c*, and guided between said ears *j*, and a pin j^1, fastened between said ears as a guide to prevent the endwise displacement of the lever. 10th. In a pipe coupling, a coupling head A, having openings on opposite sides, a seat C, surrounding one opening, and a diaphragm E, closing the other opening, a rein forcing disc *h*, covering the outer side of said diaphragm, and a part arranged to receive the thrust of said diaphragm and transmit said thrust to a reciprocal coupling head with which said head may be coupled.

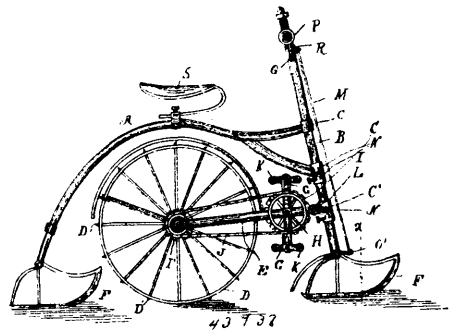
No. 43,737. Still and Cooker. (*Alambic et cuisinière.*)



James Cook, New York, State of New York, U.S.A., 25th July, 1893; 6 years.

Claim.—1st. A convertible cooker and still comprising a body portion, a condenser, a removable reservoir and body having registering openings, and a removable spiggot provided with a stem fitting both of said openings, substantially as and for the purpose described. 2nd. A convertible cooker and still comprising a body, a condenser, a removable reservoir, the reservoir and body having registering openings having annular bosses or flanges, and a removable spiggot entering said openings and engaging tightly the said flanges or bosses, substantially as shown and described. 3rd. A convertible cooker and still comprising a body portion, a condenser a reservoir fitting in the upper end of the body portion, the body portion and the reservoir having each registering screw threaded openings, a spiggot having a screw threaded inner end and a shoulder, the screw threaded portion entering the screw threaded openings of the body and reservoir, and the shoulder engaging the outer side of the body whereby the reservoir and body are drawn together, and a condenser above the reservoir, substantially as specified. 4th. A cooker or still comprising a body, a reservoir or ring at the upper end thereof, a condenser having a depending flange fitting within the wall of the reservoir or ring, and the wall of the reservoir or ring having a flange extending inward from its inner side forming a state or chamber which encloses the depending flange of the reservoir, the upper end of the said flange being lower than the upper edge of the reservoir or ring, and a condenser passing through the reservoir and body.

No. 43,738. Ice Velocipede. (*Vélocipède.*)

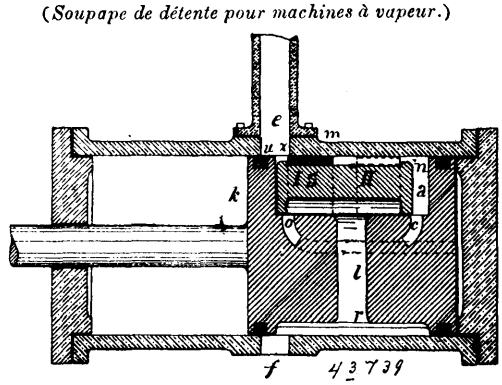


J. F. Zalsman, Holland, Michigan, U.S.A., 25th July, 1893; 6 years.

Claim.—1st. In an ice velocipede, the combination of a frame pivoted to swing in a vertical plane, a driving wheel journalled on said frame, a shaft having cranks and treadles attached and journalled on said frame between said pivot and wheel, and mechanism to transmit motion from said shaft to said wheel, substantially as described. 2nd. In an ice velocipede, the combination of a vertically adjustable and rotatable collar on the steering post, a forked frame pivoted at its forward end to said collar, and a driving wheel journalled in the forked end of said frame, and sprocket wheels and chains connecting said shaft and driving wheel, substantially as described. 3rd. In an ice velocipede, the combination of a main frame supporting a saddle having a runner at the rear and collars at the front, a steering post rotative in said collars and vertically adjustable therein, a collar rotative and vertically adjustable on said post, a frame pivoted at its forward end to said collar, a driving wheel pivoted at its forward end to said collar, a driving wheel journalled upon the rear end of said frame, a shaft having cranks and pedals journalled on said frame between said wheel and collar, and sprocket wheels and chain connecting said shaft and wheel, substantially as described. 4th. In an ice velocipede, in combination with a rotative steering post having handles at the top, and a forked lower end and a runner pivoted in said lower end, a brake also pivoted to said lower end having a rearward and downwardly projecting arm O, and a forwardly projecting arm O^1, a connecting rod M, and the pivoted levers R and Q, substantially as described.

No. 43,739. Expansion Valve for Engines.

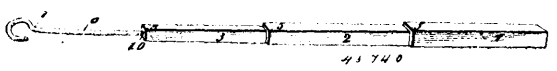
(*Soupape de détente pour machines à vapeur.*)



Horst Gohler, Freiberg, Kingdom of Saxony, German Empire, 26th July, 1893; 6 years.

Claim. -1st. The combination with the cylinder, of the piston, having a semi-circular recess or opening in its upper side, a vertical passage connecting said recess with a smaller recess or bottom of piston, said recess being adjusted to operate above an exhaust opening on bottom of cylinder, passages leading from each end of the upper recess and terminating at a point on each end of piston opposite to the starting point thereof, substantially as shown and described. 2nd. The combination with the piston, having the semi-circular opening on its upper side, of a convexo-concave shape slide valve, moving back and forth alternately therein, a semi-circular collar or flange formed on each end of said slide valve, a convexo-concave shape expansion valve, movably mounted on and between the collars or flanges of slide valve, said expansion valve being moved back and forth alternately upon the slide valve, thereby causing the same to also move back and forth alternately, substantially as and for the purpose herein described.

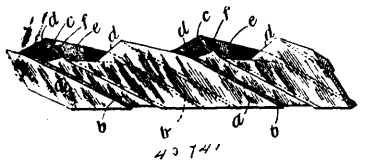
No. 43,740. Check Rein Detaching or Attaching Device. (*Appareil pour attacher et détacher les fausses-rênes.*)



Henry P. Keyes, Riverside, California, U.S.A., 26th July, 1893; 6 years.

Claim.—1st. In a device, of the character set forth, the combination, of a series of rectangular telescopic sections, and a non-rotatable rod telescopically carried by the outer section and having a hook on the outer end thereof, the rectangular shape of said sections preventing the same from turning within each other and thereby always holding the hook in proper position, substantially as described. 2nd. In a device of the character set forth, the combination, of a series of rectangular telescopic sections loosely fitted to each other, and a rod loosely mounted in the outermost section and having a hook on the outer end thereof, and a rectangular head at the inner end of the same, the said rod being slightly longer than the section in which it is mounted, the said rectangular shape of the sections preventing the same from turning in each other, and thereby always holding the hook in proper position, substantially as described.

No. 43,741. Saw. (*Scie.*)



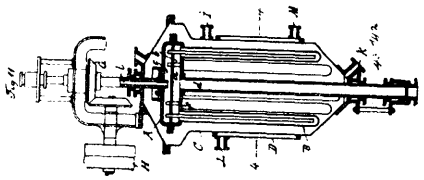
John Stewart Wallace, Belfast, Ireland, assignee of William Junge and Charles Junge, both of London, England, 26th July, 1893; 6 years.

Claim.—1st. A saw blade having channels formed in one or both sides thereof said channels extending from the cutting edges in an oblique direction to the back of the blade, substantially as described for the purpose specified. 2nd. A saw blade or disc having grooves or channels *b* formed in the side or sides thereof, and laterally bevelled portions *c* terminating in cutting edges *d* on the working edge of the saw, substantially as described for the purpose specified. 3rd. A saw blade or disc having grooves or channels *b* formed in the sides thereof, in combination with cutting edges extending the entire width of the saw, substantially as described for the purpose specified. 4th. A saw blade or disc having grooves or channels *b* formed in the sides thereof, each groove being bevelled laterally to form a cutting edge *d* on the working edge of the saw for cutting the sides of the kerf, and portions *e* bevelled to a greater angle than the bevelled portions of the grooves and forming with the sides of the said grooves edges *f* for cutting the base of the kerf, substantially as described. 5th. A saw blade or disc having grooves or channels *b* formed in both sides thereof, the grooves on one side alternating with those on the other, laterally bevelled portions *c* in each groove terminating in cutting edges *d* on the working edge of the saw, and portions *e* bevelled to a greater angle than the parts *c*, said portions *e* forming with the sides of the grooves *b* cutting edges *f*, substantially as described. 6th. In a saw blade or disc the combination of bevelled parts *c* terminating in inclined cutting edges *d* and portions *e* which gradually recede from the highest points of the edges *d* and are bevelled to a greater angle than the parts *c*, said portions *e* forming with the sides of the bevelled parts *c* other inclined cutting edges *f*, substantially as described, for the purposes specified. 7th. A saw blade or disc having grooves or channels in the side or sides thereof extending from the teeth and terminating in slots or channels, substantially as described, for the purpose specified. 8th. A saw blade having a rib *h* on one or both sides thereof and inclined grooves formed in said ribbed portions, said grooves terminating in cutting edges at the working edge of the saw, substantially as described, for the purpose specified. 9th. The mode of manufacturing saw blades as herein described consisting in rolling longitudinal grooves in a flat sheet of metal, and then cutting strips of said sheet at an angle, as and for the purpose specified.

No. 43,742. Apparatus for Heating and Cooling Liquids. (*Appareil pour chauffer et refroidir les liquides.*)

Fritz August Kleemann, Berlin, German Empire, 26th July, 1893; 6 years.

Claim.—1st. A heating or cooling apparatus for fluids, consisting in a stationary or rotating hollow body, which is divided into a plurality of compartments, tubes, communicating with one of the compartments, and a second set of tubes fitted concentrically within the first set of tubes and communicating with the second compartment, substantially as described. 2nd. The combination, with the body A and the inner and outer tubes, as described, of an enclosing vessel adapted to contain the liquid to be heated or cooled, substantially as described. 3rd. In a heating and cooling device, and in combination with the body A, communicating tubes and enclosing



vessel, mechanical stirrers or beaters, substantially as and for the purpose described. 4th. In a heating or cooling device, the combination, with the body A, communicating tubes and enclosing vessel, of a device for stirring the liquid that is to be heated or cooled, substantially as and for the purpose described. 5th. In a heating and cooling device, the combination of a case and a rotary heating or cooling element therein, consisting of a body A, and outer and inner tubes communicating therewith, substantially as described.

No. 43,743. Electric Clock.

(*Horloge électrique.*)

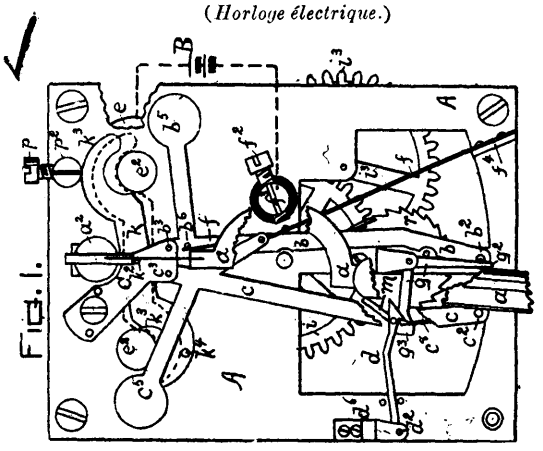


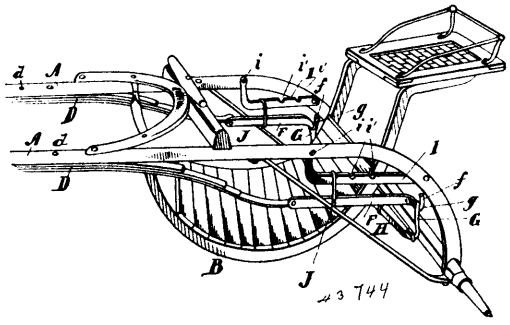
FIG. 1.

Philip A. Jenkins, Reading, assignee of Walter J. Dudley, Somerville, Massachusetts, U.S.A., 26th July, 1893; 6 years.

Claim.—1st. The combination of the time measuring vibrator, its impelling device and restoring electro-magnet and armature therefor, a second lever independent of said impelling device pivoted near the centre of suspension of and engaged by said time measuring vibrator, and a circuit closer for said electro-magnet independent of but normally jointly controlled by said impelling device and second lever, substantially as described. 2nd. The combination of the pendulum impelling device, the actuating electro-magnet therefor, and the armature for raising said impelling device pivoted near the axis of said device, said armature being centrally pivoted between the poles of said electro-magnet, so that the attraction of said poles acts as a couple to turn said armature upon its centre and thereby raise said impelling device, substantially as described. 3rd. The combination of the pendulum impelling device and its actuating electro-magnet and armature, a detent for supporting said impelling device, a co-operating lever pivoted near the centre of suspension of the pendulum and engaged by said pendulum, and a second or intermediate lever through which said first lever co-operates with said detent, substantially as described. 4th. The combination of the pendulum impelling device and actuating electro-magnet and armature therefor, a detent for supporting said impelling device, and the elastic projection of said impelling device engaging with said detent for the purpose of lessening the shock and noise, substantially as described. 5th. The combination of the pendulum impelling device, its restoring electro-magnet and armature therefor, and detent for retaining it when so restored, the train of wheel work and actuating ratchet wheel thereof, the lever pivoted independently of the impelling device near the centre of suspension of the pendulum, and the click or pawl mechanically actuated by said lever to impel the said ratchet wheel, substantially as described. 6th. The combination of the time measuring vibrator, its impelling device and restoring electro-magnet, the armature actuated by said electro-magnet, and engaging with said impelling device both to restore it to its highest position and to form a stop for it in its lowest position, and an adjustable stop controlling the extent of motion of both said armature and said impelling device, substantially as described. 7th. The combination of the pendulum impelling device and its restoring electro-magnet and armature, the lever pivoted independently of the impelling device near the centre of suspension of the pendulum, the click or pawl actuated by said lever and impelling a ratchet wheel and train of wheel work connected therewith, and a projection of said lever engaging with said

ratchet wheel and simultaneously arresting the motion of said lever and ratchet wheel, substantially as described. 8th. The combination of the time measuring vibrator and its impelling device and actuating electro-magnet and armature therefor, a detent or lath for supporting said device, and a circuit controlling device for said electro-magnet independent of said time measuring vibrator and impelling device, comprising a fixed and a movable member, the movable member arranged to be engaged by said impelling device when in its raised or latched position, and thereby break the circuit of and to be controlled by said time measuring vibrator to close the circuit of said electro-magnet when said impelling device is in its lowest position, substantially as described. 9th. The combination of the time measuring vibrator and its impelling device, the actuating electro-magnet with its projecting poles, and the armature for said electro-magnet centrally pivoted between and turning in a plane at a right angle to the axis of said poles, and engaging with said impelling device, and with its extremities shaped to partially encircle said poles, substantially as described. 10th. The combination of the time measuring vibrator, its impelling device and actuating electro-magnet and armature therefor, the circuit closer of said electro-magnet independent of said impelling device, comprising a fixed and a movable member, and a lever pivoted independently of said impelling device, and said circuit closer engaged by and co-operating with said time measuring vibrator and with the movable member of said circuit closer, substantially as described. 11th. The combination of the time measuring vibrator, its impelling device and actuating electro-magnet, the detent for said impelling device, the train of wheel work and actuating ratchet wheel thereof, the lever pivoted near the centre of suspension of and engaged by said time measuring vibrator, and engaging with said detent, the click actuated by said lever to impel the ratchet wheel, and the arrangement of the time measuring vibrator and the impelling device, and its detent so that the movement of said lever that impels the ratchet wheel can occur only when said lever is disengaged from said time measuring vibrator, substantially as described.

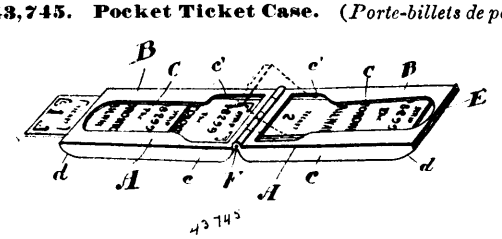
No. 43,744. Vehicle Spring. (*Ressort de voiture*)



Benjamin S. Van Tuyl, assignee of James Alexander Luke, both of Petrolia, Ontario, Canada, 26th July, 1893; 6 years.

Claim.—1st. In combination with the body and spring of a vehicle, of a lever having one end connected to said spring and its other end connected to said body, and a link forming a movable fulcrum for said lever, substantially as described. 2nd. In combination with the body and springs of a vehicle, of a lever having one end connected to said spring and its other end connected to said body, a bar connected to the vehicle and having notches formed therein, and a link connecting said lever with said bar and adapted to fit in any of said notches, substantially as described. 3rd. In a vehicle, a spring connected to the thills, a lever having one end connected to said spring, and the other end connected to the body of the wagon, a bar provided with notches and also connected to the thills, in combination with a link connecting said bar and lever and adapted to fit in any of said notches, substantially as described.

No. 43,745. Pocket Ticket Case. (*Porte-billets de poche.*)

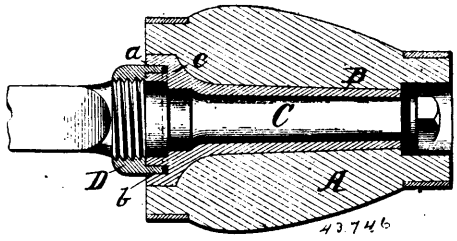


Alexander Allen, Thomas Roden and Frank Roden, all of Toronto, Ontario, Canada, 26th July, 1893; 6 years.

Claim.—1st. A holder for tickets comprised of a top B, having the slotted openings C, sides *c*, the bottom D, having the upwardly curved outer end *d*, and the slot E made in the outer end, as and for the purpose specified. 2nd. The combination with the bottom D, having an upwardly curved outer end *d*, sides *c*, and the slot E made in the outer end, of means whereby the ticket is normally retained in the case, as and for the purpose specified. 3rd. The combination with the top B, having the slotted openings C, having the enlarged inner ends c^1, and the sides *c*, of the bottom D having the upwardly curved outer end *d*, and the slot E made in the outer end, as and for the purpose specified. 4th. The combination with two casings A, hinged at their inner ends at F, provided with an eye *f*, having slotted openings made in the top, and the outer end of the bottom curved upwardly to the slot E made in the outer ends, as and for the purpose specified.

No. 43,746. Dust Guard for Hubs.

(*Garde-poussière pour moyeux.*)

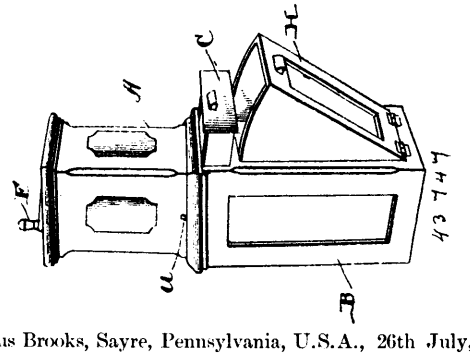


John Tudor Richards, Gardiner, Maine, U.S.A., 26th July, 1893; 6 years.

Claim.—1st. The combination, with an axle, of a dust guard located on the axle, said dust guard provided with an annular outwardly projecting flange, and an axle box, having an enlarged inner end, in which an annular groove is formed, adapted to receive the annular flange on the dust guard, said groove of greater depth than the length of the flange, whereby a recess is formed for a washer, and the portion of the dust guard adjacent to the flange forming a shoulder or abutment for the inner end of the axle box, substantially as set forth. 2nd. The combination, with an axle having a screw thread thereon and a dust guard screwed on these threads of the axle, said guard provided with an annular flange at its outer edge and a shoulder within this flange, of an axle box provided with an annular groove in its inner end, adapted to receive the flange, this inner end constructed to abut against the shoulder within the annular flange, substantially as set forth.

No. 43,747. Combined Flour and Meal Sifter.

(*Sas à fleur et farine combinés.*)



Augustus Brooks, Sayre, Pennsylvania, U.S.A., 26th July, 1893 6 years.

Claim.—1st. In a flour screening cabinet, the combination, with the base B, containing the drawer C, and having the reduced aperture in the top and the flat section of screen resting on the top of the base section and bridging the aperture therein, of the top section resting on and confining the edges of the screen between the top and bottom sections, with removable fastenings for uniting the top and bottom sections, whereby the screen is held distended without the use of a special frame therefor, and the agitator mounted in the top section to rotate above the screen, substantially as described. 2nd. In a cabinet, such as described, the combination, with the hopper and screen, of the vertical shaft secured in proximity to the screen, the agitator, consisting of the hub mounted on said shaft so as to rotate therewith, but loose and free to move longitudinally of the shaft, of the arms carried by said hub moving in proximity to the screen, substantially as described.

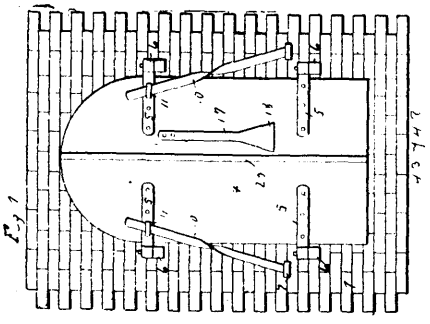
No. 43,748. Means for Opening Shutters.

(*Moyen d'ouvrir les volets.*)

Charles J. Sandberg, St. Louis, Missouri, U.S.A., 26th July, 1893; 6 years.

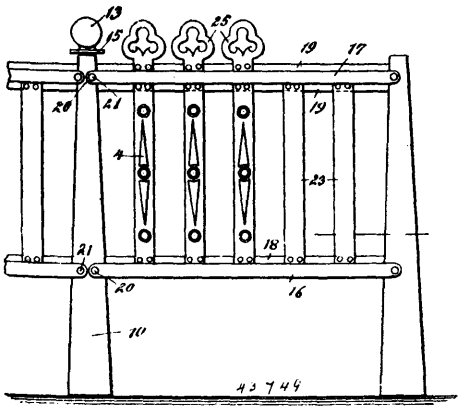
Claim.—1st. An improved means for opening shutters, in which a simultaneous pressure against one of the shutters, and the withdrawal of a latch pin holding up a latch bar is necessary for the releasing of a latch bar holding said shutters, and the tension of spring attached thereto opening said shutters, substantially as set forth. 2nd. An improved means for opening shutters having a

spring controlled cup carrying a latch pin projecting through within the inner side of said shutter to which said spring is secured, a latch



bar carried by an adjacent shutter, and adapted to be normally held upon said latch pin and under a casting secured to said shutter, substantially as set forth. 3rd. An improved means for opening shutters, having springs held at their lower end in sockets driven between the bricks in the wall adjacent and above the lower hinges, the upper ends of said springs projecting through staples secured to said shutters adjacent the upper hinges, a spring controlled cup secured to the exterior of one of said shutters, said cup having a latch pin projecting inwardly through said shutter, a latch bar pivoted to the adjacent shutter and projecting through an opening in a casting secured upon the edge thereof, and normally held above said latch pin and below a casting secured adjacent thereto, and a simultaneous pressure against said shutter, and the withdrawal of said latch pin adapted to drop said latch bar and allow the opening of said shutter, substantially as set forth. 4th. An improved means for opening shutters, having a spring secured vertically upon a shutter, a cup shaped device secured upon the lower end of said spring, the side of said cup adjacent said shutter flat, the outer side of said cup rounded, a latch pin secured to the back of said cup and projecting inwardly through an opening in said shutter, a latch bar secured to an adjacent shutter and normally held in position above said latch pin, tension springs secured to the outer side of said shutters and to the wall, and the tension of said springs adapted to hold said latch bar in place independent of the support by the latch spring, substantially as set forth.

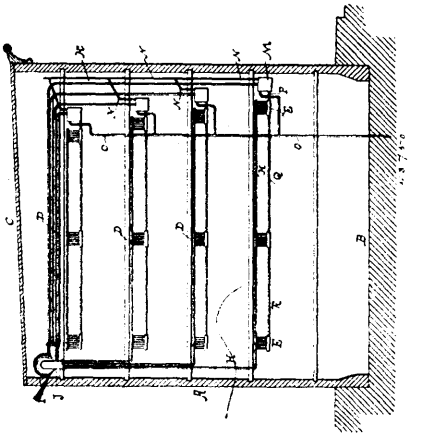
No. 43,749. Metal Fence. (*Clôture métallique.*)



George D. Hamilton, Innisfail, Alberta, Canada, 26th July, 1893; 6 years.

Claim.—1st. A metal fence, comprising tapering metallic posts, parallel rails bolted to the posts, and a suitable fence body carried by the rails, substantially as described. 2nd. A metal fence, comprising tapering metallic posts having seams on their sides, tubular rails fastened to the posts and provided with longitudinal seams, and a fence body bolted to the seams of the rails, substantially as described. 3rd. A metal fence, comprising posts, parallel rails connecting the posts and provided with longitudinal seams, and pickets bolted to the seams of the rails, substantially as described. 4th. A metal fence, comprising tapering metallic posts having vertical side seams, tubular rails bolted to the posts and provided with longitudinal seams, and flanged pickets bolted to the seams of the rails, substantially as described. 5th. In a metal fence, the posts consisting of a hollow cone-shaped structure having a vertical side seam and a suitable head, substantially as described. 6th. In a metal fence, the combination of the fence post having the perforated side seam, the fence wires, the sleeves held on the wires, and the fastening staples extending through the perforations in the post seam and around the sleeves, substantially as described.

No. 43,750. Apparatus and Process of Refrigeration.
(*Appareil et procédé de refroidissement.*)



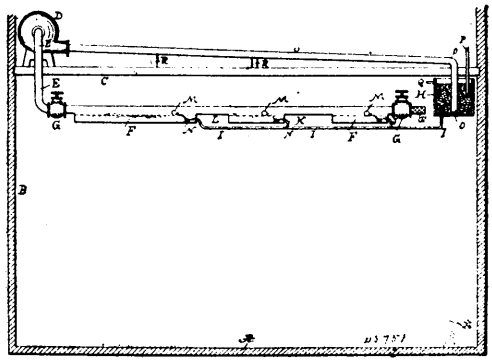
Martin Wanner, Denver, Colorado, U.S.A., 26th July, 1893; 18 years.

Claim.—1st. The method of refrigeration herein described, consisting in subjecting a volatile liquid, of greater specific gravity than water and insoluble in it, to the action of a vacuum, more or less perfect, moving the resulting vapours through the apparatus, and condensing them by direct contact with a column of cold water through which they rise till condensed, substantially as set forth. 2nd. The method of refrigeration herein described consisting in subjecting a volatile liquid of greater specific gravity than water and insoluble in it, to the action of a vacuum, more or less perfect, moving the resulting vapours through the apparatus, relieving them of the vacuum, and conveying them in vaporous or liquid form, as the case may be, into direct contact with a column of cold water through which they rise till condensed, substantially as set forth. 3rd. The method of refrigeration herein described consisting in subjecting a volatile liquid of greater specific gravity than water and insoluble in it, to the action of a vacuum, more or less perfect, moving the resulting vapours through the apparatus, relieving them of the vacuum and conveying them in vaporous or liquid form, as the case may be, in contact with a column of cold water open to the atmosphere whereby they are condensed by the atmospheric pressure, also by the pressure of the weight of water and by the temperature of water, substantially as set forth. 4th. The method of refrigeration herein described, consisting in subjecting a volatile liquid of greater specific gravity than water and insoluble in it, to the action of a vacuum more or less perfect, moving the resulting vapours through the apparatus, relieving them of the vacuum, conveying them in vaporous or liquid form, as the case may be, into direct contact with a column of cold water open to the atmosphere, whereby they are condensed by the atmospheric pressure, the pressure due to the weight of the water, and the temperature of the same, and are sealed against atmospheric contact by the said superposed column of water, substantially as set forth. 5th. The combination, in a refrigerating apparatus, of a reservoir, containing the refrigerating material, receptacles for the said material, connected with the reservoir, and in which the material may be exposed to the action of a vacuum more or less perfect, a pipe connecting the said receptacle with the device which produces the vacuum; said vacuum producing device, and an overflow for said reservoir located below the junction of said pipe with said receptacle, substantially as set forth. 6th. The combination, in a refrigerating apparatus, of a combined condenser and reservoir adapted to contain the refrigerating material and a column of water, a cold water supply pipe and an overflow pipe, receptacles for said material connected with the reservoir in which it may be subjected to a vacuum, a pipe connecting the said receptacle with the device which creates the vacuum, said pipe being constructed and arranged to draw the vapours from said receptacle, and connecting therewith on a higher lever than the overflow from the reservoir and condenser and return pipes connecting the device which creates the vacuum with the reservoir and condenser, substantially as set forth. 7th. The combination, in a refrigerating apparatus, of a combined condenser and reservoir, adapted to contain the refrigerating material connected with the lower part of the reservoir and condenser, and in which the material may be subjected to the action of a vacuum, a pipe connecting said receptacle with the device which creates the vacuum, constructed and arranged to draw the vapours from said receptacle and an overflow from said reservoir and condenser, to conduct away the overflow of the cooling water, substantially as set forth. 8th. The combination in a refrigerating apparatus of a combined condenser and reservoir, adapted to contain the refrigerating material, and a column of cold water comprising essentially a conduit or pipe for conveying the refrigerating material into it, a pipe connected with an outside source of water supply, an overflow pipe to conduct away the overflow of the cooling water, opening into the reservoir above the mouth of the conduit or pipe through which the refrigerating material enters the

reservoir and a pipe connecting with the bottom of the reservoir and condenser for conveying the condensed refrigerant to the place of its use, substantially as set forth. 9th. The combination in a refrigerating apparatus of a reservoir containing the refrigerating material receptacles for the said material connected with the reservoir, in which the material may be exposed to the action of a vacuum more or less perfect, a pipe connecting said receptacles with the device which produces the vacuum-producing device, substantially as set forth.

No. 43,751. Apparatus and Process of Refrigeration.

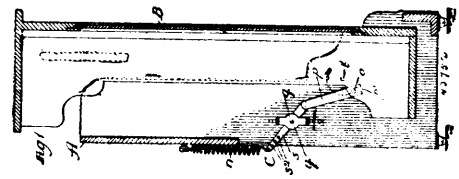
(*Appareil et procédé de refroidissement.*)



Martin Wanner, Denver, Colorado, U.S.A., 26th July, 1893; 18 years.

Claim.—1st. The method of refrigeration herein described consisting in subjecting a volatile liquid specifically heavier than and not soluble in water in a closed receiver to the action of a current of fresh air supplied from the surrounding atmosphere, substantially as set forth. 2nd. The method of refrigeration herein described, consisting in subjecting a volatile liquid, specifically heavier than and not soluble in water in a closed receiver, to the action of a current of fresh air supplied from the surrounding atmosphere, moving the resulting vapours through the apparatus under confinement and collecting and condensing them for re-use, substantially as set forth. 3rd. The method of refrigeration herein described, consisting in subjecting a volatile liquid specifically heavier than and not soluble in water in a closed receiver, to the action of a current of fresh air supplied from the surrounding atmosphere, moving the resulting vapours through the apparatus, and conveying them in vapourous or liquid form, as the case may be, into direct contact with a sufficient body of cold water to condense the vapours and separate the liquid from the air, substantially as set forth. 4th. The method of refrigeration herein described, consisting in subjecting a volatile liquid specficially heavier than and not soluble in water, in a closed receiver, to the action of a current of fresh air supplied from the surrounding atmosphere, moving the resulting vapours through the apparatus, conveying them in vapourous or liquid form, as the case may be, into direct contact with a sufficient body of cold water, and sealing the volatile liquid against atmospheric contact by said body of water, substantially as set forth. 5th. The combination in a refrigerating apparatus, of a reservoir adapted to contain the refrigerating material, a receptacle for the said material connected with the reservoir, in which receptacle, the material may be exposed to the action of a current of air, a pipe open to the exterior atmosphere and connecting said receptacle with the device which produces the current of air, and said device, substantially as set forth. 6th. The combination in a refrigerating apparatus, of a reservoir adapted to contain the refrigerating material, a receptacle for the said material connected with the reservoir, and in which the material may be exposed to the action of a current of air, a pipe open to the exterior atmosphere and connecting said receptacle with the device which creates the current of air, said device and pipe being constructed and arranged to draw the vapours from said receptacle and confine the same, substantially as set forth. 7th. The combination in a refrigerating apparatus, of a reservoir adapted to contain the refrigerating material, a receptacle for said material connected with the reservoir, and in which the material may be exposed to the action of a current of air, a pipe open to the exterior atmosphere and a device to create a current of air, both constructed and arranged to draw the vapours from said receptacle and confine them, and areturn pipe connecting the device which creates the current of air with the reservoir to condense the vapours, substantially as set forth. 8th. The combination in a refrigerating apparatus, of a reservoir adapted to contain the refrigerating material, a receptacle for the said material connected with the reservoir, in which it may be subjected to a current of air, a pipe connecting said receptacle with the device which creates the current of air, said pipe being open at one end to the external atmosphere, and constructed and arranged to draw the vapours from said receptacle and confine the same, a return pipe connecting the device which creates the current of air with the reservoir, and means to convey running water to and from said reservoir, substantially as set forth.

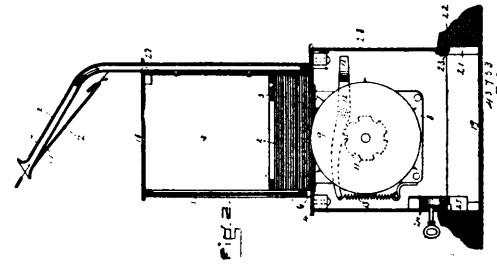
No. 43,752. Wardrobe Bedsteads. (*Lit garde-robe.*)



Harry Waddell, Chicago, Illinois, U.S.A., 26th July, 1893; 6 years.

Claim.—1st. In a folding bed, the combination, with the stationary frame and vertically swinging couch pivoted to the stationary frame, of counterbalance mechanism for the couch comprising a lever fulcrumed between its ends on the stationary frame, a link pivotally connected at one end with one end of the lever, and at its opposite end with the couch near its head portion, and a spring connected with the main frame and lever, and operating through the medium of the lever and link, to resist lowering and assist raising of the couch, substantially as described. 2nd. In a folding bed, the combination, with the stationary frame and vertically swinging couch pivoted to the stationary frame, of counterbalance mechanism for the couch comprising a lever fulcrumed between its ends on the stationary frame, a link pivotally connected at one end with one of the lever and at its opposite end with the couch near its head portion, a spring n connected with the lever, and with the stationary frame above the lever, to draw in the downward direction upon the stationary frame, and operating through the medium of the lever and link to resist lowering and assist raising of the couch, substantially as described. 3rd. In a folding bed, the combination, with the stationary frame and vertically swinging couch pivoted to the stationary frame, of counterbalance mechanism for the couch comprising a spring n connected with the main frame, a lever a fulcrumed near one end portion to the stationary frame below the spring and adjustably connected near one end with the spring, a link p pivoted at one end to the short arm of the lever s, and provided at its opposite end with a socket p^1 at which it is pivotally and removably attached to the couch near the head portion thereof, the spring operating to draw in the downward direction upon the stationary frame, and through the medium of the lever and link to resist lowering and assist raising of the couch, substantially as described.

No. 43,753. Vending Machine. (*Appareil de vente.*)

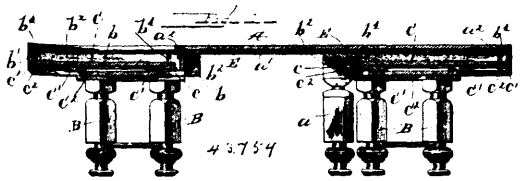


Daniel T. Caldwell, Lynn, Massachusetts, assignee of Virgil Alphonso Krepps, Kensico, New York, U.S.A., 26th July, 1893; 12 years.

Claim.—1st. A vending apparatus, comprising a receptacle for the merchandise provided with a slot or opening in line with the bottom package, a spring actuated wheel train, a series of radial spurs driven by a shaft of the train and adapted to sweep through an opening in the bottom of the receptacle and engage the bottom package, said spurs being out of contact with the package when the apparatus is inactive, and a coin-operated detent to release the train. 2nd. In a vending machine, a coin conduit provided with a slot on its under side of proper width to reject a coin of smaller denomination or size than the one required, the portion of said coin conduit provided with said slot being outside the case of the machine, whereby a rejected coin will drop outside and be accessible to the would-be purchaser, substantially as described. 3rd. In a vending machine, a coin conduit extending diagonally up from and over the machine and provided with a slot on its under side of proper width to reject a coin of smaller denomination or size than the one required, whereby such coin will drop upon the outer surface of the machine and be accessible to the would-be purchaser, substantially as set forth. 4th. In a vending machine, a coin conduit extending diagonally up from the machine and provided with a slot on its under side of proper width to reject a coin of smaller denomination or size than the one required, and a platform under said coin conduit to receive the rejected coin, the slotted portion of said coin conduit and the platform being both on the outside of the machine whereby a rejected coin will be accessible to the would-be purchaser, substantially as described. 5th. In a vending machine, a coin conduit extending diagonally up from the machine and provided with a slot on its under side of proper width to reject a coin of smaller denomination or size than the one

required, and an inclined platform under said coin conduit adapted to receive the rejected coin and guide it on to the outer surface of the case of the machine, whereby a rejected coin will be accessible to the would-be purchaser, substantially as set forth. 6th. In a vending machine, the coin conduit 14, provided with a slot on its under side for rejecting a coin of too small denomination and extending up from and diagonally over the surface of the case of the machine, and the inclined platform 17 extending down from a point near the mouth of the conduit under said slot and at an angle with the conduit, and with its lower end over the surface of the case of the machine, whereby a rejected coin will be accessible to the would-be purchaser, substantially as described. 7th. A vending machine, comprising the base flange 21, provided with the internal and substantially horizontal groove 22, the frame inclosing the wheel train, provided with the bent lip 23, extending into said groove, and with a locking device for securing the frame to the base flange, the commodity receptacle I, provided with the overhanging lugs 27, and the strip or pawl 28, made integral with the rear wall of the commodity receptacle and with its upper edge normally caught under the said lugs 27, and its lower edge normally between the lip 23 and the base flange 21, substantially as set forth.

No. 43,754. Extension Table. (*Table à rallonge.*)



The Warren Extension Table Company assignee of Frederick Page Cobham, Warren, Pennsylvania, U.S.A., 27th July, 1893; 6 years.

Claim.—1st. In an extension table, the combination with the main table top, of the sliding extension frames, carrying supplemental leaves, said frames and leaves being arranged to slide beneath said top, and to be drawn out to extend the table, and the risers pivotally secured to the leaves for elevating the same into the plane of the top after they have reached their outermost positions, said risers having a sliding engagement with a portion of said frame, substantially as described. 2nd. In an extension table, the combination with the main top, of the sliding frames, carrying supplemental leaves supported below the plane of the said top, the supporting bars secured to said frames, and a pair of risers pivotally secured to each leaf, and having a sliding engagement with said bars, for elevating said leaf into the plane of said top after said leaf has reached its outermost position, substantially as described. 3rd. In an extension table, the combination with the main top, of the sliding extension frames carrying the supplemental leaves supported below the plane of the table top, the supporting bars secured to the frames, a pair of risers for elevating each leaf into the plane of the table top after it has reached its outermost position, said risers being pivotally secured to said leaf, and having a sliding engagement with said supporting bars, and a connecting bar for connecting the risers of each leaf for simultaneous movement, substantially as described. 4th. In an extension table, the combination with the main top, of an extension frame carrying a supplemental leaf supported below the plane of said top, the supporting bars secured to said frame the risers pivotally secured at one edge to the leaf, and having their opposite edges provided with bearing surfaces to engage said supporting bars, and the connecting bars connecting the risers of each leaf for joint movement, pivotally secured to said risers, substantially as described. 5th. In an extension table, the combination with the main top, of a sliding extension frame carrying a supplemental leaf supported below the plane of the table top, the risers for elevating said leaf into the plane of said top after it has reached its outermost position, said frame being provided with guiding grooves and shoulders, and parts secured to and projecting from said leaf for engaging the grooves and shoulders of the frame for guiding said leaf and limiting its vertical movement, substantially as described. 6th. In an extension table, the combination with the main top and its supports, of an extension frame carrying a supplemental leaf, the supporting bars secured to said frame and extending longitudinally of said table, supports for said frame, secured to said bars, the risers pivotally secured to said leaf and having a sliding engagement with said bars, substantially as described.

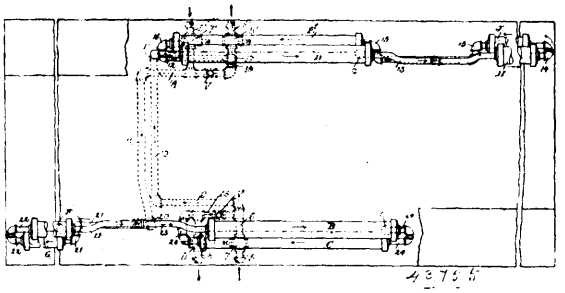
No. 43,755. Storage Heaters for Street Cars.

(*Accumulateur de chaleur pour chars de rue.*)

The Consolidated Car Heating Company, assignee of James F. McElroy, all of Albany, New York, U.S.A., 27th July, 1893; 6 years.

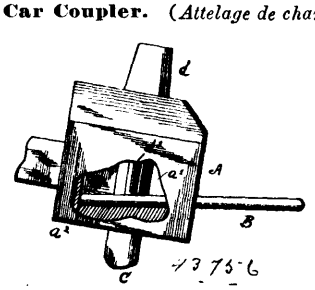
Claim.—1st. In a storage heater for street cars, the combination of a series of drums placed on each side, of a car piping placed within the car connecting said drum, a means for charging said piping and drums on each side of the car, substantially as described and for the purpose set forth. 2nd. In a storage heater, a drum suitably mounted, a pipe arranged to convey hot water into said drum at one

Fig. 1.



end thereof, a pipe entering said drum at the opposite end thereof, a trap arranged within said drum in connection with last mentioned pipe, said trap opening into the drum near the top thereof, with an orifice in said trap near the bottom of said drum, substantially as described and for the purpose set forth. 3rd. In a storage heater, one or more drums placed on each side of a car suitably connected together, a means for charging said storage heater with hot water from the side of the car, suitable piping within the car to provide for the circulation of the hot water through the drums from one side of the car to the other, with a check valve arranged in such a manner as to prevent the circulation of the water in but one direction, substantially as described and for the purpose set forth. 4th. In a storage battery, one or more drums located on each side of a car suitably connected with piping, with a trap arranged at that end of each drum out of which the water passes, said trap communicating with the drum near the top thereof, with a vent within said pipe communicating with the drum near the bottom thereof, said piping provided with a check valve on each side of the car, constructed in such a manner as to permit of the circulation of the water in but one direction, substantially as described and for the purpose set forth. 5th. In a storage heater, a series of drums placed on each side of a car, suitably connected up with piping charging orifices in said piping on each side of the car beneath the floor, discharging orifices connecting with said piping on each side of the car beneath the floor, said piping and drums so arranged with reference to each other that when hot water is forced into the car through the charging orifice, it passes through a pipe across the car beneath the floor, entering a pipe within the car on the opposite side passing into a drum, circulating through the drums and pipes on that side of the car and then returning through a pipe beneath the floor to the drums and pipes on the side of the car it entered, and after circulating through said last mentioned drums and pipes, passes out through the discharge port on the side of the car it entered beneath the floor thereof, with stop cocks in each charging and discharging pipe, substantially as described and for the purpose set forth.

No. 43,756. Car Coupler. (*Attelage de chars.*)



Samuel C. Sams and Louis D. Sweet, both of Aspen, Colorado, U.S.A., 27th July, 1893; 6 years.

Claim.—1st. The combination, with the draw-head, having a cross-shaped opening in its top provided with a rearwardly inclined wall, of the coupling pin herein described, having lateral wings and designed to fit in said cross-shaped opening, substantially as set forth. 2nd. The herein described improved car coupling, comprising the chambered draw-head having a rearwardly inclined bottom and a cross-shaped opening in its top, and the coupling pin having lateral ribs or wings throughout a portion of its length, substantially as set forth.

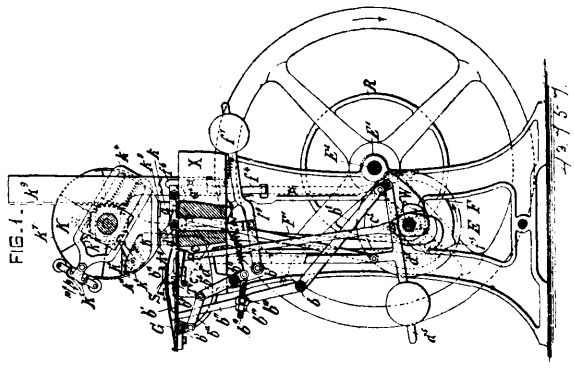
No. 43,757. Machine for Printing on Matches.

(*Appareil pour imprimer sur les allumettes.*)

Vereinigte Zündwaarenfabriken Aktien-Gesellschaft, Zanow-Hannover, Hannover, and Siegmund Bud, assignee of Max Küstermann and Hermann Gottsschalk, Berlin, Germany, 27th July, 1893; 6 years.

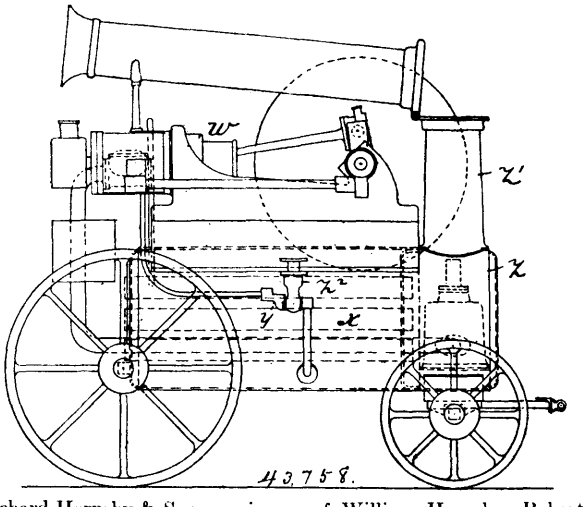
Claim.—1st. In machines for printing on matches, a laying on bar S (for the purpose of printing at one time on a larger quantity of

matches Z, than hitherto), divided into a number of guides corresponding with a number of lines in a forme of type by transverse



partitions *s*, in each of which guides a match *z*, is laid, so that when the laying on bar with the matches it carries is in the printing position, the several lines of type exactly correspond with the several matches, substantially as hereinbefore described. 2nd. In machines for printing on matches and provided with the laying on bar S, the arrangement with a view of printing two sets of matches Z, together, of two rotating flaps *d* and *a*, connected with one another by levers *f*, of which flaps the first *d*, receives the laying on bar S, at first, and after the matches have been printed passes them on in a reversed and regular position to the second flap *a*, by means of a combined movement of both flaps, whereupon the printing of the second surface of the matches can take place, substantially as hereinbefore described. 3rd. In a machine for printing on matches, the pawl f^6, serving to hold the levers or guiding arms *f*, for the second flap *a*, which pawl, when released by a projection f^5, of a cam F, by means of a lever f^4, allows a weight f^7, on a lever f^9, revolving on the framing to turn the levers *f*, and the printing flap *a*, against one another, whereby the cam *d*, on an axle W, acts at the same time upon a lever d^5, raises a sector d^4, by means of a rod d^6, and the two flaps *d*, *a*, meet one another, so that both can rotate with the guiding arms *f*, and the pawl f^6, can again fix the guiding arms. 4th. The ejectors b^{15}, which effect the removal of the empty laying on bar S, after the printing flap *d*, has been driven back, said ejectors operated by a lifting finger *b*, on an axle W, an arm b^8, connected with a shaft *b*, of the arms of the ejector. 5th. A finger A, arranged upon a shaft W, which by means of a lever a^5, and rod a^6, rotates upwards a toothed sector a^3, and through it a toothed sector a^3, a^4, and flap *a*, for ejecting the completely printed matches from the machine. 6th. The combination of a thruster b^1, which effects the insertion of a fresh laying on bar S, after the removal of an empty one with a rod b^{10}, which connects the arms of the ejectors, by a screw bolt b^9, provided with a striking nut b^{14}, and guided in an eye in the rod b^{10}, said screw bolt engaging with an arm b^{13}, of the shaft b^5, connected to the thruster b^1, by arms b^6, rods b^{12}, and holder b^3. 7th. An angular striker *c*, rotating upon an axis c^1, with said striker, by rods c^2, and lifting finger *c*, retreating when the thruster b^1, commences to push the laying on bar on to the printing flap *d*, as set forth.

No. 43,758. Engine. (*Machine.*)

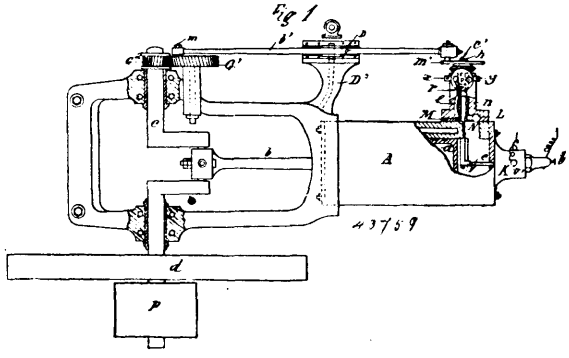


Richard Hornsby & Sons, assignees of William Hornsby, Robert Edwards and William Edward Gibbon, all of Grantham, England, 27th July, 1893; 6 years.

Claim.—1st. In an explosion engine, a partition of wire gauze or like material dividing the combustion chamber from the cylinder, substantially as described. 2nd. In an explosion engine, a double oil valve box having one valve held closed by a spring, and another which can be opened by a governor actuating it so that oil will pass the first named valve when the pump forces it past it, but that oil can only pass the second valve when the governor actuates and opens it, substantially as described. 3rd. In an explosion engine, jacketting the valve box which is attached to the vapourizer or chamber with water or oil so as to keep it cool, substantially as described. 4th. In an explosion engine, jacketting the vapourizer or combustion chamber with a jacket to open to the atmosphere and arranging a valve that allows more or less of the air that is required in the cylinder to be drawn through it, the expansion or contraction of a rod or column of mercury under variations of the temperature of the vapourizer or combustion chamber serving to open or close this valve to allow air to be drawn around the vapourizer or combustion chamber or to shut off the supply of air through the jacket, substantially as described. 5th. The combination, with an explosion engine of a water cooling tank having pipes extending through it through which air can pass or constructed with a series of water tubes around or over which air can circulate, and a chimney for causing the air to pass through or around the tubes by the action of the draught caused by the heat of the air or by a blast from the exhaust of the engine, substantially as described.

No. 43,759. Gas or Petroleum Engine.

(*Machine à gaz ou pétrole.*)

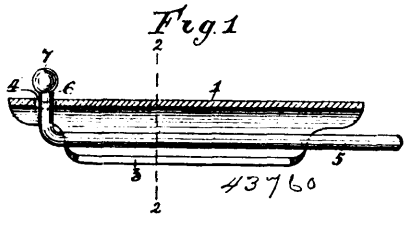


Louis Sabatier, Joseph Roche, and Louis Rodier, Bagnols sur Cèze, French Republic, 27th July, 1893; 6 years.

Claim.—1st. In a gas or petroleum engine, the combination of disc M^1 revolved continuously, disc M connected by spring thereto, and a rod *t* with contact V traversing the disc M, and connected adjustably to disc m^1, the whole arranged for co-operation, substantially as set forth. 2nd. In a gas or petroleum engine, the combination, with shaft *c* of gear wheels G^1, G^2, oscillatory rod b^1, with sliding guide, disc m^1, disc M adapted to be revolved by disc m^1 spring *r* interposed between said discs, fixed contact *c*, and rotary contact V on rod T adjustably secured to disc *m* and revolving therewith.

No. 43,760. Clip for Holding Papers.

(*Lien pour tenir des papiers.*)



Samuel Hudson Wright, Dublin, Ireland, 27th July, 1893; 6 years.

Claim.—A clip for holding papers or for other purposes, consisting of a longitudinally slotted tube having an orifice in juxtaposition to one end and a core pin having an angularly bent end passing through the orifice and provided with a head, substantially as and for the purpose described.

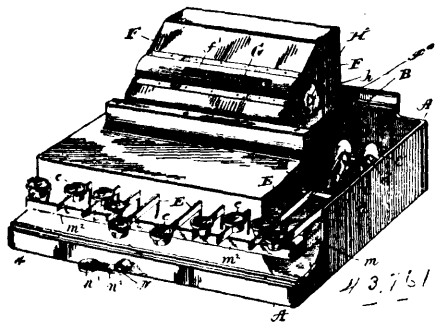
No. 43,761. Adding Machine. (*Machine à additionner.*)

Bradley Hatch Phillips, Fredonia, New York, U.S.A, 27th July, 1893; 6 years.

Claim.—1st. In an adding machine, the combination, with a series of operating levers, the inner arms of which are of different lengths, and which are provided at their inner ends with gear segments, of a main rotating shaft provided with a series of gear wheels or segments of different radial extent and with which the gear segments on the said levers mesh, a main driving gear wheel

carried by said shaft, a travelling carriage movable laterally relative to said main driving gear wheel, a series of independently rotating

Fig 1



numeral wheels mounted in said carriage, a spring for advancing or pressing said carriage forward, and an escapement mechanism connected with the said operating levers and actuated thereby and serving to regulate the forward movement of the said carriage by said spring. 2nd. In an arithmometer or adding machine, the combination, with a series of operating levers, a rotating shaft with which said levers are connected so that each will impart a different rotative movement thereto, and a main driving gear wheel carried by said shaft, of a travelling carriage movable laterally relative to said main driving gear wheel, a series of independently rotating numeral wheels mounted in said carriage, a spring for advancing or pressing said carriage forward, and an escapement mechanism connected with the said operating levers, and serving to regulate the forward movement of the said carriage by said spring. 3rd. In an arithmometer or adding machine, the combination with a series of operating levers, a rotating shaft with which said levers are connected so that each will impart a different rotative movement thereto, and a main driving gear wheel carried by said shaft, of a travelling carriage movable laterally relative to said main driving gear wheel, a series of independently rotating numeral wheels mounted in said carriage, a spring for advancing or pressing said carriage forward, an escapement mechanism connected with the said operating levers and serving to regulate the movement of the said carriage under the stress of said spring, and a stopping device for the said main driving gear wheel which serves to prevent the latter from overthrowing, and which is also actuated from the said operating levers. 4th. In an adding machine, the combination with a series of operating levers, the inner arms of which are of different lengths, and which are provided at their inner ends with geared segments, of a rotating shaft provided with a series of gears or geared segments of different radial extent and with which the geared segments of the said levers mesh, a main driving gear wheel carried by said shaft, a travelling carriage movable laterally relative to said main driving gear wheel, a series of independently rotating numeral wheels mounted in said carriage, and an automatic feeding mechanism controlled by said levers for advancing the said carriage to the extent of the distance from one numeral wheel to another whenever any one of the said levers is operated. 5th. In an adding machine, the combination with a series of operating levers, the inner arms of which are of different lengths and which are provided at their inner ends with geared segments, of a main rotating shaft provided with a series of gear wheels or segments of different radial extent and with which the geared segments on the said levers mesh, a main driving gear wheel carried by said shaft, and a series of numeral wheels any one of which may be arranged to be rotated by the said driving gear wheel, and which are connected together so that each numeral wheel will advance a numeral wheel contiguous to it to the extent of one tooth when the numeral wheel in gear with the said driving gear wheel has been rotated to the extent of a series of numerals thereon. 6th. In an adding machine, the combination with a series of operating levers, of a rotating shaft with which the said levers are operatively connected, and a main driving gear wheel carried by said driving shaft, a travelling carriage movable laterally relative to the said main driving gear wheel and provided with a ratchet bar, a series of independently rotating numeral wheels mounted in said carriage, a spring for advancing said carriage forward, an escapement device operating in connection with said ratchet bar, to control the forward movement of the said carriage, and an operating frame for the said escapement device, which is actuated by the said operating levers, whereby whenever one of the said levers is depressed the escapement will be actuated to permit the carriage to be advanced a distance equal to that from one numeral wheel to another. 7th. In an adding machine, the combination, with a series of operating levers, the inner arms of which are of different lengths, and which are provided at their inner ends with gear segments, of a main rotating shaft, provided with a series of gear wheels or segments of different radial extent, and with which the gear segments on the levers mesh, a main driving gear wheel carried by said shaft, a travelling carriage movable laterally relative to said main driving gear wheel, a series of independently rotating numeral wheels mounted in said carriage, and each of which is provided with a ratchet wheel rotating therewith, a pawl or lever rotating with each of said ratchet wheels, but which is normally held out of engagement therefrom by a spring, a stationary cam or projection to engage each of said pawls or levers when the numeral wheel with which it is rotating, has arrived at a certain point, and to thereby throw the said pawl into engagement with said ratchet wheel against the stress of its spring, and thus rotatively advance the numeral wheel to which the ratchet wheel, thus engaged by said pawl, is attached, to the extent of one tooth on the ratchet wheel. 8th. In an adding machine, the combination with a series of operating levers, the inner arms of which are of different lengths, and which are provided at their inner ends with gear segments, of a main rotating shaft, provided with a series of gear wheels or segments of different radial extent, and with which the gear segments on the levers mesh, a main driving gear wheel carried by said shaft, a travelling carriage movable relative to said main driving gear wheel, a series of independently rotating numeral wheels mounted on said carriage, and each of which is provided with a ratchet wheel rotating therewith, a pawl or lever rotating with each of said ratchet wheels, but which is normally held out of engagement therefrom by a spring, stationary rings i^2, arranged between the said numeral wheels, and provided on their inner faces with cams or projections i^3, arranged to engage the said pawl or levers at times and force them inward into engagement with the said ratchet wheels against the stress of their springs, to cause the said ratchet wheels and the numeral wheels connected therewith to be advanced. 9th. In an adding machine, the combination, with a series of numeral wheels provided with rigidly attached ratchet wheels, spring pressed pawls or levers rotating with said numeral wheels, stationary rings between the said numeral wheels and against the inner sides of which the said levers or pawls are normally held out of engagement with their ratchet wheels, and cams or projections on the inner faces of said rings arranged to engage said pawls or levers at certain times, and thereby press them into contact with their ratchet wheels to cause the latter and the numeral wheels to which they are attached to be advanced to the extent of a numeral. 10th. In an adding machine, the combination, with a series of operating levers, of a rotating shaft with which the said levers are connected, so that each will impart a different rotative movement thereto, a main driving gear wheel carried by said shaft, a travelling carriage movable laterally relative to said main driving gear wheel, a series of independently rotating numeral wheels movable with said carriage, a spring for moving said carriage forward, an escapement mechanism connected with the said operating levers, and serving to regulate the forward movement of the said carriage under the stress of said spring, and a stopping device arranged to engage a numeral wheel next adjacent to that with which the said main driving gear wheel is in connection, and serving to prevent the said numeral wheel from overthrowing. 11th. In an adding machine, the combination, with a carriage, and a series of independently rotating numeral wheels mounted thereon, a series of operating levers and intermediate connections for rotating said numeral wheels, a spring for moving said carriage forward, an escapement mechanism for controlling the forward movement of said carriage under the stress of said spring, a returning shaft provided with an operating arm or handle, and having also an arm connected with said carriage, whereby the said arm or handle may be pressed upon to return the carriage to its starting point against the stress of its advancing spring, when desired. 12th. In an adding machine, the combination, with a series of operating levers, the inner arms of which are of different lengths and which are provided at their inner ends with geared segments, of a rotating shaft provided with a main driving gear wheel and with a series of gears or segments of different radial extent which are loosely mounted on said shaft, and each of which has, rigid therewith, a wheel or disc, a series of ratchet wheels connected with said shaft to rotate therewith, a series of spring pressed pawls carried by said discs, and which are arranged to engage said ratchet wheels when the discs move forward, but which ride freely over the same when the discs perform their return movements, and a series of numeral wheels any one of which may be thrown into engagement with main driving gear wheel. 13th. In an adding machine, the combination, with a rotating shaft provided with a main driving gear wheel and mechanism for imparting different rotative movements to said shaft, of a travelling carriage, a series of independently rotating numeral wheels mounted in said carriage any one of which may be brought into engagement with the said main driving gear wheel, and a stopping lever, as P, mounted on a stationary support and arranged to engage the numeral wheel which may be next adjacent to that which is in mesh with the said main driving gear wheel.

No. 43,762. Puzzle. (*Jeu de patience.*)

Jesse Kinney, Windsor, Ontario, Canada, 27th July, 1893; 6 years.

Claim.—1st. A puzzle, composed of two interlocked pieces, one piece having a restricted portion, and two heads or enlarged portions formed of compressible fibrous material having the appearance of a rigid non-compressible substance located at opposite ends of the restricted portion and the second piece formed with an aperture corresponding to the size of the restricted portion, substantially as

described. 2nd. A puzzle composed of two interlocking pieces, one piece being made of wood, a compressible portion formed thereon,

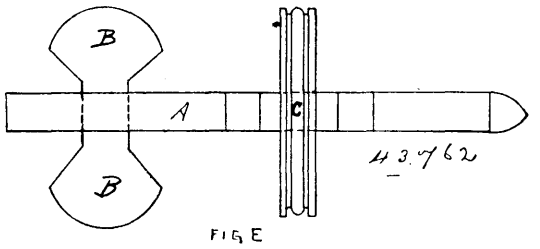
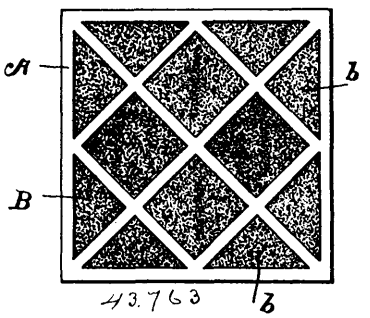


FIG E

composed of material having an appearance of a rigid non-compressible substance, two heads or enlarged portions located at opposite ends of the restricted portion, and a second piece formed with an aperture corresponding to the size of the restricted portion and adapted to be engaged over the head when the same is compressed, substantially as described.

No. 43,763. Process of Chipping Glass.
(*Procédé pour graver le verre.*)

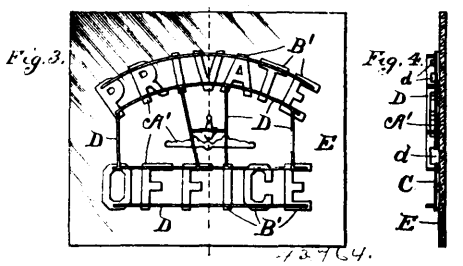
Fig. 2.



Samuel Evans, Charles L. Rawson and Charles Turner Brown, all of Chicago, Illinois, U.S.A., 27th July, 1893; 6 years.

Claim.—1st. The process of chipping glass, which consists in covering the surface of the glass with a thin film of soap, in applying a flexible pattern thereover adapted to resist the action of a sand blast process, of removing the film of soap exposed in the openings of the pattern, in subjecting the glass with the pattern thereon to the sand blast process, in applying a glass chipping compound in a liquid condition on the surface of the glass and the pattern thereon, in lifting the pattern off the glass together with the chipping compound thereover, while such chipping compound is in a liquid or semi-liquid condition, and in allowing the chipping compound to dry in the ordinary way, substantially as described. 2nd. The process of chipping glass which consists in covering the surface of the glass with a coating adhering to the glass sufficiently well to form a means of attaching a flexible pattern thereover to the glass, in applying a flexible pattern thereover adapted to resist the action of the sand blast process, in subjecting the glass with the pattern thereover to the action of the sand blast process, and thereby simultaneously grinding the glass and removing the coating thereover in the open places of and around the pattern, in coating the entire surface of the glass and the pattern thereon with a glass chipping compound in a liquid condition, in removing the flexible pattern from the glass together with the glass chipping compound thereover, and in allowing the glass chipping compound to dry in the ordinary way, substantially as described. 3rd. The process of chipping glass which consists in covering the surface of the glass with a coating adapted to protect the glass from the action of a glass chipping compound when interposed between the glass and such glass chipping compound, in applying a coating adapted to adhere to the first named coating and to a pattern sufficiently well to form a means of attaching such pattern to the glass, in applying a flexible pattern thereover adapted to resist the action of the sand in the sand blast process, in removing the second named coating from the glass where the same is exposed through the opening of the pattern, in subjecting the glass with the pattern thereover to the action of the sand blast process, in coating the entire surface of the glass and pattern thereon with a glass chipping compound in a liquid condition, in removing the flexible pattern from the glass together with the glass chipping compound thereover, in allowing the glass chipping compound to dry in the ordinary way and in applying a second coating of glass chipping compound over the entire surface of the glass and allowing the same to dry in the ordinary way, substantially as described.

No. 43,764. Process of Preparing for and Ornamenting Clear Glass. (*Procédé pour préparer et ornementer le verre.*)



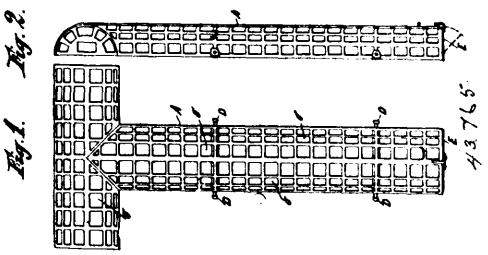
Samuel Evans, Charles L. Rawson and Charles Turner Brown, all of Chicago, Illinois, U.S.A., 27th July, 1893; 6 years.

Claim.—1st. A stencil plate consisting of a sheet metal pattern having a coating on the exposed surface thereof, of material adapted to withstand the action of sand projected by the sand blast process, substantially as described. 2nd. A sheet metal pattern forming a stencil plate whereof the several parts are connected together by sheet metal ties extending over the open spaces of the pattern in planes at right angles with the plane of the pattern, such ties having notches cut therein on the under side thereof and above the openings in the pattern, and a coating of material adapted to withstand the action of sand projected by the sand blast process applied on the exposed surface thereof, substantially as described. 3rd. The process of ornamenting glass which consists of applying a sand blast protective coating adhering thereto to the entire surface of a sheet of glass, of placing a pattern thereover adapted to resist the action of the sand in the sand blast process, and of subjecting the glass so prepared to the action of the sand blast process, thereby simultaneously removing the coating over and grinding the portions of the glass in the open spaces of the pattern, substantially as described. 4th. The process of ornamenting glass which consists of applying a sand blast protective coating adhering thereto to the entire surface of a sheet of glass, of applying a chipping protective coating to the entire surface of the glass thereover, of placing a pattern thereover adapted to resist the direct action of the sand in the sand blast process, of subjecting the glass so prepared to the action of the sand blast process, thereby simultaneously removing the coatings over and grinding portions of the glass, and of applying a glass chipping compound to the entire surface of the glass, with such coatings where remaining thereon interposed between the glass and the chipping compound, and allowing such chipping compound to dry, substantially as described. 5th. The process of ornamenting glass, which consists of applying a sand blast protective coating adhering thereto to the entire surface of a sheet of glass, of applying a chipping protective coating to the entire surface of the glass thereover, of placing a pattern thereover adapted to resist the direct action of the sand in the sand blast process, of subjecting the glass so prepared to the action of the sand blast process, thereby simultaneously removing the coatings over and grinding portions of the glass, of applying a chipping protective coating to the portions of the glass thereby ground and to appear ground in the completed design, of applying a glass chipping compound to the entire surface of the glass with the coatings thereon interposed between the glass and chipping compound, and allowing such chipping compound to dry, substantially as described. 6th. The process of ornamenting glass which consists of applying a sand blast protective coating adhering thereto to the entire surface of a sheet of a glass, of placing a pattern thereover adapted to resist the direct action of the sand in the sand blast process, of subjecting the glass so prepared to the action of the sand blast process, of applying a chipping compound protective coating adhering thereto to the entire surface of the sheet of glass on the side thereof exposed to the sand blast process, of placing a second pattern thereover adapted to resist the direct action of the sand in the sand blast process, of subjecting the glass so protected to the action of the sand blast process, thereby simultaneously removing the chipping compound protective coating over and grinding portion of the glass, of applying a glass chipping compound to the entire surface of the glass with the coatings thereon interposed between the glass and the chipping compound, and allowing such chipping compound to dry, substantially as described. 7th. The process of ornamenting glass which consists of applying a sand blast and glass chipping compound protective coating adhering thereto to the entire surface of a sheet of glass, of placing a pattern thereover adapted to resist the direct action of the sand in the sand blast process, of subjecting the glass so prepared to the action of the sand blast process, of applying a glass chipping compound to the entire surface of the glass and allowing such chipping compound to dry, of applying a sand blast protective coating adhering thereto to the entire surface of the sheet of glass on the side thereof exposed to the sand blast and glass chipping process, of placing a second pattern thereover adapted to resist the direct action of the sand in the sand blast process and to protect the portion of the glass to appear as clear and chipped in the completed design, and of subjecting the

glass so protected to the action of the sand blast process, substantially as described.

No. 43,765. Sign and Advertisement.

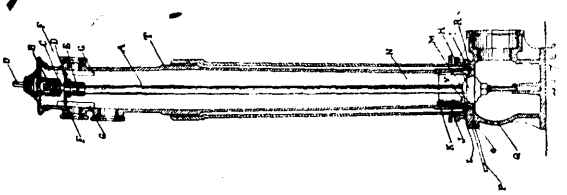
(*Enseigne et annonce.*)



Camille de Borman and Charles Alker, both of Brussels, Belgium, 27th July, 1893; 6 years.

Claim.—1st. In combination, in a sign or advertising device, the outer part of the shape, of the letter or figure, the support therefor and the lightning device, both the support and lightning device being of the shape of the letter, substantially as described. 2nd. In combination, in a sign, the supporting piece and the outer casing, in the form of the latter, consisting of metallic open work, or a sheet having numerous openings, and the glasses in said openings, substantially as described. 3rd. In combination, in a sign, the support of the shape, of the letter having a series of spikes or projections to hold it away from the wall of the building, and having openings G, the gas burners I, projecting through the said openings, the caps H, above the gas jets, and the outer casing, having the openings at top and bottom for the circulation of air, substantially as described. 4th. In combination, the letter or sign comprising the support, the outer casing and the series of gas jets and the lightning device P, substantially as described. 5th. In combination, the sign or letter comprising the three parts, outer case lighting device and the support B, and the detachable hook connections between the parts, substantially as described.

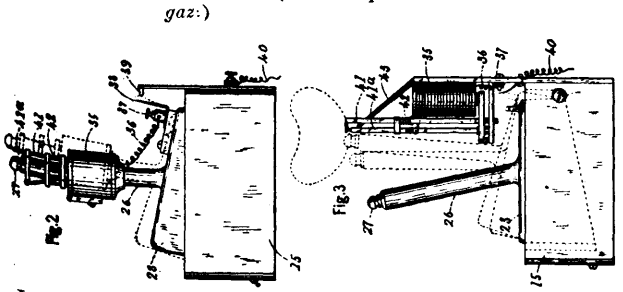
No. 43,766. Hydrant. (*Borne-fontaine.*)



Arthur Gravel, Montreal, Quebec, Canada, 28th July, 1893; 6 years.

Claim.—1° Dans une borne-fontaine, le bras transversal D, attaché à la tige A, à l'aide de la clef E, et dont les bouts s'engagent dans les rainures ou glissoires GG, tel que décrit. 2° Dans une borne-fontaine, l'écrou C, formant enveloppe sur la partie vissée de la tige A, et recevant son mouvement de rotation du tourillon U, tel que décrit. 3° Dans une borne-fontaine, la rainure ou puisart circonférentiel R, amorçant les pièces I et Q, et correspondant aux orifices O et L, tel que décrit. 4° Dans une borne-fontaine, la pièce I, trouée de l'orifice L, et pourvu de la valve verticale J, glissant dans un tube K, tel que décrit. 5° La pièce V, de la valve J projetant vers la valve H, sur le collet M, tel que décrit et pour les fins indiquées.

No. 43,767. Machine for Lighting and Extinguishing Gas. (*Machine pour allumer et éteindre le gaz.*)



James Sangster, Buffalo, New York, U.S.A., 28th July, 1893; 6 years.

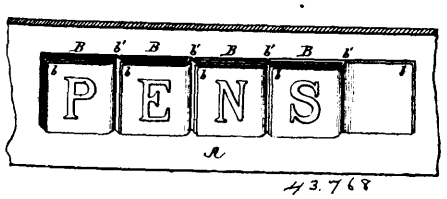
Claim.—1st. In an apparatus for automatically lighting and extinguishing gas, the combination, with a gas supply pipe and burner, of a pivoted gravity valve normally closing the passage to the burner and adapted to be opened by an operative variation of gas pressure to permit the flow of gas, and means for sustaining the valve open until another variation of pressure whereby the sustaining means is released, and the valve permitted to close and thus cut off the flow of gas, substantially as described. 2nd. In an electric gas lighting and extinguishing apparatus, the combination, with a pivoted gravity valve adapted to be actuated by an operative variation of gas pressure to control the flow of gas to the burner, means for sustaining said valve in the open position and means for igniting the gas comprising a battery, a lighting device and a conductor connected to opposite poles of the battery and including the lighting device, said conductor having a break therein and a circuit closer operated by a variation in the gas pressure whereby to establish an electrical circuit through the lighting device to ignite the gas, and a subsequent operative variation of the gas pressure serving to release the valve and permit it to descend and cut off the supply of gas, substantially as described. 3rd. In an apparatus for automatically lighting and extinguishing gas, the combination, with a gas supply pipe and burner, of a pivoted gravity valve constantly exposed to the gas pressure and normally closing the passage and adapted to be raised by an operative variation of the gas pressure to permit the flow of gas, a latching mechanism to sustain the valve in its open position, and said latching mechanism being adapted to release the valve upon a subsequent variation of pressure whereby the valve is permitted to descend and cut off the flow of gas, substantially as described. 4th. In an apparatus for automatically lighting and extinguishing gas, the combination, with the gas supply pipe and burner, of a pivoted gravity valve normally closing the passage, said burner being mounted upon said valve mechanism, and said valve being adapted to be opened by an operative variation of the gas pressure, latching mechanism for sustaining the valve in its open position and said latching mechanism being adapted to be released by a subsequent variation of the gas pressure to permit the valve to descend and cut off the flow of gas, substantially as described. 5th. In a gas lighting and extinguishing apparatus, the combination, with a gas supply pipe, of a pivoted gravity valve normally closing the passage of said pipe, a burner mounted upon the valve, and said valve being adapted to be opened by a temporary increase of the gas pressure to permit the flow of gas to the burner, and an igniting device comprising a battery, a lighting device, a conductor connected to opposite poles of the battery and including the lightning device, said conductor having a break therein and a circuit closer operated by the valve whereby to establish an electrical circuit through the lighting device to ignite the gas, and a latching mechanism for sustaining the valve in its open position after an operative increase in gas pressure and being adapted for release upon a subsequent operative variation of the gas pressure to permit the valve to descend and cut off the supply of gas, substantially as described. 6th. In a gas lighting and extinguishing apparatus, the combination, with a gas supply pipe, of a pivoted gravity valve normally closing the passage of said pipe, a burner mounted upon the valve and said valve being adapted to be raised by an operative increase of the gas pressure, a latching mechanism for sustaining the valve in its open position, and means for igniting the gas, comprising a sparking device, a battery, a conductor connected to opposite poles of the battery and including the sparking device, said conductor having a break therein and a circuit closer having a movable member thereof mounted upon the valve and adapted when the latter is raised to close an electrical circuit through the sparking device to ignite the gas, said latching mechanism being adapted for release upon a subsequent operative variation of the pressure to permit the valve to descend and cut off the supply of gas, substantially as described. 7th. In an electric gas lighting apparatus, the combination, with a pneumatically controlled valve adapted to be actuated by a temporary variation of gas pressure to permit the flow of gas to the burner, of means for igniting the gas, said means comprising a battery, a lighting device and a conductor connected to opposite poles of the battery and including the lighting device, said conductor having a break therein and a circuit closer operated by a variation of the gas pressure whereby to establish an electrical circuit through the lighting device to ignite the gas, substantially as described. 8th. In an electric gas lighting apparatus, the combination, with the gravity valve, adapted to be actuated by the temporary variation of gas pressure to permit the flow of gas to the burner, of means for lighting the gas, said means comprising a battery, a lighting device and a conductor connected to opposite poles of the battery and including the lighting device, said conductor having a break therein and circuit closer operated by variation of the gas pressure whereby to establish an electrical circuit through the lighting device to ignite the gas, substantially as described. 9th. In an electric gas lighting apparatus, the combination, with a pivoted gravity valve adapted to be actuated by a temporary variation of gas pressure to permit the flow of gas to the burner, of means for igniting the gas, said means comprising a battery, a lighting device and conductor connected to opposite poles of the battery and including the lighting device, said conductor having a break therein and a circuit closer operated by a variation of the gas pressure whereby to establish an electrical circuit through the lighting device to ignite the gas, substantially as described. 10th. In a means for automatically lighting and extinguishing gas, the combination with a gas supply pipe, of a pivoted gravity valve normally closing the passage of said pipe, said valve being adapted to be

opened by an operative variation in the gas pressure, a latching mechanism for sustaining the valve in its position and an igniting device arranged adjacent to the burner and adapted to ignite the gas when the valve is rocked on its pivot, and said latching mechanism being adapted to be released by a subsequent operative variation of the gas pressure whereby to permit the valve to descend and cut off the supply of gas, substantially as described. 11th. In means for lighting gas, the combination with a gas supply pipe, burner and valve for controlling the flow of gas to the burner, of an electric gas igniting apparatus included in a normally open electric circuit and a suitable circuit closer operated by variations of gas pressure, and said lighting device and burner being moveable with relation to each other and adapted to be brought into lighting proximity by an operative increase of gas pressure to effect ignition and to be separated upon a change of said pressure whereby the lighting device is without the influence of the flame during the maintenance of the light, substantially as described. 12th. In an automatic gas lighting apparatus, the combination with the gas supply pipe, of a valve for controlling the flow of gas, said valve being adapted to be opened by an operative increase in gas pressure, a movable burner adapted also to be moved by the variations of gas pressure and an igniting device so located with reference to the burner that when the latter is moved the gas may be ignited, substantially as described. 13th. In an electric gas lighting apparatus, the combination with a gas supply pipe and burner, of a gravity valve normally closing the passage, said burner being mounted upon said valve and the valve being adapted to be rocked by an operative variation of the gas pressure and an igniting device so located with reference to the burner tip as to ignite the gas when the burner is moved, substantially as described. 14th. In an automatic gas controlling apparatus, the combination with a gas supply pipe, of a coverless receptacle or tank mounted upon said pipe and adapted to contain a liquid seal, and an inverted cup movable mounted in said tank having a burner tube with a prolongation adapted to dip into the seal liquid and said cup being normally exposed to the gas pressure and having its edges also adapted to be submerged in the seal, substantially as described. 15th. In an apparatus for automatically controlling the flow of gas to burners, the combination with a gas supply pipe, of a tank mounted thereon and adapted to contain a liquid seal, a cup pivotally mounted in said tank in an inverted position, a valve device carried by said cup and normally adapted to seal the gas passage, and a burner tube mounted on said cup, substantially as described. 16th. In an apparatus for automatically controlling the flow of gas to burners, the combination with a gas supply pipe, of a coverless receptacle or tank mounted upon and communicating therewith, said tank being constructed to provide a marginal chamber to contain a seal liquid and cup, pivotally mounted on said tank, and its edge adapted to enter the seal chamber thereof, a burner mounted on said cup and communicating with the interior thereof, and a valve carried by the cup and adapted to close the gas passage, substantially as described. 17th. In an apparatus for automatically controlling the flow of gas to burners, the combination with the gas supply pipe, of an open tank or receptacle mounted thereon and having a marginal chamber adapted to contain a liquid seal, said chamber being of greater depth at one side than upon the other, and a cup pivoted to said tank in an inverted position, the pivot being at the shallow portion of said cup, and the edge of the cup and its pivot being adapted to be submerged in the seal liquid, substantially as described. 18th. In an apparatus for automatically controlling the flow of gas to burners, the combination with the gas supply pipe, of a tank mounted thereon and providing a chamber to contain a seal liquid, said chamber being deeper upon one side than upon the other, and a cup pivoted to said tank in an inverted position at the shallow portion of said chamber, a latching mechanism supported upon said tank at the deeper part of said chamber and the edge of the cup, its pivot and latching mechanism, being adapted to be submerged in the seal liquid, substantially as described. 19th. In an apparatus for automatically controlling the flow of gas to burners, the combination, with the gas supply pipe, of a tank mounted thereon and adapted to contain a seal liquid, a cup pivotally mounted on said tank in an inverted position, said cup having its vertical wall truncated and the pivot being applied to the shorter side of said cup, whereby it may be moved by the gas pressure without lifting its edge above the seal, substantially as described. 20th. In an apparatus for automatically controlling the flow of gas to burners, the combination with a gas supply pipe, of a coverless tank or receptacle to contain a liquid seal, a cup pivotally mounted upon said tank in an inverted position, and a burner mounted upon said cup, and having a prolongation of the burner tube adapted to dip into the seal liquid, substantially as described. 21st. In an apparatus for automatically controlling the flow of gas to burners, the combination, with a gas supply pipe, of a tank or receptacle mounted thereon and adapted to contain a liquid seal, and a cup substantially rectangular in form pivotally mounted upon said tank in an inverted position and having a burner and valve mechanism connected therewith, substantially as described. 22nd. In an apparatus for automatically controlling the flow of gas to burners, the combination, with a gas supply pipe, of a tank mounted thereon and adapted to contain a liquid seal, a cup pivotally mounted upon the tank in an inverted position, said cup having a pin upon its side opposite the hinge, and a latching mechanism mounted upon the inner wall of the tank, said hinge, pin and latching mechanism being adapted to be submerged in the seal liquid, substantially as described. 23rd. In a pressure operated device for automatically controlling the flow of gas to burners, the combination, with a gas supply pipe, of a tank mounted thereon and adapted to contain a liquid seal, a cup pivotally mounted upon said tank in an inverted position and having a valve to control the flow of gas, a latching mechanism comprising a pin and a cam, one of which is carried by the tank and the other by the cup and said cam having a groove which is traversed by the pin, said cam being pivotally mounted and adapted to be moved upon its pivot by the pin when the cup is raised by the gas pressure, and also provided with a seat to sustain the pin upon a decrease of pressure and adapted to be further moved upon a subsequent operative increase whereby the pin is carried out of its seat, and the cup permitted to descend upon a decrease in the second operative variation of presure, substantially as described. 24th. In a pressure operated device for automatically controlling the flow of gas to burners, the combination, with a gas supply pipe, of a tank mounted thereon, and adapted to contain a liquid seal, a cup pivotally mounted upon said tank in an inverted position and having a valve to control the flow of gas, a latching mechanism one member whereof is carried by the tank and the other by the cup and adapted to sustain the cup when the valve is open and means for igniting the gas comprising a lighting device, a battery, a conductor connected to opposite poles of the battery and including the lighting device, said conductor having a break therein, and a circuit closer operated by the movable cup, said latching mechanism being adapted to permit the cup to move sufficiently to close the electrical circuit upon an operative increase of the gas pressure sufficient to open the valve and to limit its movement upon a subsequent operative increase of gas pressure to prevent closing the electrical circuit, substantially as described. 25th. In a gas lighting apparatus, the combination, with a gas supply pipe and a valve for controlling the flow of gas to the burner, of electrical means for lighting the gas comprising a lighting device, a battery and a conductor connected to opposite poles of the battery and including the lighting device, a break in the conductor, and a pressure operated circuit closer, and an auxiliary lighting device comprising a thief or by pass for maintaining a pilot light at or in proximity to the burner tip, substantially as described. 26th. In an automatic gas lighting apparatus, the combination with a gas supply, a burner and a valve for controlling the supply of gas to the burner of an electric igniting apparatus included in a normally open electric circuit, a circuit closer operated by variations of gas pressure, said igniting apparatus having electrodes by which ignition is effected, and means for separating the burner and electrodes after ignition is effected whereby the electrodes may be maintained without the influence of the gas flame, substantially as described. 27th. In an automatic gas lighting apparatus, the combination with a gas supply pipe, a burner and a valve for controlling the flow of gas to the burner, of an electric gas igniting apparatus included in a normally open electric circuit and a suitable circuit closer and said lighting device and burner being adapted to be brought into lighting proximity by an operative increase of gas pressure to effect ignition and to be separated upon a change of said pressure whereby the lighting device is without the influence of the flame during the maintenance of the light, substantially as described. 28th. In an automatic means for lighting gas, the combination with a gas pupply pipe, burner and valve for controlling the flow of gas to the burner, of an electric gas igniting apparatus included in a normally open electric circuit, a suitable circuit closer operated by variations of gas pressure, and said lighting device and burner being normally separated and means for bringing them into lighting proximity whereby to effect ignition and the burner and lighting device being adapted to resume their normal relation after ignition, substantially as described. 29th. In an automatic gas lighting apparatus, the combination with a gas supply pipe, a burner and a valve for controlling the supply of gas to the burner of an electric ignition device included in a normally open electric circuit and a circuit closer the movable member whereof is in the form of an inverted cup, exposed to the gas pressure and adapted to be moved by an operative variation thereof, whereby to close the electric circuit through the ignition device, substantially as described. 30th. The combination of a gas supply pipe, burner and valve controlling the flow of gas to the burner and means for igniting the gas, said means comprising a battery, a lighting device and a conductor connected to opposite poles of the battery and including the lighting device, said conductor having a break therein and a circuit closer operated by variations of the gas pressure whereby to establish an electrical circuit through the lighting device to ignite the gas, said circuit being in the form of an inverted cup or vessel whose hollow forms a chamber which the gas pressure is exerted, substantially as described. 31st. The combination of a gas supply pipe, burner and valve controlling the flow of gas to the burner and means for igniting the gas, said means comprising a battery, a lighting device and a conductor connected to opposite poles of the battery and including the lighting device, said conductor having a break therein, and a circuit closer operated by variation of the gas pressure whereby to establish an electrical circuit through the lighting device to ignite the gas, said circuit closer being in the form of an inverted cup or vessel whose hollow forms a chamber in which the gas pressure is exerted, substantially as described. 32nd. In a gas lighting apparatus, the combination with a gas supply pipe and a valve for controlling the

flow of gas to the burner, of electrical means for lighting the gas comprising a lighting device, a battery and a conductor connected to opposite poles of the battery and including the lighting device, a break in the conductor, and a pressure operated circuit closer, and a thief or by-pass for conducting a sufficient quantity of gas around the valve and to or in proximity to the burner tip, whereby the lighting of the gas at the tip may be affected when the valve is open to the burner tip, substantially as described.

No. 43,768. Changeable Sign and Label.
(*Etiquette et enseigne variables.*)

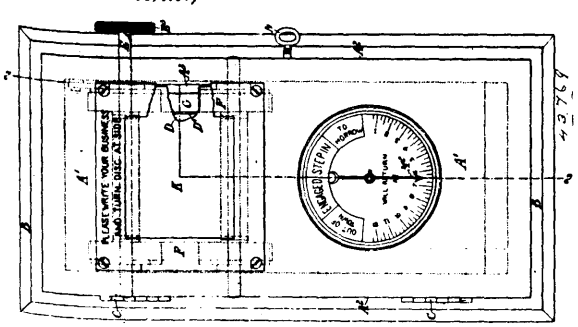
FIG. 5.



Charles Andrew Gildemeyer, Haddonfield, New Jersey, U.S.A., 28th July, 1893; 6 years.

Claim.—1st. In a changeable sign or label, the combination of a backing, a leaflet permanently secured thereto, composed of a series of leaves secured together, and a case or holder whereby said leaves may be held in folded form with either leaf uppermost, substantially as described. 2nd. The combination in a sign or label, of a series of leaflets each having leaves secured together, the leaflets being arranged adjoining each other, and the leaves of one leaflet overlapping the leaves of the other when opened, substantially as described. 3rd. The combination of the backing, a series of leaflets secured thereto, the leaves of said leaflets having thereon characters with a confining covering tending to hold the leaves in their adjusted positions and expose the characters thereon, substantially as described. 4th. The combination of a series of leaflets, the leaves of each leaflet being pivoted to each other, and with a cover plate having an open centre, with ways on which the cover plate slides, substantially as described. 5th. The combination of the pivoted leaf, with an extension pivoted thereto, and having a character thereon and a cover plate having an open centre, substantially as set forth.

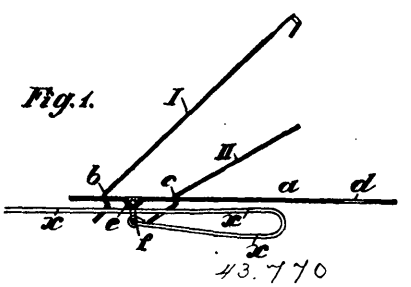
No. 43,769. Apparatus for Receiving Written Messages. (*Appareil pour recevoir les messages écrits.*)



Frederick William Schafer, London, England, assignee of Charles Rogers, New Plymouth, New Zealand, 28th July, 1893; 6 years.

Claim.—1st. In a device for receiving written messages or the like the combination with a case writing surface or table and slots through which a strip of paper may be passed from the inside of the case across the outer surface of the table and again to the interior of the case, of means for moving the paper from the inside of the case across the table and back again to the inside of the case, as set forth. 2nd. In a device for receiving written messages or the like, the combination with a case having at its front an opening and a table fitting into this opening of a roller shaft and milled head for moving a strip of paper across the table, as set forth. 3rd. In a device for receiving written messages or the like, the combination with a case having a table and spaces or slots through which the paper may be passed from the interior to the exterior and back again to the interior of the case, of a roller shaft ratchet and pawl and milled head, as set forth. 4th. In a device for receiving written messages or the like, the combination with a case having a table and spaces or slots through which the paper may be passed from the interior to the exterior and back again to the interior of the case of a roller shaft frame ratchet and pawl milled head and spring pressure, as set forth. 5th. In a device for receiving written messages or the like, the combination with a case having a table and spaces or slots through which the paper may be passed from the interior to the exterior and back again to the interior of the case of two rollers, two shafts, an endless band, and a frame, as set forth. 6th. In a device for receiving written messages or the like, the combination with a case having a table and spaces or slots through which the paper may be passed from the interior to the exterior and back again to the interior of the case of four rollers two shafts, two endless bands, a frame, and a ratchet and pawl device, as set forth. 7th. In a device for receiving written messages or the like, the combination with a case having a table and spaces or slots through which the paper may be passed from the interior to the exterior and back again to the interior of the case of four rollers two shafts, two endless bands, a frame, a ratchet and pawl device and a spring pressure device, as set forth. 8th. In a device for receiving written messages or the like, the combination with a case having a table and spaces or slots through which the paper may be passed from the interior to the exterior and back again to the interior of the case and a device for moving the paper across the writing surface of an indicator adjustable only from the inside of the apparatus, as set forth. 9th. In a device for receiving written messages or the like, the combination of a case having a table and spaces or slots through which the paper may be passed from the interior to the exterior and back again to the interior of the case, four rollers, two shafts, two endless bands, a frame, a ratchet and pawl device, a spring pressure device and indicator, as set forth and illustrated in the accompanying drawings.

No. 43,770. Belt Fastener. (*Agrafe de courroie.*)



David Pasztor, Berlin, Prussia, 29th July, 1893; 6 years.

Claim.—1st. In a clip or connecting device for belts, etc., the combination of the plate *a*, and the pivoted plate *l*, having a hook at one end passing through a slot in the plate *a*, one end of the belt being connected to the said hook, and the other end gripped between the short arm of the plate *l*, and the plate *a*, when the plate *l* is forced into the same plane as the plate *a*, substantially as and for the purpose specified. 2nd. A clip or connecting device for belts, etc., consisting of the plate *a*, in combination with the plates *l* and 2, pivoted in the plate *a*, and arranged to grip the belt between their shorter arms and the plate *a*, when forced down into the plane of the said plate, substantially as and for the purpose specified. 3rd. A clip or connecting device for belts or the like which also enables varying the length of such belt, etc., consisting of the arrangement and construction of the plate *a*, in combination and acting in conjunction with two plates such as 1 and 2 (arranged to act lever fashion in the plate *a*) to grip the belt, etc., between the said plates, and one or more swellings in the plate *a*, when the plates 1 and 2 are forced down into the plane of the plate *a*, all arranged, constructed, combined and acting substantially in the manner and for the purpose hereinbefore described and illustrated in the drawings hereunto annexed.

No. 43,771. Method of Producing Cement.
(*Méthode de production de ciment.*)

Verner Frederick L. Smidth, Copenhagen, Denmark, 29th July, 1893; 6 years.

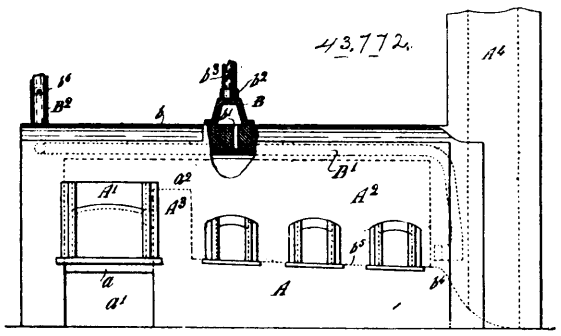
Claim.—The process of producing cement called sand cement, by mixing and grinding together in a dry state, portland cement, roman cement or any other cement of commerce with a filling material in a granular state or in pieces, such as sand, gravel, ballast, limestone, dolomit, granite, basalt or other materials that can be used as filling material, in proportions substantially as described.

No. 43,772. Furnace. (*Fournaise.*)

J. Roberts, Catasauqua, Pennsylvania, U.S.A., 29th July, 1893; 6 years.

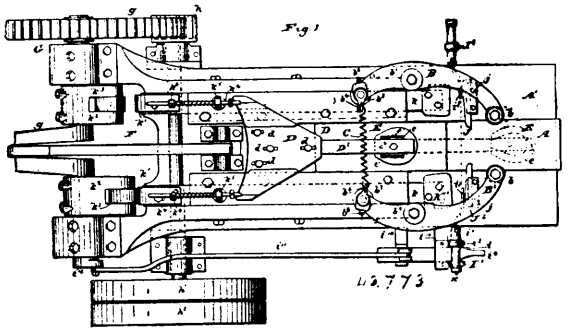
Claim.—1st. A furnace, having a fire chamber and puddling or heating chamber partially separated by a bridge wall, ports or passages for air or oxygen communicating with the puddling or heating chamber at its top and rearward of the bridge wall, and directing the air or oxygen directly downward into the puddling or heating chamber, and ports or passages for air or oxygen communicating with the rear portion of said puddling or heating chamber near its bottom, substantially as specified. 2nd. A furnace, having a fire chamber and puddling or heating chamber, partially separated by a bridge wall, ports or passages for air or oxygen communicating with the puddling or heating chamber at its top and

rearward of the bridge wall, and directing the air or oxygen directly downward into the puddling or heating chamber, ports or passages



communicating with the rear portion of said puddling or heating chamber near its bottom and pipes or flues extending along the walls of the furnace and communicating with said last named ports or passages, substantially as specified.

No. 43,773. Machine for Forming Horse-Shoes or Horse-Shoe Blanks. (*Machine pour former et ébaucher les fers à cheval.*)



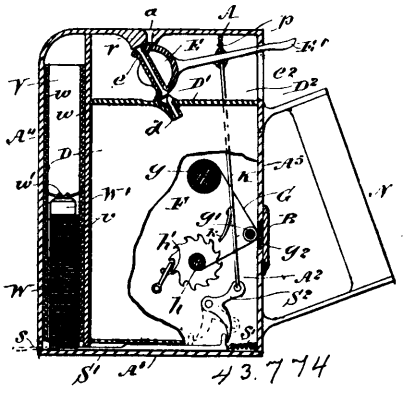
J. Roberts, Catasauqua, Pennyslvania, U.S.A., 29th July, 1893; 6 years.

Claim.—1st. In a machine for forming horse-shoes or horse-shoe blanks, the combination, with bending mechanism and swaging mechanism, of centering devices consisting of longitudinally yielding fingers, arms carrying said fingers and in which they are longitudinally adjustable, two rods extending through side pieces of the machine frame and each rod being rigidly connected to an arm and pressing loosely through the other arm, a spring for each rod and reciprocating ways or inclines for separating the centering devices, substantially as specified. 2nd. In a machine for forming horse-shoes and horse-shoe blanks, the combination, with bending mechanism, substantially such as described, and intermittingly acting swaging devices, of centering devices each comprising an upright arm, a tube longitudinally adjustable in said arm, a finger extending into said tube, a spring within the tube for forcing the finger longitudinally, a rod rigidly attached to each of said arms and passing loosely through the other springs for drawing said arms towards each other, and means operated from the main shaft for separating them, substantially as specified.

No. 43,774. Fare Box. (*Boîte à billets.*)

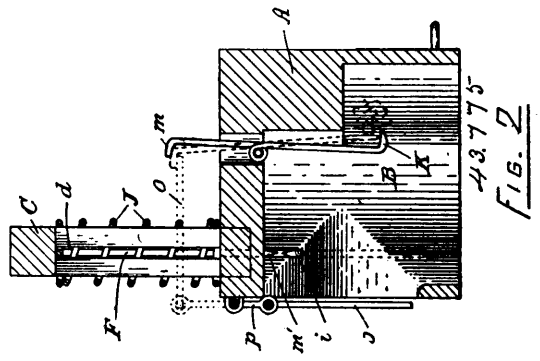
William Oliver Kennedy Ross, and Edward Louis Guaedinger, of Montreal, Quebec, Canada, 29th July, 1893; 6 years.

Claim.—1st. In a fare box, the combination, with a suitably partitioned casing having a fare inlet, of a movable fare receiver within the box adapted to control the passage of the fare into same and means for operating said receiver. 2nd. In a fare box, the combination, with a suitably partitioned casing having a fare inlet of a movable fare receiver and a registering device box, and means for operating said movable receiver and through it said registering device. 3rd. In a fare box, the combination, with a suitably partitioned casing having outer and inner fare inlets, of a moveable guide section or fare receiver located between said inlets and acting to control the passage of the fare from one to the other, fare registering mechanism connected with and actuated by said moveable fare receiver and the means for operating same. 4th. In a fare box having a fare chamber proper formed by the casing thereof and suitable partitions or walls, the combination, with the fare inlet in the outer casing and a fare inlet or passage in the inner wall of such fare chamber proper, of an intermediate movable guide section or fare receiver adapted to receive the fare from the outer inlet when in one position, and by change of position to allow of its passing through the inner inlet to the fare chamber proper, fare registering mechanism connected with and actuated by said movable fare



receiver and the means for operating same as set forth. 5th. In a fare box, the combination, with a suitable partitioned casing providing a fare chamber proper, outer and inner fare inlets, an intermediate movable fare receiver controlling the passage of the fare to the fare chamber proper, and fare registering mechanism operated by said movable receiver, of a ticket receptacle and feeding device actuated by said movable fare receiver as set forth. 6th. In a fare box, the combination, with the suitably partitioned casing providing a fare chamber proper, and a separate issue ticket receptacle with suitable openings, controlled fare inlet or passage to said fare chamber proper and controlling mechanism, a one way follower in said ticket receptacle adapted to bear upon the tickets filed therein, and a feed slide adapted to act upon the lowermost ticket of the pile with operating connections between said slide and the said fare passage controlling mechanism as set forth. 7th. In a fare box provided with inlet *a*, the combination of a movable channelled receiver E, means for operating same, partition D^1, provided with opening or chute *d*, partition F, retractile spring *p*, rod K, spools *g* and *h*, roller g^1, band G, and pawls h^1 and *k*, as shown and described.

No. 43,775. Animal Trap. (*Piège.*)



Jacob J. Poaps, Osnabruck Centre, Ontario, Canada, 29th July, 1893; 6 years.

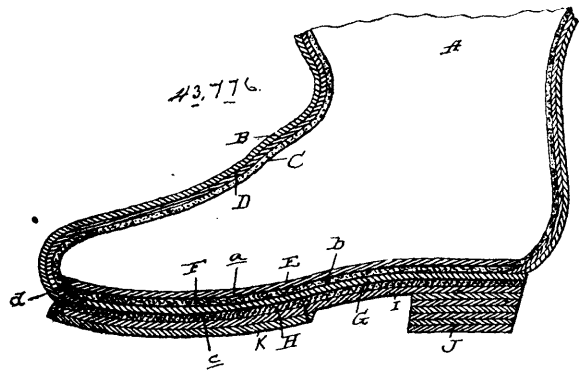
Claim.—1st. An animal trap consisting of a chambered body having a lateral opening and provided with a vertically moving staple having its ends formed as grab hooks for seizing the animal, and a spiral spring for operating said staple and grab hooks, substantially as shown. 2nd. In an animal trap the combination of a chambered body, with a vertically moving staple and grab hooks, a coil spring for operating the same, and a slotted standard to guide said staple and spring, substantially as shown. 3rd. The combination of the body A, staple F, with its grab hooks *i*, the spring J and slotted standard C, with the bait hook K, and lever O, substantially as herein shown and described.

No. 43,776. Rubber Boot. (*Chaussure de caoutchouc.*)

Benjamin A. Pickering, Parker J. Buxton and John Shambow, all of Woonsocket, Rhode Island, 29th July, 1893; 6 years.

Claim.—1st. The improved boot herein described, comprising the insole E, the leg and foot lining C, lapped over upon and connected to the underside of the insole, the filling sole F, interposed between the lapped edges of the lining C, and also connected to the underside of the insole, the vamp lining D, lapped over upon and connected to the underside of the filling sole F, the filling sole G, interposed between the lapped edges of the lining D, and connected to the

underside of the filling sole F, the vamp B, having its edges lapped and connected, the canvas sole H, of a greater length and width



than the soles E, F, G, connected to the underside of the sole G, the top sole I, and nails connecting said top sole to the boot, the said nails extending through the canvas sole H, the lapped edges of the linings C, D, and the vamp B, and the insole E, and serving to strengthen the connection of the same, substantially as and for the purpose specified. 2nd. The improved boot herein described, comprising the top sole, the insole E, the leg and foot lining C, lapped over upon and connected to the underside of the insole, the filling sole F, connected to the insole and resting between the lapped edges of the lining C, the vamp lining D, lapped over upon and connected to the underside of the filling sole F, the filling sole G, interposed between the lapped edges of the lining D, and connected to the underside of the sole F, the vamp B, having its edges lapped and connected, and the canvas sole H, of a greater length and width than the soles E, F, G, connected to the underside of the sole G, the whole being vulcanized into a homogenous mass, substantially as and for the purpose set forth.

No. 43,777. Submarine Boat. (*Bateau sous-marin.*)

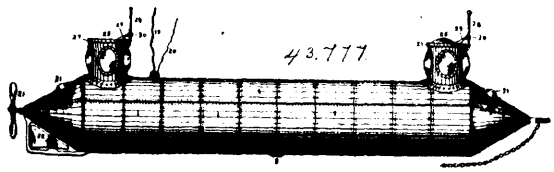
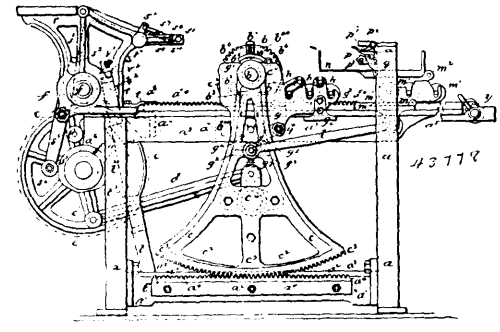


Fig. 1

James R. Haydon, of Cleveland, Ohio, U.S.A., 29th July, 1893; 6 years.

Claim.—1st. In a submarine boat, a cylinder 3, within an air tight casing with conical ends, said casing having an opening 9, therein, in open communication with the middle of the cylinder 3, in combination with two pistons 4 and 5, arranged within said cylinder 3, and operated by the right and left screw rod 6, 7, conjointly with the gear system and motor, whereby a volume of water may be admitted or forced out of the cylinder 3, as desired for sinking or raising the boat, substantially in the manner and for the purpose set forth. 2nd. In a submarine boat, in combination, an air tight casing, conical at each end and having lookouts 25 and 26, on top thereof, and interior cylinder 3, with opening 9, therein, the right and left screw piston rod 6 and 7, and pistons 4 and 5, operating conjointly with the motor and gear system, substantially in the manner as and for the purpose set forth. 3rd. In a submarine boat, an air tight casing, a cylinder of less size than the casing located in the bottom thereof, pistons located within the cylinder, a passageway extending from the cylinder between the pistons to the outside of the casing, and means carried within the casing for operating the pistons to admit water to, or expel it from the cylinder, substantially as described. 4th. In a submarine boat, a cylindrical casing, conical at both ends, a cylinder located in said casing with a passageway leading to the outside, means for admitting water to or expelling it from the cylinder, a motor located in the casing, and means for connecting the motor with the propelling device or with the water forcing means, as desired, substantially as described. 5th. In a submarine boat, with an exterior, air tight casing and an interior cylinder, the right and left screw rod 6 and 7, operating the two pistons in conjoint operation with the gear system and motor, whereby said pistons are caused to recede or approach each other for the purpose of filling or emptying the cylinder of water, and sinking or raising the boat, substantially in the manner specified.

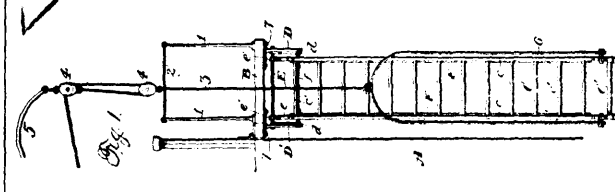
No. 43,778. Printing Press. (*Presse d'imprimerie.*)



Charles Butterfield, Nottingham, England, 29th July, 1893; 6 years.

Claim.—1st. In letterpress and lithographic printing machinery, the arrangement and combination, with a dipping feed table, of parts for gripping the sheet on the feed table and presenting the lower edge thereof in proper position to be taken by the cylinder grippers, substantially as herein shown and described. 2nd. In letterpress and lithographic printing machinery, the combination of a travelling and rotating cylinder and mechanism for carrying, rotating and traversing the same to and fro between the feed table and the retainer, substantially as shown and described. 3rd. In letterpress and lithographic machinery, the combination, with the travelling and rotating cylinder and mechanism for carrying, rotating and traversing the same to and fro between the feed table and the retainer of the arrangement of parts for giving rotary motion to the cylinder in one direction of its traverse and for preventing the rotation thereof in the contrary direction, substantially as shown and described. 4th. In a letterpress and lithographic printing machinery, the peculiar combination of lever frame *t*, and parts acting therewith and with the cylinder for preventing rotary motion of the cylinder when the impression is thrown off, and for permitting rotary motion thereof when the impression is thrown on, substantially as herein shown and described. 5th. In letterpress and lithographic printing machines, having a travelling and rotating cylinder as herein described, the arrangement and combination of means for opening and holding the cylinder grippers open when the cylinder is travelling in the one direction and for closing them when the cylinder is travelling in the contrary direction, substantially as herein shown and described, and for the purpose stated. 6th. In letterpress and lithographic printing machinery, having a travelling and rotating cylinder, the combination therewith, of a retainer for receiving the printed sheet from the cylinder, of mechanism for actuating the cylinder, substantially as herein shown and described. 7th. In letterpress and lithographic printing machinery, having a travelling and rotating cylinder, the combination therewith of a frame carrying the distributing rollers and receiving table, and of means for operating such frame so that the distributing rollers shall have a lower motion than that given to the cylinder, substantially as herein shown and described.

No. 43,779. Ladder. (*Echelle.*)

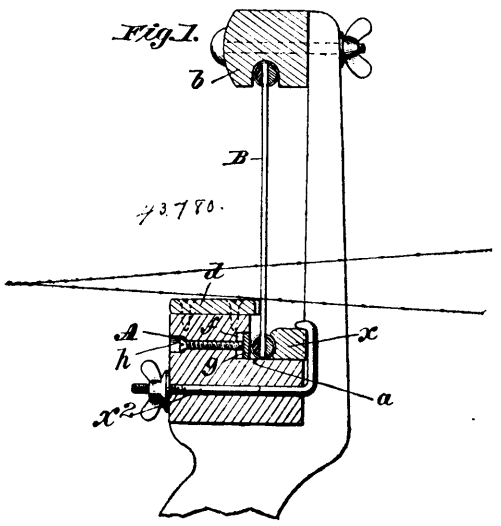


William E. Richards, New York, State of New York, 29th July, 1893; 6 years.

Claim.—1st. The combination in a ladder or similar structure, of a suspending bracket, main and auxiliary portions pivotally as suspended from said bracket, steps or treads pivotally mounted in both of said portions, the pivotal connection of one of said portions being movable, so as to admit of the adjustment of the plane of the steps or treads as the position of the structure is changed, substantially as set forth. 2nd. The combination in a ladder or similar structure of a suspending bracket, of main and auxiliary portions pivotally suspended from said bracket steps or treads pivotally mounted in both of said portions, a variable bearing operating the auxiliary portion as the ladder itself is moved, and means for raising and lowering the ladder, substantially as set forth. 3rd. The combination, with a structure, of a ladder mounted thereon, having a main and an auxiliary portions being pivotally supported and separately suspended in suitable bearings, steps or treads pivotally mounted in both the main and auxiliary portions, said auxiliary portion being suspended in a variable bearing that imparts independent movement to the auxiliary portion whenever the ladder is moved, sub-

stantially as set forth. 4th. The combination in a ladder or similar structure, of a suspending bracket, a main frame pivotally suspended from a rigid bearing in said bracket, an auxiliary portion pivotally suspended therefrom and free to move in a variable bearing in said bracket, steps or treads pivotally mounted in both said main and auxiliary portions, said main and auxiliary portions being capable of motion independently of each other, whereby the position of the steps is changed as the ladder is moved from one position to another, substantially as set forth. 5th. In a ladder of similar structure such as described, a bracket provided with a bearing, one end of which is open, substantially as set forth. 6th. The combination in a ladder or similar structure, of a suspending bracket with its bearings, main and auxiliary portions pivotally suspended from said bracket in such bearings, and steps or treads pivotally supported between said main and auxiliary portions, one of said portions of the ladder being provided with suitable openings to permit the passage and operation of the shaft or bar upon which the other of said portions of the ladder is supported, substantially as shown and described. 7th. The combination with the depending brackets adapted to be secured to a gangway or platform, and each provided with a cam bearing, of a ladder pivotally suspended from said brackets, an auxiliary portion engaging said cam bearings, together with a series of steps pivotally mounted in the main and auxiliary portions of the ladder, as set forth. 8th. In a ladder, the segmental bracket D, D^1, provided with bearings d^5 to receive the bar E for supporting the ladder, and with the d, d^1 forming an inclined bearing for supporting an actuating and auxiliary portion, substantially as shown and described.

No. 43,780. Loom. (*Métier à tisser.*)

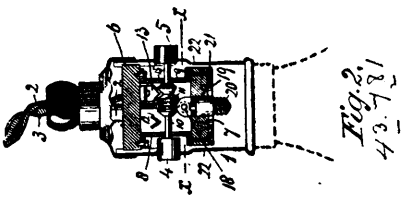


Joseph William Sheney, Three Rivers, Massachusetts, U.S.A., 29th July, 1893; 6 years.

Claim.—1st. In a loom, the lay beam having a depression at its rear, a transversely adjustable strip in the vertical face of said depression engaging one side of the lower rib of the reed, and clamping devices, substantially as described, engaging the opposite side of said rib and securing the same to the lay beam, combined and operating substantially as set forth. 2nd. In a loom, in combination, the reed, the lay beam having a depression at its rear, reed rib clamping devices, as x and x^2, securing the lower rib of the reed to the lay, and an adjustable rear bearing for said rib in the vertical wall of said depression whereby the dents of the reed are adjusted and maintained in a position away from the edge of the race board of the lay, combined and operating substantially as set forth. 3rd. In a loom, the step formed lay beam having the groove f, the strip g, within said groove, one or more adjusting screws therefor, the reed, and clamping devices, substantially as described, securing the lower rib of the reed to the beam, combined and operating substantially as set forth. 4th. In a loom, the lay beam having a depression at its rear, a longitudinal bearing for the lower reed rib on the vertical face of said depression, and clamping devices, substantially as described, engaging the opposite side of said rib and securing the same to the lay beam, combined and operating substantially as set forth. 5th. In a loom, the lay beam having a depression of its rear, a longitudinal bearing for the lower reed rib on the vertical face of said depression, the race board having its edge opposite the reed dents, projecting beyond the vertical face of said depression, and clamping devices, substantially as described, engaging the opposite side of said rib and securing the same to the lay beam, combined and operating substantially as set forth. 6th. In a loom, the combination of the lay beam, the reed extending down past the top of said beam, and means for adjusting the lower end of said reed toward or away from the race board, on the beam, substantially as described.

No. 43,781. Incandescent Lamp Socket.

(*Douille pour lampes à incandescence.*)



George G. Layayette, Brockville, Ontario, Canada, 29th July, 1893; 6 years.

Claim.—1st. An incandescent lamp socket provided with a push key. 2nd. An incandescent lamp socket provided with a push key having a sliding electrical contact. 3rd. An incandescent lamp socket provided with a double headed push key, the heads being of different colours or shape for distinction. 4th. An incandescent lamp socket provided with a double headed push key extending diametrically through both sides thereof. 5th. An incandescent lamp socket provided with a push key consisting of reciprocating electrical contact rod, and means for holding the rod in or out of electrical contact. 6th. An incandescent lamp socket, provided with a push key consisting of a reciprocating electrical contact rod having an enlargement between its ends, and catches in the socket for alternately holding the key in or out of the electrical contact, one of said catches being insulated and the other located in the electrical circuit. 7th. An incandescent lamp socket, provided with a push key consisting of a reciprocating electrical contact rod, and spring arms for alternately retaining the key in or out of electrical contact, one of said arms being insulated and the other located in the electrical circuit. 8th. An incandescent lamp socket, provided with a push key consisting of a reciprocating electrical contact rod, having a grooved enlargement between its ends, and spring arms with ridges adapted to alternately engage the said grooved enlargement and retain the key in or out of electrical contact, one of said arms being insulated and the other located in the electrical circuit. 9th. An incandescent lamp socket, consisting of a casing with lateral openings, a transverse reciprocating rod, forming a push key and having heads projecting through said openings, and an enlargement between its ends, an insulated spring catch for holding the key out of electrical contact, and a spring catch located in the electrical circuit for holding the key in electrical contact in combination with suitable electrical circuit connection, as set forth.

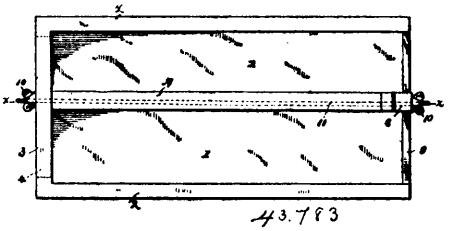
No. 43,782. Medicinal Compound.

(*Composition médecinale.*)

Adeline Boyer, Ste. Thérèse de Blainville, Quebec, Canada, 31st July, 1893; 6 years.

Résumé.—Un onguent composé d'arcanson ou résine, de graisse saindoux, de "Pain Killer," de "Sauveur du Peuple," de whisky, de camphre, de cire jaune, d'huile de pétrole ou huile à lampe, de savon "Figaro," et de sirop d'érable, le tout préparé et dans les proportions susdites et pour les fins sus-mentionnées.

No. 43,783. Printer's Galley. (*Galée.*)



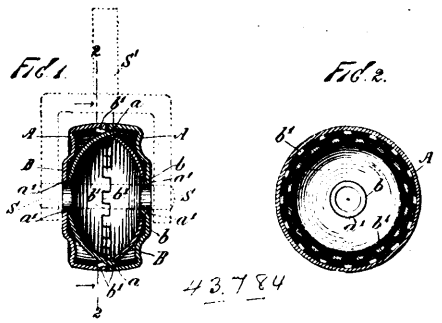
William T. Near and Daniel J. Deegan, both of Bridgeport, Connecticut, U.S.A., 31st July, 1893; 6 years.

Claim.—1st. In a galley, the combination, with a head having a slot through it from side to side and extending from side piece to side piece, of a side stick made in sections one of which abuts against the head, the other being provided with a hook engaging the bottom, and suitable means, substantially as described and shown, for locking the side stick at each end. 2nd. The combination, with the head of a galley having a slot through it from side to side and extending from side piece to side piece, of a side stick made in sections one of which abuts against the head of the other, being provided with a hook engaging the bottom, a rod extended longitudinally through the sections of the side stick and threaded at each end, and thumb pieces engaging the end of the rod whereby the side stick is located in position after adjustment. 3rd. The combination, with the head of a galley having a slot through it from side to side and extending from side piece to side piece, of a side stick made in

sections the ends of which are inclined to prevent type from getting between them, the outer end of one section abutting against the head and the outer end of the other section, having a hook engaging the bottom, a rod extending longitudinally through the sections and thumb pieces engaging the ends of the rod whereby the side stick is locked in place.

No. 43,784. Hollow Wheel or Roller.

(*Roue creuse ou rouleau.*)

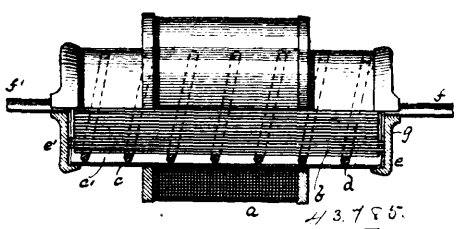


Ernest Gustav Hoffmann, New York, State of New York, U.S.A., 31st July, 1893; 6 years.

Claim.—1st. A wheel or roller composed of two metal parts or shells held together by a spring device located within the wheel or roller, said spring device engaging with the inner surface of each of the shells. 2nd. A roller or wheel composed of two parts or shells held together interiorally by means of two discs, the extremities of which engage with the interior surfaces of said parts or shells. 3rd. A hollow wheel or roller composed of two sections held together by two discs provided with interlocking teeth on their periphery, which engage with the interior surfaces of said sections. 4th. The combination of a hollow wheel or roller composed of two parts or shells, two discs located within the shells provided with interlocking teeth on their peripheries which engage with the inner surface of the shells to lock the two shells together and a spindle passing through the roller, arranged to be held in suitable bearings. 5th. The combination of a hollow wheel or roller, composed of two parts or shells, an indentation or groove running around the inner face near the periphery of each of said shells, and a spring device located within the roller or wheel which engages with said grooves on the inner surfaces of the shells. 6th. A roller or wheel composed of two parts or shells held together interiorally by means of two conical spring discs the extremities of which engage with the interior surfaces of said parts or shells. 7th. A hollow wheel or roller composed of two parts or sections securely held together by means located within the roller. 8th. A hollow wheel or roller composed of two parts or sections securely held together by a device located within the wheel or roller which engages with the inner surface of each of said parts or sections. 9th. A hollow wheel or roller composed of two parts or sections securely held together by two devices located within the wheel or roller, said devices being adapted to engage with each other and with said parts or sections.

No. 43,785. Electric Heater.

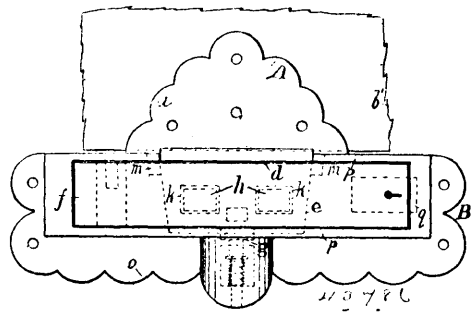
(*Appareil de chauffage électrique.*)



Earl Porter, Wetmore, Helena, Montana, U.S.A., 31st July, 1893; 6 years.

Claim.—1st. In an electric heater, the combination of a primary coil, through which alternating currents flow, a metallic cylinder constituting a secondary coil or circuit inside of the primary, an iron core inside of said cylinder, removable heads inclosing the ends of said cylinder, said heads provided with ports, a chamber being formed between the core and cylinder for the passage of a fluid, for the purpose set forth. 2nd. In an electric heater, the combination of a primary coil, through which alternating currents flow, a metallic cylinder constituting a secondary coil or circuit inside of the primary, an iron core inside of said cylinder, removable heads inclosing the ends of the said cylinder, said heads provided with ports, a chamber being formed between the core and the cylinder for the passage of fluid, and a spiral partition in said chamber, for the purpose set forth.

No. 43,786. Trunk Fastener. (*Agrafe pour coffres.*)

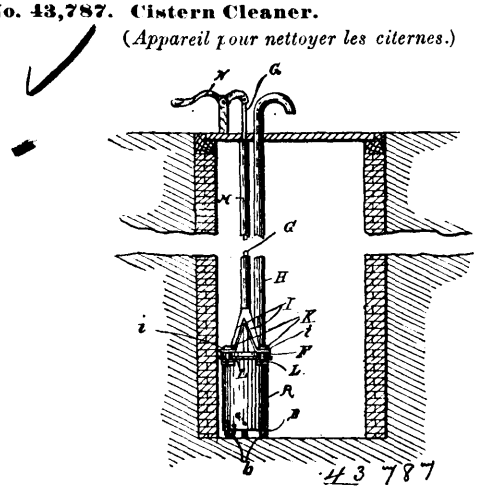


Joshua L. Jones, Chicago, Illinois, U.S.A., 31st July, 1893; 6 years.

Claim.—1st. The combination, with a trunk lid, having a rigid tongue, of an automatically acting check and latch, operated by said tongue, and it locked by the latch, substantially as specified. 2nd. The combination with a trunk lid, having a rigid tongue, of an automatically acting check and latch, provided with an automatic lock, said check and latch operated by said tongue, and it locked by the latch, substantially as specified. 3rd. The combination with a trunk lid, having a rigid tongue, of an automatically stopped latch, provided with automatically locking bolt, a notched wall on a bed plate surrounding and holding said latch, and means for fastening said bed plate, substantially as specified.

No. 43,787. Cistern Cleaner.

(*Appareil pour nettoyer les citernes.*)



Frank Overton and John Faught, both of La Grange, Indiana, U.S.A., 31st July, 1893; 6 years.

Claim.—In a lifting pump, adapted to be located in a well or cistern, the combination, with the pump cylinder A, provided with the removable top or cover F, having vertical expelling tube H, the perforated lugs L, the standards I, bent at their lower ends to form feet *i*, overlapping the edge of cover F, and the fastening bolts, of the stationary guide tube M, secured to standards I, and extending to the top of the well or cistern, and the pump rod and valves, substantially as and for the purpose described.

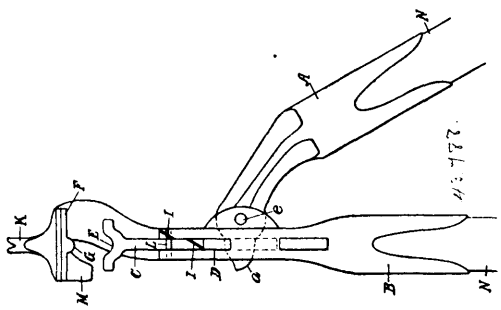
No. 43,788. Grip Tool for Wire Fences.

(*Outil pour clôtures en fil de fer.*)

Selden S. Casey, Hugh McKay and Hugh A. Stringer, London, Ontario, Canada, 31st July, 1893; 6 years.

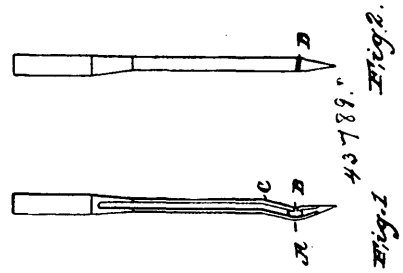
Claim.—1st. A standard B provided with a solid overhanging head *b*, an elongated groove D, and with a slot or opening H, and a plate F provided with a projection or die G, in combination with a plunger C provided with an elongated groove or recess E in its upper face, and with a slot or opening O, and the lever A having the portion *a* extending through the slots or openings O, H, in the plunger C, and standard B respectively, substantially as shown and described and for the purpose specified. 2nd. A standard B provided with a hook M, a solid overhanging head *b*, an elongated groove D, and with a slot or opening H, and a plate F provided with a projection or die G, in combination with a plunger C, provided with an elongated groove or recess E in its upper face, and

with a slot or opening O, and a lever A, having the portion *a* extending through the slots or openings O, H, in the plunger C and



standard B respectively, substantially as shown and described and for the purpose specified. 3rd. A standard B, provided with an elongated groove D, a slot H and a cutter I, in combination with a plunger C, provided with a cutter I, in combination with a plunger C, provided with a cutter I, and with a slot or opening O, and a lever A, having the portion *a* extending through the slots or openings O, H, in the plunger C and standard B respectively, substantially as shown and described and for the purpose specified. 4th. A standard B, provided with an overhanging head *b*, a hook M, staple puller K, cutter I, elongated groove D, and slot or opening H, and a plate F formed with a projection or die G, in combination with a plunger C, provided with a cutter I, an elongated groove or recess E, and with a slot or opening O, and a lever A, having a portion *a* extending through the slots or openings O, H, in the plunger C and standard B respectively, substantially as shown and described and for the purpose specified.

No. 43,789. Needle. (*Aiguille.*)



Nina H. Piffard, of Piffard, New York, U.S.A., 31st July, 1893; 6 years.

Claim.—1st. A sewing machine needle having a bend at its eye, and a lateral notch or slot entering the eye at the inside of the bend. 2nd. A sewing machine needle having two bends in its longitudinal axis, one at the eye into which a slot opens from the inside of the bend or angle, and the other a reverse bend at a higher point adapted to bring the point of the needle directly in line with the head.

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

3038. THE GRIP PRINTING AND PUBLISHING COMPANY, (assignees) 3rd five years of No. 17,166, from the 4th day of July, 1893. Improvements in Black Leaf Check Books, 3rd July, 1893.

3039. WALTER B. NOYES, 2nd five years of No. 29,596, from 31st day of July, 1893. Improvements in Bed Bottoms, 7th July, 1893.

3040. JOHN J. LAPPIN, 3rd five years of No. 17,213, from the 11th day of July, 1893. Improvements in the Art or Process of Manufacturing Brake Shoes for Braking Car Wheels in Railway Trains and other Car Wheels, 10th July, 1893.

3041. ROBERT SMALLWOOD, 2nd five years of No. 29,476, from the 10th day of July, 1893. Improvements in Stepped Cone Pulleys, 10th July, 1893.

3042. THE ALABASTINE COMPANY, (assignees) 3rd five years of No. 17,231, from the 12th day of July, 1893. Improvement in Feed Regulators for Grinding Mills, 11th July, 1893.

3043. THE ALABASTINE COMPANY, (assignees) 3rd five years of No. 17,257, from the 13th day of July, 1893. Improvements in Grinding Mills, 11th July, 1893.

3044. HENRY F. COOMS, 3rd five years of No. 17,226, from the 12th day of July, 1893. Improvements on Boats, 12th July, 1893.

3045. CROYDON WHEAT and ALFRED CATCHPOLE, 3rd five years of No. 17,355, from the 24th day of July, 1893. Improvements on Heating Apparatus, 15th July, 1893.

3046. FRANK B. HOWARD, 2nd five years of No. 29,512, from the 19th day of July, 1893. Improvements in Apparatus for Manufacturing Hollow Ware from Pulp, 15th July, 1893.

3047. THE CANADIAN PACIFIC RAILWAY COMPANY, (assignees) 2nd five years of No. 30,621, from the 24th day of January, 1894. Improved Attachments to Rotary Snow Plough, 17th July, 1893.

3048. WILLIAM H. HART, 2nd five years of No. 30,083, from the 2nd day of November, 1893. Improvements in Making Hinge Leaves, 19th July, 1893.

3049. HUGH REID, 2nd five years of No. 29,638, from the 4th day of August, 1893. Improvements in interlocking apparatus for Railway Point and Signal Levers, 19th July, 1893.

3050. HARRY H. WADDINGTON, 2nd five years of No. 31,623, from the 18th day of June, 1894. Improvements in the vulcanization of water-proofed fabrics and other india rubber goods, in continuous lengths, and in apparatus employed therefor, 19th July, 1893.

3051. THEODORE H. BROWN, 2nd five years of No. 29,669, from the 13th day of August, 1893. Improvements in Combined Sheathing Lath, 20th July, 1893.

3052. JAMES LOCKHART, 2nd five years of No. 29,544, from the 24th day of July, 1893. Improvement in the Manufacture of Hosiery, 20th July, 1893.

3053. CARL A. JOHANNSON, 2nd five years of No. 29,607, from the 1st day of August, 1893. Improvements relating to the manufacture of butter and to apparatus therefor, 20th July, 1893.

3054. DAVID S. KEITH and ALEXANDER KEITH, 2nd five years of No. 29,526, from the 21st day of July, 1893. Improvements in Water Closet apparatus, 21st day of July, 1893.

3055. FREDERICK C. MERCIER, 2nd five years of No. 29,624, from the 1st day of August, 1893. Combined Washing, Scalding and Snow Melting Apparatus, 21st July, 1893.

3056. ISAAC S. SHERWIN and FREDERICK M. TUCKETT, 2nd five years of No. 29,536, from the 24th day of July, 1893. Improvements on Farm Gates, 24th July, 1893.

3057. CHARLES H. LAND, 2nd five years of No. 29,585, from the 28th day of July, 1893. Improvements in Operative Dentistry, 27th July, 1893.

3058. HENRY DENNIS, JOHN MAUNDER and R. A. BRADSHAW, 2nd five years of No. 29,660, from the 8th day of August, 1893. Improvements by means of which an ordinary wooden pump may be converted into a force pump or used as an ordinary pump and for attaching hose to pump or other spouts, and for attaching other tubes where water tight attachment is required, 28th July, 1893.

TRADE MARKS

Registered during the month of July, 1893, at the Department of Agriculture—Copyright and Trade Mark Branch.

4681. DALBY & CLAXTON, of Victoria, B.C. Salmon, 3rd July, 1893.

4682. ANTOINE CARRIER & LOUIS AUGUSTE CARRIER, de Lévis, Que. Farine, 3 juillet 1893.

4683. JOSEPH COWEN & CO., of Blaydon Burn, Blaydon-on-Tyne, Durham, England. Fire Bricks of all kinds, Fire Clay Retorts, Tiles, Quarles, Pipes and Lumps, 3rd July, 1893.

4684, 4685, 4686. WILLIAM WATSON OGILVIE, of Montreal, Que. Flour, 4th July, 1893.

4687. E. W. VILLENEUVE, of Montreal, Que. Cigars, 5th July, 1893.

4688. D. RITCHIE & CO., of Montreal, Que. Cut and Plug Smoking Tobaccos, Cigars, Cigarettes, Cheroots and Chewing Tobaccos, 7th July, 1893.

4689. D. RITCHIE & CO., of Montreal, Que. Cigarettes, 7th July, 1893.

4690. EDWIN EZRA HARRIS, of Kingsville, Ont. Canned Fruits and Vegetables, 7th July, 1893.

4691. MRS. ADELAIDE SMITHE, of Montreal, Que. Insecticides, especially Fly Paste, 13th July, 1893.

4692. LOUIS HENRY SENÉCAL, of Montreal, Que. Cement Sidewalks, 14th July, 1893.

4693. HUME BLAKE, of Toronto, Ont. Mineral Water, 14th July, 1893.

4694. NAPOLÉON THOMAS TURGEON, of Brompton Falls, Que. Cigars, 17th July, 1893.

4695. THE GEO. E. TUCKETT & SON CO., Ld., of Hamilton, Ont. Chewing Tobacco, 17th July, 1893.

4696. E. W. VILLENEUVE, of Montreal, Que. Cigars, 20th July, 1893.

4697. THE SUN LIFE ASSURANCE COMPANY OF CANADA, of Montreal, Que., Policies or Contracts of Assurance upon Human Life, 20th July, 1893.

4698. WILLIAM LOGAN, of St. John, N.B. Laundry Soap, 20th July, 1893.

4699. E. W. VILLENEUVE, of Montreal, Que. Cigars, 21st July, 1893.

4700. DUNCAN SHEPPERD, of Toronto, Ont. Proprietary Medicines, 21st July, 1893.

4701, 4702. THE PETTIJOHN CALIFORNIA BREAKFAST FOOD COMPANY, of Minneapolis, Minn., U.S.A. Certain Food Products known as Pettijohn's California Breakfast Food, 21st July, 1893.

4703. J. & J. COLMAN, of 108 Cannon Street, London, England. Starch, 22nd July, 1893.

4704, 4705, 4706. J & J. COLMAN, of 108 Cannon Street, London, England. Mustard, 22nd July, 1893.

4707. J. & J. COLMAN, of 108 Cannon Street, London, England. Mustard, Starch, Blue, and other preparations for Laundry purposes, Corn Flour, Wheaten Flour and Meal, Mustard Oil and Mustard Cake, 22nd July, 1893.

4708. NAPOLÉON THOMAS TURGEON, of Brompton Falls, Que. Cigars 24th July, 1893.

4709, 4710. NEWTON CHAMBERS & CO., Ld., of Thorncliffe Iron Works and Collieries, near Sheffield, England. Chemical Substances, used for Agricultural, Horticultural, Veterinary and Sanitary purposes, 27th July, 1893.

4711. BENJAMIN FRANKLIN BELL & ALEXANDER BREMNER, of Tilsonburg, Ont., trading as BELL & CO., Robes and Furs, 29th July, 1893.

4712. FREDERICK M. PILGRIM, of Hamilton, Ont. Mineral Water, Ginger Ales, &c., 29th July, 1893.

COPYRIGHTS

Entered during the month of July, 1893, at the Department of Agriculture—

Copyright and Trade Mark Branch.

6977. THE FARMER'S ACCOUNT BOOK. Robert D. Richardson, Winnipeg, Man., 3rd July, 1893.

6978. MERCANTILE AGENCY REFERENCE BOOK FOR CANADA, VOL. V., 1893. The Legal and Commercial Exchange of Canada, Toronto, Ont., 3rd July, 1893.

6979. OTTAWA CITY DIRECTORY, 1893-4. The Might Directory Company of Toronto, Ltd., Toronto, Ont., 3rd July, 1893.

6980. MONOFORMULA. Text Book of Geometry, followed by Treatises of Plane and Spherical Trigonometry and Approximate Mensuration, by J. L. Seguin, A.M., Mile End, Que., 7 juillet, 1893.

6981. THE WHIRLPOOL GAME (chart). William Eacrett, London, Ont., 8th July, 1893.

6982. THE WIFE OF FAIRBANK ON KIRKS AND MINISTERS, by Rev. Duncan McNaughton, M.A., North Keppel, Ont., 10th July, 1893.

6983. HISTORY OF THE EARLY MISSIONS IN WESTERN CANADA, by Very Rev. W. R. Harris. Hunter, Rose & Co., Toronto, Ont., 11th July, 1893.

6984. BECHER'S STERLING ADVANCE TABLES FOR IMPORTERS. Wm. S. Becher, Winnipeg, Man., 11th July, 1893.

6985. THE CRIMINAL CODE OF THE DOMINION OF CANADA, AS AMENDED IN 1893, WITH COMMENTARIES, ANNOTATIONS, ETC., by Henri Elzéar Taschereau, LL.D. The Carswell Co., Ld., Toronto, Ont., 12th July, 1893.

6986. THE ORANGEMAN'S EMBLEM. Words by M. P. Card. Music by W. G. Garnham. Maria Passmore Card, Guelph, Ont., 13th July, 1893.

6987. LA SERENATA. Italian Waltz, by H. L. d'Arcy Jaxone. J. R. La Fleur & Sons, London, Eng., 13th July, 1893.

6988. PROSPECTUS OF THE HAPPY HOME BUILDING SOCIETY (circular). Wm. Jones, Toronto, Ont., 14th July, 1893.

6989. THE DOMINION CONVEYANCER, by William Howard Hunter, B.A., Toronto, Ont., 15th July, 1893.

6990. LE DROIT PAROISSIAL, par P. B. Mignault, C.R. C. O. Beauchemin & fils, Montréal, Qué., 17 juillet 1893.

6991. THE LIFE AND WORK OF THE MOST REVEREND JOHN MEDLEY, D. D., First Bishop of Fredericton and Metropolitan of Canada, by William Quintard Ketchum, D. D. J. & A. McMillan, St. John, N.B., 19th July, 1893.

6992. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, MONTREAL EXCHANGE, SUBSCRIBERS' DIRECTORY, JULY, 1893. The Bell Telephone Company of Canada, Ld., Montreal, Que., 21st July, 1893.

6993. THE BUSINESS AND SYSTEM OF THE BIRKBECK INVESTMENT, SECURITY AND SAVINGS COMPANY (pamphlet). The Birkbeck Investment, Security and Savings Company, Toronto, Ont., 20th July, 1893.

6994. AFTER THE BALL. Waltz, arranged by Chas. Bohner. Whaley, Royce & Co., Toronto, Ont., 21st July, 1893.

6995. ENRAPTURED. Waltz Song, by Chas. J. Rockwell. Whaley, Royce & Co., Toronto, Ont., 21st July, 1893.

6996. A TRIP TO CHICAGO EXHIBITION. Words by James Fax. Music by Chas. Bohner. Whaley, Royce & Co., Toronto, Ont., 21st July, 1893.

6997. DILLON'S IMPROVED MILK PASS BOOK. Thomas J. Dillon, Mount Elgin, Ont., 21st July, 1893.

6998. DILLON'S IMPROVED MILK BOOK AND LEDGER COMBINED. Thomas J. Dillon, Mount Elgin, Ont., 21st July, 1893.

6999. DILLON'S WEEKLY MILK SHEET (form). Thomas J. Dillon, Mount Elgin, Ont., 21st July, 1893.

7000. ST. LAWRENCE YACHT CLUB WALTZ, by Mrs. Converse. Geo. J. Sheppard, Montreal, Que., 22nd July, 1893.

7001. CHANGERS' RULES. Martin Middleton Wilson, Llandudno, Carnarvon Co., Wales, England, 24th July, 1893.

7002. THE MONTREAL DIRECTORY, 1893-4. John Lovell & Son, Montreal Que., 25th July, 1893.

7003. THE GENERAL ASSEMBLY OF 1893 OF THE PRESBYTERIAN CHURCH IN CANADA (photo). Phœbe E. Park, Brantford, Ont., 26th July, 1893.

7004. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, HAMILTON AND DUNDAS EXCHANGES, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, JULY, 1893. The Bell Telephone Company of Canada, Limited, Montreal, Que., 28th July, 1893.

7005. THE HISTORY OF CANADA, VOL. VI. (1776-1779), with Maps by William Kingsford, LL.D., F.R.S.C., Ottawa, Ont., 31st July, 1893.

INDEX OF INVENTIONS.

Holder and cutter for paper rolls. Nelson R. Streeter.... 43,656
Holder for spools. Alfred F. Morgan..... 43,689
Hominy mill. Oden H. Titus..... 43,526
Horse-shoes. Machine for forming. Jacob Roberts..... 43,773
Horses. Apparatus for carrying and keeping. Carl Huhn 43,600
Hose coupling. Edward E. Gold..... 43,736
Hub band. George Monteith..... 43,630
Hydrant. Arthur Gravel..... 43,766
Hydrocarbon lighting device. Abraham S. Cody, et al.... 43,713
Indicator, for electrical power. George A. Lintner..... 43,710
Inhaler. John J. Hartnett..... 43,644
Injector. Ernest Korting..... 43,558
Insulator. Louis McCarthy..... 43,451
Joint: See cancelled joint, ball and socket joint, roofing joint.
Kiln. Wallace C. Trotter, et al..... 43,604
Knee cap. William R. Mulock..... 43,663
Knife: See bread and cake knife.
Knitting machines. Thread splicing mechanism for. George H. Coburn, et al..... 43,537
Knock down box. James C. Meem..... 43,722
Ladder. William E. Richards..... 43,779
Lamp: See electric glow lamp.
Lamp socket. George G. Lafeyette..... 43,781
Lantern. Lewis F. Betts..... 43,463
Last. Henry Goodrick..... 43,454
Lasting machine. John T. Avery..... 43,528
Lath: See sheathing lath.
Latrine and apparatus for flushing same. William Clark.. 43,515
Leaf holder for music. Joseph Wood, et al..... 43,552
Leather skiving machine. Andrew J. Tewksbury..... 43,484
Lever. Thomas A. Briggs..... 43,556
Lifting apparatus for sack barrows. William Robinson, et al..... 43,605
Lightning arrester. Elihu Thomson..... 43,596
Lightning arrester and discharge protector. Elihu Thomson 43,597
Liquids. Apparatus for heating and cooling. Fritz A. Kleeman..... 43,742
Lock. Frederick W. Harris..... 43,706
Lock for railway joints. John L. Pope..... 43,666
Loom. Joseph W. Cheney..... 43,780
Lubricator. Vital A. Emond..... 43,523
Measuring machine for stock taking. Abraham C. Scarr.. 43,688
Medicinal compound. Adeline Boyer..... 43,782
Medicinal compound. John M. McLeod..... 43,697
Messages, etc. Apparatus for receiving written. Charles Rogers..... 43,769
Metallurgical furnace. Michael R. Conley..... 43,548
Metals out of ores. Method of dissolving. Bernard C. Molley..... 43,692
Milk. Machine for purifying and bottling. William A. Clark..... 43,539
Milking machine. Bryan Atwater..... 43,541
Mitre machine. Rudolph B. Dettweiler..... 43,592
Motor: See electric motor, water motor.
Mould for butter. Charles Boeckh..... 43,618
Mould for earthenware. William West..... 43,602
Moulds. Apparatus for producing stereotyping, George Eastwood..... 43,579
Nail. Eben Perkins, et al..... 43,494
Needle. Nina H. Piffard..... 43,789
Nut lock. Gerolt Gibson..... 43,658
Nut lock. Israel Wolfe..... 43,655
Nut lock. L. R. Blumstengel..... 43,729
Oil pump. Robert O. Graham, et al..... 43,613
Optical illusions. Apparatus for exhibiting. Ottomar Anschutz..... 43,499
Ore. Apparatus for deoxidizing, melting and puddling iron. Henry A. Jones..... 43,465
Ores. Apparatus for extracting gold and silver from. John C. Montgomerie..... 43,524
Ore. Method of and apparatus for extracting gold and silver from pulverized. Joseph W. Sutton..... 43,568
Ore. Method of treating. Thomas A. Edison..... 43,588
Overshoe. John F. O'Brien, et al..... 43,634
Packing vessel. Henry C. Hunter..... 43,510
Paper board. Robert B. McEwan, et al..... 43,720
Pea harvester. John Bearman..... 43,577
Peat. Method of preparing. Archibald A. Dickson..... 43,546
Picker: see Bean picker.
Plow: see Shovel plow. Sulkey plow.
Plug. William Morrison..... 43,513
Pneumatic tyre. John F. Palmer..... 43,733, 43,734, 43,735
Potato digger. George E. Anderson, et al..... 43,530
Power driven tool. Frank H. Cathcart..... 43,487
Printers' galley. William T. Near, et al..... 43,783
Printers' quoin. Robert Warg, et al..... 43,681
Printing. Art of. Charles B. Woodward..... 43,719
Printing machine. Charles Butterfield..... 43,778
Printing on matches. Machine for. Max Kustermann, et al. 43,757
Projectile. Harry Allen..... 43,587
Pulley: see Hay carrier pulley.
Pulley. Charles H. Waterous..... 43,712
Pull plate for self-fastening shades. Samuel R. Scotton... 43,617
Pump: see Oil pump.
Puzzle. Jesse Kinney..... 43,762
Quoin: see Printers' quoin.
Receptacles for food, &c. Method of closing. Jean Leembrugger..... 43,589
Recorder for cash. Wooster B. Metcalf, et al..... 43,643
Refrigerator. Martin Wanner..... 43,750 43,751
Revolvers. Machine for cutting cycloidal. John T. Wilkins..... 43,624
Roller. Ernest G. Hoffmann..... 43,784
Roofing joint. William H. Iellison..... 43,614
Rustic Seat. Albert Graf..... 43,626
Sanitary House. William Van der Heyden..... 43,502
Saw. William Junge, et al..... 43,741
Saw mill set works. Hector Gawley..... 43,671
Scaffolds. Contrivance for fastening. Albin Kuhn..... 43,601
Scale for cutting coats and vests. John J. Smith..... 43,723
School desk and chair. Gabriel A. Roderick..... 43,457
Scow: see Dumping scow.
Screw. Cullen K. Whitter..... 43,730
Scrubbing device. John W. Rooots..... 43,469
Seat: see Rustic seat.
Seat spring. George Caxon..... 43,616
Securing device for rail joints. John L. Pope..... 43,667
Separator. George W. & Alice Morris..... 43,674
Separator for cream and butter. Adolph Wahlin..... 43,702
Separator for liquids. Carl J. Lundstrom..... 43,500 43,501
Separator for use with solvents. Heinrich Deininger. 43,497 43,498
Sewing machine. Charles W. Davis..... 43,595
Sheathing lath. Andrew Baldwin..... 43,678
Sheep shearing machine. Henry Bland..... 43,458
Sheet metal rolling mill. Walter S. Shipe..... 43,560
Shingles. Machine for jointing. Gerdner Clish, et al..... 43,536
Shovel plow and cultivator with adjustable rake combined. George Beatty..... 43,711
Shutters. Means for opening. Charles J. Sandberg..... 43,748
Shifter for flour and meal. Augustus Brooks..... 43,747
Sifting machine. Ernst A. Weinhold..... 43,627
Sign. Cammile de Norman, et al..... 43,765
Sign. Charles A. Gildemeyer..... 43,768
Signal for tunnels. George W. Thompson..... 43,610
Skiving machine: see Leather skiving machine.
Sleigh. Joseph McEntyre, et al..... 43,640
Sleigh. George V. Wyant..... 43,598
Snow screen. Frans O. Skoglund..... 43,536
Sofa and bed combined. Benjamin Lawton..... 43,717
Soundings. Method of and means for automatically taking and indicating. Nicholas Potschinsky..... 43,726
Sprayer for liquids. Leonard L. Merrifield..... 43,559
Spring: see Seat spring, vehicle spring.
Sprinkler for potato vines. Charles H. McKay..... 43,641
Stave trimming and jointing machine. William J. Wright, et al..... 43,496
Steam boiler. Robert W. King..... 43,660
Steam engine. John Abell..... 43,664
Steam engine. Joseph Hill..... 43,639
Still and cooker. James Cook..... 43,737
Stirrup for riding saddles. Joseph A. Krewson, et al..... 43,661
Stock feeder. George Lloyd..... 43,574
Stop cock. John G. Smith..... 43,506
Storage battery. Edward P. Usher..... 43,570 43,571
Storage heater for street cars. James Finney McElroy.... 43,755
Stove. Bernhardt Hellman, et al..... 43,676
Stove. Lyman P. Converse..... 43,698
Stove. Ophing L. Gadoury..... 43,705
Stuffing box. George H. Hitchcock..... 43,707
Submarine boat. James R. Haydon..... 43,777
Sulkey plow. Perry Ries..... 43,670
Sulpho-acid for petroleum. Art of making. Hans A. Frasch..... 43,553
Support for the hoes of agricultural implements. Robert Galloway..... 43,647
Support for tongues. Daniel Ward, et al..... 43,466
Support for trolley wires. John S. Gustin, et al.... 43,563 43,564
Switch for electricity. James F. McElroy..... 43,565
Table: see Extension table.
Table for glazier's use. Joseph Cloutier..... 43,637
Tanks. Method of constructing. William Forgie..... 43,507
Telephone combination. Sir Charles S. Forbes..... 43,576
Telephone system. Charles W. Brown..... 43,527
Threshing machines. Band and feeder for. George W. and Alice Morris..... 43,684
Threshing machines. Band cutter and feeder for. John C. Lundy..... 43,535
Ticket case. Alexander Allen, et al..... 43,745
Tool: see Combination tool, grip tool, power driven tool.
Trap for animals. Jacob Poaps..... 43,775
Trace buckle. George V. Martin..... 43,492
Tree baler. Henry O. Thomas, et al..... 43,622
Type. Machine for justifying composed lines of. Jacob W. Schuckers..... 43,721
Type-setting and matrice-producing machine. Erle V. Beals..... 43,694

Type writer. Eugene A. Ford..... 43,516
Tyre: see Pneumatic tyre.
Tyre. John Smith, et al..... 43,462
Tyre. Woodburn Langmuir.....43,569-43,581
Tyre for bicycles. Hans J. Caulfield..... 43,452
Tyres on wheels. Means for securing pneumatic. Albert Whitehouse, et al..... 43,606
Valve. Edward E. Gould..... 43,534
Valve. Hugh Thomson..... 43,461
Valve for engines. Horst Gohler..... 43,739
Vault. Frank C. Rheobottom..... 43,531
Vehicle. Homer L. Boyle..... 43,450
Vehicle spring. James A. Luke..... 43,744
Velocipede: see Winter velocipede.
Velocipede. John G. Stamp, et al..... 43,672
Vending apparatus. Wyman Boardman..... 43,732
Vending machine. Virgil A. Krepps..... 43,753
Vessel: see Hermetically sealed packing vessel.
Vessels. Device for raising sunken. Ernest Nichoff, et al. 43,545
Wagon bolster standard. Anthony Miller, et al..... 43,511
Wagon bolster standard. Ludlow G. Cook..... 43,520
Washstand and dressing case. Axel Wettervick, et al..... 43,486
Washing machine. Robert Austin..... 43,683
Washing machine. Robert H. Wilson..... 43,649
Water mains under pressure. Method of and means for tapping. Harvey H. Burritt..... 43,538
Water motor. John Bolgiano..... 43,625
Waterproof garment. Otte Van Oostrum..... 43,594
Wheel, Harry Moore..... 43,493
Winter velocipede. John F. Zalsman..... 43,738
Wire covering machine. Walter H. Avis, et al..... 43,679
Wire drawing machine. Charles H. Haag..... 43,687
Wire fence strands. Implement for tightening. John Whittaker..... 43,665
Wire netting. Method of making. Frederick J. Corbett. 43,691
Wire stapling machine. Eldridge R. Johnson..... 43,628
Wood. Method of drying and vulcanizing. Charles Howard..... 43,619
Wood. Process and apparatus for vulcanizing. Samuel E. Haskin..... 43,468
Worm gear. James F. Welch..... 43,582

INDEX OF PATENTEES.

Edwards, Robert, et al. Engine 43,758
Electrical Wonder Company. Apparatus for exhibiting optical illusions 43,499
Elliott, Thomas, et al. Car coupler 43,682
Ellsworth, Herbert. Alphabetical railway guide 43,657
Emond, Vital A. Lubricator 43,523
Enholm, Oscar A. Electric railway 43,573
Epps, Charles, et al. Cutter for lard and butter 43,612
Evans, Samuel, et al. Process of chipping glass 43,763
Evans, Samuel, et al. Process of preparing and ornamenting clear glass 43,764
Falcon, Joseph G. Ball and socket joint 43,607
Faught, John, et al. Cleaner for cisterns 43,787
Fergusson, Frederick D, et al. Lifting apparatus for sack barrows 43,605
Findlay, James. Car replacer 43,561
Fisher, Robert C., et al. Wire covering machine 43,679
Fisher, William T. and Charles H. Egg crate 43,488
Fletcher, Andrew H., breast collar for horses 43,529
Forbes, Sir Charles S. Telephone combination 43,576
Ford, Eugene A. Typewriter 43,516
Forgie, William. Method of constructing tanks 43,507
Frasch, Hans A. Art of making sulpho-acid from petroleum 43,553
Freeman, Angelina M. Chime attachment for wheels 43,709
French, Charles A., et al. Game 43,544
Gadoury, Ophiny L. Stove 43,705
Galloway, Robert. Support for the hoes of agricultural implements 43,647
Gartley, William F. Speed regulator for governors 43,547
Gates, James, et al. Car coupler 43,682
Gawley, Hector. Saw mill set works 43,671
Gearhart, Joseph E. Knitting machine 43,473
Giddens, Francis W., et al. Speed regulator for governors 43,547
Gibbon, William, et al. Engine 43,758
Gibson, Gerolt. Nut lock 43,658
Gildemeyer, Charles A. Sign 43,768
Gillmore, Ross, et al. Bevelling machine for bookbinders 43,629
Gnaedinger, Edward H., et al. Fare box 43,774
Gohler, Horst. Valve for engines 43,739
Gold, Edward E. Hose coupling 43,736
Goodrich, Henry. Last 43,454
Gordon, Alexander. Cigar bunching machine 43,489
Gottschalk, Herman, et al. Machine for printing on matches 43,757
Gould, Edward E. Valve 43,534
Graf, Albert. Rustic seat 43,626
Graham, Robert O., et al. Oil pump 43,613
Grasselli Chemical Company. Art of making sulpho-acid from petroleum 43,553
Gravel, Arthur. Hydrant 43,766
Greatrex, William, et al. Binder 43,685
Greisser, Alfred E., et al. Tongue support 43,466
Griffith, George C., et al. Car coupler 43,557
Griffin, Harry S., et al. Dumping scow 43,621
Grunzburg, Isaac B. Car 43,514
Gustin, John S., et al. Trolley wire support 43,563, 43,564
Haag, Charles H. Wire drawing machine 43,687
Hall, Thomas E. Method of making butter 43,567
Hamilton, George D. Fence 43,749
Hargraves, Robert F. Friction ratchet clutch 43,642
Harris, Frederick W. Lock 43,706
Hartnett, John J. Inhaler 43,644
Harvey, Frank, et al. Car coupler 43,478
Haskin, Samuel E. Process of and apparatus for vulcanizing wood 43,468
Haydon, James R. Submarine boat 43,777
Heard, Thomas H., et al. Method of securing the handles of cranes to their shafts 43,584
Heesen, William H. Grate bar for furnaces 43,522
Hellman, Bernhardt, et al. Stove 43,676
Henry, Marcus S. Harrow attachment 43,669
Herbert, Moise, et al. Hay press 43,490
Herman, Ludwig. Chain 43,724
Hill, Joseph. Steam engine 43,639
Hinkson, Daniel, et al. Hydro carbon lighting device 43,713
Hitchcock, George H. Stuffing box 43,707
Hobson, Amos H. Method of making non-alcoholic beer 43,652
Hoffman, Ernest G. Machine for making metal balls 43,632
Hoffman, Ernest G. Roller 43,784
Hoffman, Herman H and Francis H. Blank book 43,646
Holmes, Richard B. Chimney 43,609
Hornsby (Richard) & Sons. Engine 43,758
Hornsby, William, et al. Engine 43,758
Howard, Charles. Method of drying and vulcanizing wood. 43,619
Huhn, Carl. Apparatus for carrying and keeping horses 43,600
Hull, William S. Electric protective system 43,728
Hungerford, Mary S. Fastener for boots and shoes 43,637
Hunt, Thomas S. Process of separating copper from cupriferous nickel ores 43,509
Hunter, Henry C. Packing vessel 43,510
International Cigarette Machine Company. Cigarette machine 43,554
Jackson, John H., et al. Adding machine 43,575
Jarmain, William R., et al. Velocipede 43,672
Jellison, William H. Roofing joint 43,614
Jenkins, Philip A. Clock 43,743
Johnson, Eldridge R. Wire stapling machine 43,628
Jones, Henry A. Apparatus for de-oxidizing, melting and puddling iron ore 43,465
Jones, Joshua L. Fastener for trunks 43,786
Junge, William and Charles, et al. Saw 43,741
Kane, John, et al. Car Coupler 43,478
Kay, Hugh M., et al. Grip tool for wire fences 43,788
Keeler, Berton A., et al. Car coupler 43,557
Kelly, John W., et al. Clothes line 43,620, 43,635
King, Robert W. Steam boiler 43,660
Kinney, Jesse. Puzzle 43,762
Kleeman, Fritz A. Apparatus for heating and cooling liquids 43,742
Kleinfeldt, Arthur E. Hermetically sealed sheet metal vessels 43,590
Knitting machine. Joseph E. Gearhart 43,473
Korting, Ernst. Injector 43,558
Krepps, Virgil A. Vending machine 43,753
Krewson, Joseph A., et al. Stirrup for riding saddles 43,661
Kuhn, Albin. Contrivance for fastening scaffolds 43,601
Kusterman, Max, et al. Machine for printing on matches 43,757
Kyes, Henry P. Check rein detaching or attaching device 43,740
Lafayette, George G. Lamp socket 43,781
Lane, Fernando G., et al. Clothes line 43,620, 43,635
Langmuir, Woodburn. Tyre 43,569, 43,581
Lattimer, Francis. Door knob 43,653
Lawton, Benjamin. Sofa and bed combined 43,717
Leembruggen, Jean. Method of closing receptacles for food 43,589
Leggatt, John A. Door bolt and bar 43,696
Lindemann, August, et al. Printers' quoin 43,681
Lintner, George A. Indicator for electrical power 43,710
Lloyd, George. Stock feeder 43,574
Lochric, James. Cycle 43,650
Luce, Charles J., et al. Process of extracting fat from wool 43,503
Ludikar, Bohumil, et al. Stove 43,676
Luke, James A. Vehicle spring 43,744
Lundstrom, Carl J. Separator for liquids 43,500, 43,501
Lundy, John C. Band cutter and feeder for threshing machines 43,535
Lysaght Brothers & Company. Method of making wire netting 43,691
Mable Automatic Car and Air Self Coupler Company. Car and air brake coupler 43,485
Mable, William. Car and air brake coupler 43,485
MacDonald, Randolph, et al. Electric motor 43,566
MacDonald, Randolph, et al. Method of propelling cars by electricity 43,631
Manning, Lemuel S. Car coupler 43,686
Marr, Charles K. Apparatus for automatically displaying advertisements 43,483
Martin, George V. Trace buckle 43,492
McCarthy, Louis. Insulator 43,451
McCreath, James. Disc harrow 43,651
McConnell, Virgil H. Filter 43,471
McDonald, Duncan, et al. Machine for jointing shingles 43,636
McEachran, Andrew. Elevator 43,525
McElroy, James F. Engine 43,703
McElroy, James F. Storage heater for street cars 43,755
McElroy, James F. Switch for electricity 43,565
McEwan, Robert B., Jesse L. and Richard W. Paper board 43,720
McIntyre, Joseph, et al. Sleigh 43,640
McLachlan, John. Grain crusher 43,701
McLeod, John M. Medicinal compound 43,697
McKay, Andrew B., et al. Hay carrier 43,699
McKay, Andrew B., et al. Hay carrier pulley 43,700
McKay, Charles H. Sprinkler for potato vines 43,641
McKeggie, James H., et al. Cart 43,551
McKeggie, James H., et al. Friction clutch 43,550
McKerrow, James McGarvin, et al. Stave trimming and jointing machine 43,496
Meem, James C. Knock-down box 43,722
Mercer Bros. & Company. Binder 43,685
Mercer, John E., et al. Binder 43,685
Merrifield, Leonard L. Sprayer for liquids 43,559
Metcalf, Wooster B., et al. Recorder for cash 43,643
Miller, Anthony, et al. Wagon bolster standard 43,511
Miller, Hugh. Car replacer 43,561
Miller, Thomas S. Carving apparatus 43,543
Mitchell, Fred. G., et al. Speed regulator for governors 43,547
Molloy, Bernard C. Method of dissolving metals out of ores 43,692
Monteith, George. Hub band 43,630
Montgomerie, John C. Apparatus for extracting gold and silver from ores 43,524
Moore, Harry. Wheel 43,493
Morgan, Alfred F. Holder for spools 43,689
Morris, George W. and Alice. Band cutter and feeder for threshing machines 43,684
Morris, George W. and Alice. Separator 43,674

Morris, James. Machine for heading boilers, &c. 43,495
Morrison, James. Sheet metal rolling mill 43,560
Morrison, James D. Car 43 518
Morrison, James L. Lever 43,556
Morrison, William. Plug 43,513
Mulock, William R. Knee cap 43,663
Murray, Samuel, et al. Cutter for lard and butter 43,612
Near, William T., et al. Printers' galley 43,783
Newell, Sarah. Cover for milk cans 43,608
Niehoff, Ernest, et al. Apparatus for raising sunken vessels 43,545
Noxon, Thomas H. Binder 43,659
Oakes, Chandler A., et al. Adding machine 43,575
O'Brien, John F., et al. Overshoe 43,634
Olsson, Julius A., et al. Washstand and dressing case 43,486
O'Neil, John W., et al. Printers' quoin 43,681
Ontario Peat Fuel Co. Method of preparing peat 43,546
Orton, George T. Method of placing disinfectants 43,533
Osborne, (D. M.) & Co. Disc harrow 43,673
Osborn, Francis L. Hay rake 43,519
Overton, Frank, et al. Cleaner for cisterns 43,787
Palmer, Dennis W., et al. Chair 43,481
Palmer, John F. Pneumatic tyre 43,733, 43,734, 43,735
Parker, Harry W. Floor flange for closets 43,505
Parker, John N., et al. Combination tool 43,690
Pasztor, David. Fastner for belts 43,770
Payette, Stanislas. Advertising device 43,542
Peay, Walter W. Fender for street cars 43,715
Pelton, Phineas. Car coupler and air brakes 43,470
Pemberton, Frederick B. Composition for preventing the passage of heat through bodies and for deadening sound 43,459
Pender, James, et al. Nail 43,494
Pepper, James W. Drum snare 43,549
Perkins, Eben, et al. Nail 43,494
Peters, Melvin E., et al. Combination tool 43,690
Phialcofsky, Daniel, et al. Hay press 43,490
Phillips, Bradley H. Adding machine 43,761
Pickering, Benjamin A., et al. Boot 43,776
Piffard, Nina H. Needle 43,789
Poaps, Jacob J. Trap for animals 43,775
Pollard, James B. Cigarette machine 43,554
Pope, John L. Lock for railway joints 43,666
Pope, John L. Securing device for rail joints 43,667
Potschinsky, Nicholaus. Method of and means for automatically taking and indicating soundings 43,726
Ralfe, Herbert G., et al. Electric current and current generator 43,555
Rapp, Oscar & Anton, et al. Bevelling machine for bookbinders 43,629
Rawson, Charles L., et al. Process of chipping glass 43,763
Rawson, Charles L., et al. Process of preparing and ornamenting clear glass 43,764
Reeves, Madison W. Door holding device 43,532
Reid, George, et al. Car coupler 43,682
Reliance Electric Manufacturing Co. Method of and apparatus for regulating dynamos and motors 43,675
Rey, Francois. Beverage 43,508
Rheobottom, Frank C. Vault 43,531
Richards, John T. Dust guard for hubs 43,746
Richards, William E. Ladder 43,779
Richards, Willard F. Car Coupler 43,708
Ries, Perry. Sulky plow 43,670
Roberts, Jacob. Furnace 43,772
Roberts, Jacob. Machine for forming horse-shoes 43,773
Roberts, John W. Can crimping machine 43,472
Roberts Tin Ware Company. Can crimping machine 43,472
Robertson, John J. and William. Boat 43,474
Robertson, William, et al. Lifting apparatus for sack barrows 43,605
Robrick, Gabriel A. School desk and chair 43,457
Roche, Joseph, et al. Engine 43,759
Roden, Thomas and Frank, et al. Ticket case 43,745
Rodier, Louis, et al. Engine 43,759
Roe, George G., et al. Electric current and current generator 43,555
Rogers, Charles. Apparatus for receiving written messages, &c 43,769
Roots, John W. Scrubbing device 43,469
Ross, William O. K., et al. Fare box 43,774
Rowan, Henry, et al. Wagon bolster standard 43,511
Roy, Antoine, et al. Furnace for cremating garbage 43,449
Sabatier, Louis, et al. Engine 43,759
Sacco, Carlo. Car starter and brake 43,633
Sams, Samuel C., et al. Car coupler 43,756
Sandberg, Charles J. Means for opening shutters 43,748
Sangster, James. Gas lighting and extinguishing apparatus 43,769
Scarr, Abraham C. Measuring machine for stock-taking 43,688
Schafer, Frederick W. Apparatus for receiving written messages, &c 43,769
Schmitz, Henry. Harness saddle 43,611
Schmidt, Wilhelm S. H. Buckle 43,645
Schukers, Jacob W. Machine for justifying composed lines of type 43,721
Schutte, Louis. Injector 43,558
Scott, Dugald. Duster 43,455
Scottron, Samuel R. Pull plate for self-fastening shades 43,617
Searls, Thomas C. Clothes drier 43,614
Shambow, John, et al. Boat 43,776
Sharp, Charles S. Disc harrow 43,673
Shipe, Walter S. Machine for heading water boilers, &c 43,495
Shipe, Walter S. Sheet metal rolling mill 43,560
Sichelschmidt, Hermann. Axle box 43,585
Sichelschmidt, Hermann. Bearings for railway vehicle wheels 43,586
Sienknecht, Christian C. A. Gate brace 43,599
Singin, Louis N. Car coupler 43,475
Skoglund, Frans O. Snow screen 43,536
Smidth, Verner F. L. Process of producing cement 43,771
Smith, Fred. C., et al. Oil pump 43,613
Smith, John G. Stop cock 43,506
Smith, John J. Scale for cutting coats and vests 43,723
Smith, John T. and Arthur H. Tyre 43,462
Smith, Thomas J., et al. Stirrup for riding saddle 43,661
Spangler, Charles F., et al. Coin actuated machine 43,680
Stamp, John G. Velocipede 43,672
Stearns, Norman W., et al. Curtain fixture 43,727
Sterzing, Fred., et al. Clothes line 43,620, 43,635
Stevenson, John W., et al. Tree baler 43,622
Still, William J. Electric motor 43,566, 43,578
Still, William J., et al. Method of propelling cars by electricity 43,631
Stockford, Benjamin F. Speed and whistle recorder for locomotive engines 43,623
Stone, Albert W. Thread splicing mechanism for knitting machines 43,537
Streeter, Nelson R. Holder and cutter for paper rolls 43,656
Stringer, Hugh A., et al. Grip tool for wire fences 43,788
Suda, Franz, et al. Stove 43,676
Surprenant, Edward. Car coupler 43,477
Sutherland, Hector T. Sprinkler for potato vines 43,641
Sutton, Joseph W. Method of and apparatus for extracting gold and silver from pulverized ore 43,568
Sweet, Louis D., et al. Car coupler 43,756
Sylvester, Richard. Cultivator 43,648
Tewksbury, Andrew J. Leather skiving machine 43,484
Theophel, Henry. Drum snare 43,549
Thomas, Henry O., et al. Tree baler 43,622
Thompson, George W. Signal for tunnels 43,610
Thompson, Sarah R. Fruit press 43,662
Thomson, Elihu. Lightning arrester 43,596
Thomson, Elihu. Lightning arrester and discharge protector 43,597
Thomson, Hugh. Valve 43,461
Thurston, Douglas A. Method of making butter 43,567
Titus, Odeon H. Hominy mill 43,526
Trax, David L., et al. Stave trimming and jointing machine 43,496
Trotter, Wallace C., et al. Kiln 43,604
Tupper, Silas, et al. Machine for jointing shingles 43,636
Usher, Edward P. Storage battery 43,570, 43,571
Usher, Edward P., et al Battery plate 43,593
Vander, Heyden William. Sanitary house 43,502
Van Oostrum Otte. Waterproof garments 43,594
Van Tuyl, Benjamin S. Vehicle spring 43,744
Waddell, Harvey. Bedstead 43,752
Wacker, Gustavus A., et al. Hermetically sealed sheet metal vessel 43,590
Wahlin, Adolph. Separator for cream and butter 43,702
Wallace, John S., et al. Saw 43,741
Wanner, Martin. Refrigerator 43,750, 43,751
Ward, Daniel, et al. Tongue support 43,466
Warg, Robert, et al. Printers' quoin 43,681
Warren Extension Table Company. Extension table 43,754
Waterous, Charles H. Pulley 43,712
Weinhold, Ernst A. Sifting machine 43,627
Weitenhampl, Carl. Separator for use with solvents 43,497, 43,498
Welch, James F. Worm gear 43,582
West, William. Mould for earthenware 43,602
Wetmore, Earl P. Electric heater 43,785
Wettervick, Axel, et al. Wash stand and dressing case 43,486
Weydell, Frank O., et al. Trolley wire support 43,563
Whicker, Arthur, et al. Means for securing pneumatic tyres on wheels 43,606
Whitehouse, Albert, et al. Means for securing pneumatic tyres on wheels 43,606
Whittaker, John. Implement for tightening wire fence strands 43,665
Whittier, Cullen K. Screw 43,730
Wiese, Charles, et al. Electric current and current generator 43,555
Wilkins, John T. Machine for cutting cycloidal revolvers. 43,624
Wilkinson, Walter, et al. Leaf holder for music 43,552
Williams, John. Ash pan for locomotives 43,693

Wilson, Robert H. Washing machine..... 43,649
Wolfe, Israel. Nut lock..... 43,655
Wood, Joseph, et al. Leaf holder for music..... 43,552
Woodman, Frank B. Car coupler..... 43,479
Woodward, Charles B. Art of printing..... 43,719
Wonson, Clara N., et al. Chair..... 43,481
Wortman, William H., et al. Hay carrier..... 43,699
Wortman, William H., et al. Hay carrier pulley..... 43,700
Wright, William J., et al. Stave trimming and jointing machine..... 43,496
Wright, Samuel H. Clip for holding papers, &c..... 43,760
Wyant, George V. Sleigh..... 43,598
Young, Charles P., et al. Coin actuated machine..... 43,680
Zalsman, John F. Winter velocipede..... 43,738
Zanow-Hannover, V. Z. A. G., et al. Machines for printing on matches..... 43,757
Ziegler, Frank A., et al. Recorder for cash..... 43,643