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The Canadian Patent Office Record

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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.

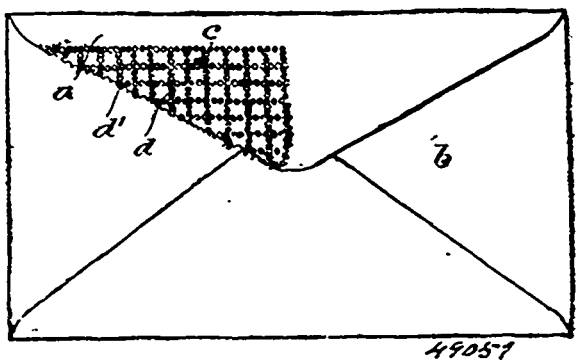
No. 49,050. Metal for Blades, &c.

(*Métal pour lames, etc.*)

James Wallace Wyckoff and John Maxwell Wetton, Jacobsville, Michigan, U.S.A., 1st June, 1895; 6 years.

Claim.—1st. A metal blade constructed in two soft metal parts, hardened wire located between said parts embeded therein, said soft metal parts with the intervening wire formed into a single integral piece, substantially as described. 2nd. A metal blade formed of two metal parts having hardened fragments or particles embedded therein, and a wire netting embedded therebetween, one series of wires in said netting being hardened and running transversely across the metal plate, substantially as described.

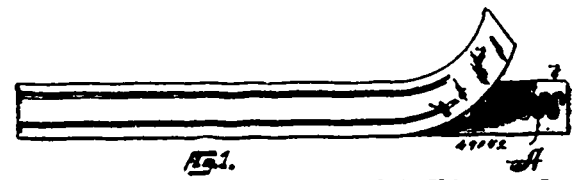
No. 49,051. Envelope. (*Enveloppe.*)



William Angus, Montreal, Quebec, Canada, 1st June, 1895; 6 years.

Claim.—1st. As a new article of manufacture, an envelope or enclosing wrapper having a flap with a serrated or broken edge and weakened adjacent to said serrated edge, for the purpose set forth. 2nd. As a new article of manufacture, an envelope or enclosing wrapper having a flap weakened by lines of perforations running at right angles to the base of such flap and having a serrated edge into which such lines run, for the purpose set forth.

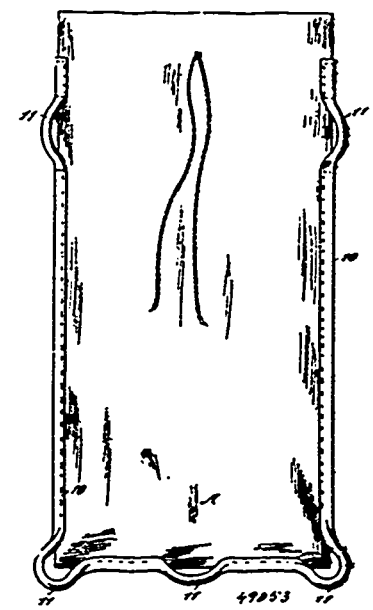
No. 49,052. Dress Stay. (*Renfort de robe.*)



Marcus Merritt Beeman, Syracuse, New York, U.S.A., 1st June, 1895; 6 years.

Claim.—1st. A dress-stay body consisting of a single piece of wire bent to create a series of eyes, each side of which normally bears against the side of the adjoining eye. 2nd. A dress-stay comprising a body consisting of a wire bent to create a series of alternately disposed eyes, each side of which normally bears against and is supported upon the adjacent side of the adjoining eye and a protecting covering secured upon said body, as set forth.

No. 49,053. Sack. (*Sac.*)



Emons Horrice Lobdell and Andrew J. Acker, both of Mecosta Michigan, U.S.A., 1st June, 1895; 6 years.

Claim.—1st. As a new article of manufacture, a sack provided

with handles on its sides, lower corners and bottom, as set forth. 2nd. A sack provided with handles formed of a strap secured to the sack and left unattached at one or more points in its length, substantially as described. 3rd. A sack provided with a reinforcing strap secured to opposite sides and extending around the lower edges and across the bottom, the said strap being unattached to the sack at various points in its length and rendered full at its unattached points, forming a series of handles, whereby the strap in addition to forming handles for manipulating the sack reinforces the same, as set forth. 4th. The combination, with a sack, of a strap extending along opposite sides and across the bottom, the strap being bowed at intervals in its length and secured to the body of the sack except at its bowed section, the said bowed section being located diagonally at the bottom corners, near the centre of the bottom and along the sides of the sack.

No. 49,054. Mechanism for Propelling Boats.

(*Mécanisme pour propulser les vaisseaux.*)

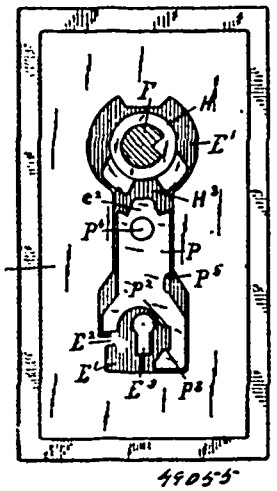
William Henry Thompson and George Morris, both of Hamilton, Ontario, Canada, 1st June, 1895; 6 years.

Claim.—1st. In mechanism for propelling boats, consisting of two bed pieces having grooves, two standards affixed to said frames carrying a shaft on said standards, a sprocket wheel on the shaft, a countershaft carried by the frames, a sprocket wheel on said countershaft, a chain belt running over both sprocket wheels, to rotate a bevel wheel on the countershaft, to engage with a bevel pinion, on the propeller shaft and thus rotate the shaft and propeller wheel when power is applied to cranks attached to the main driving shaft, all substantially as and for the purpose specified. 2nd. In a mechanism of the class specified, the combination of two grooved bed frames, blocks sliding in said grooves, pitmans pivoted to said blocks and two cranks attached to a shaft carried by standards, long levers *pivoted to the said blocks having cross handles operating the cranks* to drive the mechanism for rotating the propeller shaft of a boat, all substantially as and for the purpose specified. 3rd. In a mechanism of the class specified, consisting of two bed pieces A, A, each having a groove *c*, blocks *l*, *l*, made to slide in said grooves, a pitman *j* pivoted to each sliding block and to cranks *i*, *i*, attached to a shaft *h* carried on standards *g*, *g*, a long driving handle lever *k* pivoted to each sliding block *l* for rotating the cranks and shaft to drive the mechanism to revolve the propeller shaft and propeller, all substantially as described. 4th. In a mechanism of the class specified, the combination of two bed pieces A, A, provided with grooves *c*, *c*, standards *g*, *g*, affixed to said bed pieces, a shaft *h* carried on said standards, two cranks *i*, attached to said shaft, a sprocket wheel *u* keyed on the shaft *h*, *a countershaft p, journaled in* the bed pieces A, and carrying a small sprocket wheel *u*, an endless chain belt *o* connecting both said sprocket wheels, a bevel gear wheel *q* on the shaft *p*, and bevel gear pinion *r* on the propeller shaft *s*, to revolve the propeller wheel *t*, all substantially as described. 5th. In a mechanism of the class specified, the combination of the grooved bed pieces A, A, sliding blocks *l*, *l*, pitmans *j*, *j*, pivoted to said blocks *l*, *l*, and to cranks *i*, *i*, on the main driving shaft *h*, carried on the standards *g*, *g*, long arm levers *k*, *k*, pivoted at one end to said sliding blocks *l*, *l*, for operating the mechanism for revolving a screw propeller wheel *t*, substantially as described. 6th. In a mechanism of the class specified, the combination of the bed frame A, A, standards *g*, *g*, shaft *h*, cranks *i*, *i*, and short levers *u*, *u*, pivoted to said cranks, with the sprocket wheels *m*, *n*, chain belt *o*, bevel wheel *q*, and pinion *r*, on the propeller shaft *s*, all substantially as described.

No. 49,055. Mortise Lock. (*Serrure à mortaise.*)

Adna Wildern, London, Ontario, Canada, 1st June, 1895; 6 years.

Claim.—1st. In a lock, a spring bolt J, provided with the flanges J^1, and in which is formed the recess J^2, and the elongated openings J^3, and J^4, substantially as and for the purpose set forth. 2nd. A spring bolt J, in which a recess J^2, and elongated opening J^4, is formed in combination with the spring N, the pin O, and the lining M, substantially as and for the purpose set forth. 3rd. A spindle F, in which a groove F^2, is formed, and the tumbler I, in which an opening I^1 is formed, and which tumbler is provided with the tongue I^2, and the arms I^3, in combination with a spring bolt J, formed with the flanges J^1, and in which is formed the elongated opening J^3, substantially as and for the purpose set forth. 4th. A spring bolt J, provided with the flanges J^1, and in which is formed the recess J^2, and the elongated openings J^3, and J^4, the spring N, the pin O, and the lining M, in combination with the tumbler I, formed with the opening I^1, tongue I^2, and the arms I^3, the spindle F, formed with the groove F^2, and the knobs G, G^1, secured to said spindle, substantially as and for the purpose set forth. 5th. In a lock, a bolt P, in which a recess P^1 is formed, and provided with the shoulders P^2, P^3, the flanges P^5, and the stud P^4, substantially as and for the purpose set forth. 6th. In a lock a lever R^1, and R^3, and opening R^2, are *formed, in combination with a spring S, substantially* as and for the purpose set forth. 7th. A bolt P, provided with a stud P^4, the recess P^1, the shoulders P^2, and P^3, and the flange P^5, in combination with a lever R, in which a recess R^1 and an opening R^2 is formed, and the spring S, substantially

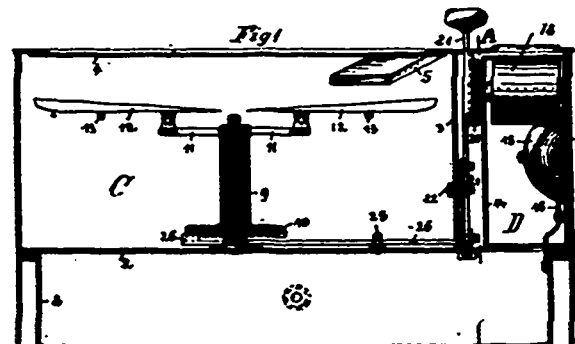


49055

as and for the purpose set forth. 8th. A bolt P, provided with the studs P^4, the recess P^1, the shoulders P^2, P^3, and the flanges P^5, a lever R, formed with the recesses R^1, R^3, and the opening R^2, and a spring S, in combination with a case E, formed with a recess E^1, and a shoulder E^2, the keeper H, formed with an opening H^1, tongue H^2, and recess H^3, and a spindle F, in which a groove F^3, is formed substantially as and for the purpose set forth. 9th. The spindle F, formed with a square end F^1, and with a screw threaded end F^2, in combination with the knobs G^1, G, the shanks G^2, and G^3, of which are formed with a square and screw threaded sockets respectively, and the set screws L, L, substantially as and for the purpose set forth.

No. 49,056. Check Thill.

(*Indicateur et registre de monnaie.*)



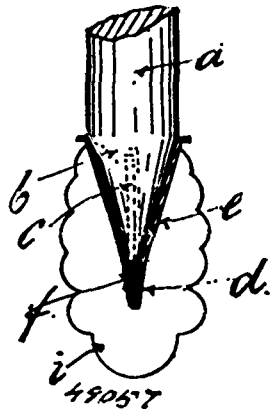
B 49056

Richard Zabel, Leipsic, Germany, 1st June, 1895; 6 years.

Claim.—1st. A check till having a coin receiving tray consisting of a number of separately movable tilting segmentally arranged divisions or parts adapted to be moved in a circular course beneath a coin chute, with means for supporting said parts during a part of their course, and a paper strip operating mechanism adapted to be moved in conjunction with said coin receiving tray for the pressuring or written records of the amounts severally passed to said tray, substantially as and for the purpose described. 2nd. In a check till, the combination of a plurality of segments hinged severally to a rotary body and adapted to fall from a horizontal position when unsupported, with a segmental track adapted to lift said segments severally into the horizontal plane and support them during a desired part of a complete revolution, substantially as and for the purpose described. 3rd. In a check till having a rotary coin tray, a movable paper strip and a cash drawer, the combination therewith of an operating hand lever, ratchet crown wheels connected with the carrying parts of said tray and paper strip, a locking spring for said drawer, lever and rod connections between said operating lever and the ratchet crown wheels and said locking spring for operating same and a spring for returning the parts to their normal positions, as described.

No. 49,057. Pencil Sharpener. (*Taille-crayon.*)

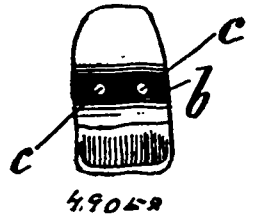
Fig. 1.



Patrick Martin Gallagher, Donegal, Ireland, 1st June, 1895; 6 years.

Claim.—1st. In pencil sharpeners in combination, a cone *c*, supported upon plate *i*, and having a knife edge *c*, a prolongation or smaller cone *d*, having a serrated or roughened interior, substantially as shown. 2nd. In pencil sharpeners in combination, a cone *c*, having a knife edge *c*, supported upon a plate *i*, carrying a plate or file *h*, at the top of the cone *c*, so that the lead protruding through the cone, bears upon and is sharpened by said plate, substantially as described.

No. 49,058. Process of Repairing Damaged Artificial Teeth or Natural Teeth. (*Procédé pour reparer les dents artificielles ou naturelles.*)



Max Salier, Aschersleben, Germany, 1st June, 1895; 6 years.

Claim.—1st. A process for repairing damaged artificial or natural teeth consisting in first providing the same with suitable depressions filling the same with enamel and inserting the retaining parts or studs and introducing the whole into a suitable muffle, substantially as described. 2nd. A process for repairing damaged artificial or natural teeth consisting in first providing the same with suitable depressions filling the same with enamel and inserting the retaining parts or studs covering the tooth with a thin enamel coating and introducing the whole into a suitable muffle, substantially as described. 3rd. Fastening the tooth to a metal plate by bending the retaining studs or gripper over said plate and covering the whole with an enamel coating.

No. 49,059. Knife Bar.

(*Barre pour couteaux de faucheuses.*)

Fig. 1.

Zadoc E. Wiseman, Vadis, West Virgina, U. S. A., 1st June, 1895; 6 years.

Claim.—The cutter composed of the bar having the continuous dove-tailed way closed at one end and open at the other, the angular projection E, from the inner end of the bar having the threaded bolt I, the blades having dovetailed backs on their under sides in said way, each block projecting beyond an edge of its blade the same distance that the opposite edge of the blade projects beyond the opposite end of the block, the eye section on the inner end of the bar with the dove-tailed block on its under side, said section abutting against the end blade and its block, said blades and section and their blocks completely filling and covering said way, the depending loop on the outer end of the section embracing projections E, and a clamping nut.

No. 49,060. Spool Holder, Work-Box, Etc.

(*Porte-bobine, boite à ouvrage, etc.*)

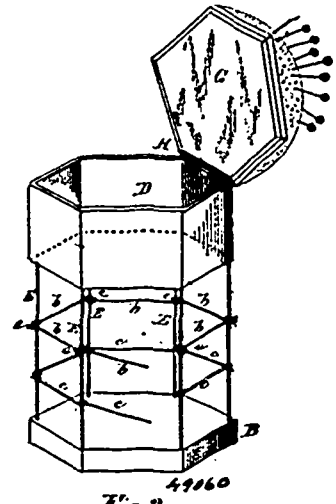


Fig. 2

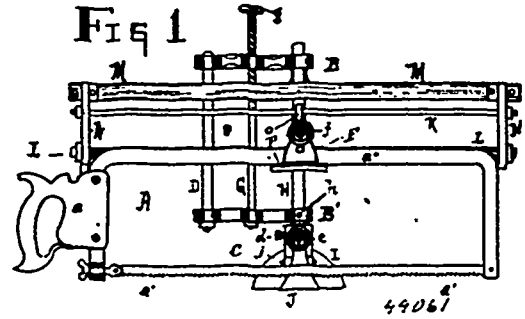
Joseph Henry Jones, and Alfred Burrows, both of Stoney Creek, Ontario, Canada, 1st June, 1895; 6 years.

Claim.—1st. A combined spool-holder, work-box and pin-cushion, consisting of the combination of the base, a revolving base block, a chamber a distance above the revolving base block, the two connected with vertical wires and a central rod, a cover for the chamber and a pin cushion attached thereto, substantially as and for the purpose specified. 2nd. In combination with a combined spool-holder, work-box and pin-cushion, the top horizontal wires attached to the vertical ones and having a catch, in which to lock the adjacent horizontal wires, and when unlocked the upper and lower horizontal wires hinge or open outwards to change spools, substantially as set forth. 3rd. The combination of the base A, revolving block B, work-box D, vertical connecting wires E, lid G, pin-cushion I, central vertical rod C, and horizontal wires *d*, *c*, attached to the vertical ones E, the top ones being interlocked, substantially as set forth.

No. 49,061. Bar Iron and Rail Cutter.

(*Appareil pour couper les rails de chemins de fer, etc.*)

Fig 1

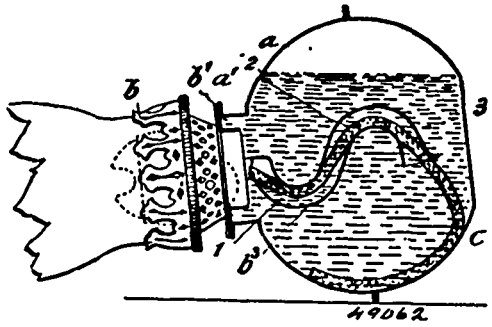


Joseph Barren Calef, North Easton, Massachusetts, U.S.A., 1st June, 1895; 6 years.

Claim.—1st. The carriage moving upon the horizontal parallel rods K, L, to give the saw A, a longitudinal stroke, combined with the vertical rods D, H, to secure a suitable depth of the stroke or cutting, substantially as set forth. 2nd. The combination of the clamping device C, having the stationary jaw I, and the movable jaw J, and set screw *e*, with the shaft H, having the set screw *d*, to secure a permanent alignment of the saw A, in its path through the bar to be cut off, substantially as set forth. 3rd. The combination with the feed screw G, of the frame N, M, bearing the horizontal rods K, L, having the base B, to slide vertically upon the rods D, H, substantially as and for the purposes set forth.

No. 49,062. Lamp for Burning Oil or Spirits.

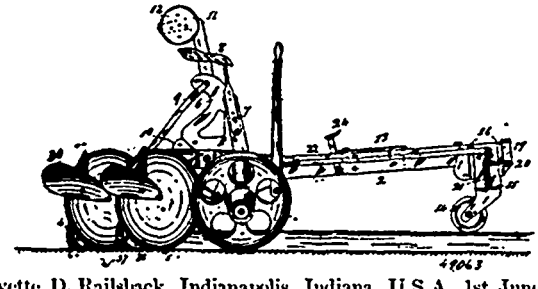
(*Lampes à brûler des huiles ou spiritueux.*)



August Kiesow, London, England, 1st June, 1895; 6 years.

Claim.—1st. In combination with a lamp or lamp burner, a wick case of waved, corrugated or S-shaped descending into the reservoir or container, substantially as herein shown and described and for the purpose stated. 2nd. In a combination with a lamp, a wick case of waved, corrugated or S-shape descending into the reservoir or container, and means for causing the lamp and consequently the wick case upon overturning to assume a given position, substantially as herein shown and described and for the purpose stated. 3rd. In combination with a lamp or lamp burner, a wick case of waved, corrugated or S-shape descending into the reservoir or container, and upon its interior formed with continuous or broken corrugations, flutings or projections, substantially as herein shown and described and for the purpose stated.

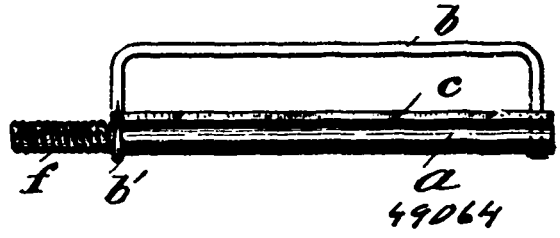
No. 49,063. Rotary Plow. (*Charrue rotative.*)



Lafayette D. Railsback, Indianapolis, Indiana, U.S.A., 1st June, 1895; 6 years.

Claim.—1st. In a rotary plow, a suitable framework, a disc carrying beam pivoted thereto, a tongue with sliding double-trees thereon, and a draft chain extending from the double-trees to the disc beam at a point where it will tend to draw the rear end of the disc beam down, substantially as set forth. 2nd. In a rotary plow, the combination of a main axle, a tongue, a disc beam pivoted at its front end to the framework, a pulley mounted under the framework near its centre of weight, a chain extending from the disc beam near its rear end under such pulley, and means for connecting the draft to such chain, substantially as set forth. 3rd. In a rotary plow, the combination with the main wheels and axle, of a vertical beam, a tongue beam secured to such vertical beam, a disc beam pivoted behind such vertical beam, and a draft chain secured at one end to the stationary part of the plow and passing around a pulley on the disc beam, under a pulley on the vertical beam, and attached to the draft by suitable means, substantially as set forth. 4th. The combination in a rotary plow wherein the beam is rigid, of a wheel supporting the front end of such beam, and means for raising and lowering the front end of such beam with relation to such wheel, substantially as set forth. 5th. In a rotary plow provided with means for rendering the beam rigid, the combination of a sliding frame secured to the front end of such beam, a wheel mounted at the lower end of such sliding frame and adapted to support the front end of such beam, a bell crank lever suitably pivoted to the front end of such beam, and to such sliding frame, a hand lever mounted on the main beam near the plow seat, a link extending from such bell crank to the hand lever, and a suitable latch adapted to lock such mechanism in a certain position, substantially as set forth. 6th. In a rotary plow, the combination with a plow disc, of a scraper mounted at an angle to the line of the furrow and behind the disc where it will square the rounded corner of the furrow, substantially as set forth. 7th. In a rotary plow, the combination with a plow disc, of a furrow cleaner comprising a rolling cutter that follows the plow disc, and a scraper behind such cutter set at an angle to the line of the furrow, substantially as set forth. 8th. In a rotary plow, the combination with the plow disc of the sod turner 30, substantially as set forth. 9th. In a rotary disc plow, the combination with the rotary disc set at such an angle that it will cut and turn the fallow, an arm mounted on the disc-supporting beam and extending over the disc, and a concave plate mounted on such arm in front of the disc behind its centre and extending rearward and outward further than the disc, substantially as set forth. 10th. In a rotary disc plow, a plow disc provided with a suitable axle, and a disc beam provided with housing in which such stub axle is mounted and which is wider horizontally at the end furthest from the disc than the axle, and means of adjusting the horizontal position of the axle in such housing, substantially as set forth. 11th. In a rotary plow, a plow disc provided with a stub axle, a beam having a housing in which such axle is mounted, such housing being of the same horizontal width as the axle at the end nearest the disc and wider than the axle at the end furthest from the disc, and set screws extending through the housing on each side at the end furthest from the disc whereby the angle of the axle and disc may be adjusted, substantially as set forth.

No. 49,064. Hair Curler. (*Fer à friser.*)



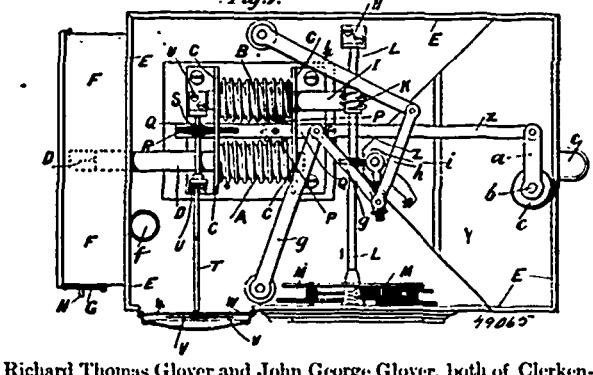
Sarah Catherine Russel, Waterloo, Ayr, Scotland, 1st June, 1895; 6 years.

Claim.—1st. The combination with a hair curler of the class set forth, of a laterally movable bar c, for curling short hair substantially as set forth. 2nd. In combination, the tube *a*, the heater *d*, for the tube, the bent wire *b*, pivotally secured to the tube and having a hook b^1, at its end and the bar c, pivotally secured to the bent wire *b*, substantially as hereinbefore set forth.

No. 49,065. Gas Meter Apparatus.

(*Appareil pour gazomètres.*)

Fig. 1.



Richard Thomas Glover and John George Glover, both of Clerkenwell, London, England, 1st June, 1895; 6 years.

Claim.—1st. Arranging two screw threaded rods parallelly to each other, a pin engaging both screws and capable of rotation for direction of travel over either screw rod when the opposite screw is turned, as and for the purpose specified. 2nd. In an apparatus for use in connection with gas meters, the combination of two parallel screws or screw rods with a pinion wheel pivoted to a sliding bar arranged between said two parallel screws or screwed rods with the pinion wheel in gear with same, one screw being adapted to be rotated by the consumer or other authorized person and the other screw being adapted to be rotated by the meter mechanism, as and for the purpose set forth. 3rd. An apparatus for use with prepayment meters, consisting of the combination with two screws and pinion wheel pivoted to a sliding bar and in gear with said screws, link connected to one end of said sliding bar and to a crank or lever for operating the valve or faucet and of a rack cut or attached to the other end of said sliding bar and gearing into a wheel fixed to a spindle at the end of which is a pointer for moving over the indices of a dial, all operated in the manner and for the purpose set forth.

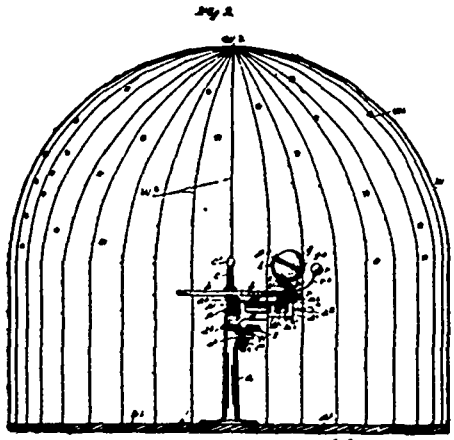
No. 49,066. Illustrative Planetariums.

(*Planétaire explicatif.*)

Angus J. McDonald, Toronto, Ontario, Canada, 1st June, 1895; 6 years.

Claim.—1st. An artificial celestial sphere in the form of a dome,

adapted to permit the observer to be located with the observing apparatus within the same, the interior of said dome being marked to exhibit the heavenly bodies, substantially as and for the purpose set forth. 2nd. An artificial celestial sphere marked by means of perforations to exhibit the heavenly bodies, constructed in the form of a dome, adapted to exclude external light, except where passed



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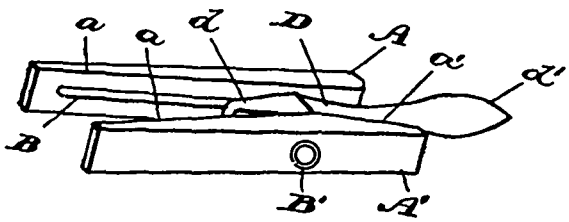
by said perforations and to permit the observer to be located with the observing apparatus within the same, the said perforations indicating stars being so disposed as to represent the relative positions of the stars in the heavens, substantially as described. 3rd. The combination, with the central support, of the elliptical table or orbit, the automatically extensible and contractible arm pivoted on said support, provided with a vertical socket in its outer end, the earth globe support loosely mounted in said socket, the loose roller on said earth globe support in frictional contact with the edge of said table and revolved thereby, and the moon globe carried by said roller, substantially as and for the purpose set forth. 4th. The combination, with the support $a\,a^2$, the table b held by said support, the extensible bracket d, d^1, pivoted on the rod a^2, and provided with the socket d, the telescoping shafts e, e^1, the spring d^5, connecting the bracket sections d, d^1, the crank shaft f, in socket d^6, having the spindle f^1, the driving hub k, loose on the spindle f^1, and provided with the gear k^1, the earth globe g, on the spindle f^2, driven from hub k, the loose sleeve n, on crank shaft f, provided with the gears n^1, n^2, the former of which engages the gear k^1, the gear m^3, engaging gear m^2, the mitre gears n, n^1 and p, p^1, as shown and described, the loose roller r, on the hub m, and the moon globe r^1, carried by said roller r, all arranged and operating, substantially as described.

No. 49,067. Quoin. (*Coin.*)



49067

Richard Kinsman, Gault, Ontario, Canada, 1st June, 1895; 6 years.

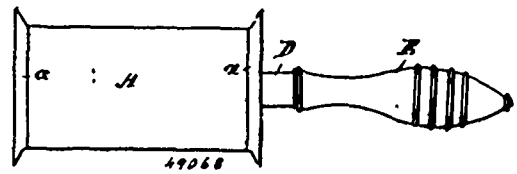
Claim.—1st. A quoin consisting of two wedges, and a lever pivotally connected to and adapted to expand the wedges, substantially as described. 2nd. A quoin consisting of two oppositely opposed wedges, a lever pivotally connected to and adapted to expand the wedges, and means for longitudinally adjusting one of the wedges to increase or diminish the expansion capacity of the quoin, substantially as described. 3rd. A quoin consisting of two oppositely opposed wedges, the inner face of one of the wedges composed of two inclined planes, a wedge-shaped expansion lever pivotally connected to and adapted to hold together the said wedges, a longitudinal slot through the side of one of the wedges, adapted to form the bearing for its respective end of the spindle of the expansion lever, and to permit of the longitudinal adjustment of the wedge, substantially as described.

No. 49,068. Hair Dryer. (*Séchoir pour les cheveux.*)

Joseph Edward Auger, Montreal, Quebec, Canada, 1st June, 1895; 6 years.

Claim.—In a hair dryer, the combination with a closed hollow cylinder, having flanges around its edges, an annular plate secured centrally on one of the ends of the said cylinder, a conical perforation in the said plate and passing through the said end of the cylinder, an internally threaded extension formed integrally with the

Fig. 1.

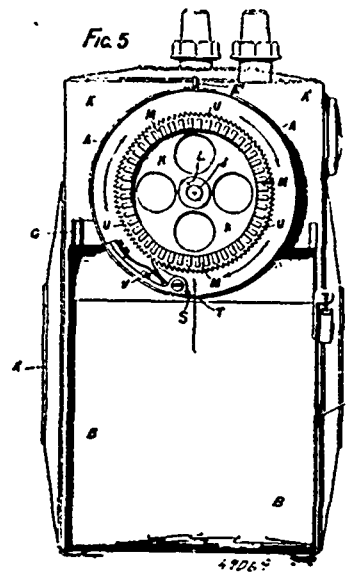


49068

said plate, of a handle adapted to be screwed into the said extension, and a conical stopper adapted to close the said perforation, substantially as set forth.

No. 49,069. Coin Freed Apparatus for the Sale of Gas. (*Appareil actionné par une pièce de monnaie pour la vente du gaz.*)

Fig. 5



49069

Richard Thomas Glover, and John George Glover, both of London, England, 1st June, 1895; 6 years.

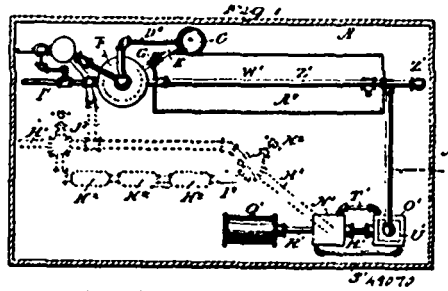
Claim.—1st. In a coin freed apparatus for the sale of gas, a circular plate C, divided or marked-off by holes or slots E, on its outer circumferential face into divisions representing definite quantities of cubic feet and having a slot D, and a projection or stop F, on the inside face of said plate C, and the combination therewith of a hook or fixing pin E^1, adapted to enter the said holes or slots E to fix the plate C, with its slot D, and stop F, in a given position for limiting and controlling the movement in one direction of a money tube P, and shield N, arranged behind said plate C, the tube P, being adapted to receive a coin when in contact with the limiting stop F, as and for the purposes described. 2nd. In a coin freed apparatus for the sale of gas, the combination with a plate C, having holes E, slot D, and stop F, and a revolving money tube P, and shield N, arranged behind said plate C, of a stop plate S, arranged on the inner periphery of a box for limiting the rotative movement of said money tube, as and for the purpose described. 3rd. In a coin freed apparatus for the sale of gas, the combination with a plate C, having holes E, slot D, and stop F, and a revolving money tube P, and shield N, arranged behind said plate C, and a stop plate S, arranged on the inner periphery of a box A, of which the plate C, forms the cover, a plate K, with face notches M, adapted to be rotated by the handle R, on the insertion of a coin into the tube P, the amount of rotation being determined by the position and distance of the stop F, from the stop plate S, as described and shown.

No. 49,070. Refrigerator. (*Réfrigérateur.*)

Martin Warmner, Yorktown, Indiana, U.S.A., 1st June, 1895; 6 years.

Claim.—1st. The described method of compelling circulation of the refrigerating agent consisting in creating a vacuum in front of said agent and subjecting it to the action of a blast of air from the rear, for the purposes set forth. 2nd. The described method of

compelling circulation of the refrigerating agent through an expansion coil consisting in admitting the same to the coil in conjunction with an air blast or current from behind, for the purposes set forth. 3rd. The described method of feeding a refrigerating agent to an expansion coil consisting in maintaining a vacuum in the coil and feeding the said agent under pressure to the coil in the same receptacle or conveyor and in conjunction with a blast of air, for the



purposes set forth. 4th. In a refrigerating process, involving the vaporization of carbon bi-sulphide in the presence of air and the separation of the two, the method of aiding the separation and the condensation of the carbon bi-sulphide, consisting in passing the mingled gases through a bath of a solution of water and material such as glycerine, for the purposes set forth. 5th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank, and air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent, at or near the expansion device, said expansion device itself, a vacuum and compression device and a condensing coil, for the purposes set forth. 6th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank, an air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent at or near the expansion device, said expansion device itself, a vacuum and compression device, azotising devices connected with the suction or return pipe, and a condensing coil, for the purposes set forth. 7th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank, an air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent at or near the expansion device, said expansion device itself, a vacuum and compression device, a condensing coil, and a pipe connecting the separating chamber with the vacuum and compression device, for the purposes set forth. 8th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank, an air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent at or near the expansion device, said expansion device itself, a vacuum and compression device, a condensing coil, a pipe connecting the separating chamber with the vacuum and compression device, and an azotising device connected with the suction or return pipe, for the purposes set forth. 9th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank, an air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent at or near the expansion device, said expansion device itself, a vacuum and compression device, a condensing coil, and a supplemental low temperature device placed in the air supply pipe, for the purposes set forth. 10th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank, an air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent at or near the expansion device, said expansion device itself, a vacuum and compression device, azotising devices connected with the suction or return pipe, a condensing coil, and a supplemental low temperature device placed in the air supply pipe, for the purposes set forth. 11th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank, an air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent at or near the expansion device, said expansion device itself, a vacuum and compression device, a condensing coil, a pipe connecting the separating chamber with the vacuum and compression device, and a supplemental low temperature device placed in the air supply pipe, for the purposes set forth. 12th. The combination of a separating tank, a supply pipe for the refrigerating agent connecting with the lower part of said separating tank an air supply pipe connecting with the upper part thereof, means to mix the air and refrigerating agent at or near the expansion device, said expansion device itself, a vacuum and compressed device, a condensing coil, a pipe connecting the separating chamber with the vacuum and compression device, an azotising device connected with the suction or return pipe, and a supplemental low temperature device placed in the air supply pipe, for the purposes set forth. 13th. In a refrigerating system, a separating tank, a supply pipe for the refrigerating agent connecting with it at one end, and an air supply pipe at the other end, means to generate pressure on the entire contents of the separating tank, and an injecting device to mix the refrigerating agent and the air at the expansion device, for the purposes set forth. 14th. In a refrigerating system, a separating tank, a supply pipe for the refrigerating agent, connecting with it at one end and air supply pipe at the other end, means to generate pressure on the entire contents of the separating tank, means to mix the refrigerating agent and the air at the expansion device, and a low temperature device placed in the air supply pipe, for the purposes set forth. 15th. The combination of a filling and reserve supply tank connecting with a separating tank, and air and refrigerating agent supply pipes also connecting with said separating tank, a suction or return pipe, a vacuum and compression device and a condensing coil connected with said last named device and with the separating tank, for the purposes set forth. 16th. The combination of a separating tank, a supply pipe for the refrigerating agent, another pipe for the air supply, both connecting with said tank, means to mix the refrigerating agent and the air at or near the expansion device, said expansion device itself, a suction or return pipe and means to create a partial vacuum in said last named pipe and to force the air or vapours into said separator tank, for the purposes set forth. 17th. The combination of a separating tank, a supply pipe for the refrigerating agent, another pipe for the air supply, both connecting with said tank, means to mix the refrigerating agent and the air at or near the expansion device, said expansion device itself, a suction or return pipe, means to create a partial vacuum in said last named pipe and to force the air or vapours into said separator tank, and means to azotise the air connected with the suction or return pipe, for the purposes set forth. 18th. The combination of a separating tank, a supply pipe for the refrigerating agent, another pipe for the air supply, both connecting with said tank, means to mix the refrigerating agent and the air at or near the expansion device, said expansion device itself, a suction or return pipe, means to create a partial vacuum in said last named pipe and to force the air or vapours into said separator tank, azotising devices connected with the suction or return pipe, and a supplemental low temperature device placed in the air supply pipe, for the purposes set forth. 19th. In a refrigerating system, a supply pipe for the refrigerating agent under pressure, a supply pipe for the air under pressure, a return pipe for the air and vapours of the refrigerant under partial vacuum, means to maintain the said relation, a separating tank with which said supply pipes connect, a suction and compression device with which said return pipe connects, a condenser through which the air and vapours are forced into said separating tank, for the purposes set forth. 20th. In a refrigerating system, a supply pipe for the refrigerating agent under pressure, a supply pipe for the air under pressure, a return pipe for the air and vapours of the refrigerant under partial vacuum, means to maintain the said relation, a separating tank with which said supply pipes connect, a suction and compression device with which said return pipe connects, a condenser through which the air and vapours are forced into said separating tank, and means to freeze moisture out of the air located in or connected with the air supply pipe, for the purposes set forth. 21st. In a refrigerating system, a supply pipe for the refrigerating agent under pressure, a supply pipe for the air under pressure, a return pipe for the air and vapours of the refrigerant under partial vacuum, means to maintain the said relation, a separating tank with which said supply pipes connect, a suction and compression device with which said return pipe connects, a condenser through which the air and vapours are forced into said separating tank, and means to azotise the air connected with the suction or return pipe, for the purpose set forth. 22nd. In a refrigerating system, a supply pipe for the refrigerating agent under pressure, a supply pipe for the air under pressure, a return pipe for the air and vapours of the refrigerant under partial vacuum, means to maintain the said relation, a separating tank, with which said supply pipes connect, a suction and compression device with which said return pipe connects, a condenser through which the air and vapours are forced into said separating tank, means to azotise the air connected with the suction or return pipe, and means to freeze moisture out of the air located in or connected with the air supply pipe, for the purposes set forth. 23rd. An expansion device for a refrigerating apparatus comprising an inlet for the mixed refrigerant and air, a portion or chamber of the expansion device located adjacent to and lower than the inlet in which any unvapourized part of the refrigerant will collect, and means to force a current of air or gas through said liquid refrigerant from substantially its lower part upwardly, for the purposes set forth. 24th. An expansion device for a refrigerating apparatus comprising an inlet for the mixed refrigerant and air, a portion or chamber of the expansion device located adjacent to and lower than the inlet in which any unvapourized part of the refrigerant will collect, means to enforce a current of air or gas through said liquid refrigerant, from substantially its lower part upwardly, and a supply pipe for the refrigerant, and another pipe for the air, and means to generate pressure in both of said pipes, for the purposes set forth. 25th. An expansion device for a refrigerating apparatus comprising an inlet for the mixed refrigerant and air, a portion or chamber of the expansion device located adjacent to and lower than the inlet, in which any unvapourized part of the refrigerant will collect, means to force a current of air or gas through said liquid refrigerant from substantially its lower part upwardly, a supply pipe for the refrigerant and another pipe for the air, means to generate pressure in both of said pipes, and a suction or return pipe connecting the exhaust end of the

expansion device with a vacuum producing apparatus, which connects with the device for generating the pressure, for the purposes set forth. 26th. An expansion device for a refrigerating apparatus comprising an inlet for the mixed refrigerant and air, a portion or chamber of the expansion device located adjacent to and lower than the inlet, in which any unvapourized part of the refrigerant will collect, means to force a current of air or gas through said liquid refrigerant from substantially its lower part upwardly, a supply pipe for the refrigerant and another pipe for the air, means to generate pressure in both of said pipes, a suction or return pipe connecting the exhaust end of the expansion device with a vacuum producing apparatus which connects with the device for generating the pressure, and a device for freezing the moisture out of the air placed in the air supply pipe, for the purposes set forth. 27th. In a refrigerating system, an inlet for the mixed refrigerant and air opening into the expansion device, a portion or chamber of said expansion device being located adjacent to and lower than said inlet in which any unvapourized part of the refrigerant will collect, a supply pipe for the refrigerant, another supply pipe for the air, both connecting with a separating tank, a suction or return pipe connecting with a device for generating a vacuum in it, and a compression device connected with the vacuum device and which forces the air and vapours through a condenser and into said separating tank, for the purposes set forth. 28th. In a refrigerating system, a supply pipe for the refrigerant, another supply pipe for the air both under pressure and supplied with means to regulate the relative flow of each, and a suction or return pipe under partial vacuum, for the purposes set forth.

No. 49,071. Wheel Tire. (*Bandage de roue.*)

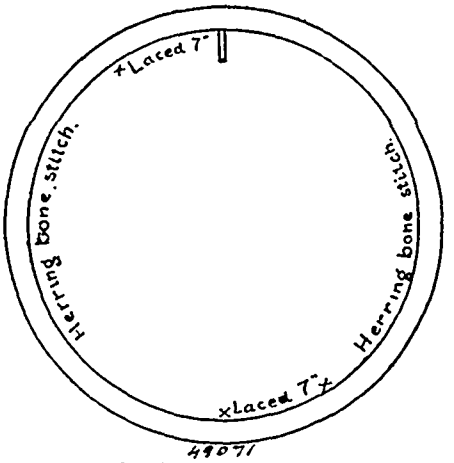
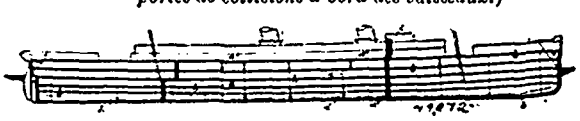


Fig 1. Outer cover

William Richard Hensel and John Smith, both of Toronto, Ontario, Canada, 1st June, 1895; 6 years.

Claim.—1st. The method or manner of the lapping of the tubing as shown in drawing figure 2, at the point marked over lapping of tube, and also the placing of the valve in the middle of the rubber tubing, as shown in said drawing figure 2, at the point opposite to the place marked over lapping of tube, both substantially as and for the purposes hereinbefore set forth. 2nd. The water proof canvas or linen lining the said leather tire, that is to say the using canvas or linen for lining of the said tire which is water proof, substantially as and for the purposes hereinbefore set forth. 3rd. The method or manner of sewing said leather tire, that is the use of the stitch called herring bone stitch, shown in figure 3 of the drawing marked as herring bone stitch, substantially as and for the purposes hereinbefore set forth. 4th. The leaving of two places about 7 inches in length, or openings in the tire for lacing instead of one; one beside the air valve and one on the opposite side of the tire both as shown in figure 2, marked "laced," substantially as and for the purposes hereinbefore set forth.

No. 49,072. Mechanism for Closing Collision Doors on Shipboard. (*Mécanisme pour fermer les portes de collisions à bord des vaisseaux.*)



Alexander Willoughby Montgomery Moore, Holland Lodge, Eltham Road, England, 1st June, 1895; 6 years.

Claim.—1st. In combination with collision doors on shipboard, blocking mechanism which keeps the doors open in opposition to gravity or other force, and a system of pipes charged with fluid to a pressure differing from the external pressure, the whole so arranged that the breakage by collision of the pipes releases the blocking mechanism and allows the doors to close. 2nd. In combination with collision doors on shipboard, mechanism operating to close the doors, and a system of pipes charged with fluid to a pressure differing from the external pressure, the whole so arranged that the opening or breakage by collision of the pipes starts the door closing mechanism. 3rd. In combination with collision doors on shipboard, mechanism operating to close the doors, cylinders and pistons so connected with the doors that fluid contained in the cylinders prevents the doors closing, and means for releasing the fluid from the cylinders.

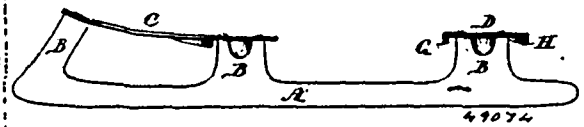
No. 49,073. Manufacture of Flongs for Producing Moulds for Stereotyping. (*Fabrication d'une composition pour la production de moules pour stéréotyper.*)

George Estwood, London, England, 1st June, 1895; 6 years.

Claim.—1st, A flong for producing matrices or moulds for stereotyping, consisting of a thick sheet of bibulous paper which has been faced when dry with composition or paste, substantially as herein before described. 2nd. A flong for producing matrices or moulds for stereotyping, consisting of a thick sheet of bibulous paper which has been faced with a paste composed of a saccharine liquor, glue, flour, whiting, borax, and water in approximately the proportions specified. 3rd. A composition for coating the bibulous paper of flongs used for producing matrices or moulds for stereotyping, the said composition consisting of a saccharine liquor, glue, flour, whiting, borax, and water in approximately the proportions specified.

No. 49,074. Skate. (*Patin.*)

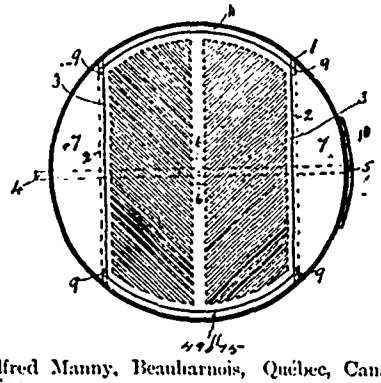
Fig. 1.



The Star Manufacturing Company, Halifax, assignee of Thomas Harrison, Darmouth, both of Nova Scotia, Canada, 1st June, 1895; 6 years.

Claim. 1st. A skate having a sole plate provided with a turned down edge or flange circumferentially and transversely of the runner, as and for the purpose set forth. 2nd. A skate having a heel plate provided with a turned down edge or flange circumferentially at the rear, as and for the purpose set forth. 3rd. A skate having a heel plate provided with a turned down flange at the forward edge, as and for the purpose set forth. 4th. A skate having the sole and heel plates provided with a turned down edge or flange transversely of the runner to re-enforce and stiffen said plates, as described.

No. 49,075. Furnace. (*Fournaise.*)



Emilien Alfred Manny, Beauharnois, Québec, Canada, 3 juin, 1895; 6 ans.

Résumé—Dans une fournaise de chauffage, un gril formé d'un cadre et d'un gril proprement dit, se déplacant, dans des espèces de coulisses par un mouvement de va et vient rectiligne, communiqué, par l'intermédiaire de pivots fixes sous le gril, par un levier de forme spéciale, actionné par une clef aussi de forme spéciale, ce gril étant muni d'ailettes placées sur les côtés, le tout permettant de faire le triage des cendres, et charbon, en même temps que le nettoyage du feu et pendant que la fournaise est hermétiquement fermée, le tout tel que décrit précédemment.

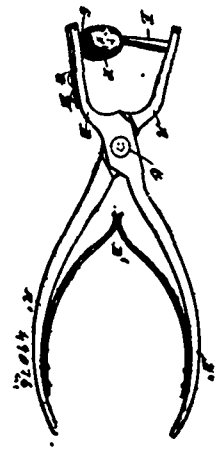
No. 49,076. Fruit Stoner.

(*Appareil pour enlever les noyaux des fruits.*)

Joseph Boeri, New York, State of New York, U.S.A., 3rd. June, 1895; 6 years.

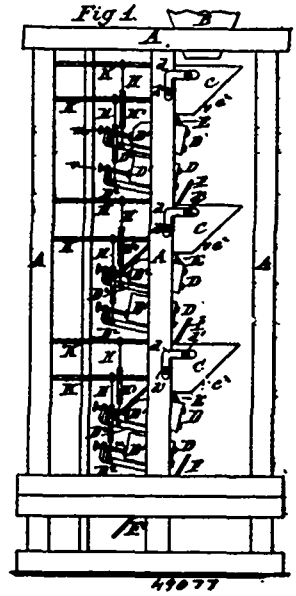
Claim.—A fruit stoner, comprising a pair of pivoted jaws one of

which has a transverse aperture, a female die secured to the apertured jaw and projecting into the opening thereof, yet spaced at its projecting end, from the walls of the said opening, so as to



leave an annular recess or chamber between the female die and the jaw to which it is secured, and a male die secured to the other jaw and adapted to enter the female die, substantially as described.

No. 48,077. Ore Separator. (*Séparateur de minerais.*)

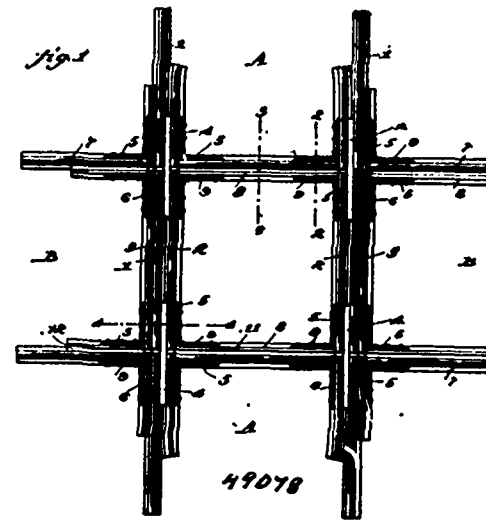


John W. Carter, Brooklyn, New York, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. The combination, with a supply hopper, of a series of permanent magnets, the pole ends of which are located below the hopper, and an adjustable deflecting-plate located above and at a short distance back of the pole ends of said magnets and in the path of the falling material, substantially as set forth. 2nd. In a magnetic ore-separator, the combination of a supply hopper, a series of magnets having the extreme attractive or active surfaces of their uppermost poles directly in the path of discharge of the ore particles and the attractive or active surfaces of the poles beneath out of said path but directly in the path of that portion of the magnetic material that has been separated by said uppermost poles, and an inclined magnetic deflecting-plate located below the mouth of the hopper and arranged above but out of contact with the attractive or active surfaces of said uppermost poles, substantially as set forth. 3rd. In a magnetic ore-separator, the combination of a supply hopper for the ore particles, two series of magnets placed one beneath the other and having the extreme attractive or active surfaces of the poles of the upper series of magnets directly in the path of discharge of the ore particles from the supply hopper so as to be in direct contact with the ore particles to be treated, and having the attractive or active surfaces of the poles of the lower series of magnets at some distance back from and out of the path of the ore particles to be separated, but directly in the path of and in direct contact with that portion of the magnetic material that has been separated by the poles of the upper series, and an inclined magnetic deflecting plate located below the mouth of the hopper and arranged above and out of contact with the poles of the upper series of magnets, substantially as set forth. 4th. In a magnetic ore-separator, the combination with a supply hopper, of a series of permanent magnets located below the hopper, a box for supporting said magnets, a pivoted frame for guiding said box, means for adjusting the box on said frame, and means for adjusting the inclination of said frame, substantially as set forth.

No. 49,078. Railway Crossing.

(*Passage de chemin de fer.*)



Mason D. Pratt and John F. Ostrom, both of Philadelphia, Pennsylvania, U.S.A., 3rd June, 1895; 6 years.

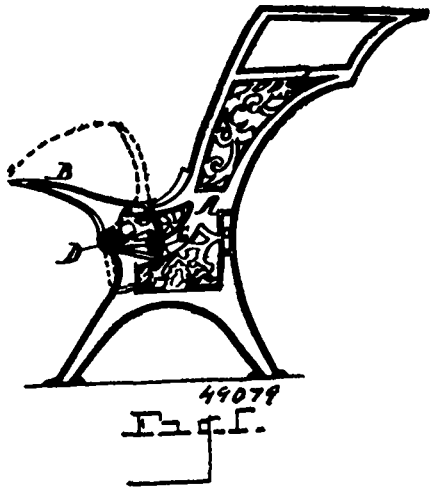
Claim.—1st. In a railway crossing, the combination with a main rail of girder cross-section, of a guard rail of similar section arranged adjacent to and connected with the main rail, said guard rail having its head formed with a depression or groove throughout its length suitable for the passage of wheel flanges, substantially as described. 2nd. In a rail crossing, the combination with the main rail of girder cross-section, of a guard rail of similar section having its head adjacent to and parallel with the head of the main rail, said guard rail having its head formed with a depression at the side adjacent to the main rail suitable for the passage of wheel flanges, said depression forming a groove which is bounded on the bottom and one side by the guard rail head and on the other side by the head of the main rail, substantially as described. 3rd. In a railway crossing, the combination of the rails of one track, with the crossing rails of the other track, and guard rails having their heads arranged parallel and adjacent to the heads of the crossing rails, each of said guard rails having its head formed with a depression or groove, on the side adjacent to the crossing rail, extending throughout its length and suitable for the passage of wheel flanges, substantially as described. 4th. In a railway crossing, the combination of the main and guard rails of one track, with the main and guard rails of a crossing track, the rails of both tracks being of like girder cross-section, and the heads of the guard rails of the crossing track being adjacent and parallel to the heads of their respective main rails, and formed with depressions adjacent to the main rail for the passage of wheel flanges, said depressions forming grooves which are bounded on the bottom and one side by the guard rails and on the opposite side by the heads of the main rail, substantially as described.

No. 49,079. School Desk. (*Pupitre d'école.*)

The Globe Furniture Company, Walkerville, Ontario, Canada, assignee of Spencer Clark, Northville, Michigan, U.S.A., 3rd June, 1895; 6 years.

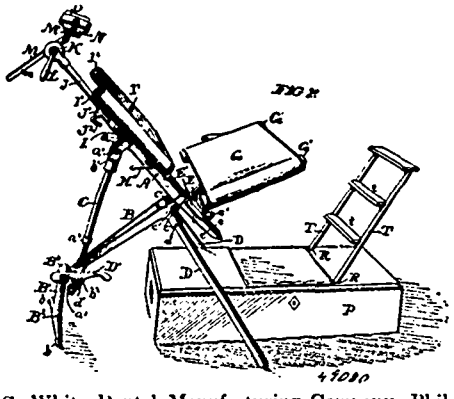
Claim.—1st. In a school desk, the combination with the seat frame, of a seat arm, a hinged plate or washer, a bolt jointedly uniting the rear end of the seat arm and the front end of the hinged plate to said frame, a bolt uniting the rear end of the hinged plate to the seat frame, and a spring held in place at the rear end of said hinged plate and projecting thereabove and therebelow, said seat arm and said plate having their adjacent faces constructed to wedge the one against the other as the seat arm is turned downward into horizontal position and upward into vertical position, substantially as and for the purposes set forth. 2nd. In a school desk, the combination with a seat frame, of a seat arm, a hinged plate or washer, a bolt jointedly uniting the rear end of the seat arm and the front end of the hinged plate to said frame, a bolt uniting the rear end of said plate to said frame, a coiled spring located between the

adjacent portions of the frame and of the plate and projecting thereon combination of the rails of one track, with the crossing rails of the above and therebelow, said seat arm and said plate or washer having their adjacent faces constructed to wedge the one against the other as the seat arm is turned downward into horizontal position and upward into vertical position, substantially as and for the purposes



set forth. 3rd. In a school desk, the combination with a seat frame, of a seat arm, a hinged plate or washer, a bolt jointedly uniting the rear end of the seat arm and the front end of said plate to said frame, a plate E located upon the outer face of said plate, a nut upon the bolt binding against said plate E, a bolt uniting the rear end of said hinged plate to the seat frame, a spring held in place at the rear end of said hinged plate and projecting thereabove and therebelow, said seat arm and said hinged plate, the one provided with wedge shaped projections, b, b^1, and the other with correspondingly shaped recesses c, c^1, to receive said projections, whereby the one will wedge against the other as the seat arm is turned downward into horizontal position and upward into a vertical position, substantially as and for the purposes set forth.

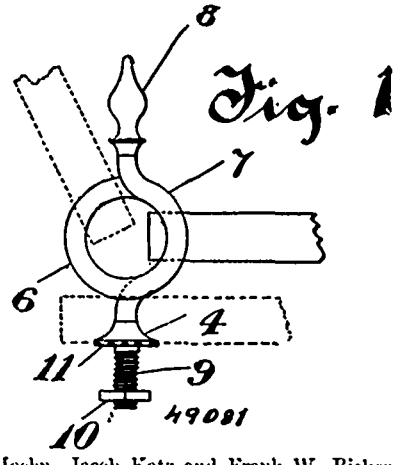
No. 49,080. Dental Chair. (*Chaise de chirurgie.*)



The S. S. White Dental Manufacturing Company Philadelphia, Pennsylvania, assignee of Arthur William Browne, Prince's Bay, New York, both in the U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. The combination, in a dental chair, of the frame bar adjustable as to inclination, the front and rear supporting legs having jointed connection therewith above its lower end, the adjusting arm having jointed connection at one end with the frame bar and adjustable and detachable connection at its opposite end with the rear supporting leg, means for maintaining the adjusting bar in the position of adjustment, the seat adjustable up and down the frame bar, and means for maintaining the seat in its position of adjustment either above or below the juncture of the legs with the frame bar, substantially as set forth. 2nd. The combination, in a dental chair, of the frame bar, the front supporting legs, the rear supporting leg composed of the upper and lower sections, said lower section having turning connection with the upper section and being provided with the cross-foot bar having the two bearing points, one at each extremity thereof, and by which only it has contact with the floor, the chair seat supported by the frame bar and adjustable up and down, and means for maintaining the seat as adjusted, substantially as set forth. 3rd. The combination, in a dental chair, of the supporting legs, the frame bar having connection with said legs above its lower end and provided with the guide-way extending lengthwise thereof both above and below the juncture of the frame bar with the legs, the seat supporting arm having the slide adjustable upon the frame bar guide way, and means by which said arm may be upheld in its position of adjustment to secure the seat either below or above the juncture of the legs with the frame bar, substantially as set forth. 4th. The combination of the seat-supporting arm, the swinging seat attaching rods pivotally connected with said arm, the flexible seat, and its stretcher bars carried by the seat attaching rods, substantially as set forth. 5th. The combination of the frame bar, the seat-supporting arm fitted to slide at its inner end upon the frame-bar and provided with the bearing sockets at its outer end, means for maintaining the seat-supporting arm in its position of adjustment upon the frame bar, the swinging seat-attaching rods pivoting in the bearing sockets of the seat-supporting arm, the flexible seat, its stretcher bars carried by the seat-attaching rods, and means for limiting the swinging movement of the seat-attaching rods, substantially as set forth. 6th. The combination of the back pad carrier provided with the bearing sockets and lateral projections, the swinging pad-attaching rods pivoting in said bearing sockets and bearing downward upon said lateral projections, the flexible back pad, and its stretcher bars carried by the pad-attaching rods, substantially as set forth. 7th. The combination in a dental chair, of the frame bar, the seat adjustable along said bar, means for upholding the seat in its position of adjustment, the back pad carrier adjustable along the frame bar independently of the seat, means for securing it in its adjusted position, the head rest pad, its vertically adjustable supporting rod supported by the frame bar independently of the seat and back pad carrier, and means for securing said rod in its position of adjustment, substantially as set forth. 8th. The combination of the bow-like head rest carrier, means for adjustably supporting it, the curved or concaved head rest block or frame pivotally connected at its ends with said carrier to swing or rock freely, the side pads supported upon the inner surfaces of the ends of the head rest block or frame, and the slack strap pad having connection at its ends with the head rest block or frame, substantially as set forth.

No. 49,081. Check-Hook. (*Crochet de sellette.*)



John N. Moehn, Jacob Katz and Frank W. Ricker, all of Milwaukee, Wisconsin, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. A check-hook, consisting of a wire having a lower base portion for attachment to the gig-saddle, a terminal portion, and a spiral intermediate the base and terminal portions, the two parallel strands of said spiral being disposed at the front to take the bearing of the loop of the check-rein, substantially as set forth. 2nd. A check-hook, consisting of a wire having a lower base portion for attachment to the gig-saddle, a terminal straight portion on a vertical line with the base portion, and a spiral intermediate the base portion, and a spiral intermediate the base and terminal portions, the two parallel strands of said spiral being disposed at the front to take the bearing of the loop of the check-rein, substantially as set forth.

No. 49,082. Apparatus for Deodorizing Oils.

(*Appareil pour désinfecter l'huile.*)

The Filbert Manufacturing Company, assignee of John Harry Filbert, all of Baltimore, Maryland, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. In an apparatus for treating fats and oils, the combination of two closed tanks one within the other, and a water space between the two, a shaft in the inner tank, separate paddle wheels on the shaft within the tank, a neck or tubular P for an air-blast and entering from the exterior into the inner tank a stand-pipe R for the escape of air from the inner tank, and revoluble blades in

said stand-pipe. 2nd. In an apparatus for treating fats and oils, the combination of two closed tanks one within the other, and a water-space between the two, an inlet for an air-blast to enter the

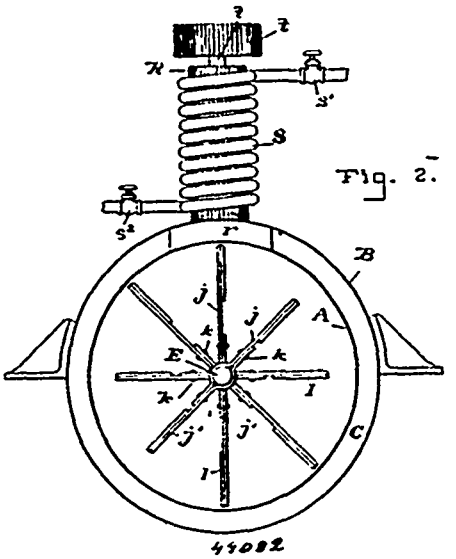


Fig. 2.

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inner tank, a stand-pipe for the escape of air from the inner tank, a steam-coil around the stand-pipe, and revoluble blades in said stand-pipe.

No. 49,083. Lock for Fastening Crossed Wires.

(*Lien pour attacher les fils croisés.*)

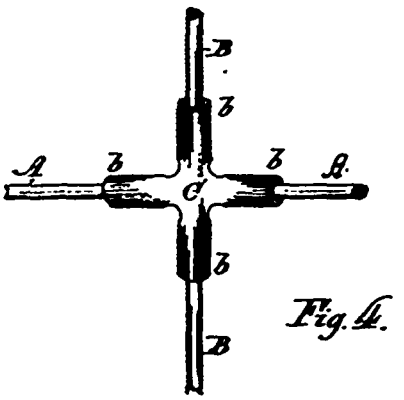


Fig. 4.

49083

Abel Land, Hamilton, Ontario, Canada, 3rd June, 1895; 6 years.

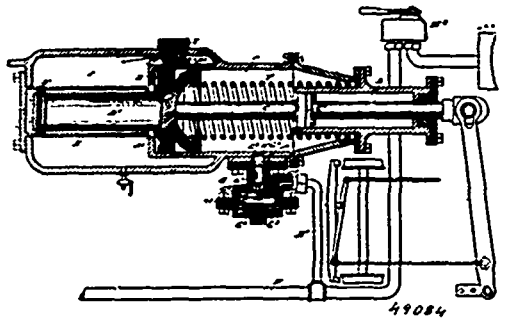
Claim.—1st. A lock for fastening vertical and horizontal wires at their junction, consisting of a metal plate formed with arms, each one having a concave recess, and side walls to receive and then made to enclose the vertical and horizontal wires, substantially as and for the purpose specified. 2nd. A lock for fastening vertical and horizontal wires at their junction consisting of a metal plate C having four arms *b*, each arm having a concave recess *c*, and side walls *d*, to receive and then made to enclose the vertical and horizontal wires *A*, *B* to form a wire locking device, substantially as specified.

No. 49,084. Automatic Fluid Brake.

(*Frein hydraulique.*)

Alexander H. Moyes, Ogden, Territory of Utah, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. An automatic fluid pressure brake, comprising a brake cylinder, a piston and double acting valve connected with the train pipe and with the forward end of the said brake cylinder, the said double acting valve carrying on its piston a slide valve for connecting the interior of the brake cylinder with the outer air, substantially as shown and described. 2nd. An automatic fluid pressure brake, comprising a brake cylinder containing a spring-pressed piston, a double acting valve connected with the said brake cylinder and with the train pipe, and an auxiliary reservoir connected with the rear end of the said brake cylinder and also connected with a feed groove in the brake cylinder by a check valve, substantially as shown and described. 3rd. An automatic fluid pressure brake, comprising a brake cylinder containing a spring-pressed piston, an auxiliary reservoir opening into the rear end of the said cylinder, a check valve



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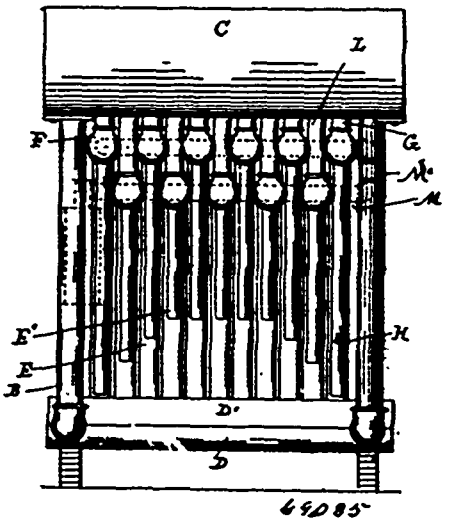
for connecting the feed groove of the brake cylinder with the said auxiliary reservoir, and a double acting valve connected with the forward end of the said brake cylinder and with the train pipe, the said double acting valve being provided with a piston and a slide valve operating over two ports connected with the outer air, substantially as shown and described.

No. 49,085. Steam Generator. (*Générateur à vapeur.*)



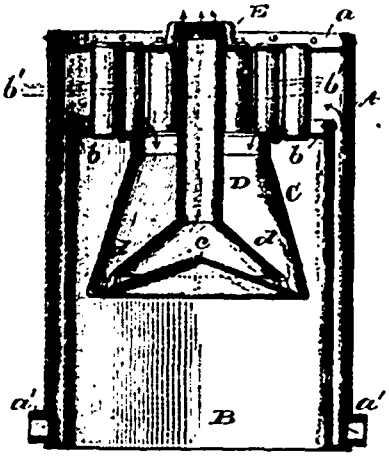
49085

Bion St. Bernard, Detroit, Michigan, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. In a steam generator, the combination with a series of horizontal headers, of a series of drop tubes, connecting at their upper ends into the water space of the headers an interior concentrically arranged series of pipes, one in each drop tube, having its discharge opening at the bottom, a connection from the top of said tubes to the feed water supply, and a steam drum common to all of the headers and having a riser connected therewith, substantially as described. 2nd. In a steam generator, the combination of a series of drop tubes, connecting at their upper ends into a water space of the header, an interior concentrically arranged series of pipes, one in each drop tube having a discharge opening at the bottom, and a circulating mechanism, such as a pump, having its suction side connected to the lower portion of the water space, and its discharge connecting into the upper end of the drop tubes, substantially as described. 3rd. In a steam generator, the combination of a series of headers arranged over the furnace, a series of drop tubes depending from each header, a manifold within each header, a series of tubes having an opening at the bottom, a connection between the manifolds and the feed water supply, and a steam drum common to all the headers, substantially as described. 4th. In a steam generator, the combination of a series of drop tubes, connecting at the top into a water space of the header, an interior concentrically arranged series of pipes, one in each drop tube, open at its bottom, manifolds into which these inner pipes connect, an exterior connection between the manifolds, a feed pump, a connection from the pump to the lower water space of the boiler, substantially as described. 5th. In a steam generator, the combination with the upper and lower headers constituting the water spaces of the generator and risers, of manifolds in the upper spaces, means comprising a pump for creating a force feed to the manifolds, and a valved connection

between the said means and the lower spaces, substantially as described.

No. 49,086. Boiler. (*Chaudière*)



49086

Ossian Carrol Davis, Racine, Wisconsin, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. A water boiler having a bottom portion forming the top of the fire box and provided with an inverted funnel shaped deflector resting on and supported by the said bottom portion, substantially as described. 2nd. A water heater or boiler having a re-entrant bottom and provided with an inverted funnel shaped deflector resting on and supported by said bottom, substantially as described. 3rd. The combination with a water heater or boiler, of an inverted funnel shaped deflector and provision for the escape of steam between the top of said deflector and boiler, substantially as described. 4th. The combination with a water heater or boiler provided with outlet and inlet, of an inverted funnel shaped deflector adjacent to the outlet resting on and supported by the bottom of the boiler, of tubular passages for the product of combustion passing through the boiler between the inlet and said deflector, substantially as described. 5th. The combination with the water heater or boiler, provided with an outlet and inlet, of a depending portion extending to near the bottom of the boiler having an interior passage connected directly with the outlet, and tubular passages for the products of combustion passing through the boiler between the inlet and said depending portion, substantially as described.

No. 49,087. Pile Covering.

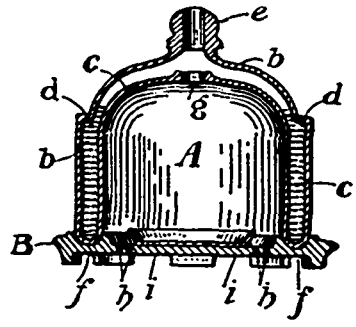
(*Matériel pour la couverture des pilotis.*)

49087

Joseph Perret, Everett, Washington, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. A pile having a covering consisting of a coating of coal-tar, gravel applied to the tar, a wire wound spirally around the pile, a section of screening arranged outside of the wire and around the pile, and secured to the wire, and a coating of plastic cement covering the screen and pile, substantially as described. 2nd. A pile having a protective covering applied thereto, and consisting of a coating of coal-tar and cement with gravel interposed as a binding agent, a wire wound spirally around the pile outside of said coating, a section of screening embracing the pile outside of the wire, and a coating of plastic cement applied to and covering the screening, substantially as described.

No. 49,088. Dish Cover. (*Couvercle de plat.*)

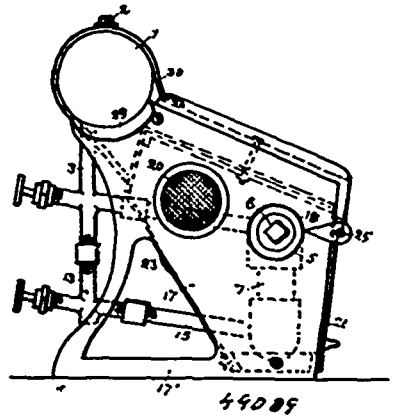


49088

Thomas York, Portsmouth, Ohio, U.S.A., 3rd June, 1895; 6 years.

Claim.—The improvement which consists in providing the cover A, with the aperture *g* in the inner wall thereof, and the dish B with the orifices *h* in the manner described, for the purpose of creating a constant current of air through the interior of the combined dish and cover, whereby the cooling properties of the said apparatus are materially increased.

No. 49,089. Foot Warmer. (*Chaufferette.*)



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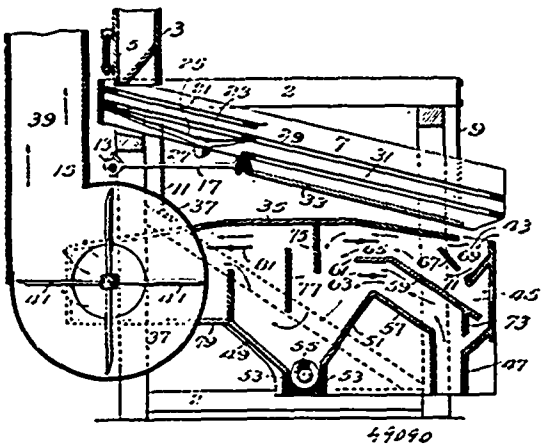
Asa Kindley, New Holland, Indiana, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. In a foot warming stove, the frame and its plates constituting a burner case, the inclined grated cover, the oil reservoir supported on the frame near the upper edge of the grate, the oil pipes provided with a burner communicating through said pipes with the reservoir and situated below the grate and within the casing, and a guard between the burner and grate inclined upwardly to direct products of combustion toward the reservoir, and away from objects placed immediately on the grate, substantially as set forth. 2nd. In a foot warming stove, the frame and its plates constituting a burner case, the inclined grated cover, the oil reservoir supported on the frame near the upper edge of the grate, the oil pipes provided with a burner communicating through said pipes with the reservoir and situated below the grate and within the casing, a guard between the burner and grate inclined upwardly to direct products of combustion toward the reservoir and away from objects placed immediately on the grate, and exits, one or more, for the products of combustion situated in the case in proximity to the oil reservoir, substantially as set forth. 3rd. In a foot warming stove, the frame and its plates constituting a burner case, the inclined grated cover, the oil reservoir supported on the frame near the upper edge of the grate, the oil pipes provided with a burner communicating through said pipes with the reservoir and situated below the grate, and a guard situated under the grate and having supplemental exits adjacent the reservoir provided with a damper, substantially as set forth. 4th. A foot warming stove, comprising a burner-inclosing case, an oil reservoir supported above the case, an

air inlet situated near the bottom of the case, a burner, a burner-heating and vapour-igniting oil receptacle, said burner and oil receptacle being situated near the air inlet, and exit for products of combustion from the case adjacent to the oil reservoir, said exit and inlet being filled with wire gauze, and a support for the feet above said exit, substantially as set forth.

No. 49,090. Grain Cleaning Machine.

(*Machine à nettoyer le grain.*)

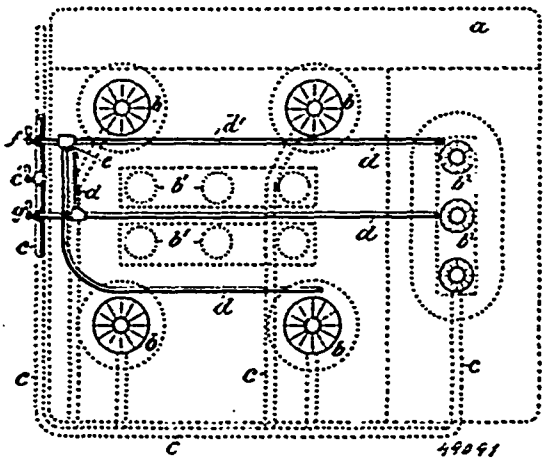


Charles John Mober, Minneapolis, Minnesota, U.S.A., 3rd June, 1895; 6 years.

Claim.—1st. The combination, in a grain cleaning machine, with the sieve-frame and means for reciprocating the same, of an independent casing arranged below the sieve frame and provided with an opening in its top into which the material from the sieve frame passes, a fan connected with the opposite end of said casing, a settlings chamber arranged in said casing between said opening and said fan, and vertical and inclined air-trunks arranged in said casing between said opening and said settlings chamber, substantially as described. 2nd. The combination, with the casing 35, of the fan arranged at one end of said casing and connected therewith by a suitable air trunk 79, the valve 81 arranged in said air-trunk, a settlings chamber in said casing provided with a suitable conveyor, the openings 43 and 45 in the end of the casing farthest from said fan, the inclined plates 67 and 69, arranged below the opening 43, the vertical air trunk 47, and the inclined transverse partition 61, arranged at the upper edge of the partition 59, and the valves 63, 65, arranged in the air trunks above and below the partition 61, for the purpose set forth.

No. 49,091. Automatic Lighter for Gas-Stoves.

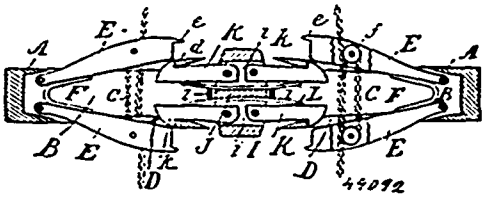
(*Allumoir automatique pour poêles à gaz.*)



William John Gurd, London, Ontario, Canada, 3rd June, 1895; 6 years.

Claim.—1st. In a gas-stove, the combination with the heating burners, of a pilot or permanent light burner, a perforated or slotted lighter tube arranged and constructed, upon being supplied with gas, to direct a light or flame from the pilot-light to said burners, and means for controlling the supply of gas to said lighter tube, substantially as described and for the purpose set forth. 2nd. In a gas-stove, the combination with a series of heating burners, of a lighter tube or system of tubes arranged and constructed, upon being supplied with gas, to receive a light or flame at any point and direct the same to said burners, and means for controlling the supply of gas to said lighter tube or system of tubes, substantially as described and for the purpose set forth. 3rd. In a gas-stove, the combination with the heating burners of a pilot-light so called, a lighter tube provided with a longitudinal slit or opening therein, forming a connection between said pilot-light and the burners and adapted to direct a light or flame from the former to said heating burners, and means for controlling the supply of gas to the lighter tubes, substantially as described and for the purpose set forth. 4th. In a gas-stove, the combination with the heating burners of a pilot or permanent light, a lighter tube arranged and constructed upon being supplied with gas to direct a light or flame from the pilot-light to said burners, and an automatic closing valve for controlling the supply of gas to the lighter tube, substantially as described and for the purpose set forth. 5th. In a gas-stove, the combination with a series of heating burners, of a pilot-light burner so called, a tube or system of tubes arranged and constructed upon being supplied with gas, to communicate or direct a light or flame from said pilot-light to the several series of burners, and means for controlling and directing the said light or flame to any desired heating burnmer or burners, substantially as described and for the purpose set forth.

No. 49,092. Car-Coupler. (*Attelage de chars.*)

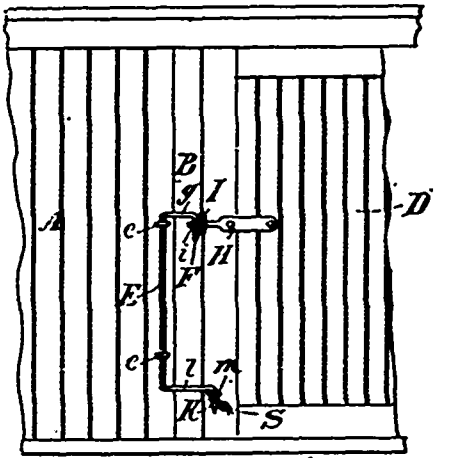


Ephrem Martin, St. Hyacinthe, and Joseph Martin, St. Henri de Montreal, both of Quebec, Canada, 3rd June, 1895; 6 years.

Claim.—1st. In a car-coupling, the combination with the block I having two transverse perforations divided by a central partition, fingers K pivoted in the said perforations, hooks *k* formed on the outer ends of the said fingers, springs L, *l*, tending to press the said fingers outwardly, of the draw-head A having slots D formed in its sides, the said hooks *k* being adapted to engage the forward edges of the said slots and means for disengaging the said hooks from the said slots, substantially as set forth. 2nd. In a car-coupling, the combination with the draw-head A having slots formed in its sides, of the levers E pivoted in the rear of the cavity of the draw-head, and passing through the said slots, the U-shaped spring F, pressing the said levers outwardly, pulleys *f* journalled in the said levers, a chain passing over the said levers, the pulley G and hand-wheel *g* and pulley H and lever *h* operating the said chain, substantially as set forth. 3rd. In a car-coupling, the combination with the block I of the chain N and hook *n*, substantially as set forth.

No. 49,093. Fastening for Freight Car-Doors.

(*Fermeture de porte de chars.*)

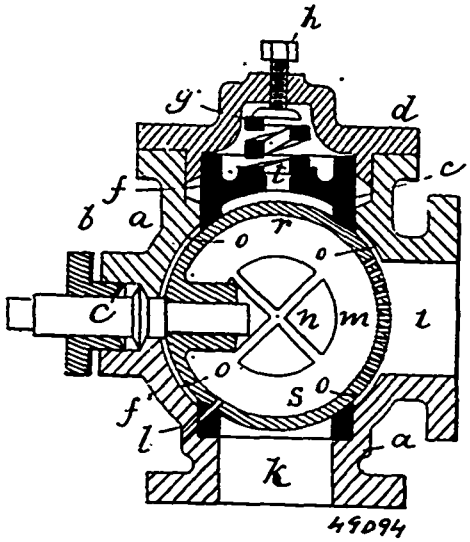


James Gelley and Donald McDonald, both of Levis, Quebec, Canada, 3rd June, 1895; 6 years.

Claim.—1st. A fastening for freight car-doors consisting of a vertically sliding rod secured to the side of car near the door opening,

and having down turned hooks formed on its upper and lower ends, the said rod being bent to pass the door frame, the upper hook being adapted to engage an eye in plate secured to the car-door, after the end of the said plate has passed through a slot in a plate secured to the door frame, the lower hook engaging an eye in a bolt secured in the said door, and the said lower hook being provided with an eye, substantially as set forth. 2nd. The combination in a fastening for freight car-doors with the rod E adapted to slide in eyes *e*, the said rod being bent at its upper and lower end so as to pass in front of the door frame of a car, of the downturned hooks F and K, substantially as set forth.

No. 49,094. Valve. (*Soupape.*)



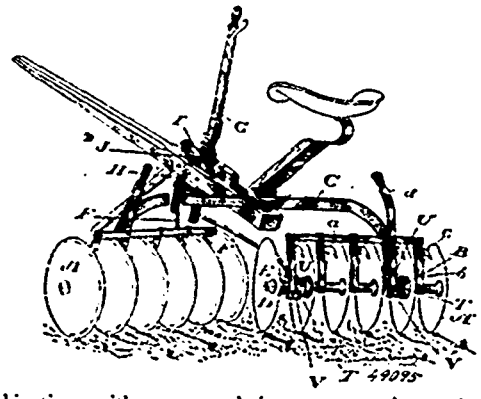
James Casey, London, England, 4th June, 1895; 6 years.

Claim. 1st. In a valve, the combination of a mutilated hollow ball *b* having openings or passages *l m n*, a spindle *c* fixed to the ball *b*, a valve box *a* formed in two parts, having passages *i k l* and *p* a cap or cover *d* and a spindle stuffing box annular rings *f* and *f*¹, enclosing spherical segments of the ball of equal areas, the ring *f* having a passage *t*, and being pressed by a spring *g*, regulated by a screw *h*, and accessible fluid spaces *o o* for equalizing the pressures upon the ball, substantially as and for the purposes described. 2nd. In a valve, the combination of a mutilated hollow ball, having openings or passages *n n*, a spindle *c* fixed to the ball, a valve box *a* in one casting having a cover *d* and gland *f*², passages *i k* and a spindle stuffing box, rings *f* a *f*¹ enclosing spherical segments of the ball of equal areas, the ring *f* being pressed by elastic packing *e* between the gland *f*² and the ring *e*, substantially as and for the purposes described. 3rd. In a valve, the combination of a mutilated hollow ball, having openings or passages *n n*, a spindle *c* fixed to the ball, a valve box in one casting fitted with a cover *d* and spindle stuffing box, also formed with passages *i k* and *p*, rings *f* and *f*¹ enclosing spherical segments of the ball of equal areas, the rings *f* being pressed by a spring *g*, regulated by a screw *h*, substantially as and for the purposes described. 4th. In a hydraulic valve, the combination of a mutilated hollow ball, having openings or passages *n n* a spindle *c* integral with the ball, a valve box *a* formed in two parts, having passages *i k* and *p*, a cover *d* and a spindle stuffing box, annular rings *f* and *f*¹ enclosing spherical segments of the ball of equal areas, the ring *f* being perforated, and its pressure regulated by a screw *h*, substantially as and for the purposes described.

No. 49,095. Disc Harrow. (*Herse.*)

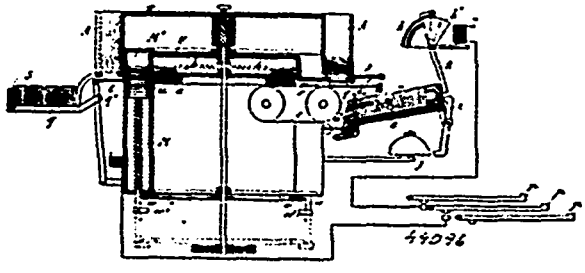
Torrance Edward Bissell, Prescott, Ontario, Canada, assignee of George Roger Thomson, Gouverneur, New York, U.S.A., 4th June, 1895; 6 years.

Claim.—1st. In a disc harrow, disc gangs A A¹, pivoted to the cross-beam C, in combination with the lever G, one or more links I, supplemental lever H, quadrant casting J, and connecting rods F, substantially as and for the purpose specified. 2nd. In a disc harrow, a cross-beam having the extremity of its downward end rounded and a flattened head forged on or connected therewith at an angle to the breadth of the end of the cross-beam, in combination with a disc gang having a journal box on the axle thereof, the said journal box having an oblong hole formed in a lug thereon, substantially as and for the purpose specified. 3rd. In a disc harrow, the cross-beam C, having its downward end loosely connected with the journal box B of the disc gang axle, in combination with a rounded projection N, formed on or connected to the downward end of the cross beam and resting on the top of the journal box, substantially as and for the purpose specified. 4th. In a disc harrow, the journal box O having chilled ball chambers at each end, in combination with the divided journal R, grooved shoulders S, balls Q, and sand bands W, substantially as and for the purpose specified. 5th. In a disc harrow, the scraper standards pivoted to the journal boxes of a gang and pivotally connected by a scraper beam,



in combination with scraper knives connected to the said standards, substantially as and for the purpose specified. 6th. In a disc harrow, scraper standards pivoted to the journal boxes of a gang and pivotally connected by a scraper knives connected to said standards; a series of clod cleaners rigidly connected to the said beam between the discs, and a series of scraper knives connected to the said clod cleaners, substantially as and for the purpose specified. 7th. In a disc harrow, scaper standards pivoted in oblong slots formed at the back of the journal boxes of a gang and pivotally connected by a scraper beam in combination with clod cleaners connected to the said beam and a hand lever rigidly connected to one of the scraper standards, substantially as and for the purpose specified. 8th. In a disc harrow, a cross-beam having the extremities of its downward ends rounded and a flattened head forged on or connected therewith an angle to the cross-beam in combination with disc gangs having the outer journal boxes thereof provided with lugs with oblong holes therein; and inner bearing boxes, to which are attached suitable connecting rods adjustably connected to the tongue of the harrow, substantially as and for the purpose specified. 9th. In a disc harrow, the disc gangs A, A¹, pivoted to the cross beam C, in combination with the hand lever G, one or more links I, supplemental lever H, and the connecting rods F, both levers being provided with a series of holes to receive the end of the connecting rods, substantially as and for the purpose specified. 10th. In a disc harrow the combination of the journal box O, chilled ball chambers P, divided journal R, washer R², grooved shoulders S, and two sets of friction balls Q, substantially as and for the purpose specified.

No. 49,096. Plectrotype. (*Plectrotype.*)

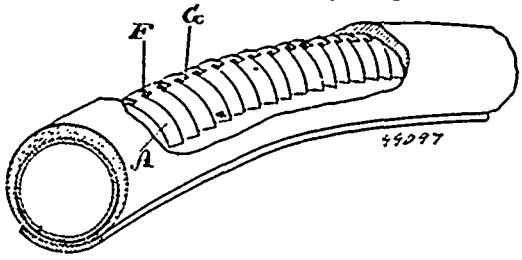


Ansbert E. Vorreiter and Dr. Eugen Mullendorff, both of Berlin, Prussia, Germany, 4th June, 1895; 6 years.

Claim.—1st. In a machine for composing and distributing types, effecting justifying by composing with temporary space types and automatically substituting for these, the required space types after each line is composed, the required thickness of the finally used space types being indicated by the machine. 2nd. For justifying in the manner above referred to the use of temporary space types larger than the other types, so that as the composed line is pushed under a magazine *l*, containing the required space types, each temporary space type closes a causing such a movement, that it is ejected and the proper space type takes its place. 3rd. The arrangement of the types in channels *m*, in which they are pressed by a driver *n*, acting from below, to the upper end, whence they are ejected by pushes *t*, upon a circular table *a*. 4th. For leading the ejected type to the composing stick, a brush *b*, revolving above the circular table *a*. 5th. For distributing the types the feeling levers *r*, having projections corresponding to the

the notches of the respective types, so that the type corresponding to each feeling lever is ejected from the line distributed. 6th. The arrangement of an auxiliary magazine M^1, above each composing channel M, into which the distributed type is introduced, and which from time to time, is automatically discharged into the composing channel below. 7th. *In combination with the distributing channels,* the contact lever a^1 whereby when a distributing channel is empty, the lever q carrying the line to be distributed is moved so as to convey the line into the empty channel. 8th. In combination with the auxiliary magazines M^1, the lever c^1, which at each movement of the distributing table momentarily lifts the types, for the purpose set forth. 9th. In the composing and distributing machine described, the employment of electro magnets or solenoids for transmitting the movements, in order to facilitate the action of the key board. 10th. The employment of feeling springs arranged in a circle each carrying the counterpart of one of the types. 11th. For employing different kinds of types arranged in adjacent channels, a key or lever in combination with a ring carrying the pushers and their electro-magnets so that when this ring is turned the pushers act on other channels. 12th. Providing space for introducing a type into a magazine already containing type by moving the bottom of the magazine down so rapidly, that the types above have not time to descend.

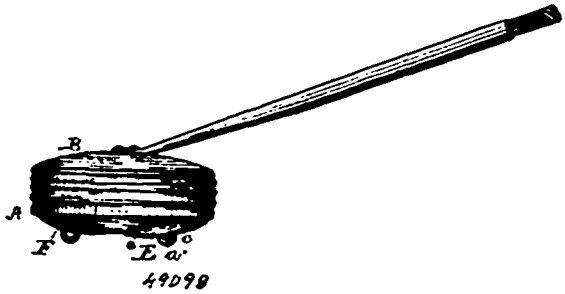
No. 49,097. Cycle Tire. (*Bandage de cycles.*)



Walter H. Morden, Frank Smith Jackson and Earle Sylvester Lyon, all of Toronto, Ontario, Canada, 4th June, 1895; 6 years.

Claim.—1st. In a cycle tire a flexible resilient protector comprising a series of concavo-convex sections, each of which is formed with a slot at one side and a projecting lug at its opposite side, said lugs and slots engaging each other, substantially as specified. 2nd. In a cycle tire a flexible resilient protector, comprising a series of overlapping concavo-convex sections, each provided with slots and lugs on opposite sides, substantially as specified. 3rd. In a cycle tire a flexible resilient protector comprising a series of scales or plates in combination with an elastic web to which the scales or plates are secured, substantially as specified. 4th. In a cycle tire, a flexible resilient protector comprising a series of overlapping scales or plates, each provided with a lug in combination with an elastic web with which said lugs engage, substantially as specified.

No. 49,098. Seed Sower. (*Semoir.*)

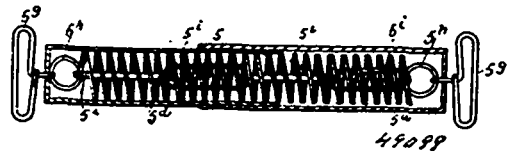


William Reece Bowen, East Palatka, Florida, U.S.A., 4th June, 1895; 6 years.

Claim.—1st. A hand seed sower substantially as described comprising the cup having its bottom formed with the large opening and with the series of small openings, the disc having a series of graded openings movable consecutively into register with the said large opening, and the disc having the series of openings movable into and out of register with the series of small openings in the cup bottom, all substantially as and for the purposes set forth. 2nd. A hand seed sower composing the cup, the top threaded to said cup, such cup having a rounded bottom provided with a large opening and with a series of small openings, the dropping disc curved to correspond to said bottom, and having a series of graded openings movable consecutively into register with the large opening of the cup bottom and the broadcast disc curved to correspond with the cup bottom, and having a series of openings movable into and out of register with those of the cup bottom, substantially as and for the purposes set forth. 3rd. The improved hand seed sower herein described consisting of the top, the handle secured to and extended from said top, the cup screwed to said top and having the rounded bottom provided with the large opening and with the series of small openings, the dropping disc having the series of graded openings movable consecutively into register with the large opening of the cup bottom, and the broadcast disc curved to correspond with the *curvature of the cup bottom, and having a series of openings mov*able into and out of register with the small openings of the cup *bottom, the rivets to which said discs are secured and by which they* are held to the cup bottom, and the handles secured to said rivets by which they and the discs may be turned, all substantially as and for the purposes set forth.

No. 49,099. Check-rein Attachment.

(*Attache de rênes de bride.*)

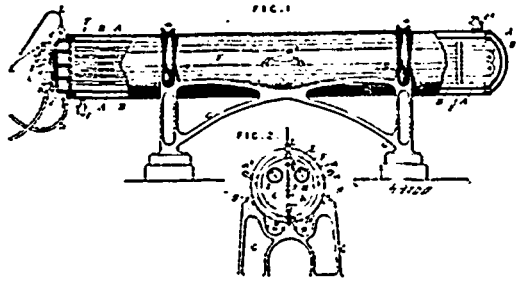


George Washington Taylor, Denver, Colorado, U.S.A., 4th June, 1895; 6 years.

Claim.—1st. In a yielding check-rein attachment, the combination of the coil spring, the telescoping two-part casing inclosing the spring, the connected links located within the spring, the loops having stems passing through the closed casing ends, and the rings connecting the loops with the spring extremities and the end links, substantially as described. 2nd. In a yielding check-rein attachment, the combination of the coil spring, the telescoping, two-part casing inclosing the spring, the connected links located within the spring, and the end loops having stems passing through the closed casing ends and suitably connected with the spring extremities and the end links, substantially as described.

No. 49,100. Apparatus for Sterilizing Liquids.

(*Appareil pour stériliser les liquides.*)



Etienne Williams Kuhn, Paris, France, 4th June, 1895; 6 years.

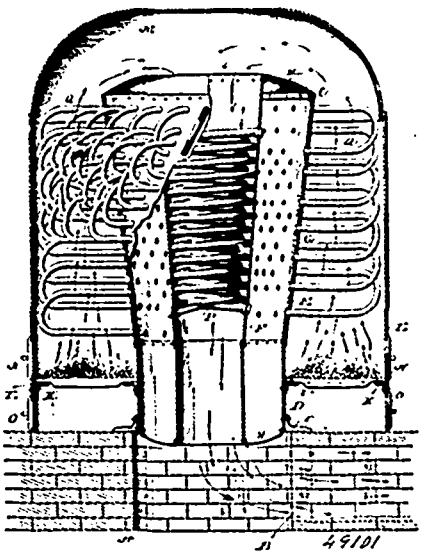
Claim.—1st. An improved process of sterlization of liquids consisting in first submitting them to the homogeneous and instantaneous action of heat not however exceeding, (or exceeding very slightly) the temperature necessary for sterilization and then cooling the same, also in a homogeneous and instantaneous manner, such heating and cooling operations being intermittently performed in a hermetically closed cylinder, or vessel, adapted to receive oscillatory, gyratory, or equivalent motion, the gases which separate from the liquid treated being, during the cooling period, re-absorbed by the said liquids owing to the considerable pressure to which they are subjected during the heating operation, and injurious action, of the metallic surfaces, being avoided by the employment of a coating of silver or other equivalent metal, proof against the actions of liquids, such silver or the like, being applied to the inner walls of the said cylinder or vessel, substantially as hereinbefore described. 2nd. Apparatus for the purpose described, the said apparatus consisting of a tightly closed cylinder, or vessel, for containing the liquid to be treated and of a diameter or width small in comparison to its length and provided with a casing of jacket and a series of tubes in the interior of the said cylinder, or vessel, and means for supplying a heating agent, and a cooling agent to the said jacket and tubes, and means for imparting a gyratory, oscillating, or equivalent motion to the said cylinder or vessel, substantially as hereinbefore described and illustrated in the accompanying drawings.

No. 49,101. Steam Boiler. (*Chaudières à vapeur.*)

Edward P. McGerr, Jersey City, New Jersey, U.S.A., 4th June, 1895; 6 years.

Claim.—1st. A boiler provided with two tapering shells, having their smallest parts downward and set one within the other, an outer shell forming a fire chamber, a canopy top to direct the products of combustion into the central inner shell, and a flue to carry them away, substantially as described. 2nd. A boiler pro-

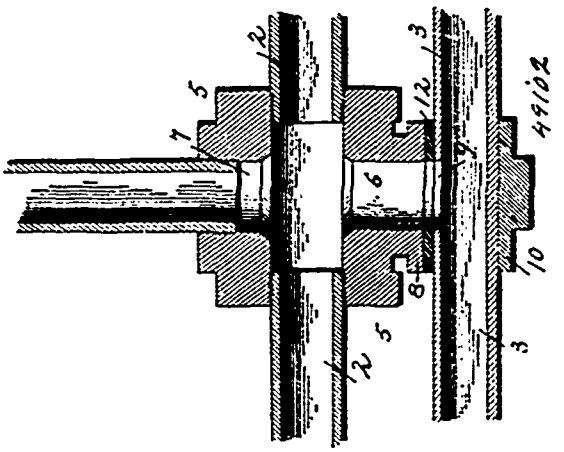
vided with two tapering shells, having their smallest parts downward and set one within the other, an outer shell surrounding the fire-chamber, a canopy to direct the products of combustion towards the central inner shell, and a flue below the fire-chamber to draw down said products of combustion through said inner shell, substantially as described. 3rd. A boiler having a down-draft central



passage and a coil of pipe of gradually decreasing diameter of coil arranged within the same having its upper and lower ends connected with the boiler near its top and bottom respectively, substantially as described. 4th. A boiler having a tapering central down-draft passage and conical coils of pipes arranged within the same and having their upper and lower ends connected with the boiler near its top and bottom respectively, substantially as described. 5th. In a boiler, the combination with inner and outer tapering shells, of a series of inclined tubes passing through the outer shell, and a series of coils inside the inner shell, both tubes and coils communicating with the space between the shells, substantially as described. 6th. The combination in a boiler, of inner and outer tapering shells, an outer shell surrounding the fire-chamber, and a downdraft flue for the same, arranged to concentrate the products of combustion as the heat thereof decreases, substantially as described. 7th. The combination with a vertical boiler having a central passage through it, of a circular furnace surrounding said boiler, and a flue to draw the products of combustion down said central passage, substantially as described. 8th. The combination in a boiler, of the inner and outer shells, the inclined tubes connected to the outer shell, the coils contained in the inner shell, the circular furnace surrounding the boiler, a jacket surrounding the entire boiler, and a flue to draw the products of combustion down the central passage, all substantially as described and shown.

No. 49,102. Steam Heating Apparatus.

(*Appareil de chauffage à la vapeur.*)



Elias Watts, Keyport, New Jersey, U.S.A., 4th June, 1895; 6 years.

Claim.—1st. The combination with a steam supply-pipe, of a coupling having an upper arm for the attachment of a radiator and a lower arm terminating in a seat which is provided with a removable cap, and a return or waste water pipe fitting in said seat and provided with an opening registering with the bore of said lower arm, substantially as specified. 2nd. In a steam heating system, the combination with a steam supply pipe inclined upward from the supply-boiler, and a juxtaposed parallel return or waste water pipe, of a coupling having lateral registering arms or attachments to the adjacent terminals of the sections of the steam supply pipe, an upper arm for attachment to a radiator, and a lower arm in alignment with said upper arm and terminating at its lower end in a concaved seat for the reception of said return pipe, a gasket arranged upon the seat in contact with said return pipe, the latter being provided with an opening registering with the bore of the lower arm of the coupling, a removable cap secured to the lower arm of the coupling and embracing the lower side of said return pipe, and means for detachably securing said cap to the coupling, substantially as specified.

No. 49,103. Medicinal Compound.

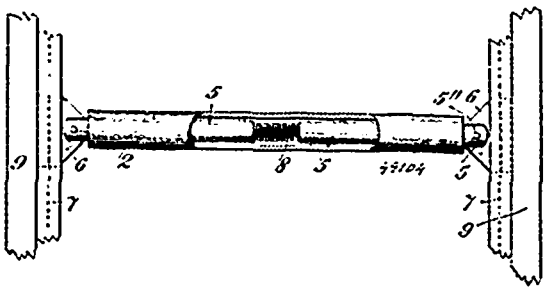
(*Composition médecinale.*)

Pierre Hamel, Montreal, et Emilien Leguerrier, Rockfield, Province de Québec, Canada, 4 juin, 1895; 6 ans.

Résumé.—Une composition formée d'huile de foie de morue et d'une addition d'esprit de sel (acide chlorhydrique ou murriatique), d'acide phenique, de salpêtre et de goudron Américain dans les proportions et pour les fins décrites.

No. 49,104. Curtain Stick and Guide.

(*Bâton et guide pour rideaux.*)



The Brussels Tapestry Company, Chauncey, New York, assignee of Gilbert L. Bailey, Portland, Maine, both of the U.S.A., 4th June, 1895; 6 years.

Claim.—1st. The combination, with a curtain stick, a sliding rod projecting from the end thereof, and a travelling guide, adapted to engage with a guide on the frame of a window, of a pivotal connection between said travelling guide and said sliding rod, all substantially as and for the purposes set forth. 2nd. The combination, with the curtain stick, the sliding rods, and upright guides on a window frame, of the travelling guides having body-parts that project from said upright guides, and hinge joints between said projecting body-parts and the outer ends of said guide-rods, all substantially as hereinbefore set forth. 3rd. The combination, with a tubular curtain stick, guide-rods projecting from the ends thereof, travelling guides connected with said guide-rods, and guides on the frame of a window, with which said travelling guides connect, of a spring located intermediately of the inner ends of said guide-rods, and operating thereon, substantially as hereinbefore described for the purposes set forth.

No. 49,105. Skeleton Lettering.

(*Lettre pour tracer les caractères.*)

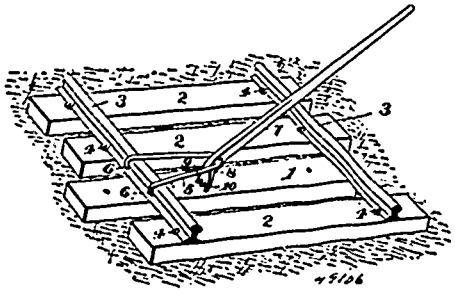
Alfred White, Charles Norman Sutherland, both of Toronto, and Arthur Stanley King, Ottawa, all in Ontario, Canada, 4th June, 1895; 6 years.

Claim. 1st. As a new article of manufacture, a skeleton lettering comprising a combination of cut out characters and a connecting

bar uniting the ends of the characters and definitely and unalterably *fixing the alignment of and space between the characters, as and for* the purpose specified. 2nd. The combination, with the cut-out characters and connecting bar integrally formed therewith of a reinforcing bar extending throughout the length of the connecting bar and affixed to it, as and for the purpose specified. 3rd. The combination, with the cut-out characters and connecting bar uniting them as specified, of a tongue extending outwardly from the bar, as and for the purpose specified.

No. 49,106. Railroad-tie Puller.

(*Tirant pour traverses de chemin de fer.*)

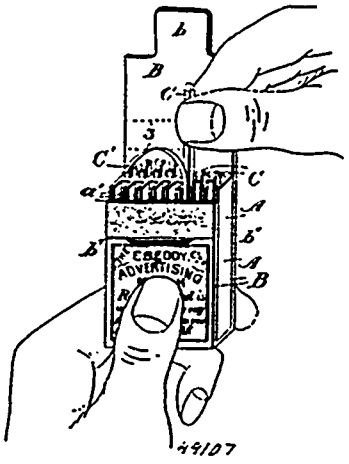


Daniel Gasper Ries, Marion, assignee of George Emerling Shasta, both of Ohio, U.S.A., 4th June, 1895; 6 years.

Claim.—1st. In a device of the class described, the combination of a loop or bail provided with hooked terminals to engage a rail, and a lever fulcrumed through the loop or bail and having a head provided with a terminal claw to engage the upper surface of a tie, and a lateral spur adapted to engage the side of a tie, substantially as specified. 2nd. In a device of the class described, the combination of a loop or bail provided with terminal hooks to engage a rail, and having a flatted head disposed at an angle to the body portion of the lever and provided with a tapered claw, substantially as *specified.*

No. 49,107. Match and Match Box for Advertising.

(*Allumette et boîte d'allumettes pour annoncer.*)

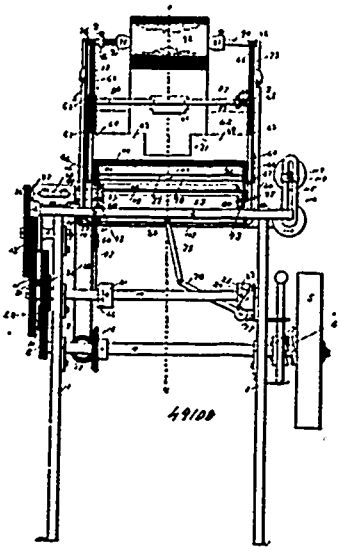


The E. B. Eddy Company, assignee of George Henry Millen, both of Hull, Quebec, Canada, 4th June, 1895; 6 years.

Claim.—1st. In an advertising device, the combination of a match box body having a series of grooves *a*, each adapted to hold a match, a covering or casing of thin material secured to the ridges between said grooves and having a slit near one end and an overlapping flap with end insertible in said slit at the other and provided with friction composition and advertisements and matches C, having strips C', secured to their tail end, such strips bearing advertisements and folding against the matches and being inserted in the grooves *a*, substantially as set forth. 2nd. The combination of a body having a series of grooves *a*, and a covering or casing of thin material secured to the ridges between said grooves by cement and covering the open faces, and one end of said grooves and having a creased flap overlapping the uncovered end and provided with a narrowed end adapted for insertion in the slit in the front, a slit in the front adapted to receive said narrowed end, a space covered with friction composition, and the remaining spaces occupied by advertisements, substantially as set forth. 3rd. The combination of a match C, and a strip of paper of the same or nearly the same size and length secured to the tail end and bearing advertisements, substantially as set forth.

No. 49,108. Paper Wrapping Machine.

(*Machine pour papier d'emballage.*)

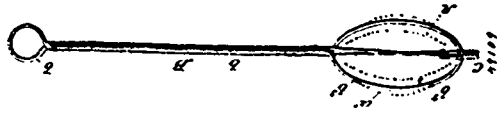


James Polk Henderson, Logan, assignee of Henry D. Bartholmew and Cassius M. Bartholomew, both of Newark, all in the U.S.A., 5th June, 1895; 6 years.

Claim.—1st. The combination with a main frame and a slotted rotary mandrel adapted to receive the edge of a paper to be wrapped, of a wrapping paper roll mounted on said main frame, a vertical reciprocating frame, guide plates carried thereby between which said wrapping paper passes, a roller carrying shaft mounted in a reciprocating frame 65, rollers 84 carried thereby, the latter rotating in but one direction and bearing against said wrapping paper, and means for automatically separating said wrapping paper into lengths, substantially as specified. 2nd. The combination with the main frame, a rotary slotted mandrel mounted therein and adapted to receive the edge of a paper, a wrapping paper roll mounted in said main frame and means for feeding the same into folds of a paper on said mandrel, of an endless belt or chain travelling adjacent to said mandrel, and a lug carried on said belt adapted to move the rolled and wrapped paper off said mandrel longitudinally by contact with one end thereof, substantially as specified. 3rd. The combination with a main frame, a rotary slotted mandrel mounted therein and mechanism for stopping the rotation of said mandrel at regular intervals, of a wrapping paper roll mounted in said main frame, means for feeding said wrapping paper on to said mandrel, an endless belt travelling adjacent to said mandrel and a lug on said belt adapted to force a rolled paper off said mandrel, substantially as specified.

No. 49,109. Fire Kindler and Holder.

(*Porte-allumoir.*)



Philip J. Harrah, Bloomfield, Indianan, and Thomas E. B. Mason, Shenandoah, Iowa, both in the U.S.A., 5th June, 1895; 6 years.

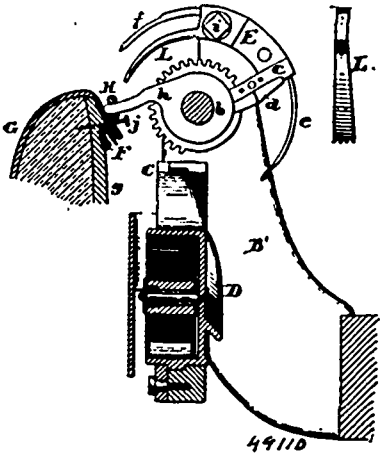
Claim.—1st. A holder composed of a series of wires twisted to form an elongated handle, an eye at one end thereof and curved to form an oval at the other end, the ends of said wires being twisted, as set forth. 2nd. A fire kindling compound consisting of fire-clay, red-clay, saw-dust, and lime, in about the proportions stated, and designed to be treated in the manner set forth.

No. 49,110. Tack Pulling Attachment for Sole Sewing Machines. (*Appareil à arracher les clous pour machines à coudre les semelles.*)

Joseph Elie Bertrand, Boston, and Mellen Bray, Newton, both of Massachusetts, U.S.A., 5th June, 1895; 6 years.

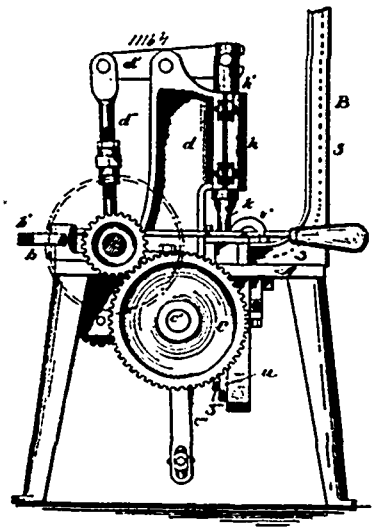
Claim.—1st. The combination with the stitch forming mechanism of a shoe sewing-machine, of a tack pulling blade secured to and movable in unison with the awl or needle-carrying arm and provided with a series of teeth in its working end and arranged to engage the lasting tacks and withdraw them in advance of their reaching the

path of movement of said awl or needle. 2nd. The combination of an oscillating needle and awl carrying arm, a curved awl and a curved needle carried thereby, a work support constructed and arranged to enter the channel of the sole; a presser-foot to bear upon the upper or welt; a tack pulling blade carried by said needle



and awl carrying arm; and means for oscillating said arm. 3rd. The combination of an oscillating needle and awl carrying arm; a needle and awl carried by said arm and curved to an arc of a circle concentric to the axis of said arm, a work support constructed and arranged to enter the channel of the sole, a looper, a thread carrier, a shuttle a tack pulling blade carried by said needle and awl carrying arm and curved to an arc of a circle parallel to said awl or needle but of a somewhat less radius and having a series of teeth formed on its working end, and adapted to engage and withdraw any lasting tack that may be in its path when the awl descends to pierce the word.

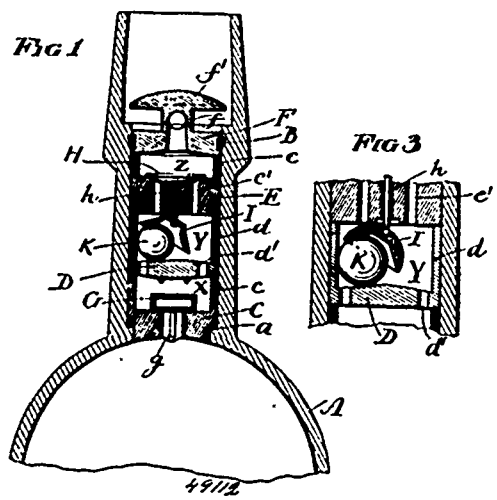
No. 49,111. Machine for Making Chains. (*Machine à faire les chaines.*)



The Phoenix Hardware Manufacturing Company, assignee of Ralph Gilbert Barnes, Syracuse, both of New York, U.S.A., Harry Dwight Pomeroy, Peterboro, Ontario, Canada, and Ernest Wilson Keyes, Phoenix, New York, U.S.A., 5th June, 1895; 6 years.

Claim.—1st. In a chain-looping machine, the combination with the bed, of a sectional feed-chute, one section being stationary and the other adapted to be adjusted upon the arc of a circle. 2nd. In a chain-looping machine, the combination with the bed, of a sectional feed-chute, one section being stationary and provided with a transverse passage, and a swinging cover, and the other section adapted to be adjusted laterally. 3rd. In a chain-looping machine, the combination with the bed, and the sectional feed-chute and means to adjust one section relative to the other, the stationary section being provided with a transverse passage and an adjustable cover thereto, of a plunger adapted to be reciprocated in said passage, and a table adapted to receive the link-blanks from the chute. 4th. In a chain-looping machine, the combination with the bed, and the table thereon provided with an adjustable throat, and means to feed the links onto the table upon their edges, of a shaft below the bed, a cam thereon, a frame reciprocated by the cam, and a curved link turner rocked upon its pivot by said frame and engaging with the link. 5th. In a chain-looping machine, the combination with bed, and the table thereon, provided with an adjustable throat and means to feed the links onto the table upon their edges, of a shaft below the bed cam theron a frame reciprocated by the cam and a curved link-turner rocked upon its pivot by said frame and engaging with the link, and a vertically reciprocating plunger adapted to engage with the link after it has been turned flat-wise onto the table. 6th. In a chain-looping machine, the combination of a rotating shaft and a wedge secured thereto and projecting therefrom, with reciprocating link-closing jaws, actuated by said wedge to close said jaws, and means to open them. 7th. In a link-looping machine, the combination with the bed and the table thereon provided with an adjustable throat, of a vertically reciprocating plunger pointed to bend a link centrally in said throat and shouldered to engage with the preceding bent link and force it through said throat, a rotatable shaft, a wedge secured thereon, jaws adapted to be closed by said wedge to squeeze the link-arms together and means to open said jaws. 8th. In a chain-looping machine, the combination with a reciprocating link-bending plunger, of a yielding link-guide with which the plunger engages. 9th. In a chain-looping machine, the combination, with a reciprocating link-bending plunger, and a rocking link-turner, of a yielding link-guide with which the plunger engages to release the link to be turned flat-wise and bent.

No. 49,112. Bottle Stopper. (*Bouchon.*)

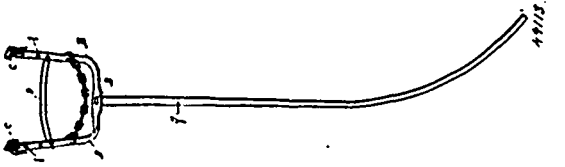


Frank T. Robinson and William H. Rand, both of Chicago, Illinois, U.S.A., 5th June, 1895; 6 years.

Claim.—1st. The combination of a valve seat, a valve, an inverted cup located below the valve, means connecting them and permitting the cup to tilt, a loose ball located beneath the cup, and a support for the ball, said support being independent of the cup, substantially as set forth. 2nd. The combination of a valve-seat, a valve, an inverted cup located below the valve, means connecting them and permitting the cup to tilt, a loose ball located beneath the cup, a support for the ball, and means for holding the ball normally with its centre of gravity in a vertical line that is at one side of a vertical line passing through the centre of the cup, substantially as set forth. 3rd. The combination of a valve-seat, a valve, an inverted cup, located below the valve, means connecting them and permitting the cup to tilt, a bearing with which the cup has contact when tilted, the point of contact with the cup being between its centre and its periphery, a loose ball located beneath the cup, and a support for the ball, substantially as set forth. 4th. The combination of a valve-seat, a valve, an inverted cup located below the valve, means connecting them and permitting the cup to tilt, a loose ball located beneath the cup, a support holding the ball in contact with the cup, a bearing with the ball causes the cup to engage at a point between its centre and its periphery and means holding the ball normally with its centre of gravity in a vertical line that is at one side of a vertical line passing through the centre of the cup. 5th. The combination of a valve-seat, a valve, an inverted cup located below the valve, means connecting them and permitting the cup to tilt, a loose ball located beneath the cup, a support holding the ball in contact with the cup, said support being sloped so as to hold the ball normally with its centre of gravity in a vertical line that is at one side of a vertical line passing through the centre of the cup, and a bearing with which the ball causes the cup to engage at a point between its centre and its periphery, substantially as set forth. 6th. The combination of a valve seat, a valve, an inverted cup located below the valve, a stem extending downward from the valve

and having a loose connection with the cup so as to permit the cup to tilt, a loose ball located beneath the cup, a support holding the ball in contact with the cup, a bearing with which the ball causes the cup to engage at a point between its centre and its periphery, and means holding the ball normally with its centre of gravity in a vertical line that is at one side of a vertical line passing through the centre of the cup, substantially as set forth. 7th. The combination of a valve-seat, a valve, an inverted cup located below the valve and having a flaring opening in its bottom, a stem extending downward from the valve and through the opening of the cup and provided at its lower end with an enlargement, the opening being of sufficient size to permit the cup to tilt, a loose ball located beneath the cup, a support holding the ball in contact with the cup, a bearing with which the ball causes the cup to engage at a point between its centre and its periphery, and means holding the ball normally with its centre of gravity in a vertical line that is at one side of a vertical line passing through the centre of the cup, substantially as set forth. 8th. The combination of a perforated part having on its top side a valve-seat, a valve located above said part, an inverted cup located below said part, means connecting the valve and cup and permitting the cup to tilt, said connecting means being of such length that when the cup is tilted it will come in contact with the under side of the part first aforesaid, the point of contact being between the centre and the periphery of the cup, a loose ball located beneath the cup, and a support holding the ball in contact with the cup, and the cup tilted and in contact with the under side of the part first aforesaid, substantially as set forth. 9th. The combination of a valve-seat, a valve having a rigid stem, an inverted cup located below the valve, and loosely connected to said stem so as to be capable of tilting but incapable of lateral displacement, a bearing with which the cup engages when tilted, the point of contact with the cup being between its centre and its periphery, a ball located beneath the cup, and a support for the ball, substantially as set forth. 10th. The combination of a valve and means for holding it normally seated, said means including a ball, means for holding the ball normally with its centre of gravity in a line that is parallel with the neck of the bottle, and that is at one side of a parallel line that passes through its centre of gravity when it is in position to permit the valve to unseat, and means preventing the ball from moving its normal position in a direction that is parallel with the direction in which the valve moves in unseating, substantially as set forth.

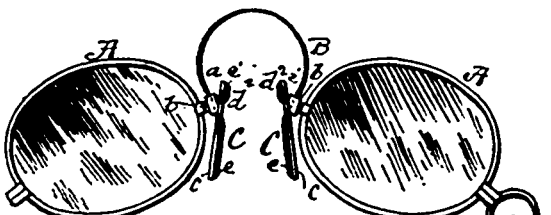
No. 49,113. Animal Poke. (*Carcan.*)



Otis Bettis and William Hotaling, assignee of Ferdinand Fisher, all of Chesaning, Michigan, U.S.A., 5th June, 1895; 6 years.

Claim.—In an animal poke, the combination with an ordinary halter for animals, and hooks C, C secured to the cheek straps of the halter, of the yoke B, its arms provided with a series of holes I, I, for engaging the hooks C, C, and provided also with a screw threaded hole B^1 in the centre of the yoke, and provided also with means for securing the chop strap D, and the nose chain E to the arms of the yoke, the removable spring poke A having one end screw threaded and adapted to screw into the screw threaded hole B^1 in the centre of the yoke, the chop strap D secured to the arms of the yoke, and passing underneath the lower jaw of the animal to prevent the yoke from swinging, and the nose chain E passing over the nose of the animal above the nostrils, and pressing on the nostrils when a strain is brought upon the yoke, substantially as and for the purpose set forth.

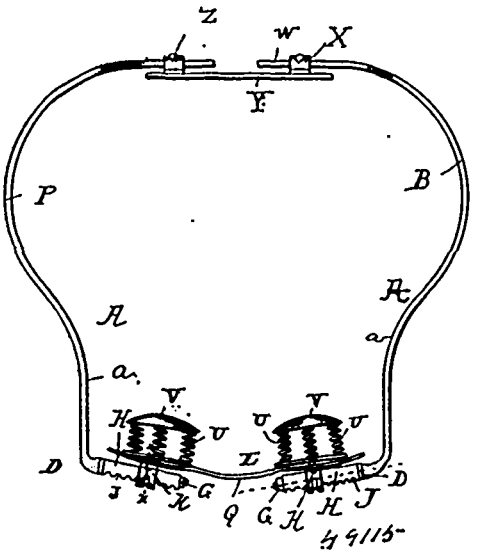
No. 49,114. Eye-Glass Guard. (*Garde pour lorgnon.*)



George Bausch, Syracuse, New York, and Sylvester Eastman, Providence, Rhode Island, all in U.S.A., 5th June, 1895; 6 years.

Claim.—1st. An eye-glass guard having a main body in line with the plane of the lenses, and an auxiliary anchor made integral with the main body, and projecting inward from the edge thereof, substantially as described. 2nd. An eye-glass guard having its main body off-set from its attaching part and formed with an auxiliary holding plate or anchor projecting inward from the main body to grasp the nose near the corners of the eyes, substantially as described. 3rd. An eye-glass guard having a main body, an auxiliary holding plate or anchor projecting inward from the main body and an attaching arm at the opposite edge of the main body, substantially as described. 4th. The combination, with the lens frames and spring connecting the same, of nose guards each comprising a main plate held in line with the plane of the lenses and an inwardly extending auxiliary grab or anchor integral with the said main plates and connected to the edge thereof, substantially as described.

No. 49,115. Truss. (*Bandage herniaire.*)



Julius Brickner and Abraham S. Herr, both of Tiffin, Ohio, U.S.A., 5th June, 1895; 6 years.

Claim. 1st. In a truss, a body band, circularly adjustable clamp collars fitted on the front ends of said body bands, and having locking notches in one edge, a front pad plate connecting the front ends of the body band and having spring locks adapted to engage the notches of said clamp collars, substantially as set forth. 2nd. In a truss, the combination of the body band, circularly adjustable clamp collars fitted on the front ends of said body band, a front pad plate connecting the front ends of the body band and having slide collars adapted to loosely embrace said clamp collars, and means for locking said slide collars at any adjusted position on said clamp collars, substantially as set forth. 3rd. In a truss, a body band having spindles at its front extremities and lock studs at the base of said spindles, circularly adjustable clamp collars adapted to be clamped on the said spindles and having stud openings in one end adapted to engage the lock studs at the base of the spindles, and a front pad carrying plate having slide collars or lugs adjustably engaging said clamp collars, substantially as set forth. 4th. In a truss a sectional body band terminating at its front extremities in spindles and having projecting lock studs at the base of said spindles, circularly adjustable clamp collars clamped on the said spindles and having stud openings in one end engaging said lock studs and a longitudinal series of locking notches in one edge, a front pad carrying plate having slide collars or lugs loosely embracing the clamp collars, and spring locks arranged on the slide collars or lugs and adapted to engage the locking notches of said clamp collars, substantially as set forth. 5th. In a truss, a sectional body band terminating at its front extremities in spindles, angular clamp collars circularly adjustable on said spindles and adapted to be clamped thereon, said clamp collars being provided with a longitudinal series of locking notches in one edge, a front pad carrying plate slide collars or lugs attached to one side of said plate near its opposite ends and provided with angular openings loosely embracing the angular clamp collars, and spring-actuated finger lock levers mounted on said slide collars or lugs and adapted to normally engage the locking notches of said clamp collars, substantially as set forth.

No. 49,116. Process of Making and Treating Pigments and Paints. (*Procédé pour la fabrication et le traitement des mordants et peintures.*)

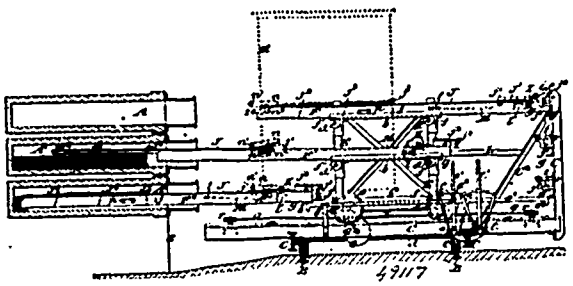
William Nelson Blakeman, jr., Mount, Vernon, New York, U.S.A., 5th June, 1895; 6 years.

Claim.—1st. The described process of making pigments or paints, which consists in combining with metallic or earthy oxides, acetates, hydrates, or sub-carbonates, basic to carbon-dioxide, salts capable of absorbing carbon-dioxide when the paints are applied to surfaces in coats or layers. 2nd. The described process of

making pigments or paints, which consists in mixing with metallic or earthy oxides, acetates, hydrates, or sub carbonates, a liquid vehicle capable of absorbing carbon dioxide, and salts also capable of absorbing carbon-dioxide. 3rd. As a new article of manufacture for a pigment or paint, a compound or mixture of a metallic oxide, or a metallic salt, and a salt capable of absorbing carbon dioxide, the whole ground or powdered into intimate mixture, with or without the addition of moisture, in the manner set forth.

No. 49,117. Gas Retort Charging Apparatus.

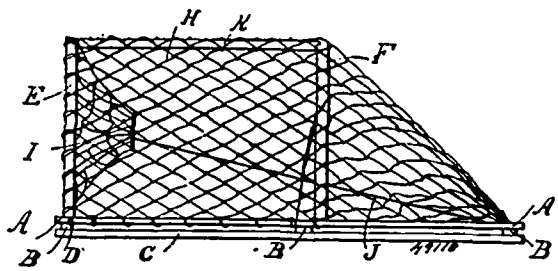
(*Appareil pour charger les cornues à gaz.*)



Gaston Aloysius, New York, State of New York, U.S.A., 5th June, 1895; 6 years.

Claim.—1st. In an apparatus for charging a row of retorts, the combination of an elevated stationary coal bin situated in front of and above the retorts, a carriage arranged to run along the front of the row of retorts and under the said elevated bin and to pass the said bin in opposite directions, a hopper on said carriage to receive coal directly from said stationary elevated bin, coal scoops on said carriage for receiving coal from said hopper and means of operating said scoops to deposit the so received coal in the retorts, substantially as herein set forth. 2nd. The combination in a retort charging apparatus, of a main carriage for running along in front of the retorts, a scoop carriage arranged to run transversely upon the first mentioned carriage and having two or more scoop supports, scoops upon said supports, and locking devices for locking each scoop either to the scoop carriage or to the main carriage that it may either move with the scoop carriage or leave the latter free to move without it, substantially as herein set forth. 3rd. In a retort charging apparatus, the combination of a carriage having thereon two or more hoppers, the delivery openings of which are one above another, troughs one for each hopper arranged opposite said openings to receive and retain coal therefrom, a scoop carriage arranged to run transversely upon the first mentioned carriage, two or more scoops arranged one above another on said scoop carriage at different levels below said troughs respectively and rotary scrapers one in each of said troughs, substantially as herein set forth. 4th. The combination with the coal hopper having its throat at one side and a coal receiving and retaining trough outside of said throat, of a movable bar arranged in the upper part of the said throat and provided with projections for loosening the coal therein, substantially as and for the purpose herein set forth. 5th. In a retort charging apparatus, the combination with a scoop carriage, of a coal scoop, a bearing on said carriage for said scoop on which said scoop is capable of vertical oscillation as a scale beam, and a weight applied to said scoop for weighing therein the coal to be deposited by it in a retort, substantially as herein set forth. 6th. In a retort charging apparatus, the combination with a main carriage and a scoop carriage arranged to run on and transversely to said main carriage, of coal scoops, locking devices for locking said scoops to said main carriage in stationary relation thereto and in inoperative relation to the scoop carriage and rollers in said scoop carriage for supporting said scoops while so locked to the said main carriage, substantially as herein set forth. 7th. The combination, with a scoop and a carriage therefor and a roller on said carriage on which said scoop is capable both of moving longitudidally and of oscillating vertically as a scale beam, and a weight on said scoop for weighing the coal deposited therein, substantially as set forth. 8th. The combination, with the scoop and the scraper frame and scrapers therein, means for moving the scoop, scraper frame and scrapers together into the retort, and means of producing a further forward movement of the scrapers within the scoop to push the coal back therein and therefrom to the back of the retort, substantially as herein set forth. 9th. The combination, with the main carriage and the scoop carriage arranged to run transversely thereon, of a scoop on the scoop carriage, a scraper frame and scrapers fitted to said scoop, a lever as K carried by the scoop carriage and bearing against the scraper frame, and a stop as k^1 on the main carriage for producing through said lever an accelerated forward movement of the scrapers relatively to the scoop as the latter completes its forward movement with the scoop carriage, substantially as herein set forth. 10th. In a retort charging apparatus, *the combination with a scoop and a scraper frame and scraper*, therein and a carriage for placing the scoop in and withdrawing it from the retort, a trip on the scoop for automatically disengaging said detaining device and means of drawing back the scrapers within the scoop after the withdrawal of the latter from the retort, substantially as herein set forth. 11th. In a retorting charging apparatus, the combination with a scoop and a scraper frame and scrapers therein, and a carriage for placing the scoop and scrapers in and withdrawing them from the retort, a pawl for detaining the scraper frame while the scoops are being withdrawn from the retort, a backing bar fitted to slide within the scoop and carrying a pulley, a second pulley attached to the scoop, a rope or chain passing around said pulleys and having its ends attached respectively to the scoop and the scraper frame and a stop behind said backing bar, substantially as and for the purpose herein set forth. 12th. In a retort charging apparatus, the combination of a main carriage and a scoop carriage running transversely thereon, a scoop on the latter carriage, a scraper frame and scrapers working within said scoop, a pawl n attached to the main carriage for detaining the scraper frame while the scoop carriage and scoop move backward, a tappet piece n^2 pivoted to said pawl, and a trip piece p on the scoop for operation on the tappet piece to automatically disengage the pawl, substantially as herein set forth.

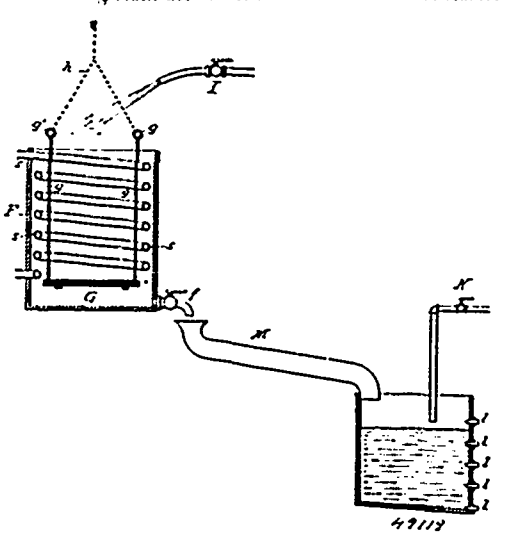
No. 49,118. Lobster Trap. (*Piège à homard.*)



Henry D. Brophy, Mechanic Falls, Maine, U.S.A., 5th June, 1895; 6 years.

Claim.—1st. In a lobster trap, the combination of the floor or bottom, two bows pivoted to the sides of said floor at a distance from each other greater than the aggregate height of both bows and a netting enclosing the space between and within said bows not occupied by the head, together with a device for holding said bows in an upright position, substantially as described. 2nd. In a lobster trap, the combination of the floor or bottom, two bows pivoted to the sides of said floor at a distance from each other greater than the aggregate height of said bows, a bow pivoted to said floor in the rear of said bows, a head in the exterior of said first named bows, a netting extending from said last-named bow to said rear bow and the sides of said floor and a device by which said bows first named may be held upright, substantially as described. 3rd. In a lobster, trap, the combination of a floor, two or more folding bows, a netting enclosing said bows and extending from the front and side of said floor to the rear bow with an entrance hoop in said netting and means for holding the two front bows in upright position when desired, substantially as described.

No. 49,119. Process of Removing Tin from Tin Scrap or Tin Coated Metal. (*Procédé pour enlever l'étain des débris d'étain ou de métaux étamés.*)



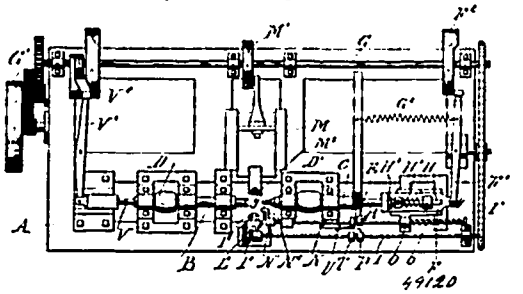
Thomas Guy Hunter, Philadelphia, Pennsylvania, U.S.A., 5th June, 1895; 6 years.

Claim. The herein described process of removing metal coating

from a metallic base, consisting in subjecting the coated metal to *the action of a neutral solution of a salt of copper and permitting* such action to continue until the coating metal has been precipitated in metallic form, substantially as described.

No. 49,120. Machine for Making Insulator Pins.

(*Machine pour faire les pitons isolateurs.*)



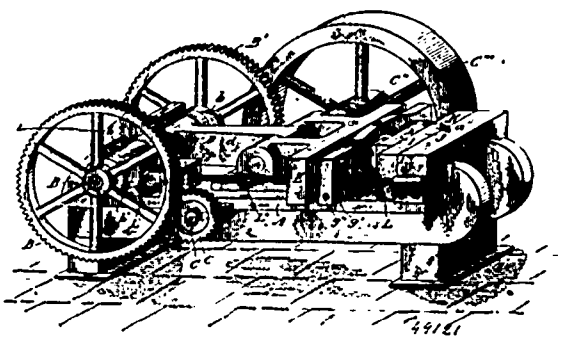
George Reber Butler, Sandusky, Ohio, U.S.A., 5th June, 1895; 6 years.

Claim. 1st. The combination of the rotating mandrel devices for intermittently reciprocating one of the mandrels, and an end spring backing for such reciprocating mandrel, substantially as described. 2nd. The combination of a rotating spindle E, a block in which one end is journalled, devices for intermittently reciprocating said block and spindle and a spring backing on the block for the end of said spindle, substantially as described. 3rd. The combination of the tubular mandrel C, the spindle E, therein having a longitudinal slot, a key passing through the slot and the mandrel, a drive mechanism for the mandrel and devices for intermittently reciprocating the spindle, substantially as described. 4th. In a machine for making insulator pins, the combination of rotating mandrels, having an intermittently reciprocating spindle, an automatic feed table for intermittently delivering the blank of the mandrels, a shaping knife, a grooving tool, and a boring tool, actuating devices therefor to bring such tools intermittently and successively to the blank while it is held by the mandrels, substantially as described. 5th. In a machine for making insulator pins, the combination of rotating hollow mandrels, and intermittently reciprocating spindle in one mandrel, and intermittently reciprocating boring tool in the other mandrel shaping and grooving devices for the blank, and actuating devices for bringing them successively and intermittently to the blank, substantially as described. 6th. The combination with the revolving mandrels, a rock-arm beside the same, devices for intermittently rocking the same, a work holder pivoted at the top thereof, and a friction spring bearing on the hub of the work holder, substantially as described. 7th. The combination with the revolving mandrels, a rock arm beside the same, dvices for intermittently rocking the same, a work holder pivoted at the top thereof, a friction spring bearing on the hub of the work holder, permitting it to be thrown down by the rotation of the work, and devices for lifting the work holder in the return movement of the rock arm, substantially as described. 8th. The combination with the mandrels, the rock arm 13, a cam for rocking it towards the mandrels, a spring for returning it, a work holder pivoted at the top, the spring J^3, frictionally holding the work holder upon its pivot, and the lever L^1, acting to lift the work holder in the return movement of the rock arm, substantially as described. 9th. The combination of the shaft N, adapted to have a sliding and rotary movement in its bearing, a grooving cutter at one end, a spiral spring on the shaft secured thereto at one end and at the other end to a stationary bearing, a rock arm engaging a slotted bearing on the shaft, a clutch for intermittently connecting said arm with a driven-wheel to rock the same and feed the shaft N, longitudinally and devices for rocking the shaft N, substantially as described. 10th. The combination of the shaft N, journalled slidingly and rotatorily in its bearings, the grooving cutter thereon, a spring for returning it to its initial position after each actuation, the slotted arm T, on the shaft, the rock arm S engaging therewith, the worm-wheel Q^1, the hub Q, adapted to be frictionally connected with the worm-wheel, a cam for intermittently coupling the clutch members, the arm T^2, on the shaft N, the lug T^1, on the shaft I^1, for rocking that arm and shaft and the inclined bearing U^1, behind which said arm T^2 is adapted to travel, substantially as described. 11th. The combination of the tubular driven mandrel B, the spindle V, slidingly supported therein, and carrying the boring tool W, at its end, of the lever V^1, secured to the spindle and cam V^2, for rocking said lever, substantially as described.

No. 49,121. Drawing Press. (*Presse à étirer.*)

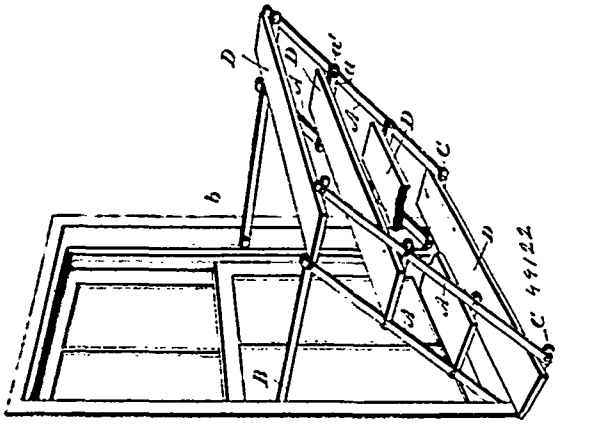
George Asa McKee, St. Catharines, Ontario, Canada, 5th June, 1895; 6 years.

Claim.—1st. In a drawing press, the combination of a bed having an abutment for the die at one end and adapted to carry the different working parts, a cross-shaft with pinions and loose balance wheel *and clutch adapted to connect balance wheel and shaft, an eccentric* shaft with spur-wheels into which said pinions gear and having cams on their hubs, an eccentric ring on the eccentric of said shaft with stem or shank pivoted to a head, a cross-head sliding on the bed and connected with the shank of the eccentric ring and having the drawing



mandrel secured to it, a drawing mandrel having its end secured to said head, a head adapted to slide on the bed between the cross-head and the die and adapted to carry a blank holder die, a blank holder die secured in said head through which the drawing mandrel passes, sliding rods opposite the cams on the spur-wheels and operated by the same in one direction held in bearings near the ends and passing through the cross-head and held adjustably in the blank holder head and provided with stops adapted to come in contact with the cross-head on its return stroke, a plate J, bolted to the abutment of the bed and having an eye larger than that in the die and a cavity or opening at its lower rear portion under said eye and having a projection around said eye on the face, a ring I, bolted to the face of said plate having a taper eye adapted to hold the die and to fit upon the projection of the plate J, the die H, having a bevelled edge adapted to fit the tapering eye of the ring I, and be held therein and against the projection of the plate J, and having a lip or ledge *h*, at its lower part and an adjustable gauge K, consisting of two plates secured to the upper part of the ring I, and having rebates or lips forming grooves with said ring, substantially as set forth. 2nd. In a drawing press, the combination of a plate J, adapted to be bolted to an *upright abutment of the the bed of the machine*, and provided with an eye or perforation a litttle larger than the eye or perforation in the die and having a recess or opening at its lower rear part under said eye and a projection and around said eye on its face, a ring or plate I, adapted to be bolted to said plate and having a tapering eye or perforation adapted to receive a die and fit upon the projection of the aforesaid plate, a die having its rim slightly bevelled and adapted to fit in the tapering eye the ring and a but with its rear against the projection of the plate J, and two lipped plates K, held adjustably to the upper part of the ring, substantially as set forth. 3rd. In a drawing press, the combination with a bed of a die holder head adapted to slide thereon, a blank holder die in said head adapted to allow the drawing mandrel to slide therein, rods passing through said head and adjustably secured by lock nuts and removable insertoins filling the lower part of the eyes through which said rods pass and secured therein by screws or bolts, substantially as set forth. 4th. In a drawing press, the combination of a die holder plate I, adaped to hold a die flush at the face and lipped gage plates K, adpted to be held thereon adjustably, substantially as set forth.

No. 49,122. Flower Stand. (*Porte-bouquet.*)



William Nafe, Waterloo, Ontario, Canada, 5th June, 1895; 6 years.

Claim.—1st. The combination with the oblique side bars and the

top, bottom and intermediate supporting bars secured to the oblique bars, of the longitudinal boards D, as and for the purpose specified. 2nd. The combination with the oblique side bars, the top, bottom and intermediate supporting bars secured to the oblique bars, and the guards at the outer ends of the intermediate bars, of the longitudinal boards D, as and for the purpose specified. 3rd. The combination with the oblique side bars, the top and bottom supporting bars secured to the oblique bars, and the intermediate supporting bars all pivotally connected together as specified, of the longitudinal boards D, resting upon the top and bottom bars and intermediate bars, as and for the purpose specified. 4th. The combination with the oblique side bars, the top and bottom supporting bars secured to the oblique bars, and the intermediate supporting bars all pivotally connected together as specified, of stop blocks secured to the oblique side bars and extending over the rear of the pivoted cross bars and the longitudinal boards D, resting upon the top and bottom bars and intermediate bars, as and for the purpose specified.

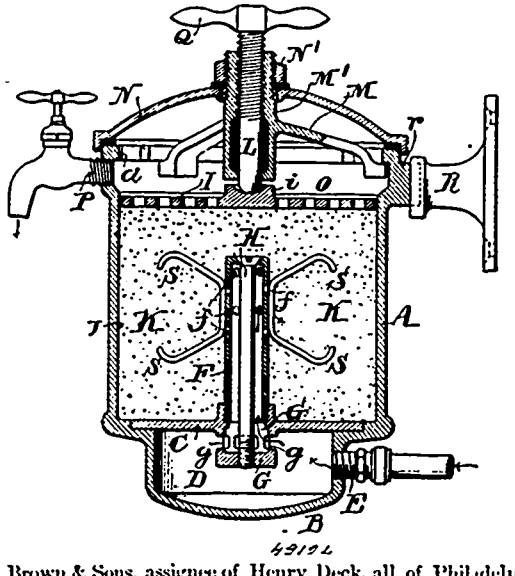
No. 49,123. Glazing and Enamelling Bricks, Etc.

(*Procédé pour enduire et émailler les briques, etc.*)

Maurice Ahern, Bounds Green, New Southgate, Middlesex, England, 5th June, 1895; 6 years.

Claim.—1st. In the process of enamelling metal, first reducing to a powder a mixture of arsenic glass, ceramic material, alkaline carbonates and nitrates and powdered metal, fusing the powdered mixture, granulating same, again reducing it to a powder, working same to the consistency of paint and fusing after application to the metal, as described. 2nd. A composition for glazing or enamelling bricks and like articles and metals, consisting of pulverized arsenic glass, ceramic material, alkaline carbonates and nitrates, with powdered metal prepared in the proportions and applied, substantially as described.

No. 49,124. Filter. (*Filtre.*)

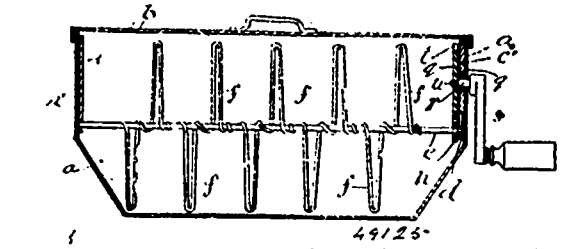


49124

John Brown & Sons, assignee of Henry Deck, all of Philadelphia, Pennsylvania, U.S.A., 5th June, 1895; 6 years.

Claim.—1st. A filter embracing a compartment containing the filtering material and having an inlet and outlet for the passage of the water, and a series of distributing projections extending into the body of the filtering material, for the purpose of directing the water as it passes into the filtering compartment and distributing it throughout the body of the filtering material. 2nd. The distributing projections for directing the course of the water throughout the body of the filtering material, in combination with an adjustable plate for tightly packing the filtrant in the filtering compartment about the distributing projections. 3rd. The distributing projections extending out into the body of the filtering material, when carried by an extended perforated tube, or conducting projection, extending into the filtrant. 4th. A filter consisting of a closed case or body having upper and lower compartments for the issue and discharge of water and an intermediate filtering compartment, a perforated adjustable plate for compressing the filtering material within the intermediate compartment, a removable cap, a spider within the upper compartment, and an adjustable clamping screw carried by the spider and bearing upon the perforated adjustable plate for the purpose of forcing the same upon the filtering material. 5th. The combination with the filter having an adjustable perforated plate for compressing the filtering material, of the removable cap, and the spider within the cap formed with a tubular projection extending through the cap, and the adjustable clamping screw carried by the tubular projection of the spider and bearing on the perforated adjustable plate. 6th. The combination with the body of the filter and the adjustable perforated plate for compressing the filtering material, of the removable cap, the spider within the cap having a tubular projection extending through the cap, the adjustable clamping screw carried by the tubular projection of the spider and bearing on the perforated adjustable plate, and a clamping nut carried by the projecting end of the tubular projection of the spider for clamping the cap upon the case or body. 7th. A filter composed of the case having a filtering compartment, the adjustable perforated clamping plate for compressing the filtering material in the filtering compartment, and the adjustable bottom having a projection or bearing acting upon the perforated plate and adapted by its adjustment to compress the perforated plate upon the filtering material and tightly pack the filtrant in the filtering compartment. 8th. A filter, adapted for adjustment to a faucet or tap, having a filtering compartment, and an adjustable perforated plate in combination with the bottom L^1 adjustably connected with the body and having a projection bearing upon the plate adapted to adjust the plate and compress the filtering material within the filtering compartment. 9th. A filter having a filtering compartment with one or more projecting pieces extending into the body of the filtering material, inlets for leading the water to the outside of the projecting piece so that it may travel down the outer surface thereof, and the projections carried by the projecting piece and extending out into the body of the filtering material to distribute the water throughout the filtrant. 10th. A filter having a filtering compartment and an adjustable perforated plate adapted to be pressed upon the filtering material to tightly pack it in the filtering compartment, in combination with the bottom L^1 adjustably connected with the body of the filter, and having an outlet M^2 and the boss N^2, provided with apertures a, and adapted to bear upon the perforated plate and force it upon the filtering material to tightly pack the same within the filtering compartment.

No. 49,125. Cream Whipper. (*Fouetteur pour la crème.*)



49125

Catherine Mary Jane Macdonald, Montreal, Quebec, Canada, 5th June, 1895; 6 years.

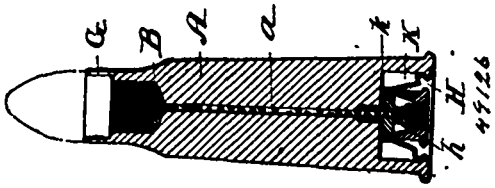
Claim.—1st. A cream whipper comprising an enlosing receptacle or dish, and a beater mounted in a frame carried within such enclosing receptacle and actuated by an operating shaft passing through the side thereof, for the purpose set forth. 2nd. A cream whipper comprising an enclosing receptacle or dish, a beater mounted therein formed of a continuous strand of wire bent at points to form a series of radial fingers and means for rotating such beater, the purpose set forth. 3rd. A cream whipper comprising an enclosing receptacle or dish, a beater formed of a continuous strand of wire bent at points to form a series of radial fingers and mounted in a frame carried within such enclosing receptacle and actuated by an operating shaft passing through the side thereof, for the purpose set forth. 4th. A rotary beater formed of a continuous strand of wire bent at points to form a series of radial fingers and means for rotating same, for the purpose set forth. 5th. A cream whipper comprising an enclosing receptacle or dish, and a beater mounted within such receptacle and formed of a carrying spindle, and a continuous strand of wire coiled and bent about same at points to form series of radial fingers, one end of such carrying spindle having mounted thereon, a pinion to intermesh with a gear-wheel mounted on the inner end of a shaft projecting through the side of such inclosing receptacle. 6th. A cream whipper comprising an enclosing receptacle or dish and a beater removably mounted within such receptacle and formed of a carrying spindle and a continuous strand of wire coiled and bent about same at points to form series of radial fingers, one end of such carrying spindle having mounted thereon, a pinion to intermesh with a gear-wheel mounted on the inner end of a shaft projecting through the side of such enclosing receptacle with means for actuating such spindle, for the purpose set forth.

No. 49,126. Cartridge. (*Cartouche.*)

George David Rice Aikin, Louisville, Kentucky, U.S.A., 6th June, 1895; 6 years.

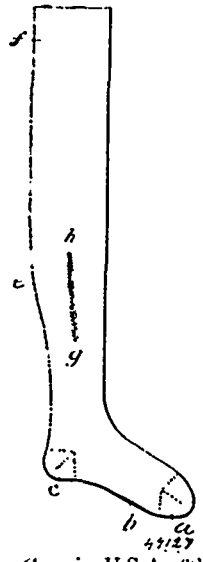
Claim. 1st. As a new article of manufacture, a cartridge shell or blank of the usual length, and formed of a single piece of metal, the internal solid portion thereof extending a portion of its length, whereby the explosive chamber of the shell or blank is reduced in length and a small longitudinal bore or passage through said solid internal portion and communicating with the cap or anvil seat,

substantially as specified, 2nd. As a new article of manufacture, a cartridge shell or blank of the usual length, and having an internal portion of its length whereby the explosive chamber of the shell or blank is reduced in length, and a small longitudinal bore or passage through such solid portion and communicating with said cap or



anvil seat, one end portion of said shell or blank being reduced in thickness and slitted, substantially as specified. 3rd. As a new article of manufacture, a cartridge shell or tube of the usual length, and having an internal solid portion of its length, whereby the explosive chamber is reduced in length, a small longitudinal bore or passage through such solid portion, a chamber in the base of said shell or tube, a cap seat therein, and a cap holding device in said chamber, substantially as specified. 4th. A cartridge shell or tube having a chamber in its base, a cap seat or nipple therein, a cap holding device comprising an arm having means whereby it is movably secured to the base of the shell and provided with a socket adapted to fit over the cap, substantiall as specified.

No. 49,127. Stocking and the Art of Manufacturing the same. (*Bas et art de les fabriquer*)



Joseph Bennor, Macon, Georgia, U.S.A., 6th June, 1895; 6 years.

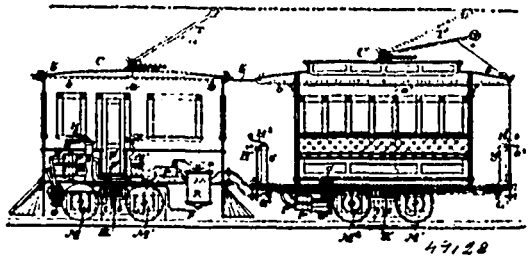
Claim.—1st. A fashioned stocking in which the upper or wide portion of the leg and the lower or narrow portion of the leg are connected by an intermediate portion seamed laterally on diagonal lines running from the lower to the upper portion, substantially as described. 2nd. The process of knitting a tubular web for stockings upon two rows of needles, which consists in throwing a predetermined number of needles out of action at each end of each row, then knitting with the needles in action, then throwing into operation the needles first thrown out of action, then knitting with all the needles in action, then cutting diagonally the laterally projecting portion of the web, and finally seaming or otherwise closing the slits or openings thus formed, substantially as described. 3rd. The process of knitting fashioned stockings upon two rows of needles equal to the required stitches to form the top of the leg, which consists in throwing a predetermined number of needles out of action at each end of each row of needles, knitting the toe, the foot, the heel and the ankle of the stocking upon the remaining needles, throwing the idle needles into operation, knitting the remainder of the leg upon all the needles, cutting or trimming diagonally the laterally projecting parts of the widened leg portion, and seaming or otherwise closing the slits or openings in the sides of the leg portion, substantialy as described.

No. 49,128. System of Controlling Electric Motors.

(*Système de contrôller les moteurs électriques*)

The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Horace F. Parshall, Milford, New York, and John W. Darley, jr., Baltimore, Maryland, both in the U.S.A., 6th June, 1895; 6 years.

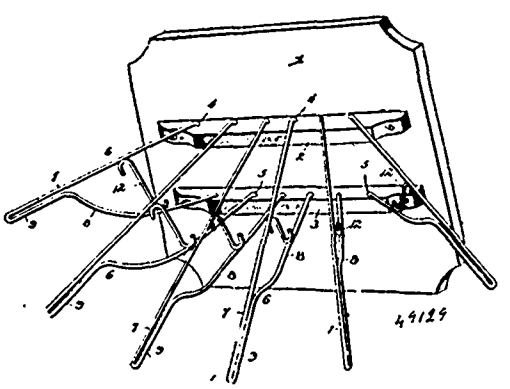
Claim.—1st. In a system of controlling electric motors, a source of fluid pressure, a cylinder carrying electric contacts and adapted by its rotation to vary the speed of an electric motor, and means, substantially as described, operated by the fluid-pressure and adapted



to rotate the cylinder. 2nd. In a system of controlling electric motors, a source of fluid-pressure, a series of cylinders carrying electric contacts and each adapted by its rotation to vary the speed of an electric motor, and means, substantially as described, operated by the fluid-pressure and adapted to effect the simultaneous rotation of the cylinders. 3rd. In a system of controlling electric motors, a source of fluid-pressure a cylinder carrying electric contacts controlling by its rotation an electric motor, and a pair of cylinders communicating with the source of pressure and having pistons actuated thereby, one of such pistons rotating the controller-cylinder and the other determining the direction of such rotation. 4th. In a system of controlling electric motors, a source of fluid-pressure, a plurality of electric controller cylinders, and a pair of cylinders communicating with the source of pressure and containing pistons actuated thereby, one of such pistons adapted to effect the simultaneous rotation of the controller cylinders and the other piston adapted to determine the direction of such rotation. 5th. In a system of controlling electric motors, a source of fluid-pressure, a cylinder carrying electric contacts controlling by its rotation an electric motor, and a pair of cylinders communicating with the source of pressure, and having pistons actuated thereby, one of such pistons rotating the controller-cylinder and the other determining the direction of such rotation and means, substantially as described, controlling the admission of the fluid pressure to the cylinder. 6th. In a system of controlling electric motors, a source of fluid-pressure, a plurality of electric controller-cylinders communicating with the source of pressure and containing pistons actuated thereby, one of such pistons adapted to effect the simultaneous rotation of the controller-cylinders, and the other piston adapted to determine the direction of such rotation and means, substantially as described, controlling the admission of the fluid pressure to the cylinders. 7th. In a system of controlling electric motors, a source of fluid-pressure, a cylinder, means for admitting pneumatic impulses thereto, a piston reciprocating therein connected to a lever operating pawls adapted to rotate a ratchet-wheel, and a controller-cylinder geared to such ratchet-wheel, whereby a step-by-step rotation is imparted to the controller-cylinder. 8th. In a system of controlling electric motors, a source of fluid-pressure, a cylinder, means for admitting pneumatic impulses thereto, a piston reciprocating therein connected to a lever operating pawls adapted to rotate a ratchet-wheel, a controller-cylinder geared to such a ratchet-wheel, in combination with means adapted to determine the direction of rotation of the ratchet-wheel, whereby a step-by-step rotation in either direction may be imparted to the controller-cylinder. 9th. In a system of controlling electric motors, a source of fluid-pressure, a cylinder, means for admitting pneumatic impulses thereto, a piston therein moving in one direction under the pneumatic impulses and driven in the opposite direction by a spring and connected to a lever operating pawls engaging with a ratchet-wheel, and a controller-cylinder geared to such ratchet-wheel, whereby a step-by-step motion is imparted to the controller-cylinder. 10th. In a system of controlling electric motors, a source of fluid-pressure, a cylinder, means for admitting pneumatic impulses thereto, a piston therein moving in one direction under pneumatic impulses and driven in the opposite direction by a spring and connected to a lever operating pawls engaging with a ratchet-wheel, and a controller-cylinder geared to said ratchet-wheel, all in combination with means adapted to determine the direction of rotation of the ratchet-wheel, whereby a step-by-step motion in either direction may be imparted to the controller-cylinder. 11th. In a system of controlling electric motors, a source of fluid-pressure, a cylinder, means for admitting pneumatic impulses thereto, a piston therein driven in one direction by such impulses and in the other direction by a spring and connected to a lever, and means, substantially as described, whereby the position of the lever determines the direction of rotation of a controller-cylinder. 12th. A cylinder, means for admitting pneumatic impulses thereto, a piston reciprocating therein connected to a lever, a pawl adapted to rotate a ratchet-wheel in one direction, a second pawl adapted to rotate such wheel in the opposite direction and links attached to a cross arm upon the lever and to the pawls, whereby the motion of the lever raises one pawl from the ratchet while bringing the other into engagement therewith, thus determining the direction of the rotation thereof. 13th. A cylinder, means for admitting pneumatic impulses thereto, a piston reciprocating therein connected to a lever, a pawl adapted to rotate a ratchet-

wheel in one direction, a second pawl adapted to rotate such wheel in the opposite direction, and links attached to a cross-arm upon the lever and by a slotted connection to the pawls, whereby the action of the lever raises one pawl from the ratchet while bringing the other into engagement therewith, the slot upon the link permitting free motion of the pawls, thus determining the direction of rotation of the ratchet-wheel. 14th. A cylinder, means for admitting pneumatic impulses thereto, a piston reciprocating therein connected to a lever operating pawls one of which is adapted to rotate a ratchet-wheel in one direction, and the other adapted to rotate such wheel in the opposite direction, and a controller cylinder geared to such ratchet-wheel, in combination with a second cylinder, means for admitting pneumatic impulses thereto, a piston reciprocating therein connected to lever adapted to raise one of the pawls from the ratchet-wheel and bring the other pawl into engagement therewith, whereby a step-by-step rotation in either direction may be imparted to the controller cylinder. 15th. A source of fluid-pressure, a valve box, a rotating valve therein provided with ports adapted to admit the fluid pressure to a cylinder and to discharge it therefrom, a piston in said cylinder driven in one direction by such fluid pressure and in the other direction by a spring and attached to a lever carrying pawls one of which is adapted to rotate the ratchet-wheel in one direction and the other in the opposite direction, and a controller-cylinder geared to such ratchet-wheel. 16th. A source of fluid pressure, an air-box communicating therewith, a drum valve within such air-box adapted by its rotation to admit fluid-pressure to a cylinder or release the pressure therefrom, a piston reciprocating in such cylinder and connected to a lever carrying pawls engaging in opposite directions with a ratchet-wheel to which is geared a controller cylinder, whereby a step-by-step rotation of the controller cylinder in either direction may be effected. 17th. A source of fluid-pressure, an air-box communicating therewith, a three-way valve adapted to admit the pressure in the box into a cylinder or exhaust it therefrom, a piston reciprocating within the cylinder and operating a lever provided with links engaging with two pawls, adapted the one to rotate a ratchet-wheel in one direction and the other to rotate such wheel in the opposite direction, whereby the motion of the piston in one direction causes one of such pawls to engage with the ratchet-wheel while it lifts the other out of engagement, and its reversed motion causes the second pawls to engage while raising the first, 18th. A source of fluid-pressure, an air-box communicating therewith, a drum-valve within such air-box adapted by its rotation to admit fluid-pressure to a cylinder or release the pressure therefrom, a piston reciprocating in such cylinder and connected to a lever carrying pawls engaging in opposite directions with a ratchet-wheel, and a controller-cylinder geared to such ratchet-wheel all in combination with a three-way valve adapted to admit pressure from the air-box into a second cylinder or exhaust it therefrom, a piston reciprocating within such second cylinder and operating a lever provided with links engaging with the two pawls, whereby the piston in the first cylinder effects a step-by-step rotation of the controller-cylinder, and the piston in the second cylinder determines by its position the direction of such rotation.

No. 49,129. Display Rack. (*Râtelier-montre.*)

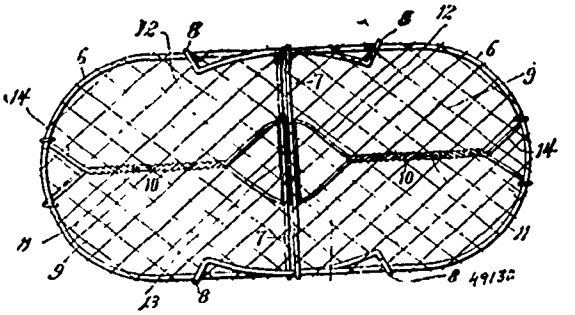


John J. Currier and George A. Camp, both of Galesville, Wisconsin, U.S.A., 6th June, 1895; 6 years.

Claim.—A display rack, comprising the upper and lower horizontally-disposed cleats designed to be secured to a suitable support and provided with series of vertical perforations, the perforations of the upper cleat being arranged near the rear face thereof and those of the lower cleat being located adjacent to the outer face of the same, and the brackets each consisting of the horizontal arm and the inclined main brace constructed of a single piece of metal and having their inner ends bent at an angle to form journals fitting in perforations of the cleats, said brace having its outer portion arranged contiguous to and extending along the arm, and the curved inclined intermediate brace connecting the arm and said brace, substantially as described.

No. 49,130. Attachment for Wash Boilers.

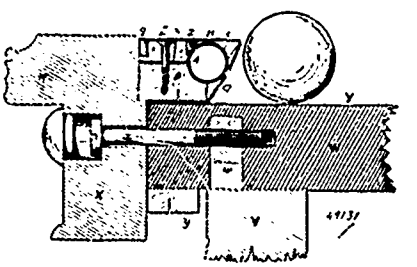
(*Attache pour chaudières de buanderies*)



John N. Moelm and Jacob Katz, both of Milwaukee, Wisconsin, U.S.A., 6th June, 1895; 6 years.

Claim.—1st. In an attachment for wash boilers, the combination with a bottom piece adapted to fit within a wash boiler, of handles secured at opposite ends of the bottom piece, said handles each consisting of a wire or wires twisted together longitudinally for a desired distance, the twist being interrupted medially by one of the strands being looped rearwardly and downwardly to form a hook for engagement with the rim of the boiler, substantially as set forth. 2nd. In an attachment for wash boilers, the combination with a clothes supporting bottom piece, of handles each consisting of a wire or wires twisted longitudinally for a desired distance, the twist being *interrupted medially by one of the strands being looped rearwardly* and downwardly to form a hook for engagement with the rim of the boiler, the wire or wires below the twist being diverged and looped to form eyes for pivotal connection with the bottom piece, and then extended inwardly to form horizontal feet adapted to rest upon the top of said bottom piece, when the handles are in an upright position, substantially as set forth. 3rd. In an attachment for wash boilers, the combination of a two-part bottom piece, means for adjusting said parts together to form different lengths, and handles *secured, respectively, to a section of the bottom piece, and provided* with hooks adapted to engage the rim of the boiler, substantially as set forth. 4th. The combination of a clothes supporting grating, comprising two sections, each section composed of a main wire and interwoven wires, the main wire bent to conform to the ends and sides of the boiler, and the extremities of each main wire bent into laterally-projecting hooks, adapted, respectively, to engage the sides of the respective main wires, and handles secured, respectively, to a section of the bottom grating, and provided with hooks adapted to *engage the rim of the boiler, substantially as set forth.*

No. 49,131. Billiard Table, Etc. (*Table de billard, etc.*)



Albert Chester Ives, London, Middlesex, England, 6th June, 1895; 6 years.

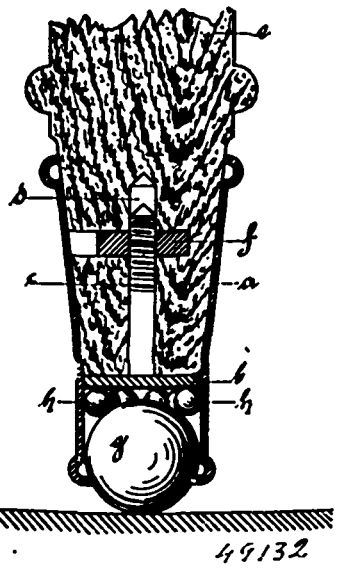
Claim.—1st. A cushion for billiard tables and the like, consisting essentially of an inflatable tube A, a fabric pocket B, and a nose or rubber C, as set forth. 2nd. In a cushion for billiard tables and the like, the combination with the inflatable tube A, of a fabric pocket B, having a web such as *b*, whereby it may be securely and accurately fixed to the block D, as and for the purpose set forth. 3rd. In a cushion for billiard tables and the like, the combination of the inflatable tube A, of the reinforcing pocket B, having a longitudinal web *b*, of the nose or cap C, and of the block D, all combined arranged and adapted to operate, as and for the purpose set forth.

No. 49,132. Furniture Castor. (*Roulette de meuble.*)

Adolph Kirmse, Marthastrasse, Hamburg, Germany, 6th June, 1895; 6 years.

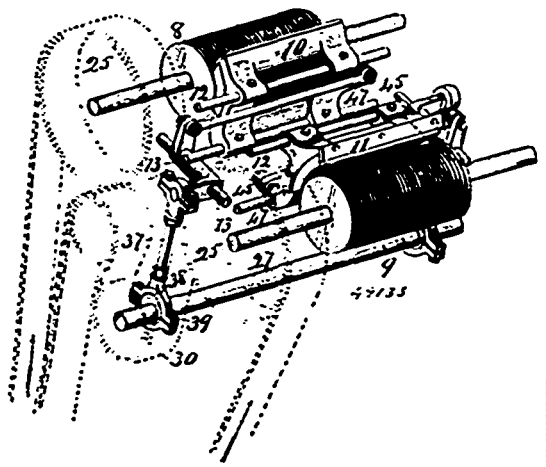
Claim.—A furniture castor consisting of a socket *a*, having a horizontal plate *b*, resting upon several small balls *h*, which transfer

the weight to a larger ball *g*, which is retained in position in the lower end of the socket *a*, by the narrowed or set in part *i*, thereof,



substantially as described with reference to the accompanying drawing.

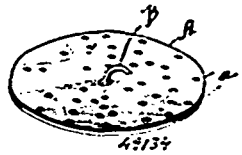
No. 49,133. Flouring Machine. (*Moulin à rouleaux.*)



Hugh M. Whitney and James Henry Bishop, both of Minneapolis, Minnesota, U.S.A., 6th June, 1895; 6 years.

Claim.—1st. The combination, in a machine of the class described, of two corrugated or fluted parts or members, means for reciprocating one of said parts, and the corrugations in the parts or members being so arranged that when reciprocated particles between said parts will be crushed or cracked, substantially as described. 2nd. The combination, in a machine of the class described, of two parts or members correspondingly corrugated, and means for reciprocating one of said parts close to the other, substantially as described. 3rd. The combination, in a machine of the class described, of two parts or members, one revolvable and the other adapted to be reciprocated, said parts having corrugated surfaces in close proximity to one another, and the surface of the reciprocating part being substantially concentric with that of the revolvable part, substantially as described. 4th. The combination, in a machine of the class described, of the two parts or members, one of the same adapted to be reciprocated, and said parts being arranged in close proximity to one another, and having their adjacent surfaces provided with substantially vertical corrugations, as and for the purpose specified. 5th. The combination, in a machine of the class described, of a suitable frame, the two members supported thereon, and having the adjacent surfaces each provided with substantially vertical corrugations, means for reciprocating one of said parts, and a suitable saddle or block for carrying said part, substantially as described. 6th. The combination, in a suitable frame, of the roller supported therein, means for revolving the same, said roller having the substantially circumferential or vertical grooves, the reciprocating concave arranged in proximity to the decending side of said roller or roll, slidable parts for said concave, and means for operating the same, substantially as described. 7th. The combination, in a machine of the class described, of the two substantially vertical corrugated parts or members arranged close to one another, one of said parts being secured in a suitable saddle or carrying block, the shafts or rods of said saddle, the slide bearings therefor, and means for reciprocating said saddle, and thereby the member carried therein, substantially as described. 8th. The combination, with the corrugated roller, of the corrugated concave or bar, the saddle or block 10 provided with the inclined retaining shoulders, one of said shoulders being removable to permit the removal of said corrugated bar or concave, means for rotating said roll, slide bearings for said saddle and bar, and means for reciprocating the same, substantially as described. 9th. The combination, with the frame, of the two corrugated parts or members, slide bearings for one of said parts, a drive shaft, a cam thereon, a bell crank, said bell crank being connected with the movable member, and a connection between said bell crank and said cam whereby, as the drive shaft is rotated, said part or member is reciprocated, substantially as described. 10th. The combination, in a machine of the class described, of the two corrugated parts arranged in close proximity to one another, a drive shaft, a cam thereon, and means in connection therewith for reciprocating one of said parts or members, substantially as described. 11th. The combination, with the frame, of the corrugated roll, having the shaft provided with bearings in said frame, means for rotating said roll, the corrugated concave, slide bearings for the carrying part thereof, a drive shaft, a bell crank, a pitman rod connecting one arm of said bell crank to said concave, and means between said driving shaft, and the other arm of said bell crank whereby the latter is operated and thereby said concave, reciprocated, substantially as described. 12th. The combination, with a suitable frame, of two corrugated parts arranged therein, one of said parts adapted to be reciprocated, a bell crank, a pitman extending from one arm thereof to the reciprocating part, an adjustable connection between said pitman and said bevel crank, whereby the length of the stroke may be regulated, and means for driving said bell crank, substantially as described. 13th. The combination, in a machine of the class described, of the two corrugated parts, one of said parts adapted to be reciprocated, the frame or casing wherein said parts are supported, the ear extending from the reciprocating part to a point outside said casing, the pitman extending through from the opposite side of the casing and having a pivotal connection with said ear, and means outside of the casing for operating said pitman to reciprocate said member, substantially as described. 14th. The combination, with the casing, of the corrugated roll adapted to rotate in bearings therein, the corrugated concave, the saddle or carrying block wherein the same is secured, the cross shafts or rods of said saddle, the slide bearings therefor upon said casing, and means for reciprocating said saddle, substantially as described. 15th. The combination, with the casing, of the corrugated roll adapted to rotate in bearings therein, the corrugated concave, the saddle or carrying block wherein the same is secured, the cross shafts or rods of said saddle, the slide bearings therefor upon said casing, a drive shaft, a cam thereon, the strap and rod of said cam, the pivoted bell crank secured upon said casing or frame, and a pitman extending from said bell crank to said saddle, substantially as described. 16th. The combination, with the casing, of the corrugated parts arranged therein, one of said parts having slide bearings upon said casing, and an ear extending outside of said casing, the bracket upon the opposite side of said casing, the bell crank pivoted thereon, a pitman extending through said casing from said bell crank to said ear, the main drive shaft, and a driving connection between the same and said bell crank, substantially as described. 17th. The combination, in a machine of the class described, of a casing having bearings, the two rollers, and the two concaves supported in said bearings, said concaves being arranged between said two rollers, and means for independently reciprocating said concaves, substantially as described.

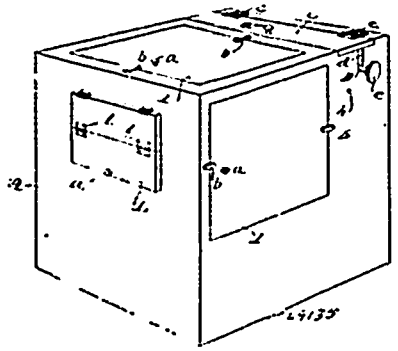
No. 49,134. Puzzle Toy. (*Jouet casse-tête.*)



Amos Bennonie Paulson, Philadelphia, Pennsylvania, U.S.A., 6th June, 1895; 6 years.

Claim. 1st. A puzzle toy, comprising a flat perforated disc, having an enlarged central opening, and a split ring normally held in the central opening, for the purpose set forth. 2nd. A puzzle toy, comprising a disc having a series of perforations formed therein, certain of the perforations being equi spaced from the centre to the periphery of the disc, and a split ring adapted to be worked in and out of the openings, and being normally held in a central opening thereof, for the purpose described.

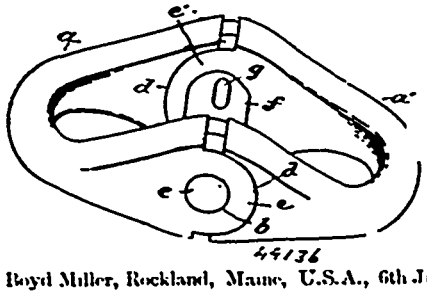
No. 49,135. Panoramic Cabinet. (*Cabinet panoramique*)



Antonio Atanasio Aguero, New York, State of New York, U.S.A., 6th June, 1895; 6 years.

Claim.—1st. In a panoramic cabinet having a lens therein, a shade comprising three rigid shutters pivoted at the top to fold downwardly and at the sides to fold inwardly, each of the said shutters being formed in two or more jointed sections adapted to be folded to regulate the projection of the shade, substantially as shown and described. 2nd. In a panoramic cabinet, the combination, with an exhibiting box, having a lens therein, of a plurality of repositories therein, and removable therefrom each of said repositories having a strip therein with representations upon the face thereof, the said strip being folded longitudinally, and means for bringing each section of the strip vertically in alignment with the lens, substantially as shown and described. 3rd. A panoramic cabinet, comprising a box having a removable door in the rear thereof, a screen in front thereof, a roller mounted in the box near the top toward the rear thereof, and adapted to be removed therefrom and reversed, a lens in the front of the box, near the upper portion thereof, a collapsible and adjustable shutter in front of the said lens, windows in the top and sides of the box, shutters closing the windows and wholly removable therefrom, a plurality of repositories adapted to fit within the cabinet and to be withdrawn therefrom through the door, a strip in each of the said repositories having representations of objects on both faces thereof, the said strip being folded longitudinally, a sheet secured to the upper end of the strip, and means for detachably securing the said strip to the operating roller, substantially as shown and described. 4th. A panoramic cabinet, consisting of a box having a door removably secured to the rear thereof, slots in the side of the box opening in the top, a roller journalled in the said slots and adapted to be removed therefrom and reversed, longitudinal flanges upon the roller, and handles at each end thereof without the box, a lid hinged above the roller, a roller journalled forwardly and below the first a jointed and folding screen suspended therefrom, an opening in the front of the cabinet, a lens secured upon the inside of the same behind the opening, shutters hinged above and at each side of the lens, adapted to fold, the top downwardly and the side inwardly, each of the said shutters being formed in two or more sections jointed by hinges whereby the outer sections folds upon the inner sections, openings in the top of the box, between the lid and the front thereof, openings in the sides of the box adjacent to the lens, glass panes upon the inside of the box behind each of the openings, shutters countersunk, in the openings, and wholly removable therefrom, catches securing the same, one or more drawers cabinets in the box having a plurality of drawers therein, and removable therefrom, a strip in each of the said drawers having representations of objects upon both faces thereof, the said strip being folded longitudinally, a sheet secured to the end of each strip adapted to fit within the flanges upon the operating roller and be brought vertically in alignment with the lens, by the rotation thereof, and cords or ribbons upon the sheet to secure the same to the roller, substantially as shown and described.

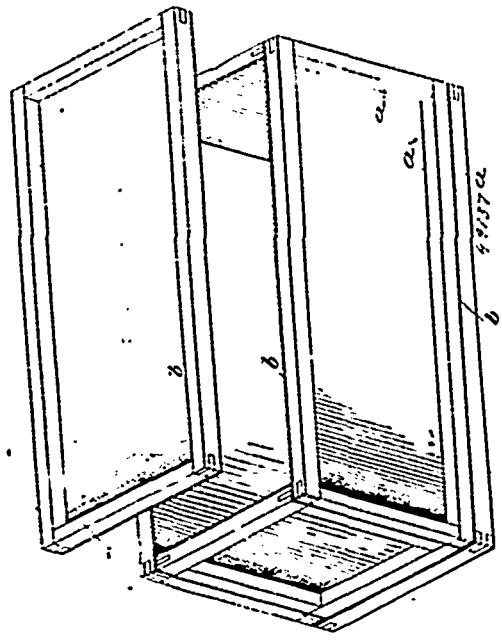
No. 49,136. Shackle for Vessels' Chains.
(*Manivelle pour chaines de vaisseaux.*)



James Boyd Miller, Rockland, Maine, U.S.A., 6th June, 1895; 6 years.

Claim.—A shackle for vessels' chains comprising in its construction two U-shaped clevises provided with eyes at their open ends and with sockets or recesses to receive the rounded portions of the open ends, a pintle or pivot pin extending through the eyes of the rounded ends, a sleeve surrounding said pintle or pivot pin between the ends of the clevises, and a cotter or pin passing through said sleeve and pintle, substantially as and for the purpose set forth.

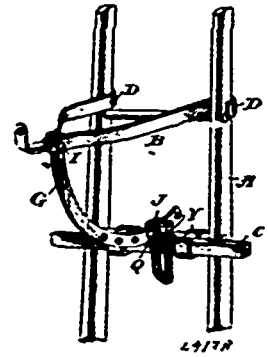
No. 49,137. Packing Box. (*Boîte d'empaquetage.*)



The National Patent Box Company, Chicago, Illinois, assignee of Edward Nolan, Wausau, Wisconsin, both in the U.S.A., 7th June, 1895; 6 years.

Claim.—As an article of new manufacture, a packing box consisting of the combination with single sheets of wood pulp, of frames, one frame for each sheet upon which the sheet is mounted, said frames being secured together to compress the edges of the wood pulp between the frames, whereby a box is formed of uniformly constructed sides, the interior surface of the box being entirely of wood pulp having tight joints, substantially as shown and described.

No. 49,138. Scaffold Bracket. (*Bou'in pour échafauds.*)

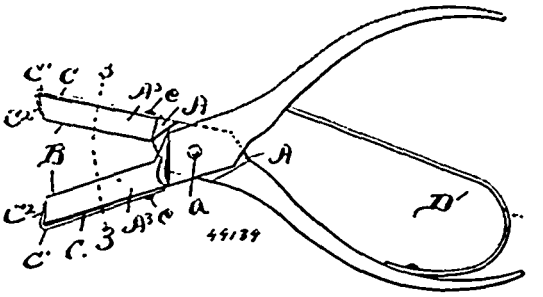


John A. Murphy, Charles G. Polleys, and William C. Scott, all of Newport, Rhode Island, U.S.A., 7th June, 1895; 6 years.

Claim.—1st. A ladder bracket, consisting of a bracket which is hooked at its inner end upon the two uprights of the ladder, combined with an adjustable brace for supporting the outer end of the bracket, and a cross-bar provided with hooks for catching over the round of the ladder, and provided with means for holding the lower end of the brace, substantially as shown and described. 2nd. A bracket for supporting the end of a scaffold upon a ladder, consisting of the bracket which is hooked at its inner end upon the uprights, combined with a brace, and a cross-bar, which is applied to the side of the ladder, the cross-bar being provided with means to suspend it from one of the rounds, substantially as described. 3rd. The bracket provided with hooks at its inner end to catch over the edges of the uprights of the ladder, and just above one of the

rounds, combined with a brace G, that is connected at its upper end to the outer portion of the bracket, and the cross-bar O, which bears against the edges of the uprights, and is provided with the hooks V, for catching over one of the rounds of the ladder, and a loop through which the lower end of the brace passes, substantially as set forth.

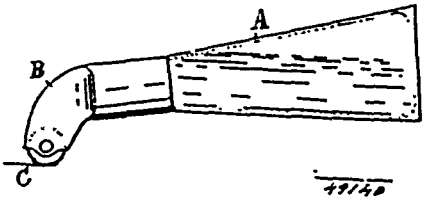
No. 49,139. Fruit and Flower Picker. (*Jaffet.*)



The Clauss Shear Company, Freemont, assignee of Jacob Sosenheimer, Crestline, both of Ohio, U.S.A., 7th June, 1895; 6 years.

Claim.—1st. A fruit and flower-picker, comprising two handle bearing jaws pivotally secured to each other substantially as indicated, said jaws, at one side of the device, being provided, respectively, with an inwardly projecting flange, and at the opposite side of the device, having respectively, an inwardly projecting blade, the blade and flange of each jaw being arranged lengthwise of the jaw, elastic packing B interposed between said flange and blade, and means for preventing displacement of said packing, substantially as set forth. 2nd. A fruit and flower-picker, comprising two handle bearing jaws pivotally secured to each other substantially as indicated, said jaws, at one side of the device, being provided, respectively, with an inwardly projecting flange, and at the opposite side of the device, having respectively an inwardly projecting blade, the blade and flange of each jaw being arranged lengthwise of the jaw, elastic packing B interposed between said flange and blade, and a spring engaging the outer end of and preventing endwise displacement of said packing, substantially as set forth. 3rd. A fruit and flower picker, comprising two handle bearing jaws pivotally secured to each other substantially as indicated, each jaw being provided with a flange A^2, and a blade A^3 wider than the flange, packing B interposed between the flange and blade of each jaw, and removable springs C engaging the outer ends of the packing, all arranged and operating, substantially as set forth. 4th. A fruit and flower picker, comprising two handle bearing jaws A, pivotally secured to each other at *a*, each jaw being provided with a flange A^2, and a blade A^3 which blade and flange are arranged and constructed to form between them a recess having having receding side walls, packing B interposed between the flange and blade of each jaw, means for preventing endwise displacement of the packing and the spring D, all arranged and operating, substantially as set forth.

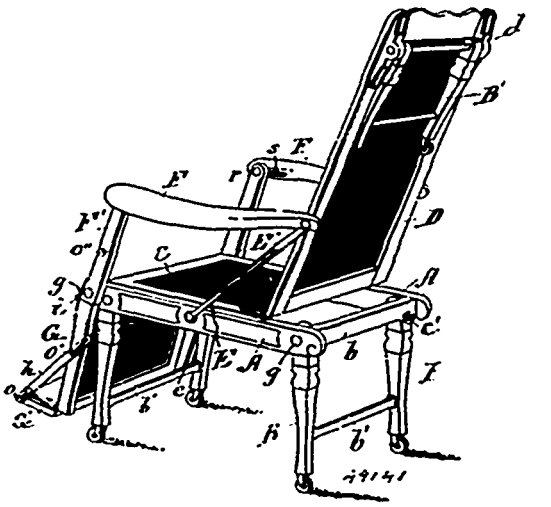
No. 49,140. Mucilage Holder. (*Porte-mucilage.*)



Eugene Terry and Bradford Almy, both of Ithaca, New York, U.S.A., 7th June, 1895; 6 years.

Claim.—1st. The combination, in a mucilage holder, of a detachable cap having an opening in one side, and a roller in said opening pivoted in the walls of said cap and having a roughened periphery, substantially as specified. 2nd. The combination, in a mucilage holder, of a detachable cap, having an elbow hand and an opening at its end, the said opening being closed by a roller journalled in the walls thereof, whereby the mucilage is distributed when the device is in use, substantially as specified. 3rd. The combination, in a mucilage holder, a metallic elbow shaped cap secured to the neck of the holder, and a non-flexible roller provided with a milled periphery, closing the mouth of the metallic cap and journalled in the walls thereof. 4th. The combination, with a mucilage holder, of a cap therefor provided with a mouth, a roller pivoted in the cap, and a curved swinging hood to close the mouth of the cap and to cover the roller pivoted on the cap, as and for the purpose described. 5th. The combination, with a mucilage holder, of a cap therefor provided with a mouth, a roller pivoted in the cap, a curved swinging hood to close the mouth of the cap and to cover the roller pivoted on the cap, and a spring connecting the hood with the cap, as with and for the purpose described. 6th. The combination, with a mucilage holder, of a cap therefor provided with a mouth, a roller pivoted in the cap and separated from the sides of the same, and a curved swinging cover to close the mouth of the cap and fulcrumed on the shaft of said roller, as set forth. 7th. The combination, with a mucilage holder, of a cap therefor provided with a mouth, a roller pivoted in the said cap and protruding from the *mouth*, a *funnel* shaped piece secured in the neck of the cap and having its contracted end near the periphery of the roller, and an aperture at the outer edge of said funnel, as and for the purpose set forth. 8th. The combination, with a mucilage holder, of a cap therefor provided with a mouth on one side, a roller pivoted in the said cap and protruding therefrom through the mouth, and a curved swinging cover having sides to turn on the axis of the roller between the latter and the cap, a funnel shaped piece secured in the neck of the cap and having its contracted end near the periphery of the roller, and an aperture at the outer edge of said funnel, as and for the purpose set forth. 9th. The combination, with a mucilage holder, of a cap therefor provided with a mouth, a roller pivoted in the said cap and protruding therefrom through the mouth, said roller having the central portion of its periphery roughened and its side portions plain and smaller in diameter, shoulders on the axle on each side of the roller, and a curved swinging cover having sides to turn on the axle of the roller between the shoulders and the sides of the cap, as and for the purpose set forth.

No. 49,141. Chair. (*Chaise.*)



Joseph G. McCaffery, and Annie D. Lenty, both of Detroit, Michigan, U.S.A., 7th June, 1895; 6 years.

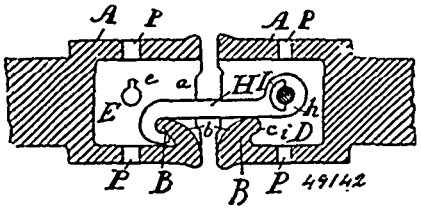
Claim.—1st. In a chair of the class described, the combination with the supporting frame, of a chair comprising a back portion pivoted on the frame and means for securing said back portion at different angles, and a foot rest pivoted on the frame and connected with said back portion, for the purpose specified. 2nd. In a chair of the class described, the combination with a collapsable supporting frame, of a chair comprising a back portion pivoted on the frame and means for securing said back portion at different angles, a foot rest formed by a series of hinged sections and pivoted on said frame and the interposed arms connecting said foot-rest and back portions as specified. 3rd. The combination with a frame, the supporting legs arranged in pairs and pivoted to said frame each of said legs being notched on opposite sides to form stop shoulders adapted for engaging portions of said frame, a rotary bolt passing through said legs and having a right angled end adapted to engage the bars of the frame to lock said legs. 4th. The combination with a combined chair and couch as described, of a foot rest comprising a plurality of sections suitably connected and means for automatically adjusting said sections at each movement of the chair back, as specified. 5th. In a convertible chair, the combination of the supporting frame, the back hinged to said frame, the foot rest, the jointed arm connecting said foot rest and back, and means for locking the joint between said arms from movement when set at a desired angle, for the purpose specified.

No. 49,142. Car-Coupler. (*Attelage de chars.*)

Napoleon Guillemette, jr., Three Rivers, Quebec, Canada, 7th June, 1895; 6 years.

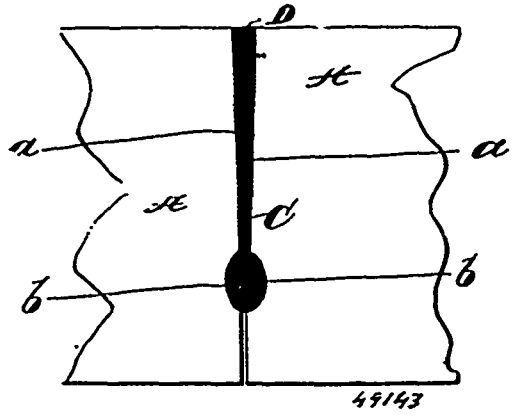
Claim. 1st. In a car-coupling, the combination with the drawhead A, having an inwardly sloping lip B, in the bottom wall, of the hook H, perforated hub *h*, formed at the rear of the said hook, a rod D, passing through perforations in the side walls of the said

draw-head, a weighted arm *d*, formed at one end of the said rod, and means for holding the said rod in the said draw-head, substantially as set forth. 2nd. In a car-coupling, the combination with a



hook H, a perforated hub *h*, formed at the rear end of the said hook, chambers I formed at either side of the said hub, of a rod D, having a weighted arm *d* formed at one end, pins *e* and *f* formed at one side of the said rod, annular chambers F, formed on the outside of the perforations through which the said rod passes, and having notches *g* and *c* for the passage of the said pins, substantially as set forth.

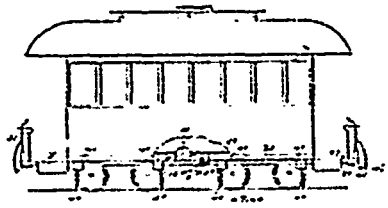
No. 49,143. System of Calking Vessels.
(*Système de calfater les vaisseaux.*)



Alfred J. Brooks, Chester, Pennsylvania, U.S.A., 7th June, 1895; 6 years.

Claim.—The combination of two planks having coincident chamfered and grooved edges and fibrous material packed into the space formed by the chamfers and grooves, substantially as described.

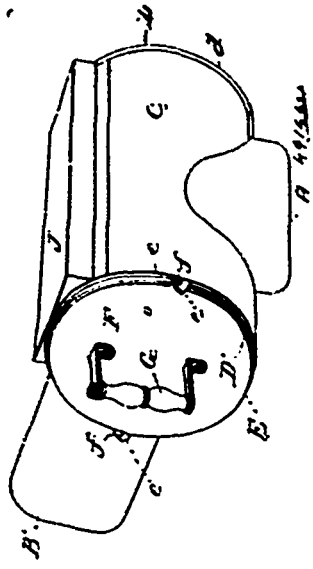
No. 49,144. Electric Operating Mechanism for Vehicles. (*Appareil électrique à propulser les chars.*)



Louis Eugene Freedley, Boston, Massachusetts, U.S.A., 7th June, 1895; 6 years.

Claim.—1st. The combination of a vehicle body, running gear therefor, a driving electric motor connected with said running gear, a brake mechanism comprising a brake-shoe for operating against a wheel of said running gear, a supplemental motor connected with said brake mechanism, electric conductors connected with said motors, mechanism for swinging the current alternately into the driving and supplemental motors, mechanism operative from the vehicle body for moving the switch mechanism, and automatic mechanism for breaking the current when the brakes become set, substantially as described. 2nd. The combination of a vehicle body, running gear therefor, a driving electric motor connected with said running gear, an electric circuit therefor, cut-outs therein, a brake mechanism comprising a brake-shoe for operating against a wheel of said running gear, a supplemental motor connected with said brake mechanism, a shunt circuit therefor, an electric switch, a spring plunger on the vehicle platform, a bar operated by said plunger and connecting said switch and cut-outs to pass the current alternately into the driving and supplemental motors, substantially as described. 3rd. The combination of a vehicle body, running gear therefor, a driving electric motor connected with said running gear, an electric circuit for said driving motor, a brake mechanism comprising a brake-shoe for operating against a wheel of said running gear, supplemental motor connected with said brake mechanism, a shunt circuit for said supplemental motor, a switch common to both circuits, cut-outs for breaking the driving circuit, bars connected at their inner ends with said switch, each bar being connected also with one of said cut-outs, and actuators at each end of the car for operating said bars to switch the current alternately into the driving and supplemental motors, substantially as described. 4th. The combination of the vehicle body, running gear therefor, a brake mechanism, an electric motor for setting said brake mechanism, an electric circuit passing through said motor, and automatic mechanism for breaking the circuit when the brake becomes set, substantially as described. 5th. The combination of a vehicle body, running gear therefor, a brake mechanism comprising a brake for operating against a wheel of said running gear, an electric motor, a rotary winding shaft operated by said motor, a chain connecting said shaft with the brake mechanism, an electric circuit connected with said motor, an electric switch in said circuit, means for operating said motor, and a flexible strap longer than said brake-chain connecting said winding shaft with said switch for automatically breaking the circuit when the brake becomes set, substantially as described. 6th. The combination of a vehicle body, running gear therefor, a brake mechanism thereon, the shaft, the chain connecting the same with a bar for said brake mechanism, the supplemental motor geared to said shaft, means for shunting the electric current from the drive motor to said supplemental motor, whereby said shaft may be rotated to set the brake, and automatic mechanism for breaking said current when the brake becomes set, substantially as described. 7th. The combination of a vehicle body, running gear therefor, a brake mechanism thereon, a switch interposed in the circuit of the drive motor of said vehicle, the supplemental motor having its conducting wires tapping said circuit and connecting with a post of said switch, the rotary winding shaft geared to said supplemental motor, the brake mechanism, a chain connecting a bar of said brake mechanism with said winding shaft, mechanism for operating said switch from the vehicle platform, whereby the current may be shunted to said supplemental motor, and means for connecting said winding shaft with the tongue of said switch, whereby said circuit may be automatically broken, substantially as described. 8th. The combination of a vehicle body, running gear therefor, a driving electric motor connected with said running gear, a brake mechanism comprising a brake-shoe for operating against a wheel of said running gear, a supplemental motor connected with said brake mechanism, electric conductors connected with said motors, mechanism for switching the current alternately into the driving and supplemental motors, and automatic mechanism for breaking the circuit when the brake becomes set, substantially as described. 9th. The combination of a vehicle body, running gear therefor, a brake mechanism thereon, the shaft, the chain connecting the same with a bar of said brake mechanism, the supplemental motor geared to said shaft, means for shunting the electric current from the driving motor to said supplemental motor, whereby said shaft may be rotated to set the brake, mechanism for automatically breaking said current, and mechanism for freeing the brake after the same has been set, substantially as described.

No. 49,145. Garbage Dryer. (*Séchoir pour tripailles.*)

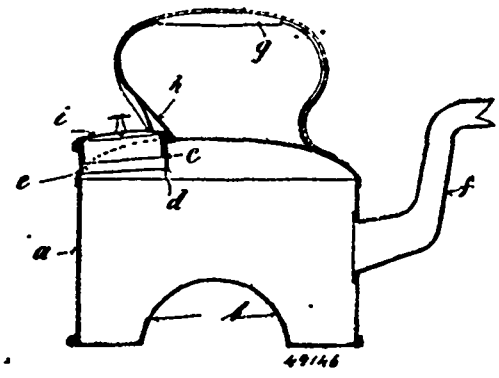


George Taylor, Boston, and Martin McLauthlin, Malden, both in Massachusetts, U.S.A., 7th June, 1895; 6 years.

Claim.—1st. A domestic garbage dryer or carbonizer comprising in its construction a closed chamber provided with an inlet and an

outlet opening, a hopper or receptacle in said chamber provided with a closed bottom and perforated sides and a deflecting plate in said chamber so located as to cause the products of combustion to contact the refuse matter either through the perforations or at the top of the receptacle, substantially as and for the purpose set forth. 2nd. A domestic garbage dryer or carbonizer comprising in its construction a closed chamber provided with an inlet and outlet opening, and an open top-hopper or receptacle provided with a closed bottom and perforated sides so located in said chamber as to cause the products of combustion to contact the refuse matter either through the perforations or at the top of the receptacle, substantially as and for the purpose set forth.

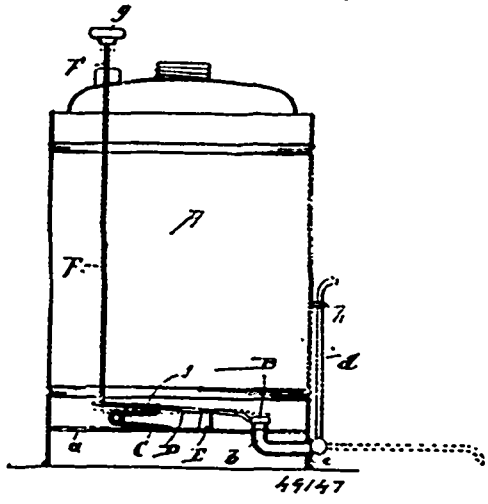
No. 49,146. Kettle. (*Bouilloire.*)



Edward Wembridge Ingamells, Albert William Mathews and William Mathews, all of Bournemouth, England, 7th June, 1895; 6 years.

Claim.—In kettles for heating liquids, in combination, an arch formed in the bottom of the kettle, a filling aperture at the rear of said kettle, a guard or shield projecting from and partially surrounding said filling aperture, a tapering rim descending into the interior of said kettle from the filling aperture, a lid for closing said aperture, substantially as described and illustrated herein.

No. 49,147. Oil Can. (*Bidon à huile.*)



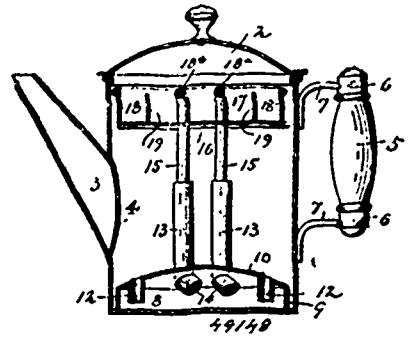
Daniel J. Holliger and Ira H. Everhard, both of Canton, Ohio, U.S.A., 7th June, 1895; 6 years.

Claim.—1st. The combination of the can A, provided with the bottom *a*, the tube *b* having pivotally connected thereto the tube *d*, the valve B provided with the valve rod D, the spring C, located below the valve rod, and the push-bar F, provided with the push button *g*, substantially as and for the purpose specified. 2nd. The combination of a can provided with the tube *b*, located through the bottom of said can, the pivoted tube *d*, the curved wire *h*, the spring n^1, and the valve 9, and means for operating said valve, substantially as and for the purpose specified.

No. 49,148. Coffee-Pot. (*Cafetière.*)

Alpheus Fay, Cincinnati, Ohio, U.S.A., 7th June, 1895; 6 years.

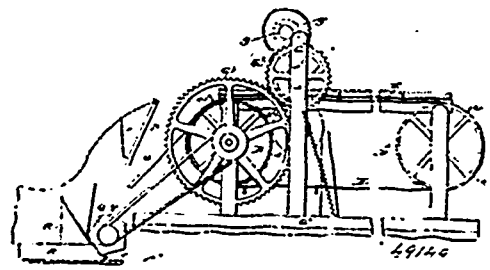
Claim.—In a percolating device for coffee pots, the combination with the base, the diametrically opposite pipes in the top thereof, the diametrically opposite vertical pipes, and the enlarged sidewise and downwardly inclined pipes communicating therewith and having their inner ends cut-off obliquely, of the pipes telescoping within said vertical pipes, the coffee receptacle having a perforated



bottom through which said pipes pass, the transverse perforated pipes having their ends bent at right angles and telescoping in said pipes and the perforated partitions, substantially as described.

No. 49,149. Stamp Cancelling Machine.

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

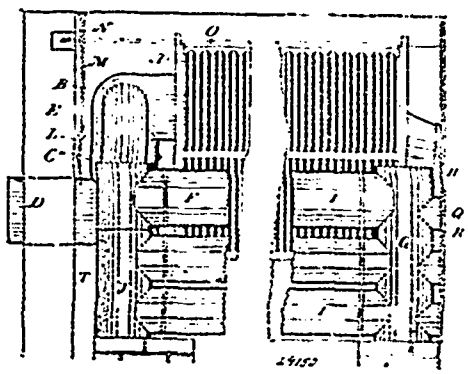


The American Postal Machines Company, Portland, Maine, assignee of George Ezra Barnard, Fitchburg, Massachussts, U.S.A., 7th June, 1895; 6 years.

Claim.—1st. In a stamp-cancelling machine, the combination with the transversely inclined stationary support having the longitudinal slots therein, of a driving-belt running beneath the support and having points or projections thereon extending through the slots in the support, and the rotary printing mechanism arranged at a point intermediate the ends of the support and driving-belt, substantially as described. 2nd. In a stamp-cancelling machine, the combination with the stationary transversely inclined support having the longitudinal slots therein enlarged at one end, of the drive-belt arranged beneath the supports and having the projections or points passing through the slots therein and adapted to enter said slots at the wider or enlarged end, of the printing mechanism arranged at a point intermediate the ends of the support and driving-belt for operating on the letters passing over the support, substantially as described. 3rd. In a stamp-cancelling machine, the combination with the stationary transversely inclined support having the longitudinal slots therein, and an opening for the printing mechanism below said slots, of the belt arranged beneath the support with the points or projections thereon passing through the slots in the support, the printing-cam working through the opening in the support, and the printing die co-operating therewith, substantially as described. 4th. In a stamp-cancelling machine, the combination with the support and the rotary printing-die, of the reciprocatory cam for co-operation with the die having one edge when in normal position lying in such proximity to the path of travel of the die as that the die will normally rotate without engaging the cam but will bind against and move the cam when a letter or equivalent is interposed between the two, substantially as described. 5th. In a stamp-cancelling machine, the combination with the support along which the letters are caused to travel, and the rotating die, of the co-operating cam having a portion of its face arranged in such proximity to the path of travel of the die as that the die will rotate past the cam when nothing is interposed between the two but will bind against and move the cam when a letter or equivalent is interposed between the two, and a spring for returning the cam when released from the die, substantially as described. 6th. In a stamp-cancelling machine, the combination with the support on which the letters are caused to travel, of the rotary printing-die and reciprocatory cam for co-operation therewith, with projections on the die arranged in proximity to but out of the plane of rotation of the projecting portion of the die, whereby the die is permitted to rotate freely under normal conditions and is caused to bind against and move the cam to take an impression when a letter or equivalent is interposed between the two and against the projection, substantially as described. 7th. In a stamp-

cancelling machine, the combination with the support and the rotary printing-die, of the normally stationary reciprocatory cam thrown into operation by the introduction of the thing to be printed and co-operating and advancing in unison with the die to make the impression with means for independently and automatically returning the cam to normal position, substantially as described. 8th. In a stamp-cancelling machine, the combination of the rotary printing-die having the oppositely arranged operative faces and central cylindrical opening, of the shaft, the cam rigidly mounted thereon and fitting within the cylindrical opening in the die, whereby the die may turn on same said cam to throw either face outward from the centre of rotation with means for holding the die in adjusted position, substantially as described. 9th. *In a stamp-cancelling machine, the combination* with the die-shaft and the cam held in position on said shaft by a set-screw, of the die journalled on the cam, the collar keyed to the shaft and having a limited movement longitudinally thereof, and the pin for uniting the collar and die, whereby the die is held in adjusted position, substantially as described. 10th. In a stamp-cancelling machine, the combination with the support along which the letters are caused to travel, and the printing mechanism, of the incline *down which the letters are discharged, the swinging gate above said* incline, the driven roller at the bottom of the incline rotating away from the same and formed with facets and projections as described, the movable abutment against which the letters are forced by the roller, and the fingers entering grooves in roller for preventing the letters from being discharged beneath the roller, substantially as described.

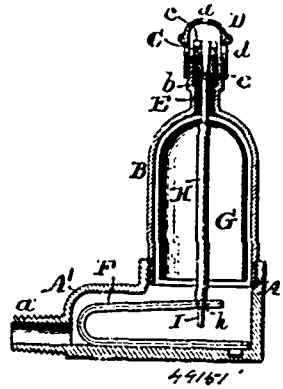
No. 49,130. Hot-Air Furnace. (*Fournaise à air chaud.*)



Joseph Brinsley Sheridan, Toronto, Ontario, Canada, 10th June, 1895; 6 years.

Claim.—1st. In combination with a furnace, a flue E, suitably connected with the combustion chamber A, of the furnace, a horizontal flue F, located at the side of the furnace and connected at one end with the aforesaid flue, a header G, to which the other end of the horizontal flue is connected, and one or more horizontal return flues I, connected at one end with the said header and at the other with the smoke exit flue D, substantially as and for the purpose specified. 2nd. In combination with a furnace, a downwardly extending flue B, connected with the combustion chamber A, of the furnace, a damper C, located in the said flue, a smoke exit flue D, connected to the downwardly extending flue below the damper, a downwardly and laterally extending flue E, connected to the said flue above the damper, a horizontal flue F, located at the side of the furnace and connected at one end with the said downwardly and laterally extending flue, a header G, to which the other end of the horizontal flue is connected, and a horizontal return flue I, connected at one end with the said header and at the other with the smoke exit flue, substantially as and for the purpose specified. 3rd. In combination with a furnace, a downwardly extending flue B, connected with the combustion chamber A, of the furnace, a damper C, located in the said flue, a smoke exit flue D, connected to a downwardly extending flue below the damper, a downwardly and laterally extending flue E, connected with the said flue above the damper, a horizontal flue F, located at the side of the furnace and connected at one end with the said downwardly and laterally extending flue, a header G, to which the other end of the horizontal flue F, is connected, and two horizontal return flues I, connected at one end with the said header, a header J, to which the other ends of the said horizontal return flues are connected, and a diagonal flue K, connecting the said header with the smoke exit flue, substantially as and for the purpose specified. 4th. In combination with a furnace, a downwardly extending flue B, connected with the combustion chamber A of the furnace, a damper located in the said flue, a smoke exit flue D, connected to the downwardly extending flue below the damper, two downwardly and laterally extending flues E, connected to the said flue above the damper, two horizontal flues F, located one at each side of the furnace and connected with the ends of the said downwardly and laterally extending flues, two headers G, to which the said horizontal flues are respectively connected, two horizontal return flues I, connected at one end with each header, and at each other with a header J, connected with a diagonal flue K, connected with the smoke exit flue D, substantially as and for the purpose specified.

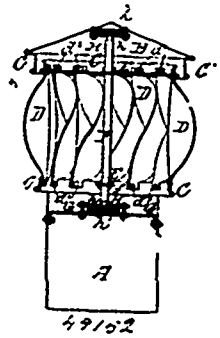
No. 49,131. Air Valve. (*Soupape à air.*)



Joseph Poulson, Philadelphia, Pennsylvania, U.S.A., 10th June, 1895; 18 years.

Claim.—1st. An air valve embracing the compound metallic expansible piece for operating the valve piece and permitting the float to move back and open the valve when said expansible piece contracts. 2nd. The combination with the closed case having an inlet and outlet, of the movable valve piece or pin for closing the outlet, the float for operating the valve pin or piece, the expansible piece composed of two metals of different co-efficients of expansibility, and the loose connection between the float and expansible piece. *3rd. The combination with the closed case having the inlet and* outlet, the valve piece for closing the inlet, the float connected with the valve piece, the compound metallic expansible piece and the stem H, connected with the float at its upper end and loosely connected with the metallic expansible piece at its lower end.

No. 49,132. Ventilator. (*Ventilateur.*)



Hermann Doerge, New York, State of New York, U.S.A., 10th June, 1895; 6 years.

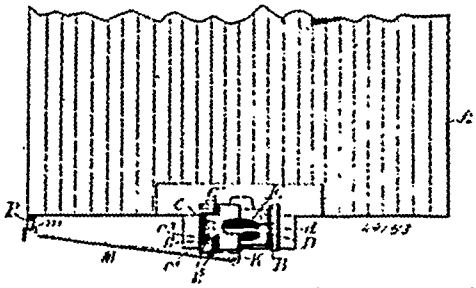
Claim. 1st. In a ventilator, the combination of a pipe, a stationary cap and an intermediate rotating fan consisting of two rings and a series of vanes, each having a half twist between the rings and its ends flat with the sides of said rings, whereby the vanes may be conveniently fastened to the top and bottom rings. 2nd. In a *ventilator, the combination of a pipe, a stationary cap, and an inter* mediate rotating fan consisting of two rings and a series of vanes, each of said vanes having a half twist between the two rings with its ends laid flat against the rings and rivetted thereto, substantially as described.

No. 49,133. Car-Coupler. (*Attelage le chars.*)

James Albert Roosevelt, Austin, Texas, U.S.A., 10th June, 1895; 6 years.

Claim. 1st. In a twin jaw car-coupling, the combination with a hollow draw head, of a knuckle pivoted in said draw head and provided with a locking arm adapted to enter into the hollow portion of said draw-head, a lock pivoted across said draw head, and provided with an inclined face and a catch on the lower side thereof, the said lock being adapted to fall by gravity and engage said locking arm of said knuckle, a lever *pivoted in said draw-head and having one arm* adapted to trip said lock and release said arm, a hand rod connected to the other arm of said lever and leading to the side of the car, a hook at the outer end of said hand rod, and means for pivotally engaging said hook at the side of the car, substantially as and for the purposes described. 2nd. In a twin jaw car-coupler, the combina-

tion with a hollow draw-head, of a knuckle pivoted in said draw-head, and provided with a locking arm adapted to enter into the hollow portion of said of said draw-head, a lock pivoted across said drawhead and provided with an inclined face, and a catch on one side thereof, a spring normally pressing on the opposite side of said

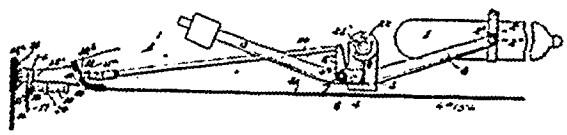


lock, a lever pivoted in said draw-head and having one arm adapted to trip said lock, and release said arm, a hand rod connected to the other arm of said lever and provided with a hook at its outer end, and a loop at the side of the car supporting and holding said hook, substantially as described. 3rd. In a twin-jaw car coupling, the combination with a hollow draw-head provided with a curved recess therein, of a knuckle C, pivoted in said draw-head and provided with a hook-shaped wing c^1, adapted to enter into said curved recess and a bearing face c^2, a lock D, pivoted across said draw-head and provided with an inclined face d^1, a bearing face d^3, a circular heel d, engaging in corresponding recess in said draw-head, and grooves at d^6, the said lock being adapted to fall by gravity and engage said locking arm of said knuckle, and a vertical pin H, entering into said groove in said lock, a bell-crank lever pivoted in said draw-head and having one arm adapted to trip said lock and release said locking arm of the knuckle and to support said lock when open, and an operating rod connected to the other arm of said lever, substantially as described. 4th. In a twin-jaw car-coupling, the combination with a hollow draw-head provided with a curved recess therein, of a knuckle C, pivoted in said drawhead, and provided with a hook-shaped wing c^1, adapted to enter into said curved recess and a bearing face c^2, a lock D, pivoted across said draw-head and provided with an inclined face d^1, a bearing face d^3, and a lug d^4, on the lower side thereof and a lug on the upper side thereof, a spiral spring engaging said lug and interposed between said lock and the inner wall of the draw-head, a lever pivoted to said draw-head and having one arm adapted to trip said lock and release said arm, and an operating rod connected to the other arm of said lever, and pivotally attached to the side of the car substantially as described. 5th. In a twin-jaw car-coupling, the combination with a hollow draw-head provided with four wedge-shaped equidistant teeth arranged in a circle about the pivot of the lower horn of the draw head, and two of said teeth being approximately at right angles to the longitudinal axis of the car, of a knuckle pivoted in said draw-head and provided with a locking arm adapted to enter into the hollow portion of the draw-head, and four wedge-shaped teeth arranged in a circle about the pivot, on the lower side of said knuckle and adapted to engage the wedge-shaped teeth in the draw-head, a lock pivoted across said draw-head and provided with an inclined face, and a catch on one side thereof, a spring normally pressing on the opposite side of said lock, a bell-crank lever pivoted in said draw-head, an operating rod connected thereto for tripping said lock and releasing said arm, a hook at the end of said rod, and a loop at the side of the car engaging in and holding said hook, substantially as described. 6th. In a twin-jaw car coupling, the combination with a hollow draw-head B provided with four wedge-shaped teeth arranged in a circle about the pivot in the lower horn of the draw-head and provided with a hook-shaped wing c^1 adapted to enter into the said curved recess, a bearing face c^2 and four wedge-shaped teeth arranged in a circle about the pivot and adapted to engage said teeth in the draw-head, a latch pivoted across said draw-head and provided with an inclined face d^1, and a bearing face d^2 on the lower side thereof, means for causing said latch to engage said knuckle, and means for tripping said latch and releasing it from engagement with said knuckle, substantially as and for the purpose described. 7th. In a twin-jaw car coupling, the combination with a hollow draw-head, provided with four wedge-shaped teeth equidistant from each other and arranged in a circle about the lower horn of the draw-head, two of the said teeth being approximately at right angles to the longitudinal axis of the car, of a knuckle pivoted in said draw-head and provided with four wedge-shaped teeth on the lower side thereof, the said teeth encircling the pivot of said knuckle, and registering with the teeth in the draw-head, and means for locking said knuckle and unlocking the same, substantially as and for the purposes described.

No. 49,154. Apparatus for Regulating the Supply of Feed Water. (*Régulateur de l'eau d'alimentation.*)

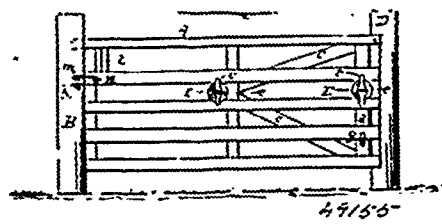
John Isaac Thornycroft, Chiswick, England, 10th June, 1895; 6 years.

Claim.—1st. The combination with a steam boiler, of feed water regulating apparatus comprising a feed water valve with inlet and outlet pipes or passages located within said boiler and directly controlling the supply of feed water thereto, a float lever connected with said valve, regulating mechanism also located within the boiler and capable of varying the distance between said float lever and the seat of said valve, and means for adjusting said regulating mechanism from the exterior of said boiler, substantially as herein described for the purpose specified. 2nd. Apparatus for regulating the sup-



ply of feed water to a steam boiler, comprising a feed valve, a float subject to the action of the varying water lever in the boiler, a lever connected with said valve and float, a second lever within said boiler and on which said float lever is fulcrumed, and means for adjusting said second lever so as to vary the position of the fulcrum of said float lever, and the extent to which said valve will be normally opened thereby. 3rd. Apparatus for regulating the supply of feed water to a steam boiler comprising a feed valve, a float, a lever connected with said valve and float, a second lever by which said float lever is carried, the boiler enclosing aforesaid parts, and adjusting mechanism connected with said second lever and capable of being operated from the exterior of the boiler so as to vary the position of the fulcrum of the float lever, substantially as herein described for the purpose specified. 4th. Apparatus for regulating the supply of feed water to a steam boiler comprising a feed valve, float operated mechanism for controlling said valve, a lever provided with a suitable adjusting device for varying the action of said mechanism on said valve, and an indicating device operated by said adjusting device, substantially as herein described for the purpose specified. 5th. In apparatus for regulating the supply of feed water to a steam boiler, the combination with float operated valve controlling mechanism comprising a lever, of a nearly balanced feed valve connected thereto, and supported by said lever, and arranged to open downward by gravity, substantially as herein described for the purpose specified. 6th. In apparatus for regulating the supply of feed water to a steam boiler, the combination of a feed water valve, float operated valve controlling mechanism comprising a lever, and a connecting pin or link freely jointed to said valve and controlling lever but so as to have no endways motion relatively to either, substantially as herein described for the purpose specified. 7th. A boiler feed water regulating apparatus in which a feed water valve, a lever connected to it, and a float for actuating said lever are so arranged that the length of the connection between the said lever and the feed valve is made capable of adjustment, and there is combined with such connection, adjusting mechanism capable of being operated from the exterior of the boiler to admit of adjustment to suit the desired height of the water level in the boiler or the rate of feed. 8th. The combination, with a steam boiler, of feed water regulating apparatus comprising a valve case fixed within said boiler and having inlet and outlet passages and a nearly balanced valve arranged to open downward by gravity, a float lever connected to said valve by a link articulated to both, bell-crank lever in one arm of which said float lever is pivoted, a longitudinally movable adjusting rod arranged to work through a stuffing box on the boiler shell and connected with the other arm of said bell-crank lever, means for moving said rod in an endways direction, and means for indicating the extent of endways movement of said rod, substantially as herein described.

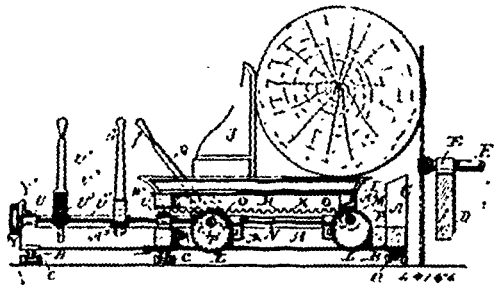
No. 49,155. Gate. (*Barrière.*)



William J. Slack, La Grange, Indiana, U.S.A., 10th June, 1895; 6 years.

Claim. 1st. A hinge adapted to a sliding and swinging gate composed of a cross-shaped base plate b having a front central bearing or swell, an oblique arm b^1 extending rearward from the base plate, a perforated lug S attached to said bearing, opposite projections f, a hinge bolt k, a loop bolt x, substantially as shown and described. 2nd. In a sliding and swinging gate, the combination with the hinge composed of a base plate b, an oblique arm b^1, a perforated lug S, projections f, and the members k and x, of the triangular gate frame c, d, the rollers E having a slight swell or hub and a flange upon one side, the vertical bar c^1, the sliding panel A, with the hand hold i, the post B, having the rests h, and the post D, substantially as shown and described.

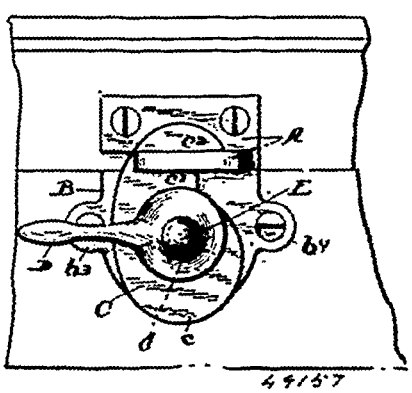
No. 49,156. Saw-Mill Carriage. (*Châssis de scieries.*)



Mat Cox, Hales' Point, Tennessee, U.S.A., 10th June, 1895; 6 years.

Claim.—1st. In a log carriage, the combination with the main frame, of a supplemental frame carrying the log, positive connections between the main and supplemental frames, and means for actuating the said connections for simultaneously lifting the supplemental frame and carrying it to the saw, substantially as described. 2nd. In a log carriage, the combination with the main frame, of eccentrics carried by one of the said frames and having positive connection with the other frame, and means for actuating the said eccentrics whereby the said supplemental frame is simultaneously raised or lowered and moved to and from the saw, substantially as described. 3rd. In a log carriage, the combination of main and supplemental frames, rack bars carried by one of the frames, toothed eccentrics provided on the other frame and meshing with the said rack bars, and means for actuating the eccentrics to simultaneously raise or lower and move the supplemental frame to or from the saw, substantially as described. 4th. In combination, a main frame adapted to travel in a line parallel with the plane of the saw, shafts journalled upon the frame in parallel relation with each other and the line of travel of the said frame, toothed eccentrics and mitre gear-wheels mounted upon the shafts, a transverse shaft having bevel gear-wheels meshing with the bevel gear wheels on the said shaft, and ratchet wheel and lever mounted upon one of the shafts, a supplemental frame carrying the log and rack bars on the supplemental frame meshing with the toothed eccentrics, substantially as and for the purpose described. 5th. In a log carriage, the combination of the main and supplemental frames, shafts journalled upon one of the frames, eccentrics mounted upon the said shafts and having positive connection with the opposing frame, and coil springs encircling the shafts and having one end connected therewith, and the other end with the frame carrying the said shafts, whereby the movements of the vertically movable frame are regulated and the weight of the log partially compensated, substantially as described. 6th. In a saw mill carriage, the combination with the lower frame and the adjustable upper frame supported upon elevating shaft M, M¹, geared together, and a lateral shaft geared to the shaft M¹, and operated by a ratchet-wheel and pawl lever, substantially as described. 7th. In a saw-mill carriage, the combination with the lower frame and the adjustable upper frame, of the lifting gear, and an index-wheel secured to one of the shafts thereof to indicate the distance moved by the upper frame, substantially as described. 8th. In a saw-mill carriage, the combination with the lower frame and the vertically adjustable upper frame, of the lifting gear, the operating shaft U¹, a brake-wheel W, band W¹ and lever W², for controlling the downward movement of the carriage, substantially as described.

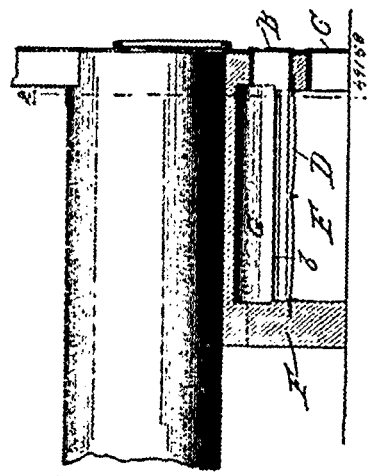
No. 49,157. Sash Lock. (*Arrête croisée.*)



Harry Bitner, Chicago, Illinois, U.S.A., 10th June, 1895; 6 years.

Claim.—The combination in a sash lock, and with a suitable hook and operating handle, of an oscillating and reciprocating latch actuated by said handle, and having a marginal flange upon its under side, and a base piece connected to the handle by a pivot and having raised portions enclosed by the flange and arranged to guide the latch by engaging with the inner side of said flange, substantially as described.

No. 49,158. Steam Boiler, Etc. (*Chaudière à vapeur.*)



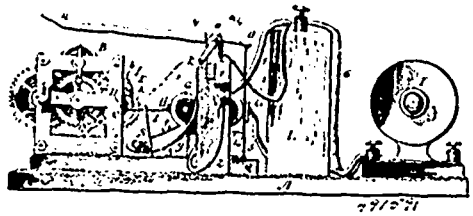
Orland Dore Orvis, Chicago, Illinois, U.S.A., 10th June, 1895; 6 years.

Claim. 1st. In a furnace, the combination of an arch, a grate surface spanned by said arch and a discharge passage at one side only of said arch and at a point between the lower edge of the arch and said grate surface, substantially as described. 2nd. In a furnace the combination of an arch, a grate surface spanned by said arch, a discharge passage at one side only of said arch at a point between the lower edge of the arch and grate surface and an updrift passage, whereby all the rising products of combustion must descend in the fire chamber and discharge into the said updrift passage in a plane above the surface of the grate bars and substantially below the crown of the arch and thereby be subjected to a draft of maximum rapidity and maintained in an igniting degree of heat a sufficient time for the ignition of substantially all said products, substantially as described. 3rd. In a furnace, the combination of an arch, a grate surface spanned by said arch, and a discharge passage at one side only and extending longitudinally of said arch which said discharge passage is at a point between the lower edge of said arch and grate surface, whereby a discharge passage of maximum length and minimum depth is provided for the fire chamber and all of the rising products of combustion therein are caused to discharge in a thin sheet from the fire chamber in a plane with or above the grate surface and substantially below the crown of the arch, substantially as and for the purpose set forth. 4th. In a furnace, the combination of two or more arches, grate surfaces therefor spanned by said arches, discharge passages at one side only of each of said arches and at a point between the lower edges thereof and their respective grate surfaces and updraft passages adjacent said discharge passages, substantially as described. 5th. In a furnace, the combination of arches arranged side by side, grate surfaces spanned by said arches, opposing discharge passages at one side only of said arches, at a point between the lower wedge thereof and the grate surface, an updraft passage extending lengthwise of and between the arches, and a wall rising from the bottom of the ash-pit to a plane with the grate surfaces and separating said grate surfaces, substantially as described. 6th. In a furnace, a double fire chamber embracing individual grate-bar surfaces, circulating water arches inclosing the fire chamber, and an updraft passage lengthwise of and between said arches in combination with a fire chamber discharge passage directly connected with said updraft passages, which said discharge passage is substantially below the crown or top of the fire chamber and in a plane with or above the grate bar surface, whereby a water arch furnace structure is subjected to the heat of perfect combustion in the presence of a maximum degree of rapid draft, substantially as described. 7th. In a furnace, a double fire chamber embracing individual grate-bar surfaces, circulating water arches inclosing the fire chamber, an updraft passage lengthwise of and between said arches, and a steam boiler connected with said arches in combination with a fire chamber discharge passage directly connected with said updraft passage which said discharge passage is substantially below the crown or top of the fire chamber and in a plane with or above the grate-bar surface whereby a water arch furnace structure is subjected to the heat of perfect combustion in the presence of the maximum degree of rapid draft, substantially as described. 8th. In a furnace, the combination of the arches G, G, grate surfaces D, D spanned by said arches, discharge passages I, I at one side only of said arches, and at a point between the lower edge of the arches and the grate surfaces, and the upright passage H between and

extending the entire length of both of said arches, substantially as and for the purpose set forth.

No. 49,159. Coin Controlled Electrical Apparatus.

(*Appareil électrique actionné par une pièce de monnaie.*)



John Orlando Frost, Greensburg, Pennsylvania, U.S.A., 10th June, 1895; 6 years.

Claim.—1st. In a coin-controlled electrical apparatus, the combination of a time mechanism having a stop wheel, a magnet-controlled spring armature adapted to normally engage with said stop wheel and with the escapement lever of the mechanism, an adjacent projected contact spring arranged at one side of the spring armature in the path of its movement to form a contact therewith and to assist in throwing it into engagement with the time mechanism, an operating battery circuit for the armature magnet, a coin-controlled circuit closer included in said battery circuit, and an external working circuit partly completed by the battery circuit and having a circuit closer consisting of said armature and said contact spring, substantially as set forth. 3rd. In a coin-controlled electrical apparatus, the time mechanism having an imperforate notched stop wheel, and the escapement lever of which is provided with a twisted end F, suitably arranged electro-magnets included in the battery circuit, a spring armature having a right angularly disposed catch tongue adapted to normally project through the notch of said stop wheel, a projected bent stop arm attached to said armature and having a laterally bent stop end K adapted to engage against the twisted end of said escapement lever, a coin-operated circuit closer included in the battery circuit of said magnets, and an external working circuit energized by movement of said armature in one direction, substantially as described. 3rd. In a coin-controlled electrical apparatus, the combination with the time mechanism and the electrically controlled devices for releasing and stopping the same, of a suitably arranged stationary flanged contact bracket included in one of the electrical circuits, a normally inactive tilting pivotally mounted coin tray included in the same circuit with said contact bracket and having a swinging contact arm connected to its axle and adapted to work at one side of and to contact therewith to close such circuit, and separate means for normally holding the tray to a position with its contact arm out of contact with said bracket, substantially as described. 4th. In a coin-controlled electrical apparatus, the combination with the time mechanism and the electrically controlled devices for releasing and stopping the same, of a supporting post, a flanged off-standing stationary contact bracket attached to said post and included in one of the electrical circuits, an elongated side flanged tilting coin tray having an axle near one end pivotally mounted on top of said post and included in the same circuit with said contact bracket said tray also having an outer angled end u, a swinging contact arm attached fixedly to one end of the tray axle and adapted to be moved against said contact bracket, and a weight loosely connected to the short end of the tray for normally holding the same in an inactive position, substantially as described.

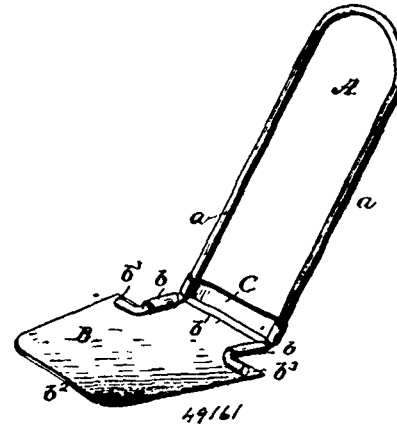
No. 49,160. Spark Conductor for Steam Engines.

(*Conducteur-étincelle pour machines à vapeur.*)

John Thomas King, Little Rock, Arkansas, U.S.A., 10th June, 1895; 6 years.

Claim.—1st. In combination, with a steam-engine, the horizontal pipe D, its front end secured to and resting on the upper end of the smoke-stack, enlarged globular part d^1, part d^2 extending downward and dividing into two parts d^3, said parts each running on one side of the boiler, their lower ends entering each side of the fire-box, rotary fan c journalled in said enlarged part d^1 and operated by suitable mechanism, run by small steam-engine E secured to the main boiler, fed therefrom and controlled by the engineer, substantially as shown and described and for the purposes set forth. 2nd. The horizontal pipe D, its front end secured to and resting on the rear part of the upper end of the stack B, its front part D^1, and bell-shaped projection d^5 extending forward and coming down over the top of the main stack, in the form of a hood, enlarged globular part d^1, part d^2 extending downward and dividing into two parts d^3, said parts d^3 one running on each side of the boiler, their lower ends entering each side of the fire-box, rotary fan c, journalled in said enlarged part d^1, and operated by suitable mechanism run by a small steam-engine E secured to the main boiler, fed therefrom and controlled by the engineer, substantially as shown and described and for the purposes set forth. 3rd. In combination, with a steam-engine, the horizontal pipe D, its front end secured to and resting on the rear part of the upper end of the stack B, its front part D^1, extending forward in the shape of a hood, and having attached to it a bell-shaped projection d^5, enlarged globular part d^1, part d^2, extending downward and dividing into two parts d^3, said parts each running on one side of the boiler, their lower ends entering each side of the fire-box, rotary fan c, journalled in said enlarged part d^1 and operated by suitable mechanism, substantially as shown and described and for the purposes set forth.

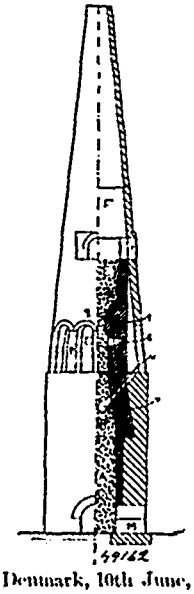
No. 49,161. Culinary Implement. (*Batterie de cuisine.*)



James Hayes, Kaukakee, Illinois, U.S.A., 10th June, 1895; 6 years.

Claim.—In a culinary implement, the combination, of a wire handle A looped to form side members *a a* the free ends of which are bent at an obtuse angle and then outwardly, a plate or blade having cutting edges and portions which embrace the bent ends of the handle, and a cross-piece or strip C held in looped engagement with the side members of the handle, substantially as shown and for the purpose set forth.

No. 49,162. Kiln for Burning Cement. (*Four à ciment.*)



Ditter Berg, Aalborg, Denmark, 10th June, 1895; 6 years.

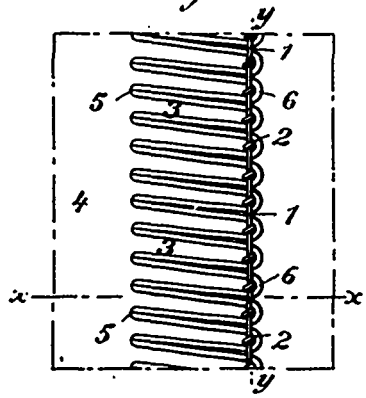
Claim. A vertical kiln for continuous burning of cement, consist-

ing of a cooling chamber, a conical burning chamber, a cylindrical clinkering chamber, a constructed collar chamber leading into a large fire-heater of about the same width as the cooling chamber, and finally a chimney resting on the outer shell of the kiln and independent of the inner brick work of the kiln, substantially as set forth.

No. 49,163. Seam for Sewed Fabrics.

(*Couture de tissus cousus.*)

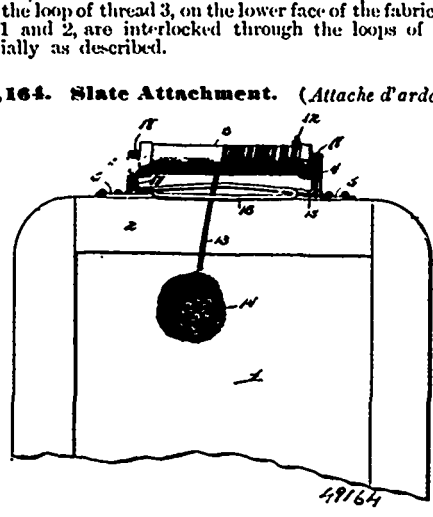
Fig. 1.



Charles Edwin Bently, New York, State of New York, U.S.A., 11th June, 1895; 6 years.

Claim.—1st. The improved seam for sewed fabrics, comprising one or more thicknesses of fabric and three threads 1, 2, 3, combined therewith, the thread 3, being passed in loops through the fabric at one edge of the seam during successive stitches and looped transversely from said points of passage on both upper and lower faces of the fabric to the opposite edge of the seam, a loop of thread 1, being passed through each loop of thread 3, on the upper face of the fabric, and the thread 2, being passed through the corresponding loop of thread 3, on the lower face of the fabric and then through the loop of thread 1, and around one strand of said loop and thence out through the loop of thread 3, on the lower face of the fabric, whereby threads 1 and 2, are interlocked through the loops of thread 3, substantially as described.

No. 49,164. Slate Attachment. (*Attache d'ardoise.*)



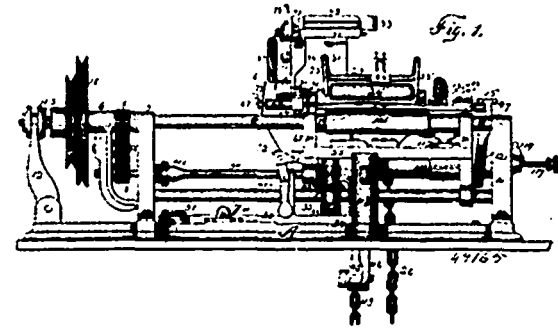
Jesse Madison Davis, and Logan P. Currin, both of St. Joseph, Missouri, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. In a slate attachment, the perforated brackets adapted to be attached to a slate frame or the like, and a non-revoluble pin interposed between said brackets, in combination with a hollow roller journalled on said pin, a spring secured at one end to said pin, and at its opposite end to the roller, and a cord carrying a sponge at one end, and having its opposite end secured to said roller, substantially as specified. 2nd. An attachment for slates or the like, comprising a base plate, and a pair of brackets formed from the material of said base plate by cutting the latter and bending up those portions of the base plate embraced by said cuts, in combination with a non-revoluble pin interposed between said brackets, a roller or hollow cylinder mounted on said pin, a spring interposed between and connected to said pin and roller, and a cord secured at one end to said roller and provided at its outer end with a sponge or other article, substantially as described. 3rd. The combination with a suitable base plate, and a pair of brackets formed integrally therewith, of a non revoluble pin extending across between said brackets, a hollow cylindrical roller mounted upon said pin and adapted to revolve around the same, a spiral spring disposed around said pin, and within the hollow cylindrical roller, and attached at one end to the pin and at the other end to the roller, a cord secured at one end to said roller and carrying a sponge or other article at its opposite end, and a pivoted guiding loop adapted to swing around said roller and pin, and to guide or direct the winding of the cord upon said roller, substantially as described.

No. 49,165. Machine for Making Cigars.

(*Appareil pour faire des cigares.*)

Fig. 1.

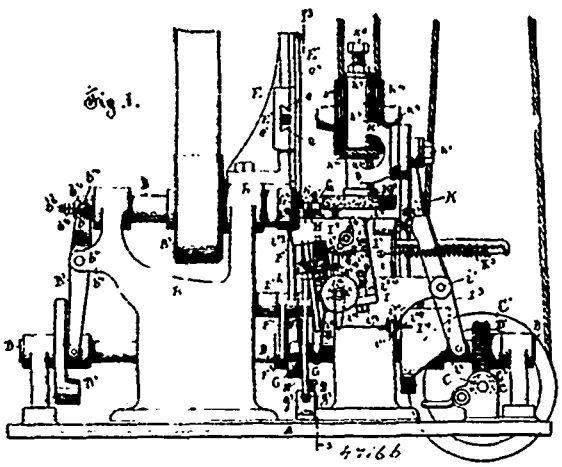


Charles Augustus Baker, and Frank Reginald Keyes, assignee of John Bunn, all of Binghamton, New York, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. A reciprocating table actuated by and in combination with a rack-bar consisting of parallel racks connected together and connected to the table, said racks having blank spaces at their opposite ends, an oscillating frame, a continuously rotated driving gear carried thereby, and adapted to alternately engage with said racks to drive the table and stop it when it reaches the blank space of a rack, and means to shift said gear from one rack into engagement with the other to drive the table in the opposite direction. 2nd. The combination with a reciprocating table of a wrapper-stretcher thereon having a substantially straight inner edge, an adjacent tip concavity, an endless apron, adapted to rotate the bunch adjacent to said stretcher and in said concavity, a vertically movable presser-roller above said apron, and means to support the wrapper. 3rd. The combination, with a traversing table of a wrapper-stretcher thereon, having a straight inner edge, and being convex both latterly and longitudinally upon its upper face, and provided with a tip-concavity, an endless apron adapted to roll the bunch against the inner edge of said stretcher and in said concavity, a vertically movable presser-roller, adapted to hold the bunch against said stretcher, and means to support the wrapper. 4th. The combination, with a reciprocating table of a wrapper-stretcher mounted thereon, and forming the front wall of the rolling chamber therein, and having a concavity at one end, an endless apron adjacent to said stretcher, a presser-roller above said apron, a roller in the rear of said presser-roller, forming the rear wall of said chamber, a stationary wrapper-support contiguous to said stretcher, and means to actuate said apron to rotate a bunch placed therein. 5th. The combination, with a reciprocating table, having a bunch-rolling chamber therein as described, and a wrapper-stretcher upon said table forming the front wall of said chamber, of a vertically reciprocating wrapper-nicking knife adjacent to said stretcher, and means to operate it intermittently, and a wrapper-support. 6th. The combination, with a transversing table upon a stationary base, of a tilting cigar-receiving trough erected upon said table and carried thereby, and a tip receiving concaved head mounted in alignment with said trough, and means to rotate said head in said trough, while said trough remains stationary. 7th. The combination, with a transversing table, of a cigar-receiving trough, hinged at one end to a suitable support and means to connect it to said table, a tuck-cutting knife at its other end pivoted upon a support, and means to operate said knife and to tilt said trough. 8th. In a cigar machine, a presser-frame having a flexible roller provided with independent end arfors having their bearings in said frame, and adapted to be reciprocated therein longitudinally when said roller is flexed, in combination with suitable cigar-bunch supporting and rotary mechanism. 9th. In a bunch rolling machine, a presser-frame, a flexible roller provided with independent end arfors journalled in bearings so constructed as to permit them to rack therein when said roller is bent, in combination with suitable cigar-bunch supporting and rotating mechanism. 10th. The combination, with a stationary wrapper support, of a transversing table, a wrapper stretcher mounted thereon, and suitable cigar-bunch supporting and rotating mechanism upon said table. 11th. In a cigar machine, the combination with a paste-reservoir, its discharge-pipe and a cigar-bunch-tip-concavity into which it opens, of a rocking handle and suitable connections between it and a rocking valve in said discharge-pipe. 12th. In a cigar machine, the combination with suitable cigar-bunch supporting and rotating mechanism, of a wrapper-gripping finger, and suitable means to

reciprocate it vertically and longitudinally. 13th. In a cigar machine, the combination with a presser-roller and its frame, and means to operate it vertically, of a wrapper gripping finger, and mechanism connected to the presser roller frame whereby said finger is reciprocated vertically 14th. In a cigar machine, the combination with a presser-roller and its frame, and means to operate it vertically, of a vertically reciprocated wrapper-gripping finger, and means to reciprocate it longitudinally to project or retract it. 15th. In a cigar machine, the combination with suitable cigar-bunch supporting and rotating mechanism, and a traversing table carrying it, of a wrapper-gripping finger mounted in vertical and horizontal supports, and means to reciprocate it vertically and longitudinally. 16th. In a cigar machine, the combination with suitable cigar-bunch supporting and rotating mechanism, a presser-roller and means to vertically reciprocate it, and a traversing table carrying them, of a wrapper-finger mounted in a horizontal support, a horizontal support mounted in a vertical support, and means to reciprocate said finger vertically and longitudinally. 17th. In a cigar machine, a rock shaft, a vertically oscillated arm connected thereto, an arm secured to said shaft, crossed tuck-cutting blades and means to connect them to said arm to close them when said shaft is rocked. 18th. A trough, weighted to tilt upon its support, in combination with a rock-shaft, an arm secured thereto, crossed tuck-cutting blades pivoted upon said support, links connecting them to said arm and a support engaging with said trough to right it when said blades are open, and to permit it to tilt when said arm is operated to close said blades to cut a tuck and remove said support.

No. 49,166. Machine for Turning Articles of Pearl, Etc. (*Machine à tourner des objets de perle, etc.*)



The Standard Pearl Button Company, Detroit, Michigan, assignee of James F. Sprague, Riverside, Rhode Island, both in the U.S.A., 12th June, 1895; 6 years.

Claim.—1st. In a button forming machine, the combination with a blank-holding chuck and a tool-sharpening grinder having fixed positions, of a reciprocating cutting tool engaging with a blank and said grinder at opposite ends of its movement, whereby the tool is re-sharpened after each operation upon a blank, and means for reciprocating said tool, substantially as set forth. 2nd. In a button forming machine, the combination with a blank-holding chuck and a tool-sharpening grinder, of a cutting tool, means for moving said tool toward and away from said chuck whereby said tool is caused to engage with a blank and said grinder at opposite ends of its movement, and means for automatically feeding said tool forward in its holder, substantially as set forth. 3rd. In a button forming machine, the combination with a blank-holding chuck and a tool-sharpening grinder having fixed positions, of a cutting-tool having an angular position with relation to the axis of the chuck, and means for reciprocating said tool between said chuck and a grinder and engaging the blanks and the grinder at opposite ends of its movement, substantially as set forth. 4th. In a button forming machine the combination with a blank-holding chuck and a tool-sharpening grinder having fixed positions, of a cutting-tool having an angular position with relation to the axis of the chuck, means for reciprocating said tool between said chuck and grinder and engaging the blanks and the grinder at opposite ends of its movement, and mechanism for feeding the tool forward to maintain its cutting edge practically in line with the axis of the chuck, substantially as set forth. 5th. In a button forming machine, the combination with a blank-holding chuck and a tool-sharpening grinder, having fixed positions, of a cutting tool, having an angular position with relation to the axis of the chuck, reciprocating between said chuck and engaging the blanks and the grinder at opposite ends of its movement without changing its position relative to the axis of the chuck, substantially as set forth. 6th. In a button forming machine, the combination with a blank holding chuck and a tool-sharpening grinder, having fixed positions, the grinding being located practically in line with the axis of the chuck, of a cutting tool having angular position with relation to the axis of the chuck, reciprocating between said chuck and grinder and engaging the blanks and the grinder at opposite ends of its movement without changing its position relative to the axis of the chuck, substantially as set forth. 7th. In a button forming machine, the combination *with a blank-holding chuck having a fixed position*, and a cutting tool having an angular position with relation to the axis of the chuck and reciprocating towards and away from such chuck without changing its position relative to the axis of the chuck, of a sharpening grinding wheel having a flat grinding surface rotating in a plane passing through the end of the cutting tool and engaging such cutting tool on its movement away from the chuck, substantially as set forth. 8th. In a buttom forming machine, the combination with a blank-holding chuck, a tool-sharpening grinder and a cutting tool, alternately relatively movable so that said cutting-tool alternately engages the blanks and the grinder, of a feeding mechanism operated automatically by or in conjunction with such movement for feeding the tool forward so that its cutting end will automatically maintain a position practically in line with the axis of the chuck, substantially as set forth. 9th. In a button forming machine, the combination with a blank-holding chuck and a tool-sharpening grinder, having fixed positions, of a cutting tool having an angular position with relation to the axis of the chuck, reciprocating between said chuck and grinder and engaging the blanks and the grinder at opposite ends of its movement without changing its position relative to the axis of the chuck, and a feeding mechanism operated automatically by or in conjunction with such movement for feeding the tool forward so that its cutting end will automatically maintain a position practically in line with the axis of the chuck, substantially as set forth. 10th. The combination with the grinding-wheel, the chuck for holding the blanks, the cutting tool and automatic means for causing the movement of the cutting tool from working contact with the blank in the jaws of the chuck to sharpening contact with the grinding wheel, substantially as set forth. 11th. The combination with the grinding wheel, the chuck for holding the blanks, the reciprocating carriage, the angularly adjustable tool-holder, the cutting-tool held in the tool holder, and automatic means for causing the movement of the cutting tool from working contact with the blank in the jaws of the chuck to sharpening contact with the grinding wheel, and reversely to the chuck, substantially as set forth. 12th. The combination with the chuck, and the cutting tool adapted for movement toward and from the chuck, of the grinding wheel for sharpening said tool, and means for adjustably holding said grinding wheel, whereby the tool may be ground at different angles, substantially as set forth. 13th. The combination with the rotating chuck, and the guide-way, of the feed-lever, the centering-lever, and the setting-lever, and the means for operating the said levers to feed the blanks from the guide-way and place the same in the chucks, substantially as set forth. 14th. The combination with the rotating chuck, and the guide-way, of the feed-lever, the centering-lever, and the setting-lever, means for operating the said levers to feed the blanks from the guide-way and place the same in the chuck, and the spring actuated sleeve or plug adapted to bear against the rear of the blank, substantially as set forth. 15th. The combination with the centering-lever, and the setting-lever pivoted to the centering-lever, of the chuck provided with the spring actuated sleeve or plug adapted to bear against the rear of the blank, substantially as set forth. 16th. An automatic button forming machine, having in combination a blank-holding chuck, a cutting tool, a tool-sharpening grinder, such chuck, tool and grinder moving relatively so that said tool alternately engages the blanks and the grinder, and an automatic feed, delivering the blanks to such chuck while the cutting tool is withdrawn, substantially as set forth. 17th. An automatic button forming machine, having in combination a rotating blank-holding chuck having a fixed position, a rotating grinding wheel having a fixed position, a cutting-tool reciprocating between the chuck and grinding-wheel, and an automatic feed, delivering the blanks to such chuck while the cutting tool is drawn, substantially as set forth. 18th. An automatic button forming machine, having in combination a blank-holding chuck, a cutting tool, a tool-sharpening grinder, such chuck, tool and grinder moving relatively so that said tool alternately engages the blanks and the grinder, an automatic feed, delivering the blanks to such chuck while the cutting tool is withdrawn, and a feed for advancing the cutting tool as it is ground away, substantially as set forth.

No. 49,167. Dating Machine. (*Machine à dater.*)

Charles L. Travis, Minneapolis, Minnesota, U.S.A., 12th June, 1895; 6 years.

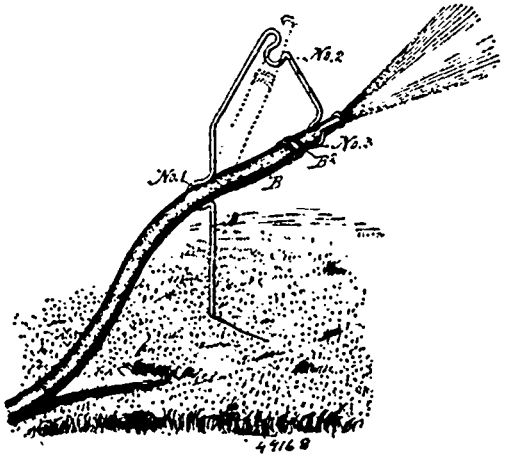
Claim.—1st. The combination, in a machine of the class described, of the two relatively movable surfaces, each consecutively numbered and equally spaced, substantially as and for the purpose specified. 2nd. The combination of the relatively movable and correspondingly spaced surfaces, the spaces of one surface being numbered consecutively, and an equal number of spaces of the other surface being divided into groups with the spaces of each group consecutively numbered, substantially as described and for the purpose specified. 3rd. The combination of the relatively movable correspondingly spaced surfaces, the spaces of one surface being numbered, and the

spaces of the other surface being divided into groups, and the spaces of each group numbered, substantially as and for the purpose specified. 4th. The combination, in a device of the class described, of the two surfaces, one movable with respect to the other, and both correspondingly spaced, the spaces of one surface being numbered throughout, and the spaces of the other surface being divided into

groups indicated as of consecutive months, and the spaces of each group being numbered to correspond with the days of their respective months, substantially as described. 5th. The combination, in a device of the class described, of the two surfaces, one movable with respect to the other, and both correspondingly spaced, the spaces of one surface being numbered, and the spaces of the other surface being divided into groups, and the spaces of each group being numbered to correspond with the days in the respective months represented thereby, and means for moving one or both of said surfaces, substantially as described. 6th. The combination, with a suitable frame, of the endless tapes or belts arranged thereon in proximity to one another, said tapes having an equal number of corresponding spaces, the spaces of one tape being numbered, and the spaces of the other tape being numbered in groups, and one of said tapes being movable, substantially as described. 7th. The combination, in a due-date automatal, of two devices, one movable with respect to the other, and one bearing a series of numbers from 1 to 365 or 366, and the other device bearing as many figures arranged in groups each representing days of distinct and consecutive months, substantially as and for the purpose specified. 8th. The combination of two devices, one rotatable with respect to the other, one of said devices bearing a series of consecutive figures indicating the days of the year, and the other device bearing an equal number of figures divided into groups running from 1 to the number of days in the several months, said groups being identified as of certain months and arranged in consecutive order as to months, substantially as described and for the purpose specified. 9th. The combination, with a suitable frame, of the endless tapes or belts of equal lengths and arranged upon said frame, means for moving one of said belts, one of the same being provided with numbers from 1 to 365 or 366, the other provided with groups of numbers from 1 to the number of days in the month represented thereby, and the numbers of the two tapes being spaced correspondingly thereon, substantially as and for the purpose set forth. 10th. The combination, with the elongated frame, of the pulleys in the ends thereof, the endless tapes or belts extending over said frame and over opposite pulleys thereon, means for rotating said pulleys and belts, a pointer upon said frame, one of said tapes bearing consecutive numbers equal to the number of days in the year, and the other tape bearing an equal number of figures correspondingly spaced in groups representing the number of days in the several months and indicated as of such, substantially as and for the purpose specified.

No. 49,168. Support for Hose Nozzles.

(*Support de lance de boyau.*)

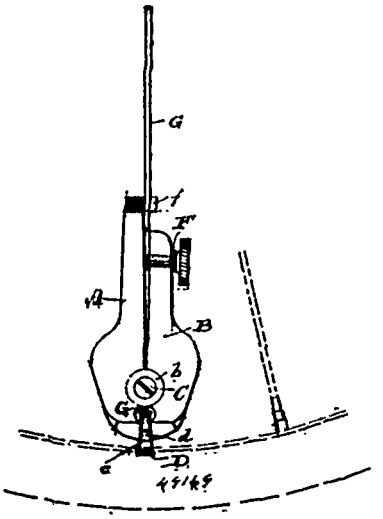


Wesley Adam Cain, Medicine Lodge, Kansas, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. As a new article of manufacture, a hose and nozzle supporter comprising a single piece of wire or metal rod, having the one end adapted to be placed in the ground, a loop near its upper portion adapted to admit and retain a hose and its top portion arched and two or more loops in the pendant part of the arch adapted to admit and retain a nozzle, as shown and described and to operate in the manner set forth for the purposes stated. 2nd. An improved hose supporter formed of a single piece of wire or metal rod having its lower end adapted to be pressed into the ground and having the loops No. 1, No. 2 and No. 3 formed in its upper end portion and the upper end portion arched substantially in the manner shown and described, for the purposes stated.

No. 49,169. Bicycle Nipple Wrench.

(*Clé à écrou pour mamelon de b. cycle.*)

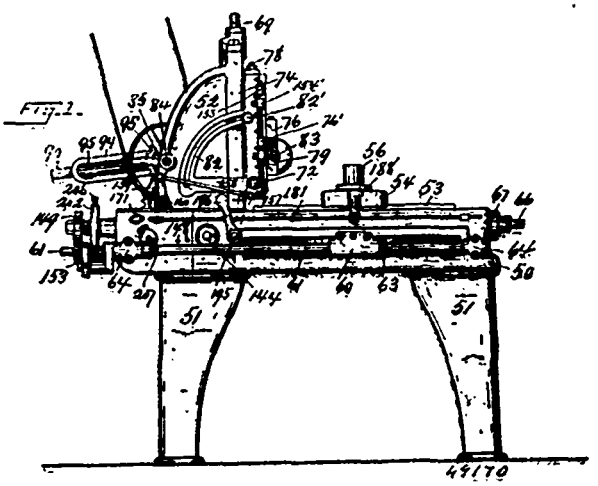


Albert Dudly, Menominee, Michigan, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. A nipple-wrench comprising a pair of pivotally united shanks having out-turned jaws at one side of the pivot, a hook on one of the shanks at that side of the pivot farthest from the jaws, and a thumb-screw that engages a tapped opening in one shank to bear against the other, substantially as set forth. 2nd. A nipple-wrench comprising a pair of pivotally united shanks having out-turned jaws at one side of the pivot, a hook on one of the shanks at that side of the pivot farthest from the jaws, a thumb-screw that engages a tapped opening in one jaw to bear against the other, and a spring arranged between said shanks adjacent to their jaws, substantially as set forth. 3rd. A nipple-wrench comprising a pair of pivotally united shanks different as to length and provided at one end with out-turned jaws, a hook-like projection at that end of the longest shank farthest from the pivot but parallel to the jaw thereof, and a thumb-screw engaging a tapped opening in the shorter shank to bear against the other, substantially as set forth.

No. 49,170. Gear Cutting Machine.

(*Mécanisme pour tailler les engrenages.*)



Lucius Erskine Whiton, New London, Connecticut, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. In a gear cutting machine, the combination of a

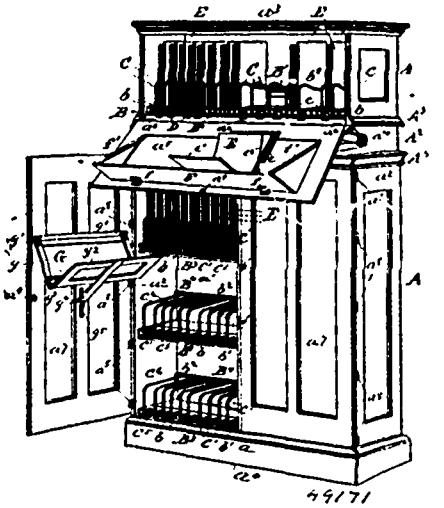
blank holder, automatic mechanism for revolving said holder intermittently, a cutter carriage mounted to slide as set forth, and automatic mechanism for moving said cutter carriage intermittently, all substantially as specified. 2nd. In a gear cutting machine, the combination with a suitable frame, of a sliding cutter carriage, automatic mechanism for sliding said carriage intermittently, a revoluble blank-holder and mechanism for revolving said blank holder during the intermissions in the movement of said cutter-carriage. 3rd. In a gear cutting machine, the combination with a suitable frame, of a sliding cutter carriage, automatic mechanism for sliding said carriage intermittently, a revoluble blank holder and positively driving mechanism for revolving said blank holder during the intermissions in the movement of said cutter carriage. 4th. In combination, a blank holder, mechanism for revolving the same intermittently, a cutter carriage mounted to slide as set forth, and positively acting mechanism, driving the said blank revolving mechanism and cutter carriage, and timed to start the latter only upon the completion of the intermittent movements of the blank holder, all substantially as specified. 5th. In combination with a revoluble blank holder, mounted to travel on ways, mechanism for revolving said holder intermittently, a cutter carriage, mounted to travel in a direction parallel with the axis of the gear blank, and hinged to swing at an angle to said axis, mechanism for moving said cutter carriage intermittently, positive clutch mechanism for actuating said cutter carriage and driving mechanism, and means for automatically stopping the cutter carriage while the blank holder is being revolved, all substantially as specified. 6th. In an automatic gear cutting machine, wherein the various movements are actuated by a single driving shaft, the combination of a blank holder, means for revolving said holder intermittently, positive clutch mechanism for controlling such revolution of the blank holder, meads for starting said clutch mechanism into action, a cutter shaft and mechanism intermediate said driving shaft and cutter shaft for revolving the latter. 7th. In combination with a revoluble blank holder, mounted to travel on ways, mechanism for revolving said holder intermittently, a cutter carriage mounted to travel in a direction parallel with the axis of the gear blank, and also inclinable at an angle to said axis, a cutter shaft journalled in said carriage, a fixed driving shaft and mechanism substantially as set forth, intermediate said driving shaft and cutter shaft for revolving the latter. 8th. In a gear cutting machine, the combination with a suitable frame work having a revoluble blank holder and a sliding cutter-spindle-carriage thereof, of a driving shaft mounted in fixed journal bearings upon said frame, splined shaft 90 pivotally attached to said cutter spindle and said driving shaft, gears 88, 89 connecting said driving shaft and said splined shaft, and gears 91, 92 connecting said splined shaft and said cutter spindle, substantially as described. 9th. In a gear cutting machine, the combination with a suitable frame or bed, having revoluble blank holder and a sliding cutter spindle carriage thereon, of a driving shaft mounted in fixed journal bearings upon said frame, splined shaft 90 pivotally attached to said cutter spindle and said driving shaft, gears 88, 88 connecting said driving shaft and said splined shaft and gears 91, 92 connecting said splined shaft and said cutter spindle, and the arm 94 adapted to support the journal bearings of said splined shaft and keep them in alignment, substantially as described. 10th. In combination, a cutter shaft journalled in a carriage, mounted to slide on ways and also hinged to be swung at an angle with said ways, gear 92 fixed on said shaft, driving shaft 84 having secured thereon a bevel gear 89, and shaft 90, having fixed on one end a bevel gear 91 meshing with said cutter shaft gear 92, and having splined on its other end a bevel gear 88, the said shaft 90 being journalled, adjacent to its gear 91, in a stand secured to an arm 94 that is swivelled on the cutter shaft at one end, and arranged to straddle and slide on the driving shaft 84, all substantially as and for the purpose specified. 11th. In a gear cutting machine in combination with a blank holder, adjustably mounted on ways, and means for revolving said holder intermittently, and a cutter shaft journalled in a carriage, mounted to slide in a direction parallel with the axis of the blank, and hinged to be adjusted at an angle to said axis as set forth, mechanism, substantially as specified, for revolving said cutter shaft continuously, and also for feeding the cutter shaft carriage intermittently, for the purpose specified. 12th. In a gear cutting machine the combination with a suitable frame, of a revoluble blank holder, an inclinable cutter carriage support, a cutter carriage mounted to slide thereon, a feeding shaft forming the pivot of said carriage support, a feeding screw mounted in said carriage support, and gears connecting said pivot shaft and feeding screw, substantially as described. 13th. In a gear cutting machine, the combination with a suitable frame having mounted thereon a revoluble blank holder, and a sliding cutter carriage, of an initial reversible feeding shaft mounted in fixed journal bearings on said frame, a feeding screw for said cutter carriage and gearing connecting said initial reversible feeding shaft and feeding screw, substantially as described. 14th. In a gear cutting machine, the combination with a suitable frame, having mounted thereon a revoluble blank holder, in inclinable carriage support with a cutter carriage mounted to slide thereon, a feeding screw mounted in said cutter carriage support, and gears connecting said feeding screw with a shaft forming the pivot of said inclinable cutter carriage support of an initial reversible feeding shaft mounted in fixed journal bearings, and gearing connecting said initial reversible feeding shaft with the pivotal shaft of said inclinable cutter carriage support, substantially as described. 15th. In a gear cutting machine, the combination of a blank holder, means for revolving the said holder intermittently, a cutter carriage and shaft mounted to travel on ways, means for removing said cutter carriage consisting of a shaft with oppositely moving clutch drivers thereon, and a sliding clutch. upon said feed shaft, and automatic mechanism for moving said clutch from one of said drivers, to the companion driver, and for returning said clutch by two movements, the first of which stops the clutch midway said drivers and provides a period of rest for the cutter feeding mechanism, substantially as specified. 16th. In combination with a blank holder, and mechanism for revolving the same intermittently, a cutter shaft carriage mounted to slide in a direction parallel with the axis of the gear blank, mechanism for moving said cutter shaft carriage, consisting of a shaft with oppositely moving clutch drivers thereon, a sliding clutch upon the said feed shaft, a rack 123 attached to said clutch, a gear segment 129 in mesh with said rack, substantially as specified for rocking said segment. 17th. In combination with a blank holder, mounted adjustably on ways, mechanism for revolving said holder intermittently, a sliding cutter shaft carriage, means substantially as described for moving said cutter shaft carriage intermittently and clutch mechanism as 190, 191 forming an element of said cutter carriage moving mechanism whereby the latter may be disconnected, all substantially as specified. 18th. In combination with a blank holder, and mechanism for revolving the same intermittently, a cutter shaft carriage mounted to slide in a direction parallel with the axis of the gear blank, a rod 154 mounted to slide at one side of said carriage and provided with adjustable collars 154^1, 154^2, a bracket 76^1 secured to the cutter carriage, adapted to engage said collars to slide shaft 154, mechanism for moving said cutter shaft carriage intermittently, and mechanism connecting the rod 154, and the cutter carriage actuating mechanism, substantially as described. 19th. In a gear cutting machine, clutch sliding mechanism, consisting of a constantly revolving shaft 99^2, an intermittent clutch as 124^a, 125^a, intermittently acting mechanism as eccentric 130, rock-shaft arm 133 having the relatively wide opening 132, rock-shaft 128 and mechanism substantially as set forth connecting said rock-shaft and said sliding clutch so organized that said eccentric will cause said clutch to slide further in one direction than in the opposite direction, in combination with a cam 134 connected with the blank revolving mechanism and adapted to continue the shorter movement of said sliding clutch before said blank revolving mechanism stops, substantially as described. 20th. In a gear cutting machine, the combination of a sliding cutter carriage, having a stop bracket 76^1 secured thereto, a stop-rod 154, mounted to slide in a direction parallel with said cutter carriage, and provided with adjustable stop collars 154^1, 154^2, a lever 159 connected to rod 154, rock-shaft arm 133, having projections 133^1, 133^2, rock-shaft 128, sliding clutch 121, and mechanism connecting said clutch and said rock-shaft 128, so organized that contact of said stop bracket 76^1, with said stop collars will move said clutch 121, substantially as and for the purpose specified. 21st. In a gear cutting machine, the combination of a sliding cutter carriage having a stop bracket 76^1 secured thereto, a stop-rod 154, mounted to slide in a direction parallel to said cutter carriage, and provided with adjustable stop-collars as set forth, a constantly revolving shaft 99^2, provided with an intermittent clutch substantially as described, and an escapement lever 159 co-acting with said clutch, all so organized that contact of said stop-bracket 76^1, with said stop collars will release said intermittent clutch, substantially as described. 22nd. Blank revolving mechanism consisting of a constantly revolving element as 127, a shaft 126, upon which said element 127 is loosely mounted, a revoluble blank holder, mechanism as set forth connecting said shaft 126, and blank holder and positively engaging clutch mechanism for locking together the said element 127, and the shaft 126. 23rd. In a gear cutting machine, blank revolving mechanism consisting of a constantly revolving driving element at 127, a positively driven intermittently revolving shaft 126, a revoluble blank holder, and mechanism connecting said shaft and said blank holder, in combination with mechanism for controlling the engagement of said driving element 127, and the intermittently revolving shaft 126, all substantially as described. 24th In a gear cutting machine, a blank revolving mechanism consisting of a constantly revolving driving element 127, a positively driven intermittently revolving shaft 126, clutch hub 127^1, mounted on said shaft, and provided with a latch 127^b, rock-shaft 128, having mounted thereon pawl-plate 168, provided with pawl 169, and notched disc 163, provided with ratchet 167, all combined and operating substantially as described. 25th. In a gear cutting machine, blank revolving mechanism consisting of a constantly revolving driving element 127, a positively driven intermittently revolving shaft 126, clutch hub 127^1, mounted on said shaft and provided with a latch 127^b, rock-shaft 128, having mounted thereon pawl-plate 188, with its pawl 169, and notched disc 163, provided with ratchet 167, and mechanism for rocking shaft 128, to cause the pawl to move the notched disc, all being combined substantially as specified. 26th. In a gear cutting machine, blank revolving mechanism consisting of a constantly revolving driving element as 127, a positively driven intermittently revolving shaft 126, clutch hub 127^1, mounted on said shaft and provided with latch 127^b, notched disc 163, mounted on shaft 128, and provided with ratched 167, and a hand lever 170, with its pawl 172, mounted to co-act with said ratchet and notched disc, all combined and operating substantially as described.

27th. In a gear cutting machine, blank revolving mechanism consisting of a constantly revolving driving element as 127, a positively driven intermittently revolving shaft 126, means for connecting said shaft and said driver, and gears 138, mounted on shaft 126, in combination with shaft 135, provided with gears 139, and mechanism substantially as described for controlling the connection between shaft 126 and its driver. 28th. In an automatic gear cutter wherein the various movements are actuated by a a single driving shaft, the combination of a blank holder and means for revolving the same intermittently, a cutter carriage mounted to travel in a direction parallel with the axis of the gear blank, mechanism for moving said cutter carriage intermittently, and means consisting of gears, 138 139, in the train of mechanism, whereby the initial revolutions of the blank revolving mechanism may be varied for the purpose specified. 29th. In an automatic gear cutting machine, the combination of a blank holder, and means for revolving the same intermittently a cutter carriage mounted to travel in a direction parallel with the axis of the gear blank, mechanism for moving said cutter carriage intermittently, means consisting of gears 138 139, in the train of mechanism whereby the initial revolutions of the blank revolving mechanism may be varied, and an indicator or telltale consisting of spring pressed pins 148, adapted to engage with said gears 139, substantially as described. 30th. Blank revolving mechanism consisting of a constantly revolving driving element as 127, a positively driven intermittently revolving shaft 126, provided with an index coupling, substantially as set forth, a revoluble blank holder and mechanism connecting said coupling and blank holder, all combined substantially as described. 31st. Blank revolving mechanism consisting of a constantly revolving driving element as 127, a positively driven intermittently revolving shaft 126, provided with a clamp coupling consisting of a driving element 202, mounted upon said shaft 126, a driven element 207, means as a ring 209, for clamping said elements, a revoluble blank holder and mechanism connecting said driven element and blank holder, all combined substantially as described. 32nd. Blank revolving mechanism consisting of a constantly revolving driving element as 127, a positively driven intermittently revolving shaft 126, hub 127^1, mounted on said shaft provided with latch 127^b, and spiral cam seat 127c, in combination with a suitable stop, as notched disc 163, for said latch, and a spring pressed bolt 197, adapted to securely lock said shaft 126 when not in revolution, substantially as described. 33rd. In a gear cutting machine, in combination, a blank holder and mechanism for revolving the same intermittently, a graduated notched collar concentric with and adjustably secured to said blank holder, and a spring actuated bolt seated in the blank holder support and adapted to engage said notch upon the completion of a predetermined series of movements of said intermittent blank holder, in the manner and for the purpose specified. 34th. In a gear cutting machine, in combination, a blank holder and mechanism for revolving the same intermittently, a notched collar adjustably secured to said blank holder, a spring actuated bolt seated in the blank holder support and an alarm consisting of a bell and hammer and operating mechanism substantially as herein described, whereby said bell is rung upon the entrance of said bolt into said notch. 35th. In a gear cutting machine, in combination a blank holder and mechanism for revolving the same intermittently, a notched collar adjustably secured to said blank holder, a spring actuated bolt seated in the blank holder support, a spring actuated lever 178 provided with a sliding bolt 178^b, having projection 178^a in combination with rock-shaft 128, and a pawl plate 168, having projection 168^a, mounted on said shaft, so organized that said projection 178^a, on bolt 178^b, and projection 168^a, of pawl-plate 168, will prevent movement of lever 178, until the suitable rocking of said shaft 128, substantially as described. 36th. In an automatic gear cutting machine, in combination, a blank holder and mechanism for revolving the same intermittently, a notched collar adjustably secured to said blank holder, a spring-actuated bolt seated in the blank holder support mechanism connecting said bolt with a spring-actuated lever 178, provided with a gear segment 177, a co-acting toothed ratchet-guard 173, mounted on shaft 128, a pawl and a pawl-plate mounted on said shaft, so organized as to render the pawl inoperative whenever said lever 178 is suitably moved, substantially as herein described. 37th In a gear cutting machine, in combination, a driving shaft 84, a cutter shaft 83, a revoluble blank holder, blank revolving mechanism consisting of a constantly revolving element as 127, and shaft 126, gearing connecting said driving shaft and said element 127, of such ratio that the element 127 will revolve at the same speed as said cutter shaft, and gearing connecting said shaft 126 and said blank holder.

No. 49,171. File for Papers, Etc. (*Serre-papier.*)

Arthur James Wells, Syracuse, New York, U.S.A., 12th June, 1895; 6 years.

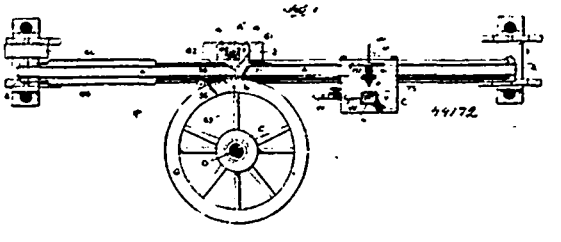
Claim.—1st. A file comprising an outer case provided with a movable door a^7, hinged at one of its upright sides, a folding shelf or support G, arranged transversely on the door and supported thereon, a series of shelves B^3, supported within the case one above the other, and a series of partitions C^4, projecting from said shelves and adjustable towards and away from each other, substantially as and for the purpose set forth. 2nd. A file comprising an outer case provided with a movable door a^7, a folding shelf or support G, a series of shelves B^3, supported within the case one above the other, a series of shoulders B^4, arranged out of alignment with the horizontal planes of the shelves, and a series of partitions C^4, adjustable towards and away from each other, and each having separate portions c^4, c^5, supported on the corresponding shelf and shoulder, substantially as and for the purpose specified. 3rd. A file compris-



ing a frame provided with separate rows of apertures b, b^2, and engaging shoulders b^4, b^5, arranged parallel with each other and one above the other, and partitions C^4, adjustable towards and away from each other and having lower and upper arms or portions c^4, c^5, inserted within said perforations and provided with shoulders c^4, engaged with said shoulders b^4, b^5, substantially as and for the purpose set forth. 4th. A file comprising an outer case formed with a rigid stop a^{10}, and provided with a door a^7, hinged to the case and movable against said stop, a folding shelf or support F, mounted on said door, a shelf B, supported within the case, and a series of partitions C, projecting from said shelf and adjustable towards and away from each other, substantially as described.

No. 49,172. Bottle Filling and Corking Machine.

(*Machine à embouteiller et boucher les bouteilles.*)



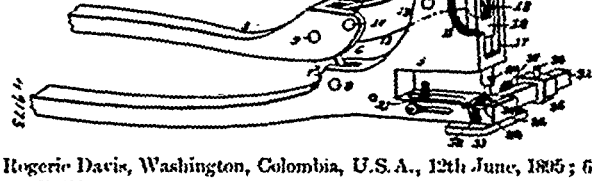
Samuel B. Smallwood, Astoria, Long Island, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. The combination of a bottle filling mechanism, a mechanism for forcing the corks into filled bottles, and a conveyor to carry the bottles to the filling mechanism and to the corking mechanism, substantially as described. 2nd. The combination of an endless conveyor, a filling mechanism contiguous to said conveyor and operating to receive empty bottles therefrom and discharge the filled bottles thereto, and a corking mechanism receiving the filled bottles from the same apron and discharging the filled and corked bottles thereto, substantially as described. 3rd. The combination, with a conveyor apron, of a bottle filling mechanism embracing a rotary shaft, a carrier, a supply tank, and a series of automatic faucets, substantially as described. 4th. The combination with a conveyor apron, of a bottle filling mechanism embracing a rotary tank, a series of filling faucets arranged to receive bottles from said conveyor and discharge them thereto, and movable discs carried by the revolvable carrier in alignment with said filling faucet, and means for raising and lowering said discs as they move with the carrier, substantially as described. 5th. The combination, with an automatic closing filler faucet, of a movable disc adapted to carry a bottle, substantially as described. 6th. The combination, with a tank, of a series of automatic closing filling faucets supplied from said tank, a series of movable discs in alignment with said filling faucets, a movable carrier in which said discs are supported, and a track upon which ride shoes attached to pendant stems of said discs, substantially as described. 7th. The combination of a supply tank, a series of automatic filling faucets connected therewith, a revolvable carrier below the faucets, a series of movable discs fitted in the carrier, an endless conveyor apron, and a track below the carrier and

provided with inclines 1^{x}, 1^{xx} adjacent to the conveyor, substantially as described. 8th. The combination of a revolvable tank, a divided filling ring in communication with said tank, a series of air escape filling faucets connected with both compartments of the filling ring, a revolvable carrier, and bottle discs in the carrier in alignment with the filling faucet, substantially as described. 9th. A bottle filling machine provided with a filling ring G and a series of automatic filling faucets provided with outlets for the air from the bottles, during the operations of filling the same, substantially as described. 10th. The combination, with a primary tank, of a revolvable supply tank having independent air and liquid pipe connections with said primary tank, filling ring connected with said revolvable tank, and a series of filling faucets connected with the independent compartments of the filling ring, substantially as and for the purposes described. 11th. The combination with a primary tank, of a revolvable supply tank connected by separate liquid and air pipes with the bottom and top of the primary tank, a series of valved filling faucets each having its liquid tube in communication with the revolvable tank and its air escape tube in communication with the air pipe connections to the primary tank, and a bottle carrier, substantially as described. 12th. The combination with a primary closed tank, of a vertical shaft having the hollow upper end in direct communication with the lower end of said tank, a revolvable tank secured to the shaft to receive the liquid from its hollow upper portion, a series of filling nozzles having their liquid tubes in communication with the revolvable tank and provided with air escape tubes, and pipe connections through the revolvable tank and the hollow between the air tubes of the faucets and the upper part of the primary tank, substantially as described. 13th. A bottle filling machine, having an automatic filling faucet comprising a liquid tube, an air tube within the same, a valve plug below the liquid tube, and a sliding tubular valve normally pressed by a spring upon the valve tube, substantially as described. 14th. A bottle filling machine, having an automatic filling faucet comprising a liquid tube, an air tube, within the same, a valve plug supported by the air tube and having a lateral air port, a sliding valve tube having a lifting collar with which the edge of the bottle is adapted to contact, and a coiled spring to normally depress the valve tube, upon the valve plug, substantially as described. 15th. In a bottle filling machine, having an automatic filling faucet in which the valve tube and valve plug are extended some distance below the filling tube and the air tube, and said valve being provided with an air port and with a spring pressed lifting collar, substantially as described. 16th. The combination with a conveyor apron, of a bottle filling mechanism comprising a horizontally revolvable carrier arranged close to said apron, a tank, filling faucets, and a device for shifting the empty bottles onto the carrier, substantially as described. 17th. The combination with a conveyor apron, of a bottle filling mechanism comprising a tank, a series of filling faucets, a horizontally revolvable carrier below the faucets, a guide and turnstile for shifting the bottles onto the carrier, and a discharging guide for moving the bottles from the carrier back to the apron, substantially as described. 18th. The combination with a conveyor apron, of a bottle filling mechanism comprising a tank, filling faucets, a horizontally revolvable carrier, a series of movable discs each provided with means to receive and retain the bottles, and each disc being capable of a limited turning movement in the carrier and means for automatically turning each disc to cause its bottle-support to face the apron as the disc reaches the place of discharge to the apron and to reverse the disc and bottle support after an empty bottle has been placed on said disc, substantially as described. 19th. The combination with a conveyor apron, of a bottle filling mechanism embodying a tank, filling faucets, a carrier, a series of discs in alignment with said faucets, and a yielding pressure device in the path of the discs to force the bottles into its seat on the disc, substantially as described. 20th. The combination with a filling tank carrying a series of filling faucets, of a revolvable carrier adjustable vertically relative to the tank, a track below the carrier, bottle discs mounted on the carrier and riding upon the track, and an adjustable conveyor apron, substantially as described. 21st. The combination with a vertical shaft, and a filling tank thereon carrying a series of filling faucets, of a revolvable carrier clamped to said shaft and vertically adjustable thereon toward or from the faucets, a stationary track below the carrier and adjustable vertically therewith, and a conveyor apron adjustable vertically in its frame to normally lie in substantially the same horizontal plane as the revolvable carrier, substantially as and for the purposes described. 22nd. The combination with a bottle-bed, of a cork tube in line with said bottle-bed, a reciprocating plunger, and a horizontally movable feed slide adapted to carry a cork to point in line with the plunger and cork tube, substantially as and for the purposes described. 23rd. The combination of a cork tube and a plunger, of a horizontally reciprocating feed slide arranged to receive the corks from a source of supply, and mechanism actuated by the plunger to move the feed slide in a direction across the line of movement of the plunger, substantially as and for the purposes described. 24th. The combination with a bottle-bed, and a plunger reciprocating in line with said bed, of a yielding cork tube in line with the plunger and constructed to be depressed a limited distance with the cork and plunger whereby the cork tube is adapted to fit over the mouth of the bottle, substantially as and for the purposes described. 25th. The combination with a bottle-bed, and a plunger, of a movable cork tube provided with a flared mouth at one end to receive the neck of a bottle, and tension devices which yieldingly sustain the cork tube, and permit it to move a limited distance on one stroke of the plunger and to return said cork tube to its initial position on the reverse stroke of said plunger, substantially as and for the purposes described. 26th. The combination of a yielding cork tube, a movable bottle-bed or platen, a movable bottle-bed or platen sustained in line with the plunger and cork tube by devices which permit said platen or bed to be moved away from the cork tube under undue pressure of the plunger, and a feed mechanism for supplying the corks to the cork tube, substantially as and for the purposes described. 27th. The combination with a plunger, a cork tube, and a feed mechanism, of an endless conveyor apron at one side of the cork tube and plunger, and a horizontally movable shifting device operated with a step by step motion to transfer the bottle from the conveyor to a position in line with the plunger and cork tube, substantially as and for the purposes described. 28th. The combination with a plunger, a cork tube, and a feed mechanism for supplying corks to the cork tube, of an endless conveyor apron, a bottle shifting device supported to rotate in a horizontal plane and transfer the bottles from said conveyor to a position below the cork-tube and plunger, and a drive mechanism for rotating the bottle shifting device with a step by step motion, substantially as and for the purposes described. 29th. The combination of a table, a cork tube thereon, a horizontally movable feed slide guided in a suitable way on said table back and forth across the cork tube, a plunger, a bell-crank lever connected with said feed slide, and a trip arranged in the path of the plunger and connected to said bell-crank lever, substantially as and for the purposes described. 30th. The combination of a cork feed tube, a plunger at one side thereof, a cork guide tube in line with said plunger, a feed-slide provided with cork grasping jaws which receive the corks from the cork feed tube, and operating mechanism for the feed slide to move the same to a position where the cork-grasping jaws are in line with the cork tube, substantially as and for the purposes described. 31st. The combination of a table, a cork guide tube, a plunger adapted to pass into said cork guide tube, a feed tube at one side of the guide tube, a feed slide operating between the feed and guide tubes, and an automatic cork feed mechanism for supplying the corks successively and in a vertical position to the feed tube, substantially as and for the purposes described. 32nd. The combination, with a cork guide tube, a plunger and a feed slide, of a cork feed tube arranged to deliver the corks to the feed slide, a cork hopper from which the corks are delivered to the feed tube, and an agitator operating in said hopper, substantially as and for the purposes described. 33rd. The combination, with a cork tube, and a feed slide of a feed tube, a cork hopper to deliver to the feed tube, and a primary hopper and elevator arranged to deliver the corks to said cork hopper, substantially as and for the purposes described. 34th. The combination, with a cork tube, a plunger, and a feed slide, of a feed tube to said slide, an elevated cork hopper to deliver to the feed tube, a primary hopper, an endless elevator between the two hoppers, and a vibrating agitator supported in the primary hopper in the path of the elevator buckets to be operated thereby, substantially as and for the purposes described. 35th. The combination, with a cork guide-tube, a plunger, and a feed slide, of a feed tube to said slide, a reciprocating hopper movable to and from the feed slide and having a cork way between which the corks are to be suspended, detents operating synchronously with the hopper to move the corks along its guide way, and means for supplying corks to the hopper, substantially as and for the purposes described. 36th. The combination, with a cork tube and plunger, of mechanism for automatically supplying gas under pressure to the cork tube on the descent of the plunger and cork, substantially as and for the purposes described. 37th. The combination, with a cork tube, a plunger and a bottle platen or bed, of a gas supply pipe connected with the cork tube, and an automatic controlling valve operated on the descent of the plunger to admit gas under pressure to the bottle on said platen or bed, substantially as and for the purposes described.

No. 49,173. Portable Hand Punch.

(*Emporte-pièce à mains.*)

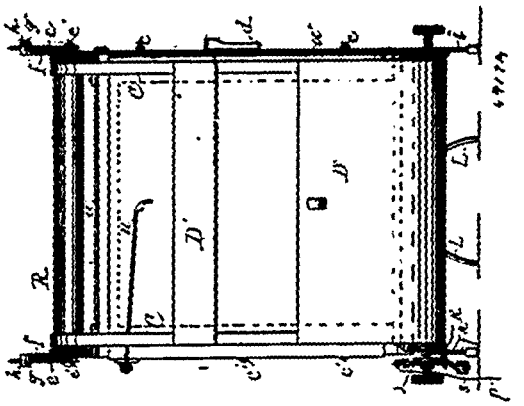


Rogerie Davis, Washington, Colombia, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. A portable hand punch for punching metals, consisting of a pair of handles having link pivot connection, a plunger carried within the head of the upper handle and having a punch removably secured thereto, a die holder carried by the jaw of the lower handle and having a die removably secured thereon and an adjustable gauge carried by said lower jaw, substantially as and for

the purpose set forth. 2nd. A portable hand punch, consisting of a pair of handles having link pivot connection, a plunger having reciprocal guide bearing within the head of said upper handle and an anti-friction and plunger-operating device connected with the front portion of the upper handle, a punch removably connected with said plunger, a die or anvil removably secured within the jaw of the lower handle, a gauge-rod extending from said lever jaw and an adjustable gauge carried by said gauge-rod, substantially as and for the purpose set forth.

No. 49,174. Copy Holder. (*Porte-manuscrit.*)



Harry C. Smith, Watertown, New York, U.S.A., 12th June, 1895; 6 years.

Claim. 1st. A copy-holder provided with a line-guide connected thereto movably from line to line of the sheet presented on said holder. 2nd. The combination, with the copy-holder, of rollers extending across opposite ends of said holder, longitudinally movable bands carried on said rollers, and a line guide attached to said bands, as set forth. 3rd. The combination, with the copy-holder, of rollers extending across opposite ends of said holder, endless bands extending along the side edges of said holder and carried on the rollers, and a flexible sheet extending across the holder and attached to the bands, as set forth. 4th. The combination, with the copy-holder, of rollers extending across opposite ends of said holder and pivoted thereto, endless bands extending lengthwise of the holder and carried on said rollers, a line-guide attached to said bands, and a pawl and ratchet mechanism turning the rollers, as set forth. 5th. The combination, with the copy-holder, of rollers extending across opposite ends of said holder, and pivoted thereto, endless bands carried on said rollers lengthwise of the holder, a line-guide attached to the bands, pawl and ratchet mechanism turning the rollers, and a treadle actuating said mechanism, as set forth. 6th. A copy-holder consisting of a main frame, a line-guide extending across the front of said frame, and a copy supporting back connected to the frame adjustably forward and rearward as set forth. 7th. The combination of the main frame, rollers extending across opposite ends of said frame, endless bands carried on said rollers lengthwise of the frame, and a line guide attached to said bands, and a copy-supporting back connected to the frame adjustably forward and rearward as set forth. 8th. The combination of the main frame, a roller extending across one end of said frame, longitudinally slotted brackets extending from the opposite end of the frame, a roller having trunnions extending through the slots of said brackets, screw-rods suspended from the upper ends of the brackets and having on their lower ends eyes receiving the trunnions through them, nuts on the upper ends of said screw-rods, endless bands running on the two rollers, a line-guide attached to said bands, and a copy-supporting plate on the frame back of the line-guide as set forth. 9th. The main frame composed of a sheet metal plate having its side-margins bent at right angles and in opposite directions from the body of the plate, its top and bottom margins bent forward at right angles from the plane of the plate, and provided with parallel slots in the aforesaid side-margins, a copy supporting plate seated movably on the aforesaid frame and having lugs projecting from its edges and through the aforesaid slots, a clamping-screw for fastening said supporting plate in its position, rollers extending across the top and bottom of the frame, endless bands running on the ends of said rollers, a flexible sheet attached to said bands, and a brace sustaining the frame in its erected position, as set forth.

No. 49,175. Thill-Coupling. (*Armon de limonière.*)

Angus D. Cameron, Charlottenburg, Ontario, Canada, 12th June, 1895; 6 years.

Claim. 1st. A thill-coupling pin having a thumb piece or eye P, and shoulder S, substantially for the purpose hereinbefore set forth, 2nd. A thill coupling spring having a bolt hole or aperture at one end, a slot *h*, at the other end to form two springs C and C, and bent or curved as shown substantially as and for the purpose set forth. 3rd. An anti-rattling thill coupling comprising an axle clip

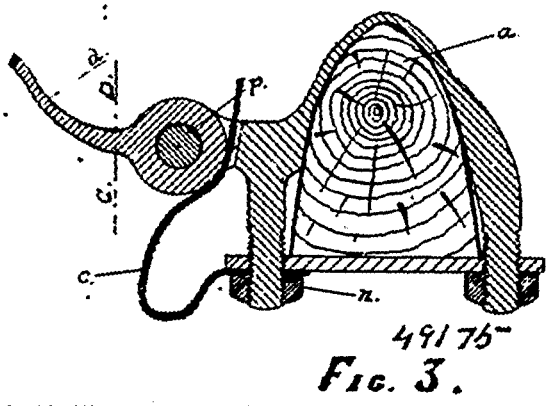
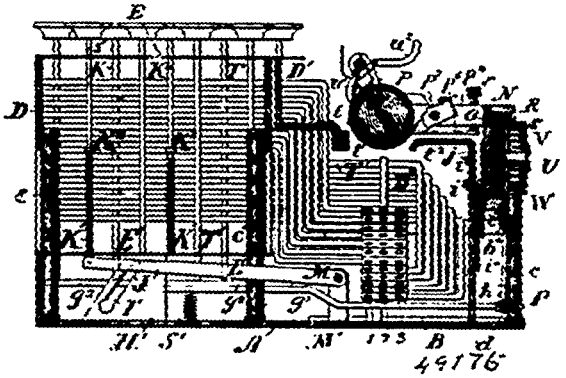


FIG. 3.

or shackle W, double spring C and C, pin P and thill iron *d*, all formed, arranged and combined substantially as and for the purpose set forth.

No. 49,176. Type-Writing Machine. (*Clavigraphe.*)

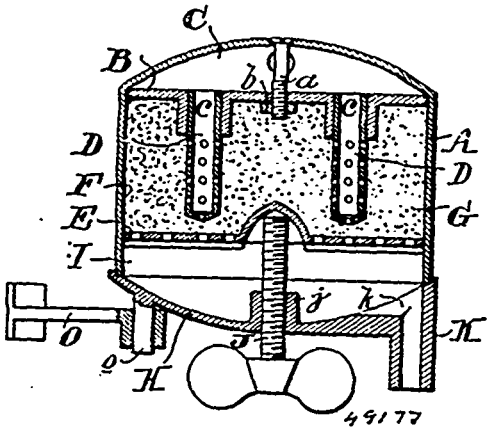


The New Jersey Type-Writer Company, assignee of Theodore Frelinghuysen Woodward, both of Camden, New Jersey, U.S.A., 12th June, 1895; 6 years.

Claim. 1st. A type-writing machine whose type-bars are divided into series, each type-bar having a pivotal portion or shaft, and an oscillating portion or arm, the pivotal portions, or shafts of the type-bars being parallel to each other and arranged in bearings in arcs of circles whose centres are in line with the point of contact of the type and the platen, and the oscillating portions being adapted to carry the type. 2nd. A type-writing machine whose type-bars are divided into series, each type-bar having a pivotal portion or shaft, and an oscillating portion or arm, the pivotal portions, or shafts, being parallel to each other and being arranged in bearings in segments of parallel circles. 3rd. A type-writing machine whose type-bars consist of a pivotal portion or shaft, and an oscillating portion or arm, the former being parallel to each other, and arranged in series in the segment of the circumference of a circle. 4th. The combination with the type-bars as described having grooves r, of a plate of metal r^1, secured to the frame of the machine, and adapted to enter these grooves to prevent a lateral movement of the type-bars. 5th. In a type-writing machine, in combination a base comprising two parts whereof one is fixed and the other movable, two cams inclined in opposite directions and attached to one part of the base, a rod carried by the other part of the base, straps attached to this rod and provided with wheels co-operating with the cams, keys for operating the straps, and type bars and a platen carried by the respective parts of the base, the whole arranged and operating, substantially as and for the purposes set forth. 6th. A type-bar for type-writing machines, the rear portion of which is adapted to be held in bearings in the frame of the machine, and to rotate in these bearings, and the front portion of which is bent first at right angles to the rear portion and then parallel to the rear portion, and which carries the type. 7th. The herein described device for driving the ribbon spools, and in combination with the carriage, the ribbon spool shafts having ratchet-wheels, a slotted arm on one shaft, a pin on this arm entering a diagonal slot in the carriage, a second arm on the other shaft provided with a pin entering the slot in the first arm, and pawls on said arms adapted to engage and turn the ratchet-wheels, substantially as described. 8th. In combination with the pivoted platen carrying arms and platen and the stationary arms to which the pivoted arms are pivoted, a projection or stop on one of the former and an adjusting screw carried by one of the latter

arms and adapted to engage said stop, substantially as and for the purposes set forth.

No. 49,177. Filter. (*Filtre.*)



John Braun, William P. M. Braun and John F. Braun, assignees of William Lorey, all of Philadelphia, Pennsylvania, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. A filter composed of a hollow case having an upper closed compartment to receive the water to be filtered under pressure, an extended tube opening into the upper compartment and extending below it and provided with small apertures or perforations, at a substantial distance below the base of the upper closed compartment, and a filtrant closely packed about said extended tube so as to surround the apertures or perforations therein whereby the water under pressure from the upper compartment will issue from the small aperture or perforations in the extended tube in jets at high pressure within the body of the filtrant and will cut its way into the same. 2nd. A filtrant composed of a hollow case, a diaphragm within the case forming an upper compartment to receive the water to be filtered under pressure, a perforated tube opening into the upper compartment through the diaphragm and extending down a distance below the diaphragm and having its perforations located at a substantial distance below the diaphragm, a second adjustable perforated diaphragm located below the perforated tube and forming with the first diaphragm an intermediate compartment in which the tube is located, and a filtrant located in said compartment surrounding the perforations in the tube and closely packed about the perforated tube by the pressure of the adjustable perforated diaphragm, whereby the water issuing from the small perforations in the perforated tube under high pressure may be compelled to cut its way into the body of the closely packed filtrant surrounding said tube. 3rd. A filter composed of the hollow case having a closed top provided with an inlet for water under pressure, a closed diaphragm within the case below the top provided with one or more perforated tubes opening through the diaphragm and extending down a distance with the case below the diaphragm, a filtrant of fibrous material closely packed about the said tube or tubes, a movable perforated plate located below the diaphragm and supporting the fibrous filtrant, a cap provided with an outlet carried by the hollow case and forming the base of the filter, and means carried by said cap to adjust the movable plate and compress the fibrous filtrant about the perforated tube or tubes whereby the water issuing from the perforations of the tubes in the form of small jets under high pressure will cut its way into the body of closely packed filtering material. 4th. A filter composed of the hollow case A provided with the inlet L and hose M, the detachable cap H provided with an outlet and adapted for attachment to the base of the case A, the diaphragm B and perforated plate E, within the case A, forming the compartments C, F and I, a perforated pipe or pipes leading from the compartment C, to the compartment F, and a filtrant located in the compartment F, between the diaphragm B, and plate E, and closely packed about the pipe therein. 5th. A filter composed of the hollow case A provided with an inlet, the cap H provided with an outlet and adapted for attachment to the base of the case A, the diaphragm B, and movable perforated plate E, within the case A, forming the compartments C, F and I, a perforated pipe or pipes leading from the compartment C, to the compartment F, a filtrant located in the compartment F, between the diaphragm B and plate E and closely packed about the pipe therein, and means to adjust the plate E to force it upon the filtrant and compress it about the pipes. 6th. A filter composed of the hollow case A provided with the inlet, the cap H provided with an outlet adapted for attachment to the base of the case A, the diaphragm B, and movable perforated plate E, within the case A, forming the compartments C, F and I, a perforated pipe or pipes leading from the compartment C, to the compartment F, a filtrant located in the compartment F, between the diaphragm B, and plate E, and closely packed about the pipes therein, and the adjusting screw J carried by the cap H, and bearing upon the plate E. 7th. A filter composed of a hollow case A, provided with an inlet, an internal diaphragm B forming the upper compartment C and having one or more openings for the passage of water and the lower movable perforated plate E, having the central protuberance *a* upon its upper face. 8th. A filter composed of a hollow case A provided with an inlet, an internal diaphragm B, forming the upper compartment C and having one or more openings for the passage of water, the perforated tubes D, carried by the diaphragm B, and the lower movable perforated plate E having the central protuberance *a* upon its upper face. 9th. A filter composed of a hollow case provided with an internal stationary diaphragm, a perforated tube leading from said stationary diaphragm, a movable perforated diaphragm located below the perforated tube having a protuberance upon its upper face, whereby when the diaphragm is moved towards the upper stationary diaphragm intermediate filtering material may be compressed and forced by the protuberance upon the movable diaphragm tightly against the perforated tube.

No. 49,178. System of Electrical Distribution by Alternating Currents. (*Mode de distribution électrique par courant alternatif.*)

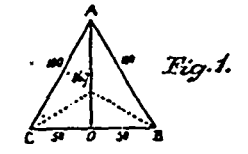


Fig. 1.

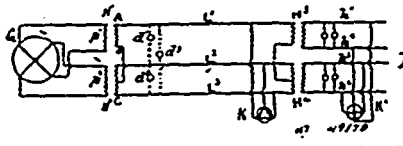


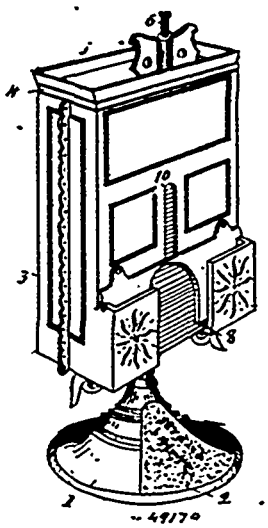
Fig. 2.

Charles Felton Scott, Pittsburgh, Pennsylvania, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. In a system of multiphase electric transmission, the combination of a source of multiphase currents having a given number of phases, a main line system of conductors, a system of phase transformers at or near the source for receiving the multiphase currents and delivering to the main line system currents having a greater number of phases than received from the source, a system of consumption circuits, and phase transformers at the terminal of the main-line system delivering to said consumption circuits multiphase currents of a smaller number of phases than that of the main line currents. 2nd. An apparatus for the transformation of two phase alternating currents to three-phase alternating currents or vice versa, consisting of the combination of two alternating current transformers, the ratio of the length of a coil of one transformer to the length of the corresponding coil of the other transformer being approximately that of one to one-half the square root of three, and electrical connections from one terminal of the shorter of said coils to approximately the middle point of the other of said coils. 3rd. The combination of two alternating current transformers, the ratio of the length of one coil of one transformer to the length of the corresponding coil of the other transformer being approximately that of one to one half the square root of three, electrical connections from one terminal of the shorter of said coils to approximately the middle point of the other of said coils, and a system of electrical conductors for conveying three-phase currents connected with the remaining terminals of said coils and a system of electrical conductors for conveying two-phase currents connected with the terminals of the other coils of said transformers. 4th. In an apparatus for the transformation of multiphase alternating currents, the combination of two alternating current transformers, with a connection from one end of one coil of one transformer with approximately the middle point of a coil of the other transformer. 5th. An apparatus for transforming multiphase alternating currents in which the different currents bear a symmetrical phase relation to one another into a second system of multiphase alternating currents in which the phases are symmetrically related, which consists of two transformers, one coil or a portion thereof of one transformer being connected to an intermediate point in a coil of the second transformer. 6th. The combination of two alternating current transformers, a source of two alternating currents differing in phase ninety degrees, connections therefrom with the primary coils of said transformers, and a connection from one terminal of the secondary coil of one of said transformers with an intermediate point in the secondary coil of the other transformer. 7th. The combination of two alternating current transformers having primaries of equal length, a source of two alternating currents of equal potential differing in phase ninety degrees, connections therefrom with said primary coils, a connection from one terminal of the secondary coil of one of said transformers with an intermediate point in the secondary coil of the other transformer, and an electrical connection with the shorter coil at a point approximately two-thirds from its free end. 8th. The method of transmission of electric energy to a distance by multiphase alternating currents, which consists in producing two-phase alternating cur-

rents, transforming the same into three phase alternating currents, transmitting the three-phase currents to a distance and at the distant point re-transforming the tree-phase currents into two phase alternating currents. 9th. The hereinbefore described method of transmission to, and utilization of, electric energy at a distance from its point of generation, by means of multiphase alternating currents, *which consists in generating two-phase alternating currents*, transforming the same into three-phase alternating currents and transmitting the energy in the form of three-phase currents to a distance and there utilizing the energy thus transmitted. 10th. The method of transmitting electric energy required for operating multiphase apparatus by alternating currents having two phases, which consists in transmitting three-phase alternating currents to a distance, transforming the same into two-phase alternating currents, and utilizing such transformed currents. 11th. The hereinbefore described method of multiphase alternating current distribution which consists in generating alternating currents of a given number of phases, transforming the same into alternating currents of a greater number of phases, transmitting the alternating currents thus produced and utilizing such currents. 12th. The hereinbefore described method of multiphase distribution which consists in generating alternating currents of a given number of phases, increasing the potential of the currents thus generated and at the same time transforming the currents into alternating currents of a greater number of phases and transmitting the latter currents.

No. 49,179. Match Cabinet. (*Boîte à allumettes*)



Henry F. Ganon, Indianapolis, Indiana, U.S.A., 12th June, 1895; 6 years.

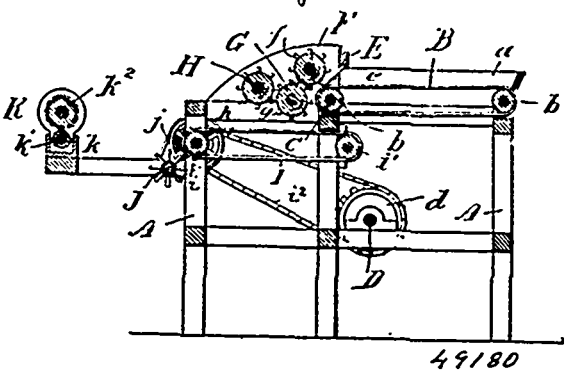
Claim.—1st. A match cabinet provided at its lower end with a passage way about the width of a match, a portion of the passage way being horizontal and a portion of it vertical. 2nd. A match cabinet provided at its lower end with fingers so placed as to leave a space between them and the end of the casing and also a passage way about the width of a match between them and the front of the casing, a portion of which is horizontal and a portion thereof vertical. 3rd. A match cabinet having an off-set or guards at the lower end thereof with finger space between them, fingers extending down behind such guards, leaving a space between them and the ends for the heads of the matches, and a passage way between them and the guards, a portion of which passage way is horizontal and a portion thereof is vertical. 4th. A match cabinet provided with means at its lower end for the removal of matches singly and a slot in its side whereby the matches within the cabinet may be kept straight. 5th. The combination, with a match cabinet, of a cigar cutter and a box about the cutter to receive the cuttings, substantially as shown and described.

No. 49,180. Machine for Treating Heavily Sweetened Tobacco Fillers. (*Appareil pour le traitement du tabac.*)

Thomas William Helm, Danville, Virginia, U.S.A., 12th June, 1895; 6 years.

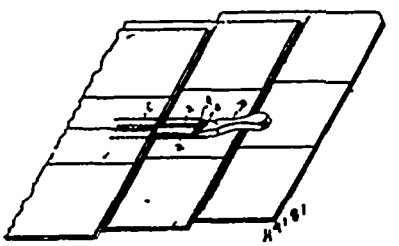
Claim.—1st. The combination of the feed belt, the retarder, the feed cylinder, the first picking cylinder and the second picking cylinder geared substantially as described, an endless belt for receiving the loosened leaves of tobacco, a reel upon which the leaves are discharged, and a spraying device for spraying the leaves as they are carried over the reel, substantially as described. 2nd. The combination, with the feeding mechanism, and the picker mechanism for separating and loosening the leaves of tobacco, of an endless belt for receiving the said leaves, a reel journalled near one end of said belt and adapted to receive the loosened leaves, and a spraying device located in the line of travel of said belt for spraying the leaves as they pass over the reel, substantially as described.

Fig. 3.



3rd. The combination of the feeding mechanism, the first picker cylinder and the second picker cylinder so geared as to separate and loosen up the leaves of tobacco, an endless belt for receiving said leaves, a reel upon which the leaves are discharged, and a spraying device for spraying the leaves as they are carried over the reel, substantially as described.

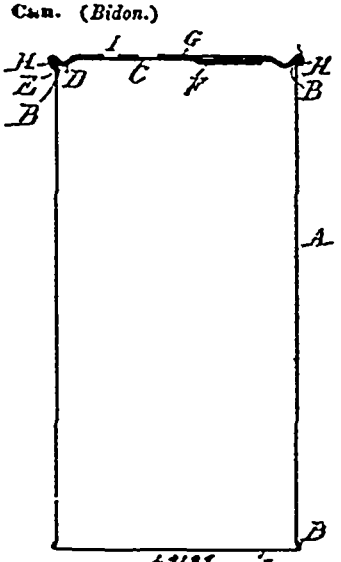
No. 49,181. Roofing Tool. (*Outil de couvreur.*)



Charles Henry Dana, West Lebanon, New Hampshire, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. The herein described roofing tool or implement comprising a narrow, elongated blade, adapted to be inserted beneath a shingle, and having upturned edge flanges extending the length thereof, and of the same height throughout, and an upwardly projecting handle attached to one end portion of such blade, substantially as specified. 2nd. The herein described roofing tool, or implement, comprising a blade, a handle attached thereto, and an over-guide, substantially as specified.

No. 49,182 Can. (*Bidon.*)



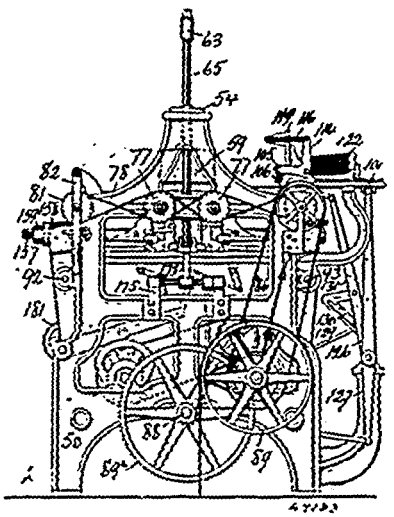
Thomas Neal, Detroit, Michigan, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. The combination with a sheet metal can having

outwardly flaring flanges at the top and bottom, of top and bottom plates seamed thereon, and a rotatorialy, adjustable cap having an annular hook or flange loosely seamed over the overhanging margin of the top, substantially as described. 2nd. The combination with a can having a perforated top and a movable closure or cover having the apertures therein, of a sealing compound applied on the interior of the cap to fill the apertures, such sealing compound having the properties described.

No. 49,183. Paper Box Machinery.

(*Machine pour boîtes en papier.*)



Frank Hopkins Allen, Norwich, Connecticut, U.S.A., 12th June, 1895; 6 years.

Claim.—1st. In a box machine, a reciprocating plunger, mechanisms, substantially as described, for feeding the body and end blanks, paste-rolls for pasting the flanges of the body blank and pressure heads for setting the ends onto said pasted flanges. 2nd. In a box machine, in combination, a reciprocating plunger, and pressure heads co-acting therewith, as set forth, said pressure heads being actuated by mechanism that includes springs for relieving the otherwise rigid effect, as specified. 3rd. In a box machine, in combination, a reciprocating plunger, pressure-heads located at opposite ends of said plunger, mechanism for actuating said pressure-heads, shelves mounted to slide within said heads and mechanism for withdrawing said shelves upon the completion of a box, all substantially as specified. 4th. In combination with a reciprocating plunger and pressure-heads located at each end thereof, mechanism for feeding the body blank consisting of a starter 103, feed-rolls 105-106 and a pusher-rod 107, and mechanism for actuating the same at proper times, all substantially as specified. 5th. In a box machine having a vertically reciprocating plunger, the following named mechanisms arranged to engage or co-act with said plunger as the latter descends, to wit: first a breaking-up plate onto which the body blank is fed and which bends up said body blank, second, paste-rolls that engage the bent up flanges and deposit paste thereon and third, pressure heads that press the end-blanks on to said pasted flanges. 6th. In combination with the paste-roll of a box machine, tension regulating mechanism for the driving belt of said paste-roll, consisting of a movable pulley in the train that supports said belt, and means for locking said pulley after adjustment, substantially as specified. 7th. In combination with the box-blank-supporting form of a box machine, a paste-roll having its circumferential surface provided with projecting points adapted to be forced into the material with which the roll is in contact, substantially as and for the purpose specified. 8th. In combination with the blank-supporting form of a box machine, a paste box with inclined bottom having journalled therein adjacent to said form a paste-roll the circumferential surface of which is provided with projecting points adapted to be forced into the material with which the roll is in contact and an adjustable scraper co-acting with said roll in manner and for the purpose specified.

No. 49,184. Manufacture of Forks, Spoons, Etc.

(*Fabrication de fourchettes.*)

Count Geoffroy de Kergorlay, Bornel (Oise), France, 12th June, 1895; 6 years.

Claim.—1st. In the manufacture of forks, spoons and other articles of household use, the employment of an alloy composed of about 68 to 82 parts of copper, 1 to 9 of zinc, and 8 to 25 of nickel. 2nd. The process of manufacturing forks and spoons substantially as herein described, consisting in cutting out the blanks by a cutting punch then bending them while hot or cold, and placing them, (either hot or cold) in matrices or stamps to which a stroke is imparted by a fly or other press to give them their general form, then annealing them, and finally passing them a second and last time through the same tools to give them the required finish.

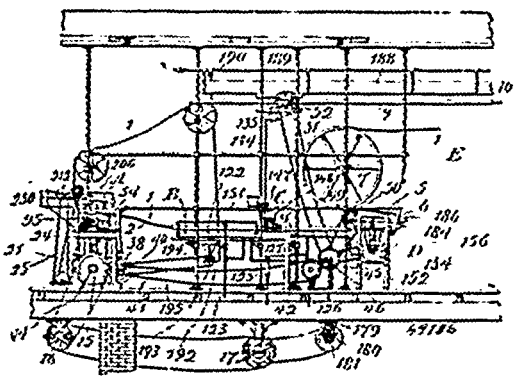
No. 49,185. Incandescent Light. (*Lumière incandescente.*)

David Gravel, Montréal, Québec, Canada, 12 juin, 1895; 6 ans.

Résumé.—Un procédé de rendre moins fragiles les manteaux employés dans le système de lumière incandescente Auer, consistant à plonger plusieurs fois ces manteaux dans une solution d'alun en ayant soin de les laisser sécher chaque fois, on encore à exposer ces manteaux aux vapeurs qui se dégagent pendant l'ébullition de cette solution d'alun, le tout tel que décrit.

No. 49,186. Machine for Making Matches.

(*Machine pour faire les allumettes.*)



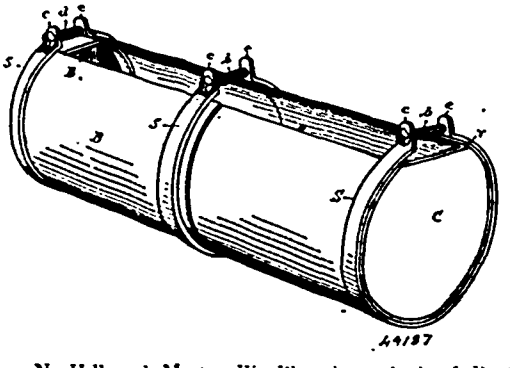
Ebenezer Benton Beecher, Westville, and Jacob Pulver Wright, New Haven, both of Connecticut, U.S.A., 13th June, 1895; 6 years.

Claim.—1st. In a machine for making matches, in combination with the block feeding trough provided with feeding mechanism, and a stationary block guiding side, a reciprocating plunger for driving the blocks against the guiding side of the trough, and mechanism for reciprocating the plunger operated from the main drive of the machine, substantially as specified. 2nd. In combination, with the block feeding trough, and mechanism for feeding blocks through the trough, a reciprocating plunger, to engage the blocks and force them against one side of the trough, mechanism for reciprocating such plunger, and a spring interposed in such mechanism, to cause the plunger to be forced against the blocks with a yielding pressure, substantially as and for the purpose specified. 3rd. In combination, with the block feeding trough, and means for feeding the blocks along the same, a moving piece to strike and force the blocks over against one side of the trough, a lever for actuating such piece, a moving rod having a bearing to engage and move the lever, to retract the block engaging piece, and a spring engaging the lever and a bearing on the rod, substantially as and for the purpose specified. 4th. In combination, with the block feeding mechanism, and a way for the blocks having a block guiding face, a plunger to engage the sides of the blocks and force them over against the guide face, a lever to which the plunger is pivoted, a reciprocating rod passing through one end of the lever, a stop on such rod, to engage the lever and move it as the rod is moved to retract the plunger, and a spring on the rod between the other side of the lever and a bearing on the rod, substantially as and for the purpose specified. 5th. In combination with intermittingly moved block feeding mechanism and the way for the blocks, having a block guiding face, a knocker to strike the blocks and force them against the guiding face, and mechanism causing such knocker to strike the blocks during the periods of rest of the feeding mechanism and then recede from the blocks, substantially as and for the purpose specified. 6th. In combination with the splint-cutting cutters and a suitable way for the blocks to be cut, means for moving the cutters through the blocks, a removable plate provided with pins in line with the cutters, a holder having a part engaging a longitudinal flange on the plate, so as to hold said plate with its series of pins in a line parallel to the line of the cutters, and detachable means for holding the plate from longitudinal movement, substantially as and for the purpose specified. 7th. In combination with the cutter head carrying the splint-cutting cutters, a backer having faces to support the ends of the splints in the cutters made movable towards and from the lower side of the cutters at an angle oblique to the plane of the latter, substantially as and for the purpose specified. 8th. In a machine for making matches, in combination with a reciprocating head, the spling cutters carried thereby a backer supported on such head, so as to be movable thereon, and provided with splint supporting portions to be moved under and away from the cutters, cam-ways on a stationary support, and bearings on the backer engaging

such ways, whereby the backer is moved on the cutter-head, as it rises and falls with the same, substantially as and for the purpose specified. 9th. In combination with the reciprocating head and the splint cutters attached thereto, the backer bars, one for each cutter reciprocally supported on the head, a bar with which the backer bars are connected, and means for moving such head, to reciprocate the backer bars, as the cutter bearing head rises and falls, substantially as and for the purpose specified. 10th. In combination with the reciprocating head carrying the splint cutters, the backer bars, one for each cutter, supported on the head, so as to move up and down therewith, while being longitudinally movable thereon, so as to be moved out under the cutters and back again, a bar carried by said head to which the backer bars are attached, bearings on this bar, and cam-ways on a suitable stationary support, whereby such bar is moved relatively to the head to carry the backer bars out under the respective cutters, during a portion of the upward travel of the cutter head, substantially as and for the purpose specified. 11th. In combination with a head carrying a splint cutter adapted to cut a splint from a block, a backer to support the splint end in the cutter, movable obliquely towards and from point in line with the splint, and also towards and from the cutter, and means for actuating such backer, substantially as and for the purpose specified. 12th. In combination with a head carrying a splint cutter adapted to cut a splint from a block, a backer, for supporting the end of the splint held in the cutter, made movable toward and from its splint supporting position under the cutter, and a suitable guide for such backer guiding it at an angle to the plane of the end of the splint holding opening in the cutter, whereby, as the backer is moved towards its operative position, it also moves up towards the end of the cutter opening, and means for actuating the backer, substantially as and for the purpose specified. 13th. In combination with a reciprocating head carrying splint cutter, a reciprocating backer for such cutter, a guide for the backer extending at an angle obliquely to the plane of the side of the cutter, at which it is to engage and support the end of the match splint, and means for reciprocating the back, substantially as and for the purpose specified. 14th. In combination with the reciprocating head for the splint cutters, the reciprocating backer bars for the cutters, guided, so as to be movable on the head, and provided with pins the actuating bar for the backers, a removable plate clamping the backers to such bar, provided with holes engaging the pins on the backers, and means for actuating this bar during the travel of the cutter head, substantially as and for the purpose specified. 15th. In combination with the reciprocating head for the splint cutters, the backers guided in grooves in such head, the backer actuating bar secured to the backers, and guided in slots on portions of the head, rollers on the ends of such bars and the cam-ways on stationary supports engaging such rollers, substantially as and for the purpose specified. 16th. In combination with the series of splint cutters having shanks provided with pins, the block provided with grooves for the cutter shanks, a plate closing the open sides of such grooves, removably secured to the block, a shoulder on such block to engage the pins on the cutter shanks, and a plate removably attached to the block, clamping the pins against the block shoulder, substantially as and for the purpose specified. 17th. In combination with the plate having the inclined grooves, the backers having their shanks guided in such grooves the plate covering the open sides of the grooves, having its face opposite to that engaging the backer shanks at an angle to the plane of the latter, a block with grooved under side or face attached to such plate, and the splint cutters having their shanks in the grooves of the block, substantially as and for the purpose specified. 18th. In combination with the longitudinally movable backers, the plate supporting them at an incline, the plate over them having its under side inclined and its upper face horizontal, and the splint cutters mounted upon such horizontal face, substantially as and for the purpose described. 19th. In a machine for making matches, in combination with the chain carrier for the splints, a cam having cam surfaces of different height and different pitch, a rotary shaft a disc thereon carrying teeth of different heights to be engaged by the different cam surfaces, and suitable connections between the shaft and the carrier chain moving wheels, substantially as and for the purpose specified. 20th. In a machine for making matches, a chain driving mechanism consisting of a driving shaft, a compound cam on the shaft, one working surface being higher than the other, a shaft supported by the frame, said latter shaft bearing a disc with projecting teeth of varying length that engage the compound cam, said latter shaft also bearing a pinion in mesh with a gear connected with sprocket-wheels that have teeth in mesh with the teeth on the chain plates, thereby the chain is intermittently given a movement of varying distance as the teeth of varying length engage the higher or lower surfaces of the cam, substantially as specified. 21st. In a machine for making matches, in combination with the carrier chain, a rotary shaft having a disc with pins of different lengths projecting from its face, a rotary cam having on its periphery a cam rib, to pass between and engage the pins, and a cam face of greater pitch than that of the rib, made lower than the rib, so as to engage only a long pin on the pin disc, and suitable driving connections between the shaft and chain, substantially as and for the purpose specified. 22nd. In a machine for making matches, the mechanism for giving the splint carrier intermittent movements of different lengths, consisting of a rotary shaft carrying a disc provided with a series of pins, of which the one at one end of the series is higher than the others, a rotary cam having a cam rib high enough to engage all the pins, and a cam face, of greater pitch than such rib, made low enough to engage only the long pin, and suitable driving connections between the shaft and carrier, substantially as and for the purpose specified. 23rd. In mechanism for securing a step-by-step movement of the splint carrier of a match making machine, in combination with the rotary shaft and the disc thereon carrying the two series of pins, in which the pin at one end of each series is made longer than the others, and is separated from the short pin, at the adjoining end of the other series, by a space greater than that between the pins within one of the series, a rotary cam having a rib high enough to engage the lower pins, with one part inclined and one part in line with the travel of the rib, as the cam revolves, and a cam face lower than the rib, so as to engage only the higher pins having an inclined portion of greater pitch than the incline of the rib, and a straight circumferential portion, parallel with the other part of the rib, substantially as and for the purpose specified. 24th. In a machine for making matches, in combination with the composition vat and the rotary composition applying roller, and mixer turning therein, a rotary piece connected with the roller and mixer by suitable gearing, so as to rotate the same, two rotary wheels driven at different rates of speed, and pawl and ratchet connections between such rotary wheels and the rotary piece connected with the composition applying roller and mixer, whereby the latter devices will be driven by the wheel rotating at the greatest speed while that is turning, and by the lower speed wheel when the other stops, substantially as and for the purpose specified. 25th. In a machine for making matches, in combination with the composition applying mechanism and the moving devices thereof, a wheel, connections between the latter and the moving devices of the composition applying mechanism, the two pawls carried by the wheel, the two ratchet-wheels, one for each pawl, and means for driving such ratchet-wheels, at different speeds, in such direction, that their teeth, when they engage the pawls on the pawl carrying wheel, will cause such wheel to rotate, substantially as and for the purpose specified. 26th. In a machine for making matches, in combination with the composition vat, a mixer supported on a shaft in the vat, an applying roll supported on a shaft above the mixer, such shaft bearing intermeshing gears and one of said shafts bearing a sprocket connected by a chain with a sprocket loosely mounted on its shaft, two pawls on opposite sides of such sprocket, the ratchet-wheel turning with the shaft and engaged by one of the pawls, the ratchet-wheel turning independent of the shaft and engaged by the other pawl on the sprocket-wheel, means for rotating the shaft while the machine is in operation, and separate means for rotating the ratchet-wheel independent of the shaft at a slower rate than the shaft rotates, whereby the mixer and composition roll, through one mechanism, are rotated rapidly when the machine is in motion, but more slowly through the other mechanism, when the machine is stationary, substantially as and for the purpose described. 27th. In a machine for making matches, in combination with the carrier holding the splints and a composition applying device, means for moving the carrier, a fan extending longitudinally over the carrier close to the headed splints therein, and means for swinging such fan transversely with reference to the carrier, substantially as and for the purpose specified. 28th. In a machine for making matches, in combination with the splint cutting mechanism, a wax dipping mechanism, a composition applying mechanism, a series of drying rolls and a discharge mechanism, an endless chain for conveying the splints from mechanism to mechanism, a fan located adjacent to the path of movement of a portion of the chain and extending longitudinally over such path, and mechanism for moving the fan transversely with reference to the travel of the chain to dry the composition on the splints, substantially as specified. 29th. In a machine for making matches, in combination with the frame, a run-way for the endless chain supported by the frame between the drying rolls and the discharge mechanism, a rocking shaft held by the frame with arms supporting a plate or board extending longitudinally over the run-way, so as to form a fan adjacent to the run-way, a crank for rocking the shaft, and driving mechanism for rotating the crank, substantially as specified. 30th. In a machine for making matches, a discharge mechanism consisting of a reciprocating head having a recessed face a slide inserted in said recess, punching pins projecting outward from said slide, a removable backing bar, to receive the thrust of the pins, and mechanism for reciprocating the head, substantially as specified. 31st. In a machine for making matches, a discharge mechanism consisting of a reciprocating head, punching pins projecting outward from the front of said head, and a removable backing bar to receive the thrust of the pins, substantially as specified. 32nd. In a machine for making matches, a discharge mechanism consisting of a reciprocating head having a recessed face, a slide inserted in said recess, punching pins projecting from said slide, an overhanging plate for holding said slide in position, and removable clamps for securing the overhanging plate, substantially as specified. 33rd. In a machine for making matches, in combination with a carrier for holding the match splints, while they are being treated, and a discharging mechanism to discharge the matches from the carrier, a moving conveyor receiving the discharged matches, and moving longitudinally with reference thereto, means for moving such conveyor to carry matches discharged from the carrier at one time, a distance greater than their length, before the next discharge of matches from the carrier takes place, substantially as and for the purpose specified. 34th. In a machine for

making matches, in combination with a carrier to hold the splints, while they are being treated, and a discharging mechanism to discharge from the carrier successively different portions of the quantity of completed matches held by the latter, a travelling receiving apron, to receive the discharged matches, moving longitudinally with reference thereto, and means for driving such apron at a speed sufficient to carry the matches discharged from the carrier at any one time beyond and out of the way of the matches next discharged upon the apron, substantially as and for the purpose specified. 35th. In a machine for making matches, in combination with the carrier for holding the splints during treatment, adapted to hold such splints in rows, discharging mechanism operating at intervals, to discharge, at one time, one or more of such rows, a travelling receiving apron, to receive the row or rows discharged from the carrier and moving longitudinally, with reference to the splints in such row or rows as discharged upon it, and means for moving the apron at a speed to carry the row or rows discharged upon it, at any one time, a distance greater than the length of a completed match, before the next discharge from the carrier is made by the discharging mechanism, substantially as and for the purpose specified. 36th. In a machine for making matches, in combination with the carrier for holding the splints in rows, while they are being treated, the reciprocating discharger adapted to discharge the rows of matches successively from the carrier, the travelling receiving apron moving longitudinally with reference to the matches discharged upon it, and means for driving it, so that it moves, between the times of discharge by the discharging mechanism, a distance greater than the length of a match made from the splints, substantially as and for the purpose specified. 37th. In a machine for making matches, in combination with a travelling carrier holding the treated splints in rows, and means for causing such rows to be successively discharged when they arrive at a given point, a travelling receiving apron to receive the discharge rows, moving longitudinally with reference to the treated splints in such rows, and driving mechanism for the carrier and apron, relatively timed, so that, while the carrier is travelling the distance between two rows of the splints, the apron will be moved a distance greater than the length of one of such splints or matches, whereby the rows, as carried and delivered by the apron, will be separated from each other by clearly dividing spaces, substantially as and for the purpose specified. 38th. In a machine for making matches, in combination with a carrier plate provided with rows of splint receiving openings, the reciprocating discharger provided with means for discharging the contents from a row of holes at a time, means for actuating such discharger, a travelling receiving apron in position to receive the rows of treated splints or matches, as they are successively discharged from the plate, moving longitudinally with reference to such splints or matches, and means for driving such apron and causing it to travel a distance greater than the length of a treated splint or match, while the discharger is moving to make two successive discharges from the plate, substantially as and for the purpose specified. 39th. In a machine for making matches, in combination with the discharging mechanism, a travelling receiving apron supported by the frame adjacent to the discharge mechanism, moving longitudinally with reference to the matches received upon it, and a rapidly revolving rod for insuring the passage of the discharged matches onto the apron between the discharge mechanism and the apron, substantially as specified.

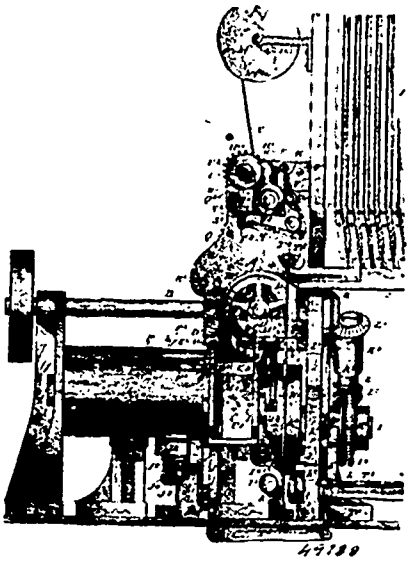
No. 49,187. Metal Tank, Etc. (*Réservoir en métal, etc.*)



Harvey N. Hill and Martin W. Bloomburg, both of Pontiac, Michigan, U.S.A., 13th June, 1895; 6 years.

Claim.—1st. In a water tank, in combination with an inner support, an outer contractile band, overlapping ends of sheet metal interposed between the support and band, a strip of packing material interposed between contiguous surfaces of the sheet metal forming the tank, substantially as described. 2nd. In a tank, the combination of an inner supporting member, an outer compression member, overlapping ends of sheet metal interposed between the supporting and compression members, and means for compressing the outer member, substantially as described.

No. 49,188. Type-Setting Machine.
(*Machine à composer*)

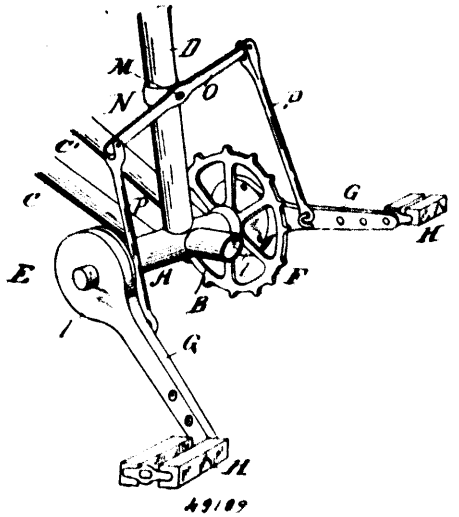


The Cox Type Setting Machine Company, Chicago, Illinois, assignee of Paul Flemming Cox, Battle Creek, Michigan, both in the U.S.A., 13th June, 1895; 6 years.

Claim.—1st. The combination, with mechanism for composing type, of a movable receiver, adapted to receive lines of type, and mechanism whereby while one line of type is delivered into the receiver, another previously composed line of type is removed therefrom, substantially as described. 2nd. The combination, with mechanism for composing types, and a galley, of a movable receiver adapted to receive lines of type from the composing mechanism and transfer them to the galley, and mechanism, substantially as described, whereby while one line of type is being moved into the receiver, a previously composed line is being transferred into the galley, substantially as described. 3rd. The combination, in a type setting machine, of mechanism for composing type, a rotary type-line receiver having a series of type receiving channels adapted to successively receive lines of type from the setting mechanism, with mechanism whereby said receiver is partly rotated upon the completion of a line of type, and mechanism whereby a previously formed line of type is ejected from the receiver during the entrance of another line therein, substantially as described. 4th. The combination of mechanism for composing type, a rotary type-line receiver having a series of type receiving channels each adapted to receive a line of type, with key controlled mechanisms, whereby, when a line of type is composed, upon depressing such key, the receiver is partly turned so as to bring an empty channel to the receiving point, and while such channel is being filled, the previously filled channel is emptied, substantially as described. 5th. In a type-setting machine, the combination with a line receiver, of means for moving said receiver, means for ejecting a composed line therefrom, and a single key and connections whereby both said means are put in action upon the depression of the key, substantially as described. 6th. The combination with a type-setting machine and a receiving galley, of a receiver, mechanism for moving it intermittently, mechanism for ejecting a composed line of type from the receiver into the galley, while another line of type is being moved into the receiver, and a single key and connections controlling both said mechanisms, substantially as described. 7th. In combination with a type-setting machine, a type line receiver, mechanism for intermittently moving said receiver, mechanism for locking it when shifted, mechanism for ejecting a composed line of type from the receiver and simultaneously linearly compressing said line, and a single key and connections controlling said mechanism, substantially as described. 8th. In a type setting machine, the combination with a type line receiver, and a galley, of mechanism for moving said receiver intermittently so as to transfer a composed line of type from the receiving to the delivery point, mechanism for ejecting the composed line from the receiver into the galley, mechanism whereby the composed line is subsequently moved down in the galley out of the way of an incoming line, and a single key and connections whereby all said mechanisms are controlled, substantially as and for the purpose set forth. 9th. In a type-setting machine, the combination of a galley, a plunger therein, and a movable rule, with a type line receiver, mechanism for moving said receiver intermittently, mechanism for ejecting a composed line from said receiver into the galley between the rule and plunger, mechanisms for raising said rule and simultaneously moving the plunger to push the line down in galley and then to retract plunger and lower rule, and a single key and connections whereby all said mechanisms are

controlled, substantially as described. 10th. In a type-setting machine, the combination with a rotary line receiver, means for rotating it, and means for ejecting a composed line therefrom, both driven from one shaft, with a key, and means substantially as described, whereby said shaft is given one revolution only upon the depression of said key, substantially as described. 11th. In a type-setting machine, the combination of mechanism for composing type and compressible spaces in line, a receiver having a plurality of type-receiving channels adapted to successively receive enough types as composed to form a line when justified, a receiving galley, and mechanism whereby as type to make one line are being composed and forwarded into one channel of the receiver, a previously formed line of type is ejected from the receiver and automatically justified by laterally compressing the line, thereby flattening the yielding spaces, substantially as described. 12th. The combination of mechanism for composing type and laterally compressible spaces in line, with a key controlled power actuated mechanism whereby the lines of type are automatically justified by lineal compression, substantially as described. 13th. The combination of mechanism for composing type and spaces in line, mechanism for forming laterally compressible spaces and delivering them as needed to the composing devices during the setting operation, and key-controlled mechanism, whereby when enough types and spaces have been set to form a line such matter is removed and automatically justified by lineal compression, without stopping the setting operation, substantially as described. 14th. The combination, in a type-setting machine, of mechanism for composing type in line, a cylindrical type line receiver into which the type are moved as composed, and a key controlled means whereby upon the depression of such key the receiver is partly rotated upon the completion of a line, to transfer such line out of the way, substantially as described. 15th. In a type-setting machine, the combination with the composing mechanism, of a line receiver having a series of type-receiving channels, a slide in each channel adapted to be moved outward by the incoming type, mechanism whereby, after the setting of a line and its transfer by moving the receiver to a delivery point, said slide is pushed inward to inject the line wholly from the channel, and means whereby the slide is partially retracted after the line is ejected, substantially as described. 16th. The combination of the rotary channelled receiver, with the slides fitting in the channels, and means for moving said slides to eject the type in the channels, substantially as described. 17th. The combination of the casing, the rotary channelled receiver therein, and the slides fitted in the channells of the receiver, with the push block within the casing adapted to engage the slides, substantially as described. 18th. The combination of the casing, the rotary receiver in one end thereof, and the slotted casting in the other end thereof, the movable block guided in said slotted casting adapted to eject lines of type from the receiver and mechanism, substantially as described for alternately partly rotating the receiver and reciprocating said block, substantially as set forth. 19th. The combination of the galley, the transversely reciprocating pusher, and the longitudinally movable plunger working through the pusher, substantially as described. 20th. The combination of the galley, the slotted pusher reciprocating transversely of the galley, the longitudinally movable plunger playing through said pusher and the vertically movable rule, independent of the plunger with means for operating these parts at the proper time, for the purpose and substantially as described. 21st. The combination of a type line receiver, means for moving it, and for ejecting type therefrom operated once for each revolution of shaft, with a worm gear on said shaft, a continuously rotated worm adapted to engage said worm gear, a key lever and connections, substantially as described, whereby said worm is thrown into engagement with the shaft, and automatic mechanism whereby said worm is disengaged from said gear when said shaft makes one revolution, substantially as described. 22nd. The combination of a shaft, a worm gear thereon, a continuously rotated worm adapted to engage said gear and carried by a swinging bracket, a rock-shaft, a lever thereon engaging said bracket, a key lever for rocking said shaft to throw the worm into engagement with the gear, a catch for locking the bracket in such position, and the trip-pin mounted on the shaft adapted to disengage the catch when the shaft makes a complete revolution, substantially as described. 23rd. The combination of the rotary type-line receiver, its slides, and the movable block for pushing said slides, with the rod attached to said block, the lever for reciprocating said rod, the lever operated by a cam, and the brakable connection between said levers, for the purpose substantially as described. 24th. The combination of the reciprocating pusher, the oscillating spring controlled lever for vibrating it, and the annular cam for rocking said lever, constructed and arranged, substantially as described. 25th. In a type-setting machine the combination of a space reservoir with means for making spaces and supplying them to the reservoir automatically controlled by the amount of spaces therein, substantially as described. 26th. The combination of means for feeding and cutting spaces from a strip or ribbon, and a reservoir in which the spaces are collected and means for locking the feeding and cutting mechanisms, with a vibrating plate resting on the spaces in the reservoir adapted to drop as the spaces are removed and eventually disengage the lock thereby releasing the feeding and cutting mechanisms, and means for raising said plate upon the severance of each space until the latter drops into the reservoir, whereby the making of spaces is automatically controlled, substantially as described. 27th. The combination of the space ribbon feed rolls, the gear thereon, the segmental gear for operating said feed rolls, the cam disc on the shaft carrying the segmental gear, and a friction drive for said shaft, with cutting devices operated by said shaft, a locking device for said shaft, and mechanism for releasing said locking device, substantially as described. 28th. In a type-setting machine the combination of a space reservoir, a space ejector, and crimping rolls located between the reservoir and the composing channel, by which the space is corrugated on its way to the composing channel, substantially as described. 29th. In a type-setting machine the combination with a space reservoir, mechanism controlled by the number of spaces in the reservoir and constructed substantially as described for making spaces from a continuous strip of soft metal, means for ejecting the spaces successively from the reservoir, and crimping rolls adapted to catch the ejected space and crimp it as it travels to the composing race-way, substantially as described. 30th. The combination in a type-setting machine of mechanism for composing type, a slot into which the types are successively delivered as composed, a pusher for ejecting type from said slot, a galley, a movable rule and plunger therein, a receiver having a plurality of type receiving channels adapted to successively register with said slot, and with the space between the plunger and rule in the galley with mechanism, controlled by a single key for first, shifting the receiver so as to transfer a type filled channel from register with the slot into register with the space between rule and plunger and to simultaneously bring an unfilled channel into register with said slot, second, for ejecting the line of type from the receiver into the galley between the rule and plunger, and third, for raising the rule and moving the line of type down in the galley, all said operations taking place automatically during the composition of a succeeding line of type, substantially as described. 31st. The combination of the galley, the casing attached thereto, the slotted casting within said casing, the channelled receiver within the casing next the galley, the slides in its channels, the rod passing axially through said receiver into the casing, means reciprocating said rod, and a block on the inner end of the rod guided in said slotted casting and adapted to engage projected slides and force them back into the receiver thereby ejecting the type, and means for intermittently rotating said receiver step by step alternating with the reciprocations of said block, and means for locking the receiver after it is rotated, substantially as described. 32nd. The combination of the galley having adjoining receiving and inlet slots in one side, a reciprocating pusher for ejecting type from the receiving slot, and a reciprocating plunger and vertically movable rule at opposite sides of the inlet slot, with the rotary galley having a series of type receiving channels adapted to successively register with the galley slots, the slides in said channels, and means for actuating the slides so as to eject composed lines of type from the receiver into the galley through the inlet slot, and mechanism whereby the pusher, rule and receiver, are operated substantially as and for the purpose specified.

No. 49,189. Bicycle. (*Bicycle.*)

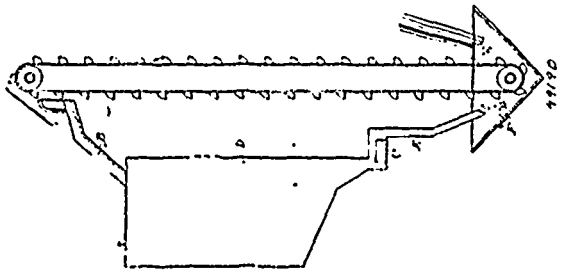


49189

John A. Beam, Waterloo, and Fred A. Kraus, Baden, both of Ontario, Canada, 13th June, 1895; 6 years.

Claim.—1st. In a safety bicycle, the combination of the drive shaft bearing, and the drive shaft therein, of the ratchet-wheels secured to the ends of the shaft, the pedal levers C, journalled on the ends of the drive shaft, dogs thereon, engaging the ratchet-wheels, the walking beam or return lever O, and the links P, connecting the return lever to the pedal levers, substantially as described. 2nd. In a safety bicycle, the combination of the drive shaft, the ratchet-wheels F^1, secured to the ends thereof, the pedal levers G, having gear cases I, enclosing the ratchet-wheels, a series of gravity dogs in the upper part of the gear case, engaging the ratchet-wheels, the return lever O, pivoted to the post D, of the frame, and links P, connecting the ends of the return lever to the pedal levers, substantially as described.

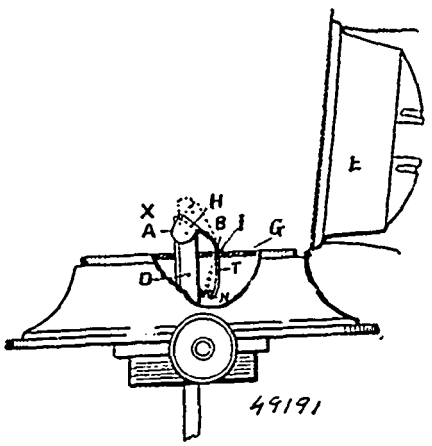
No. 49,190. Process of Preparing Food Products and Apparatus therefor. (*Procédé pour préparer les produits alimentaires et appareil pour cet objet.*)



James Campbell, San Francisco, California, U.S.A., 13th June, 1895; 6 years.

Claim.—1st. A process of preparing grain as a food product, consisting in elevating equal parts of corn, barley and rye, and dropping them through the air into receiving bins, passing the grains through a purifier and again elevating and discharging them through the air, and mixing the different grains together and repeating the process one or more times, substantially as herein described. 2nd. An apparatus for preparing grain before grinding consisting of an elevator by which the grain is raised and discharged from a height, a receiving bin into which the grain falls at the bottom, a chute through which it is carried and a hopper at the foot of the elevator into which the grains are successively delivered, and from which they are raised by the elevator, substantially as herein described.

No. 49,191. Kerosene Oil Burner. (*Brûleur d'huile.*)



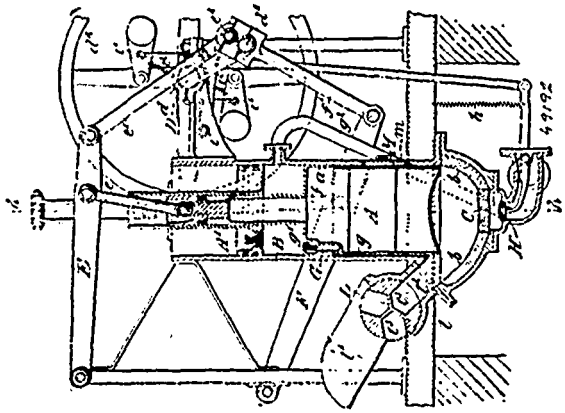
Frank P. Boland, Providence, Rhode Island, U.S.A., 13th June, 1895; 6 years.

Claim.—1st. A lamp-burner having a wick-tube bevelled on one side at the top, combined with the suitably mounted extinguisher X, provided with ears A, A, and arranged to automatically swing into engagement with said bevelled portion of the tube upon turning down the wick past the extinguisher, substantially as and in the manner described. 2nd. In a lamp-burner, a flat wick-tube D, bevelled on one side at the top, and a perforated base-plate G, through which said tube extends, in combination with the automatically operating extinguisher X, constructed with end ears A, A, shoulders B, B, resting upon said plate, tongue T, extending downwardly through a slot formed in the plate and means for preventing the extinguisher from falling out, substantially as and in the manner described. 3rd. The extinguisher X, provided with two shoulders or pivots B, B, flat tongue T, and two ears A, A, projecting forward at substantially right angles with the flat surface of the extinguisher, in combination with the perforated plate and flat wick-tube of a lamp-burner, so as to operate substantially as and in the manner described. 4th. The extinguisher X, provided with two shoulders or pivotal points B, B, a flat tongue T, and two ears or wings A, A, projecting forward at substantially right angles with the flat surface of the extinguisher, substantially as and in the manner hereinbefore described.

No. 49,192. Hot Air Motor. (*Moteur à air chaud.*)

The Trentham Engineering Company, assignee of William Trewhella, all of Trentham, Colony of Victoria, 13th June, 1895; 6 years.

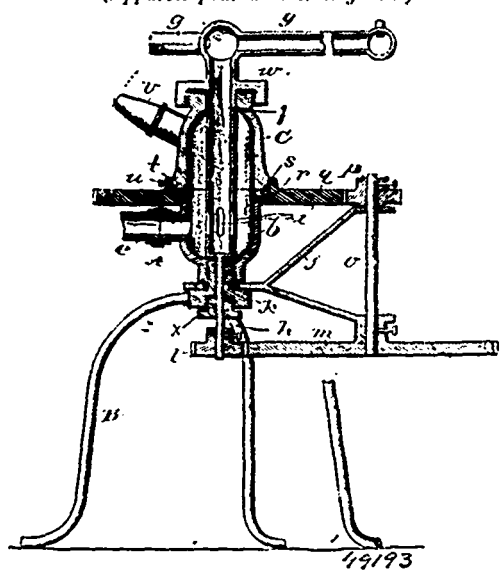
Claim.—1st. A hot air engine, having a power piston and a distributing or displacer piston in a cylinder in one end of which the fuel is burnt, substantially as specified. 2nd. In a hot air motor, having a power piston and a distributing or displacer piston in the same cylinder, the arrangement of levers and rods herein described for controlling the relative motions of the two pistons and crank,



said levers and rods being arranged, constructed and operating, substantially as and for the purposes specified. 3rd. In a hot air motor, the use of a mass of rounded particles of gravel, sand or other suitable material as a regenerator, substantially as and for the purposes specified. 4th. In a hot air motor, mechanism for regulating the speed of the motor, by allowing the exhaust valve to close at an earlier or later point of the revolution, substantially as specified. 5th. In a hot air motor, having the fire within the cylinder, the use of a hemi-spherical or curved bottom or hot end to the cylinder for the purpose of causing a current of air passing downward round the piston to converge into the fire, substantially as specified. 6th. In a hot air engine, having a fire within the cylinder, the use of a receiver such as N adapted to be charged with compressed air from the engine when working and fitted with suitable valves and passages for allowing some of said compressed air to enter the furnace for the purpose of starting the engine, substantially as specified. 7th. The combination and arrangement of parts, constituting the hot air motor herein described, said parts being constructed, arranged and operating, substantially as and for the purposes herein described.

No. 49,193. Lawn Sprinkler.

(*Appareil pour arroser le gazon.*)

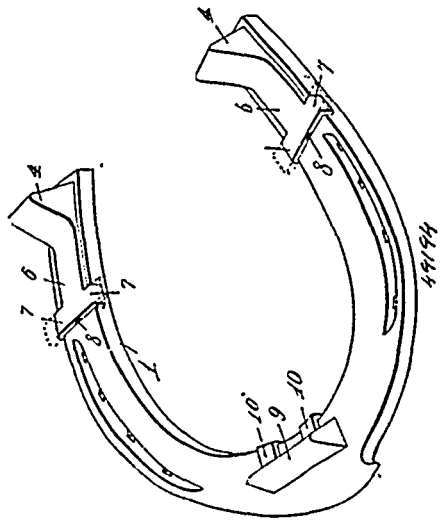


Jerome B. Fellows, Conway, New Hampshire, and Charles F. Lebby, Portland, Maine, both of the U.S.A., 13th June, 1895; 6 years.

Claim.—1st. In a sprinkler, two sets of sprinkler arms rotating at different speeds, one driven by the other through intermediate mechanism, substantially as and for the purposes set forth. 2nd. In a sprinkler, two sets of rotary sprinkler arms rotating at different speeds, one set driven by the other through intermediate and connecting mechanism, the driven set capable of vertical adjustment to throw the water at any desired angle, substantially as and for the purposes set forth. 3rd. In a sprinkler, a reservoir composed of two sections, one stationary and the other rotatable thereon, a

vertical pipe passing through said reservoir and open thereinto, having on its upper and laterly extended sprinkler arms and on its lower extremity a pinion adapted, through intemediate mechanism, to rotate the upper sections of said reservoir, said upper section carrying one or two nozzles, substantially as and for the purposes set forth.

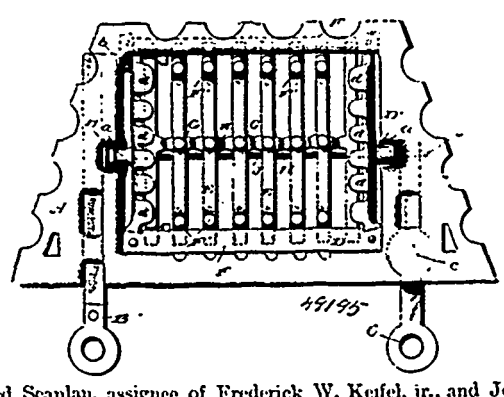
No. 49,194. Horse-shoe. (*Fer à cheval.*)



Otto Anton Dieckmann, assignee of Kaspar Kollenberg, both of St. Louis, Missouri, U.S.A., 13th June, 1895; 6 years.

Claim.—1st. The improved horse-shoe, constructed with screw-threaded apertures 2, in its heels extending at a right angle to the face of the shoe, and heel-calks 4, having each a single integral screw-threaded lug 5, engaging in said screw-tin caded apertures, whereby said calks may be secured in position by revoluble movement in one direction and detached by a reverse revoluble movement, substantially as herein specified. 2nd. A horse-shoe constructed with removable wheel and toe-calks, said calks being provided with integral screw-threaded lugs adapted to enter screw-threaded apertures in the shoe, said calks being also constructed with integral spring-arms, the ends of which are adapted to be bent at right angles to the body portions thereof to engage the edges of the shoe. 3rd. The combination of a horse-shoe constructed with screw-threaded apertures in in its heel-ends, and calks provided with screw-threaded apertures, and provided also with spring arms, the laterally projecting ends of which are adapted to be bent so as to engage the edges of the shoe and prevent the calks from turning. 4th. The improved horse-shoe, constructed with screw-threaded apertures 2, in its heels extending at a right angle to the face of the shoe, heel-calks 4, having screw-threaded lugs 5, engaging in said apertures, said shoe having also a screw-threaded aperture 3, extending at a right angle to the face of the shoe and located where the toe-calk is affixed, and a toe-calk 9, having a screw-threaded lug 11, engaging in said screw-threaded aperture 3, whereby all of said calks may be secured in position by revoluble movement in one direction and detached by a reverse movement, substantially as herein specified.

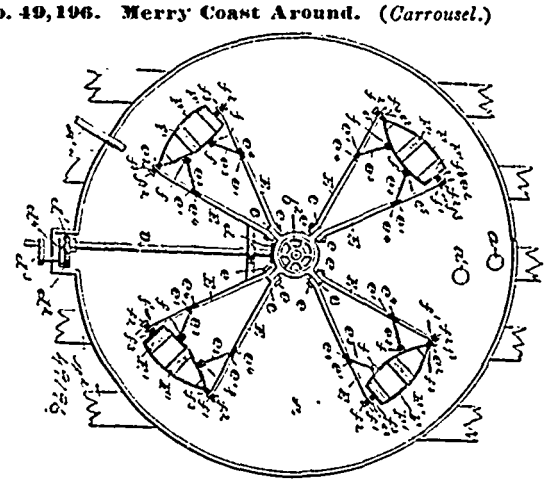
No. 49,195. Grate. (*Grille.*)



Edward Scanlan, assignee of Frederick W. Keifel, jr., and John Zipp, all of Louisville, Kentucky, U.S.A., 13th June, 1895; 6 years.

Claim. 1st. The combination, with the supporting frame having oppositely disposed depressions, of the grate-bars in sections, each bar being curved upon its upper face, and provided near the ends with upwardly extending portions and near its centre with upwardly extending lug, substantially as specified. 2nd. The combination, with the supporting frame having oppositely disposed depressions, of the grate-bars in sections each bar being curved upon its upper face and provided near its ends with upwardly extending portions, and near the centre with an upwardly extending lug and with pintles resting in said depressions, substantially as specified. 3rd. A rocking grate-bar curved upon its upper surface and provided with upwardly extending portions near its ends and at its centre, substantially as specified. 4th. A rocking grate bar curved on its upper surface, combined with the frame having fingers *d* curved on their under surface to extend over said rocking bar, substantially as specified. 5th. The combination of the dumping frame carrying the independently mounted rocking bars and the lever arranged to one side of the grate, and having curved end relative to the journals of the frame of the grate whereby the lever will not interfere with the frame being dumped, substantially as specified. 6th. The combination, with the supporting frame and the grate frame with its pivoted grate-bars formed at their centre with downwardly extending arms with horizontal extensions, of the bar having openings through which said extension will pass, means for holding the same against displacement, the shaking lever having curved end relative to the journals of the grate frame whereby the lever will not interfere with the frame when being dumped and the bar provided with a notch upon its upper face to receive said curved end, substantially as specified.

No. 49,196. Merry Coast Around. (*Carrousel.*)



Henry D. Gardy and Taylor C. Burke, both of Chester, Pennsylvania, U.S.A., 13th June, 1895; 6 years.

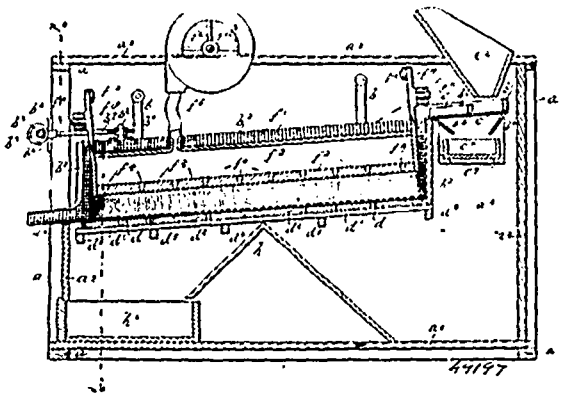
Claim.—1st. In a coast-around, the combination, with the foundation power mechanism secured thereto and arms extending from said mechanism, of boats, a bolt or pin projecting from the bow and stern of the same to which the arms are loosely secured and a spring coiled around said bolt or pin on each side of the said arms. 2nd. In a coast-around, the combination, with power mechanism, of a crown wheel, arms hinged to and extending from said wheel, braces having a hooked end and loosely secured to said arms, and a boat swivelled to said arms and provided with staples or rings in one side in which the braces are adapted to hook, whereby the boats are free to take motion of the water. 3rd. In a coast-around, the combination with a tank, of a brace or truss work forming a foundation in the centre of said tank, a crown wheel journalled on said foundation, short arms projecting from and integral with the crown wheel, of long arms hinged or pivoted to said short arms, braces loosely secured to said long arms, a boat having a swivel connection with said long arms, and provided with staples or rings in its side in which the braces secured to the long arms hook, a journal bearing secured to the foundation, a shaft journalled therein, a cog or gear-wheel secured to each end of the shaft one of which meshes with the crown wheel, while the other engages with a cog or gear-wheel by means of a belt or chain, and a suitable motor connected with the last named cog or gear-wheel, all combined and operating, substantially as described.

No. 49,197. Scouring and Cleaning Machine.
(*Machine à écurer et nettoyer.*)

Gabriel Carlson, Springfield, Massachusetts, U.S.A., 13th June, 1895; 6 years.

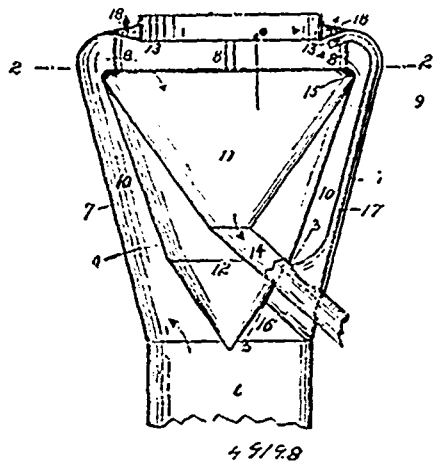
Claim.—1st. A brush lined sieve. 2nd. A seive composed of a meshed or perforated body and brush filaments projecting through the meshes of said body and constituting the bearing surface of the sieve, substantially as described. 3rd. The combination of a brush and a brush lined sieve, co-operating to produce a sweeping action on the materials passing over the brush lined sieve, substantially as described. 4th. The combination of a brush and brush lined sieve,

both ofwhich parts are movable with respect to each other in lines, at angles to each other, for increasing the sweeping action on the materials, substantially as described. 5th. The combination, with the concave brush lined sieve mounted for longitudinal shaking motion, of the rocking brush mounted for transverse sweeping



motion cross-wise of said sieve, substantially as and for the purpose set forth. 6th. The combination, with a longitudinally shaking sieve, of a transversely sweeping brush acting on the face of said sieve and fixed against reciprocating motion therewith, substantially as and for the purposes set forth. 7th. The combination, with a brush of an air blast device arranged to discharge the air from among the filaments of the brush onto the materials being subjected to the brushing action, substantially as described. 8th. The combination, with a brush and a support for the material to be cleaned, one or both of which are movable to produce a brushing action, of a blast device arranged to discharge the air from among the filaments of the brush onto the materials being subjected to the brushing action, substantially as described. 9th. The combination, with the brush lined longitudinally shaking sieve, of the transversely rocking brush held against longitudinal motion and having a hollow head or air chamber with discharge outlets among the filaments of the brush, and an air blast device for supplying air under pressure to said hollow brush-head, substantially as described 10th A brush lined sieve having its brush filaments arranged to form a series of steps, substantially as and for the purpose set forth. 11th. The combination, with the transversely sweeping brush, of the underlying brush lined sieve having a longitudinally shaking motion and having some of its brush filaments projecting inward farther than those of others, for forming a series of steps or breaks in the brush bearing surface, substantially as and for the purpose set forth. 12th. The combination, with the hollow headed rocking brush f^1, f^2, f^3, f^4, of the fan f^5, and the flexible connection f^6 from the fan to the air chamber of the brush head, substantially as described.

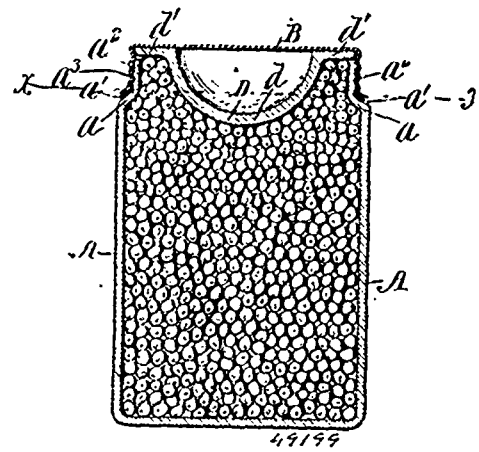
No. 49,198. Spark-Arrester. (*Arrête-étincelle.*)



Thomas Lee, Home City, Ohio, U. S.A., 13th June, 1895; 6 years.

Claim.—1st. In a spark-arrester, the combination of the upper, outwardly flaring part of the smoke-stack, having its upper end turned in as shown, a cone 9, supported within this part of the stack and below its upper inturned end, a cone 11, supported point downward within cone 9, and with its upper edge closely connected to the latter, but of less depth than the same, to produce an inclosed space 12, completely surrounding the under surface of cone 11, an outlet for smoke and steam and an outlet for cinders precipitated within cone 11. 2nd. In a spark-arrester, the combination of the upper outwardly flaring part of the smoke-stack, two inverted cones 9 and 11, one within the other and connected at their edges, suspended therein, being of equal diameters but of different depths, an annular smoke-passage discharging the smoke into the inner cone, an outlet above the latter and an outlet in its lower end for the cinders. 3rd. In a spark-arrester, the combination of the upper outwardly flaring part of the smoke-stack, a separating chamber 11, suspended within this upper part, an annular passage between the chamber and the outwardly flaring part of the smoke-stack, such passage being completely separated and insulated throughout its entire height from chamber 11, by a completely closed air-space which intervens between the two and is of even height with the passage. 4th. In a spark-arrester, the combination of the upper, outwardly flaring part of the smoke-stack, having its upper end turned in and partly down as shown, a deflecting cone 9, supported within this part of the stack and below its upper inturned end, being of sufficiently reduced size to produce an annular passage between it and the stack, a separating cone supported above this latter cone which of reduced size to produce a space between the two cones, an outlet above the latter, an outlet pipe 14, in its lower part passing out through the deflecting cone and the smoke-stack and a deflector below said pipe. 5th. In a spark-arrester, the combination of the upper, outwardly flaring part of the smoke-stack, having its upper end turned in and partly down as shown, a deflecting cone 9, supported within this part of the stack and below its upper inturned end, being of sufficiently reduced size to produce an annular passage between it and the stack, a separating cone supported above it, being of reduced size to produce a space between the two cones, an outlet above the latter, an outlet and a flue 17. 6th. In a spark-arrester, the combination of the upper, outwardly flaring part of the smoke-stack, two inverted cones 9, and 11, supported within this part, an annular passage 10, between them and the wall of the stack, the upper end of the stack being turned over and in, above the upper ends of the cones as shown at 13, apertures 18, in this inturned end of the smoke-stack, a closed space 12, between cones 9 and 11, a central outlet above the upper cone and an outlet from the lower part thereof.

No. 49,199. Preserve Jar Cover. (*Couvercle de jarre.*)

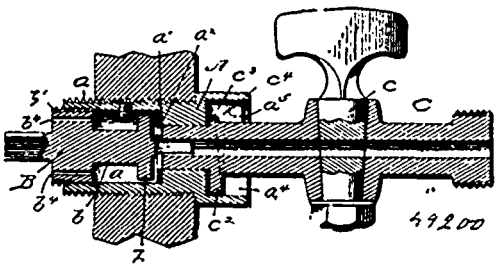


Ruth Ann Gilchrist, Wilkes Barre, Pennsylvania, U.S.A., 13th June, 1895: 6 years.

Claim.—1st. The within described improved preserve jar cover formed of a screw-threaded outer metallic sealing portion, and a fruit or food displacing and air expelling non-corrodible lining portion, the two parts being constructed and united as follows:—Each part being provided with integral uniting projections, and the upper part of the said lining portion having a diameter about equal to that of the under surface of the top of the outer metal portion, and provided with a downwardly extending inverted conical projection of much less diameter than the top surface of the lining portion, and of a greatr depth than the heighth of that portion of the cover which is screw-threaded, whereby a preserving jar cover is provided comprising simply two united parts, the inner one of which is formed with a thin annular flange by which it is connected to the outer metallic screw-threaded metallic portion, and which cover, when

applied to a jar serves for acting upon the enclosed substances so as to cause them to entirely occupy the inside area of the jar from top to bottom, and thereby expell all atmospheric air from the jar, and, finally, for hermetically sealing the jar when screwed tight down upon a rubber gasket applied on the shoulder of the jar, substantially as described. 2nd. The within described cover for a fruit, meat, or other preserving jar, consisting of the sheet metal screw-threaded portion B, C, and the lining portion D, the said lining portion having a thin annular connecting flange d^1, and a downwardly extending fruit or food displacing and air expelling conical projection d, substantially as described. 3rd. In combination with a jar for *preserving fruit, meat or other substances, having a gasket shoulder*, a screw-threaded and a neck portion of nearly an equal diameter with its body portion, a cover consisting of the sheet metal screw-threaded portion B, C, and the fruit or meat displacing and air expelling lining portion D, having an annular flange d^1, and a downwardly extending conical projection d, substantially as described.

No. 49,200. Faucet. (*Robinet.*)



William A. Frey, George White, and Charles H. Frey, all of Bangor, Maine, U.S.A., 13th June, 1895; 6 years.

Claim.—The combination, of a thimble threaded exteriorly, and interiorly at its rear end, and having an interior annular shoulder intermediate its ends, and an inwardly projecting lug at its forward end, a plug comprising a spindle, a threaded rear end, and a valve near the forward end of said spindle, said rear end having a series of openings to permit the ingress of liquid, and a faucet having a slotted rear end, and a cam shaped collar mounted upon said faucet, and slotted as described, and carrying an extension adjacent to said slot, substantially as shown and described.

No. 49,201. Car-Brake and Coupling.
(*Frein et attelage de chars.*)

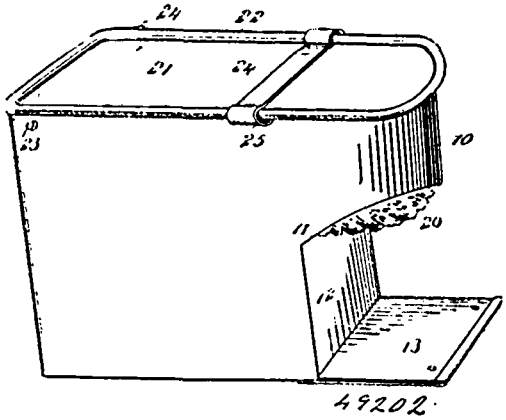
François Victor Isoire dit Provencal, Black Lake, and David Gordon Pozer, St. George, both of Quebec, 13th June, 1895; 6 years.

Claim.—1st. In a car-brake the combination with a centrally pivoted lever linked at each end to the brake beam, a rod I, secured to one end of the said lever, of the spring buffer J, substantially as set forth. 2nd. In a car-brake the combination with a centrally pivoted lever link at either end to the brake beams, the rods I pivoted to one end of the said levers, the spring buffers J, of the rocking shafts K, journalled one on the either side of the said car, and having arms which are connected by a bar at each end of the said car, a stirrup formed in each of the said cars engaging the said rods I, and ends of the said rocking shafts being adapted to automatically couple with the shafts on an adjacent car, substantially as set forth. 3rd. In a car coupling the combination with the draw-head A of the rocking shaft B journalled on the end of the car, a drum b centrally secured on the said shaft, a chain C connecting the pin P, to the said drum, a stop c limiting the rotation of the said drum, handles D secured on either side of the said shaft, latches d holding the said handles in position, of a bail F, pivoted to the said draw-head a rocking shaft E, on arm e secured on said shaft E, a chain connecting the said bail to the said arm c and handles, substantially as set forth.

No. 49,202. Moistener and Paper Weight.
(*Appareil d'humectage et bloc-notes.*)

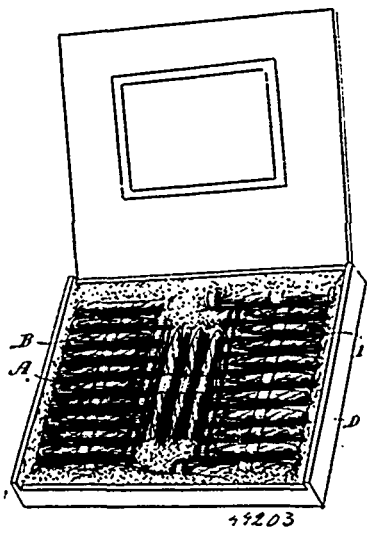
Harvey Ransford Harris, Michigan City, Indiana, U.S.A., 13th June, 1895; 6 years.

Claim.—1st. A moistening device, consisting of a casing having a compartment formed in it to receive moisture-retaining material, the bottom of said compartment being inclined and having an opening formed at its lower portion to expose the moisture-retaining material, the upper end of said inclined bottom being arranged above the bottom of the casing, substantially as set forth. 2nd. A *moistening device consisting of* a casing having an open-topped compartment formed in it to receive moisture-retaining material, the bottom of said compartment being inclined and having an opening formed at its lower portion to expose the moisture retaining material, the upper end of said inclined bottom being arranged above the bottom of the casing, and a cover for the open top of the compartment, substantially as set forth. 3rd. A moistening device consisting of a casing having a lower part, and an overhanging upper portion the



bottom of which is open, said casing having a compartment adapted to receive absorbent material formed in it, said compartment extending into the overhanging portion of the casing and having an inclined bottom to the lower end of which is arranged adjacent to the open bottom of said overhanging portion of the casing, substantially as set forth. 4th. A moistening device consisting of a casing having a compartment formed in it to receive moisture-retaining material, said compartment having its bottom inclined and provided at its lower part with an opening to expose the moisture-retaining material, substantially as set forth. 5th. A moistening device consisting of a casing having a lower part and an upper part provided with an overhanging rounded projecting portion, the bottom of which is open, said casing having formed in its upper part a compartment, the bottom of which is inclined and has its lower end arranged adjacent to the opening in the bottom of the overhanging part of the casing, and a base plate secured to the lower part of the casing and projecting therefrom under the open bottom of the casing, substantially as set forth.

No. 49,203. Cigar Package and Holder.
(*Enveloppe et porte-cigares.*)



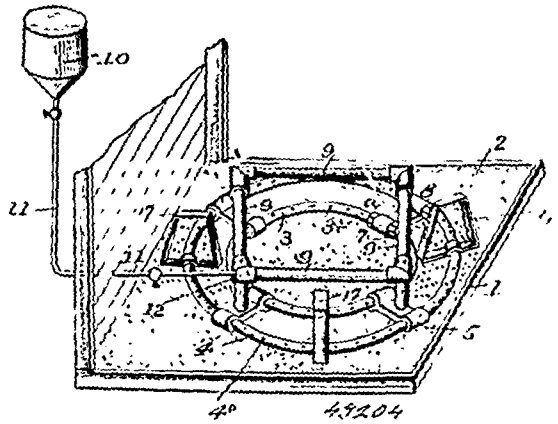
Eugène Vallens, Chicago, Illinois, U.S.A., 13th June, 1895; 6 years.

Claim.—1st. In combination with a cigar, a container for holding

the same provided with a stopper and means comprising a string carried by the latter for facilitating its withdrawal, substantially as specified. 2nd. In combination with a cigar, a container for holding the same provided with a stopper, means comprising a string carried by the latter for facilitating its withdrawal and means for sealing the stopper to the container, substantially as specified. 3rd. In combination with a number of containers holding cigars, of a box or holder for the containers and means carried by the box or holder for retaining them in place, substantially as specified. 4th. In combination with a cigar, a container for holding the same, a stopper for the container, a covering piece for the stopper, as foil or paper, and a strip for securing the cover to the container, substantially as specified. 5th. In combination with a cigar, a container for holding the same, a stopper for the container, a covering piece for the stopper, as foil or paper, and a narrow strip encircling the container for securing the cover to the container, substantially as described.

No. 49,204. Tire Heater.

(*Appareil pour chauffer les bandages.*)



Clark Robinson, Hartley, Iowa, U.S.A., 14th June, 1895; 6 years.

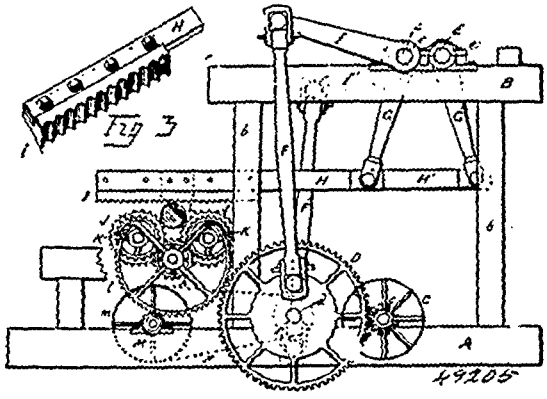
Claim.—1st. A tire heater comprising a circular burner, a square vapourizer arranged above the same and communicating therewith, and means for supplying oil and air to the vapourizer, substantially as set forth. 2nd. A tire heater comprising circular concentric burners, a square vapourizer arranged above said burners and communicating therewith, and means for supplying oil and air to the vapourizer, substantially as set forth. 3rd. A tire heater comprising circular concentric burners, a square vapourizer arranged above the same and communicating therewith, means for supplying oil and air to the vapourizer, devices for supporting tires above the circular burners, and the cover formed with the flat deflecting top, for the purpose specified, substantially as set forth. 4th. A tire heater comprising the circular burners, a vapourizer consisting of the square generator pipe communicating with said burners and having an air inlet, a feed pipe leading from an oil reservoir and formed within the generator pipe with discharge openings, and devices for supporting tires above the circular burners, substantially as set forth. 5th. A tire heater comprising the circular burners, a vapourizer consisting of the square generator pipe, communicating with said burners and having an air inlet, a feed pipe leading from an oil reservoir and formed within the generator pipe with the small openings, the tire supports, and the cover formed with the flat deflecting top for the purpose specified, substantially as set forth.

No. 48,205. Rossing Machine.

(*Machine pour décortiquer les billots.*)

Edward Carlton Hargrave, Bay City, Michigan, U.S.A., 14th June, 1895; 6 years.

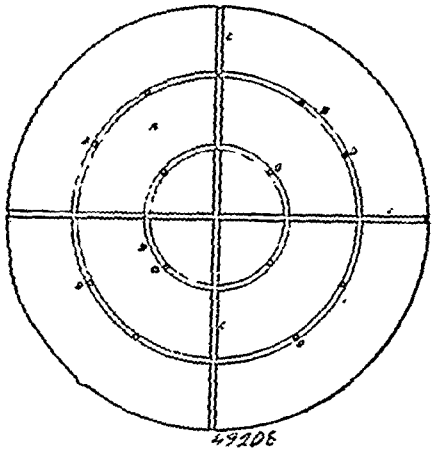
Claim.—1st. In a rossing machine, the combination with mechanism for supporting a log, of a blunt tooth rubbing, breaking or grinding instrument and mechanism for moving the same in contact with the log whereby the bark of the log is rubbed, broken or ground off, substantially as described. 2nd. In a rossing machine, the combination with mechanism for supporting a log, of a blunt-toothed rubbing, breaking or grinding instrument and mechanism for reciprocating the same in contact wih a log whereby the bark of the log is rubbed, broken or ground off, substantially as described. 3rd. In a rossing machine, the combination with mechanism for supporting a log, of a yieldingly supported blunt toothed rubbing, breaking or grinding instrument and mechanism for moving the same in contact with a log whereby the instrument is capable of yielding to follow the irregularities or inequalities of a log and the bark of a log is rubbed, broken or ground off. 4th. In a rossing machine, the combination with mechanism for supporting a log, of a yieldingly supported blunt-toothed rubbing, breaking or grinding instrument and mechanism for reciprocating the same in contact with a log whereby the instrument is capable of yielding to follow the inequalities or irregularities of the log and the bark of the log is rubbed, broken or ground off. 5th. In a rossing machine, the combination with mechanism for supporting a log, of a plurality of sets of blunt-toothed rubbing, breaking or grinding instruments, each set comprising a plurality of such instruments and means for reciprocating said sets of instruments in opposite directions in contact with a log,



substantially as described. 6th. In a rossing machine, the combination with mechanism for supporting a log of a plurality of sets of yieldingly supported blunt-toothed rubbing, breaking or grinding instruments, each set comprising a plurality of such instruments and means for reciprocating said sets of instruments in opposite directions in contact with the log, substantially as described. 7th. In a rossing machine, the combination with mechanism for supporting and rotating a log, of rubbing, breaking or grinding instruments I, connected alternately with rock-shafts E and E^1 and means for rocking said shafts, substantially as described. 8th. In a rossing machine for rossing logs, the combination with mechanism for supporting a log, of bars H and H^1 each of which is composed of a plurality of members, each member carrying a rubbing, breaking or grinding instrument independently capable of rising and falling and means for reciprocating said bars, substantially as described.

No. 49,206. Follower for Gang Press Cheese Hoops.

(*Presse pour mettre le fromage en boîte.*)



Nelson Buzzell, Cowansville, Quebec, Canada, 14th June, 1895; 6 years.

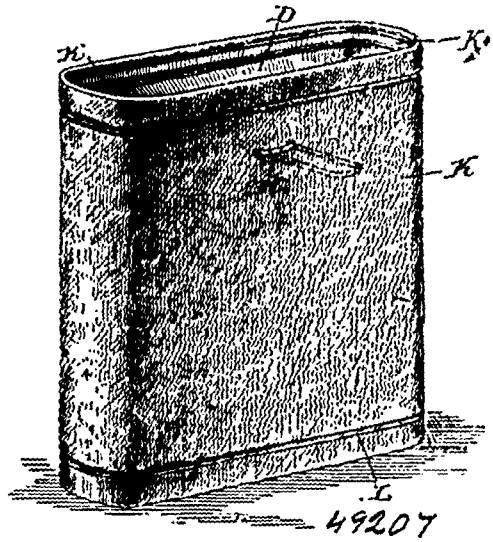
Claim.—As an article of manufacture, a cheese-hoop follower constructed or made of pressed wood pulp, or indurated fibre, with or without grooves on the face and apertures for the passage of whey, substantially as and for the purpose hereinbefore set forth.

No. 49,207. Hot Water Device. (*Appareil à eau chaude.*)

William H. Welch, Andover, Massachusetts, U.S.A., 14th June, 1895; 6 years.

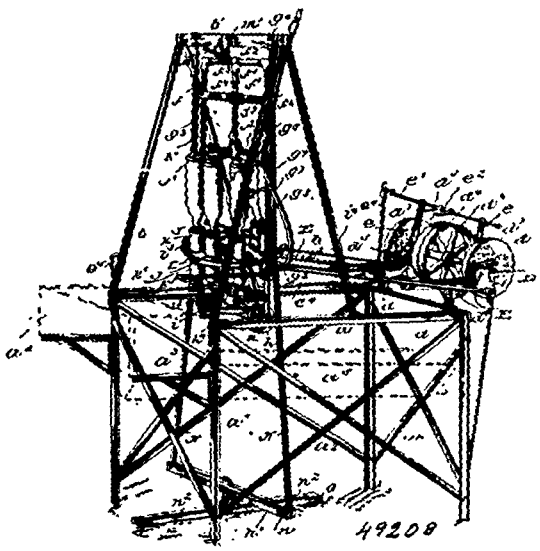
Claim.—1st. A metallic water bag holder, comprising a case, having a bottom, the upper and lower portions reversely arranged, the threaded tubular connection, and the screw plug, all arranged substantially as shown and described. 2nd. A metallic water bag,

a holder comprising a case, having a bottom, the upper and lower portions, the threaded tube, the screw plug, the ring and handle, all arranged substantially as shown and described. 3rd. In a water bag, or holder, a case, having a bottom of the inner and outer portions, so arranged as to provide an air space or chamber, the threaded tubular connection between said portions, the handle connected with the case and adapted to slide into the air space, and a cloth covering surrounding the holder, substantially as shown and described.



No. 49,208. Bottle Washing Machine.

(*Machine à laver les bouteilles.*)



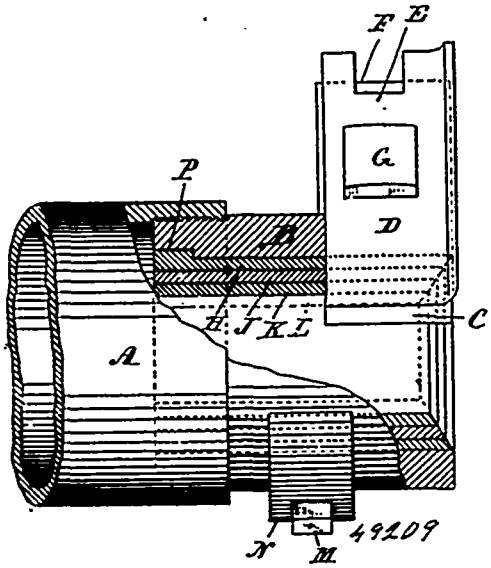
Schuyler L. Gillet, Lima, New York, U.S.A., 14th June, 1895; 6 years.

Claim.—1st. In a bottle washing machine, a pivoted bottle-supporting reel, and means for imparting reciprocal and rotary movements thereto, said reel being capable of being turned on its pivots, as set forth. 2nd. In a bottle washing machine, a bottle supporting reel, a carriage therefor, means for imparting a reciprocal movement to said carriage, and yielding connections for said carriage, substantially as set forth. 3rd. In a bottle washing machine, the combination with the frame, of the shaker of the carriage, means for imparting a reciprocating movement thereto, depending hanger straps supporting said carriage, and perpendicular spring-bars held at their lower ends and secured at their upper ends to said hanger straps, substantially as set forth. 4th. In a bottle washing machine, the combination with the frame, of the shaker or carriage, means for imparting a reciprocating movement thereto, dependin hanger straps supporting said carriage, spring-bars secured to said hanger straps, and a yieldingly secured rocker to which said spring bars are connected at their lower ends, substantially as set forth. 5th. In a bottle washing machine, the combination with the frame, of the shaker or carriage, means for imparting a reciprocating movement thereto, depending hanger-straps supporting said carriage, spring-bars secured to said hangers, a lower clamp to which said spring-bars are connected, and flexible straps connected to said clamp at the centre thereof, said straps being held fast at their outer ends, substantially as set forth. 6th. In a bottle washing machine, the combination with the frame, of the carriage, means for imparting a reciprocating movement thereto, supports for said carriage, a lower clamp, straps connected to the centre thereof and held fast at their outer ends, and upright spring-bars connected at their upper ends to said carriage, their lower ends being secured to said clamp, substantially as set forth. 7th. In a bottle washing machine, the combination with the frame, of the guide-bars secured thereto, the carriage designed to move in said guide-bars and having hubs or shafts, means for operating said carriage, and spring-bars fast at one end and secured at their other ends to the lower ends of said hangers, substantially as set forth. 8th. In a bottle washing machine, a carriage formed of hollow pipe, a central hollow shaft communicating with said pipe, a reel supported by said shaft having shot cups, a series of corresponding holding cups, connections between said hollow shaft and said shot cups, and feed-water connections with the hollow pipe of one side of said carriage, substantially as set forth. 9th. In a bottle washing machine, a carriage having one of its sides and end made hollow, a coupling extending from said hollow end, a hollow shaft fitted in said coupling, a reel carried by said shaft having a series of shot-cups and a corresponding series of bottle-holding cups, connections between said shot-cups and said shaft, hubs or shafts extending from said carriage, one of which is hollow and communicating with said hollow side of said carriage, and a flexible supply-pipe connected to said hollow hub or shaft, substantially as set forth. 10th. The combination with the frame, of the carriage having hubs or shafts projecting therefrom, depending hanger straps supporting said hubs or shafts, angular arms secured to said frame having guide-ways for the forward end of said carriage, an operating shaft mounted on said arms having crank-wheels at its ends, pitmans connected to said crank-wheels and also to said hubs or shafts, and upright straps fast at their lower ends and secured at their upper ends to the lower ends of said hangers, substantially as set forth. 11th. The combination with the frame, of the carriage having a transverse shaft at its inner end, a longitudinal shaft having the bottle supporting reel, a bevelled gear-wheel on the inner end of said longitudinal shaft, a bevelled pinion loose on said transverse shaft and having a toothed hub, a disc fast on said latter shaft having one or more spring-pressed pawls engaging said toothed hub, the main operating shaft having crank-wheels, and the described series of sprocket-wheels and chains connecting one of said crank-wheels to said transverse shaft, substantially as set forth. 12th. The combination with the main frame, of the carriage having hubs or shafts projecting from its sides, hangers holding said hubs or shafts, two sprocket-wheels on one of said hubs or shafts a transverse shaft at the inner end of said carriage having a sprocket-wheel thereon, a chain encompassing said latter wheel and one of said wheels on said hub or shaft, a bevel pinion on said transverse shaft, a longitudinally disposed shaft carrying the bottle-supporting reel, a bevel gear-wheel on said longitudinal shaft engaging said bevel pinion, the operating shaft having crank-wheels, pitmans connecting said crank-wheels to said hubs or shafts, a sprocket-wheel carried by one of said crank-wheels, and a chain encompassing said latter sprocket-wheel and the other one of said wheels on said hub or shaft, substantially as set forth. 13th. In a bottle-washing machine, a bottle support having cups comprising each an outer stationary cup, an inner spring-pressed cup, and an adjustable stop carried by said inner cup and engaging one end of said outer cup through which it is passed, substantially as set forth. 14th. In a bottle washing machine, a bottle support having cups comprising, each, an outer stationary cup open at its ends, an inner spring-pressed cup, and an adjustable threaded rod projecting from said inner cup through one end of said outer cup and having an elongated head for engaging the latter, substantially as set forth. 15th. In a bottle washing machine, a bottle support having cups provided, each with an angular water passage for directing the flow of water into the bottles, substantially as set forth. 16th. In a bottle washing machine, a bottle support having cups provided with water inlets and air vents, substantially as set forth. 17th. In a bottle washing machine, a bottle support having cups provided with water-inlets, and an air outlet tube extending into said cup, substantially as set forth. 18th. In a bottle-washing machine, a bottle support having cups consisting each of an outer stationary cup open at its ends, an inner spring-pressed cup having a water inlet and an air vent, and a threaded rod extending from said spring-pressed cup through one end of said stationary cup and having an elongated head bearing against said latter of said cup, substantially as set forth. 19th. In a bottle-washing machine, a bottle support having cups consisting each of an outer stationary cup open at its ends and provided with a slot, an inner spring-pressed cup having a threaded rod extended through one end of said outer cup, an air-vent tube extending into said inner cup, and an angular water-passage in said inner cup, and a tube coincident therewith extending through the slot in said outer cup, and a series of cups for receiving the closed ends of the bottles, substan-

tially as set forth. 20th. The combination with the reciprocating carriage having a water-way therein, of the hollow shaft supported by said carriage carrying the bottle-supporting reel having a disc, the series of shot cups consisting of outer stationary cups secured to said disc, an inner spring-pressed cup having a water inlet at one side, an air vent at the other side, and a tube coincident with said water inlet, tubular connections between such coincident tubes and said hollow shaft, and the series of circularly arranged cups mounted on said shaft and designed to receive the closed ends of the bottles, substantially as set forth.

No. 49,209. Rotary Cutter-Head or Stock.

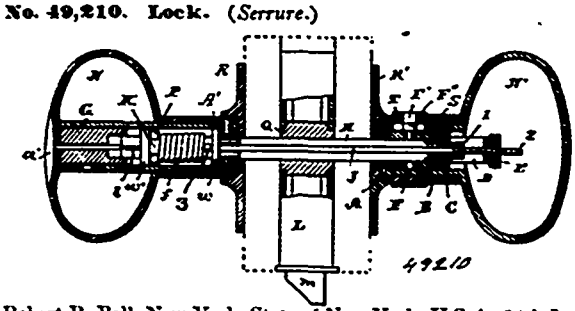
(*Tranche rotatoire.*)



Wilbert Box, Ottawa, Ontario, Canada, 14th June, 1895; 6 years.

Claim.—1st. A rotary cutter-head or stock, having a hollow cylindrical body B, an adjustable cutting tool D, and a series of graduated tubular cylinders H, J K, L, telescoping within said body B, and held stationary therein by a screw M, or other fastening, as and for the purpose set forth. 2nd. A rotary cutter-head, comprising a tubular body provided with a notched out portion at the front, and having an exterior tangential bracket at said section, a removable block seated on said bracket, an adjustable cutting tool occupying a portion of said section and supported by said block and held fixedly by a bolt passing through said tool, block and bracket, a series of tubular cylinders telescoping within said body and held stationary therein by tongues and grooves and a radial screw, passing through said body and cylinders and a weight secured to the exterior of said body to counterbalance the weight of said tool, block and bracket, substantially as described. 3rd. The combination with the hollow cylidrical body A, of a series of tubular cylinders H, J, K, L, telescoping within said body, and an adjustable tool D, exterior to said body and supported on a bracket extending from said body tangentially, and a counterbalance weight opposite to said tool, as set forth. 4th. A rotary cutter-head having a cylindrical hollow body and a series of tubular cylinders within said body and removable therefrom, and a cutting tool adjustable to suit the size of the cylinder adapted to make a pole of greater or less diameter, as set forth.

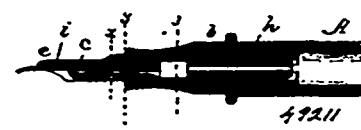
No. 49,210. Lock. (*Serrure.*)



Robert R. Ball, New York, State of New York, U.S.A., 14th June 1895; 6 years.

Claim.—1st. In a locking device of the character described, an axially turning grooved rectangular spindle with an associate rod, housed within the groove, a knob handle mounted on said spindle and revoluble thereon, and a key to connect the said knob and spindle and operate them in order to retract a latch bolt, substantially as set forth. 2nd. A reciprocating grooved spindle with a rod, housed within the groove a knob handle mounted upon and revoluble thereon and means between them for interlocking the revoluble knob and said reciprocating spindle, so that a latch bolt may be retracted, substantially as set forth. 3rd. In a locking device of the character described, the combination of a reciprocating grooved spindle with an associate rod housed within the groove, a revoluble knob mounted upon said spindle, means for interlocking the revoluble knobs and said spindle, in order to retract a latch bolt, and means for controlling the reciprocal motion of the said spindle from the end opposite the said revoluble knob, all operatively assembled, substantially as set forth. 4th. In a locking device of the character described a reciprocating grooved and axially turning spindle with an associate rod housed within the groove, a revoluble knob mounted on said spindle, a knob handle connected with the said spindle at the end opposite the revoluble knob with a manipulating sleeve thereon, the said sleeve to control the reciprocal movement of the said spindle, and means to interlock the revabluble knob and said spindle, so that a latch may be retracted, substantially as set forth. 5th. In a locking device of the character described, the combination of a reciprocating grooved spindle with an associate rod, housed within the groove, a revolvble knob mounted upon said spindle, means to manipulate the reciprocating spindle from the end opposite the revoluble knob, means to interlock the said knob and spindle in order that a latch bolt may be retracted and a sliding jacket adjusted to the said spindle, all for the purpose substantially as set forth. 6th. In a locking device of the character described, a reciprocating grooved spindle with an associate rod housed therein combined with a latch bolt, a revoluble knob mounted upon an end of said spindle, means to interlock the said spindle and knob, in order to retract the said latch bolt, and means whereby the spindle and associate rod are adjusted to variant thickness, substantially as set forth. 7th. In combination for a locking device of the character described, a revoluble knob, a reciprocating grooved spindle with an associate rod, housed within the groove, a sliding jacket upon the said spindle and a yoke adjusted to the said rod associate therewith, as adjuncts thereto, an operating knob opposite the revoluble knob and means to interlock the revoluble knob and said spindle, all operatively assembled, substantially as set forth. 8th. In combination for a locking device, a revoluble knob, a reciprocating grooved spindle with a sliding sleeve nut fitted thereto, and a sliding jacket as adjuncts to the spindle, with a knob handle mounted upon the said jacket and fastened to the said sleeve nut all operatively assembled, substantially as set forth. 9th.. In a locking device of the character set forth, the combination of the yoke D, with the locking lugs 3, 3, said lugs locking the nut E, with the rod J, and in sequence the nut C, with the spindle H. 10th. In a locking device, a grooved spindle H, with an associate rod J housed therein, a *revoluble knob K mounted upon* an end of the said spindle, interlocking means with the said revoluble handle and spindle, a sliding sleeve nut A, and jacket B, upon the opposite end of the said spindle, a yoke D adjusted to the associate rod, the knob N^1 opposite the revoluble knob, and a cam sleeve T, upon the said knob N^1 all operatively assembled, substantially as set forth. 11th. In a locking device of the character described, the revoluble knob N, the reciprocating grooved handle H, associate rod J, and nut A^1, having the axial aperture 6, and with the said spindle at the end opposite the said revoluble knob, the sleeve nut T^1, fork yoke D, and nut E all operatively assembled, substantially as set forth.

No. 49,211. Fountain Pen. (*Plume-fontaine.*)

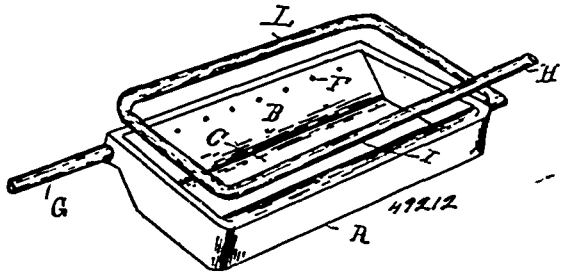


Charles Eaton Browning, Toledo, Ohio, U.S.A., 14th June, 1895 6 years.

Claim.—1st. In a fountain pen, the feed shaft having the plug in the outer end of the nozzle, the ink pocket in the rear of said plug, the sides of the shaft in the rear of said plug being flattened, the feed tongues at the outer end of the shaft, the longitudinal passage through the shaft from the inner end to said plug and through said plug to the tongues. 2nd. In a fountain pen, a feed bar formed entirely in one piece with its outer end bifurcated forming the upper and lower feed tongues, the central longitudinal air duct continued along the inner faces of said tongues by grooves, as described, the plug at the bases of said tongues, the transverse ink pocket just in rear of said plug, the bifurcation extending through the plug to said pocket, and the flattened sides forming ink ways, substantially as shown and described. 3rd. In a fountain pen, a feed bar having the plug at its outer portion to fit the outer end of the pen nozzle, and the central transverse opening through the bar forming a pocket for the collection of ink at the inner end of said plug, said plug being split through to said pocket to receive the pen, as set forth, said bar being formed to permit inflow of air and to place the ink pocket in direct communication with the ink in the holder. 4th. In a fountain pen, the feed bar having the plug near its outer end to

close the nozzle, the central transverse opening forming the ink pocket immediately in rear of said plug, said plug split through to said pocket to receive the heel of the pen and permit ink to flow from the pocket through the split on to the upper and lower surfaces of the pen and to permit air to flow into said pocket, and independent air and ink passages from said pocket to the interior of the ink barrel, substantially as shown and described. 5th. A fountain pen having the feed bar in one piece with the plug at its outer portion, the central transverse opening forming the ink pocket immediately in rear of said plug, the plug being split to permit outflow of ink from the pocket and inflow of air to the same, ink ducts extending from the ends of said pocket longitudinally of the bar to the inner end thereof, and an air duct from the inner end of the bar to the centre of said pocket, substantially as shown and described.

No. 49,212. Oil Burner. (*Brûleur d'huile.*)

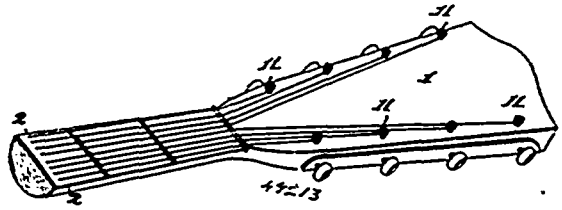


Charles A. Holdridge, Fenton, Michigan, U.S.A., 14th June, 1895; 6 years.

Claim.—1st. In an oil burner, the combination of a receptacle an inclined back wall, an oil supply pipe extending across the top of said wall having feed apertures leading into the receptacle and a steam supply pipe arranged in the wall opposite the inclined wall having discharge apertures to direct the steam to the base of the inclined wall, substantially as described. 2nd. In an oil burner, the combination of a pan or receptacle having the inclined rear wall B, the oil supply pipe E, cast integral therewith, and having supply passages F, leading from the upper end of said inclined wall, the vertical front wall D, the pipe J, cast integral therewith, and having the inclined discharge apertures K, the oil supply pipe G, connecting with the pipe E, water supply pipe H, and the loop I, connecting with the pipe J, the parts arranged and operating, substantially as and for the purpose described. 3rd. In an oil burner, the combination with the casting, of an open pan-shaped burner having even upper edges an apertured plate located above and supported on the burner and extending beyond the burner to the side walls of the casting, and means for vertically adjusting one side of the plate in relation to the burner to form an air passage between the burner and the plate, substantially as described.

No. 49,213. String Clamp for Musical Instruments.

(*Agrafe pour cordes d'instrument de musique.*)



Howard W. Hafer, and Jesse O. Love, both of Fort Scott, Kansas, U.S.A., 14th June, 1895; 6 years.

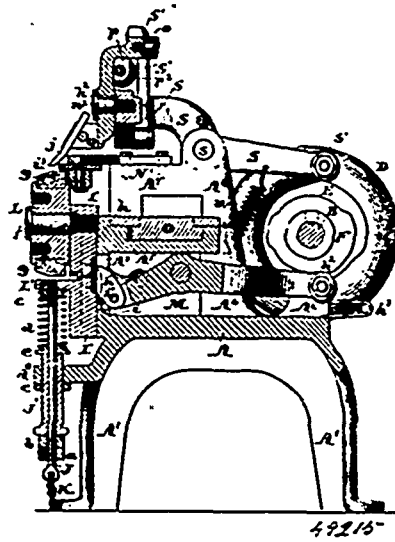
Claim.—1st. A string clamp for musical instruments, comprising a rotatable post, a rim projecting marginally from the upper end thereof, and provided with alternating V-shaped notches and projections, and a bolt engaging said clamp-post, and provided with an annular rim embracing externally the upper end of said post and closing the upper ends of said notches, substantially as set forth. 2nd. A string clamp for musical instruments, comprising a rotatable post which is internally screw-threaded and is provided with an annular and upwardly projecting rim having alternating V-shaped notches and projections in its upper margin, and with a horizontal shoulder inward of said rim, a bolt engaging said internal screw-threads and provided with a head having a shoulder adapted to fit within said rim and oppose the shoulder of the post, and having a depending annular flange which externally embraces the upper end of the post and closes the upper and open ends of said V-shaped notches, substantially as set forth.

No. 49,214. Apparatus for Closing and Hauling in Fishing Nets. (*Appareil pour haler les rets.*)

Harald Hommerberg, Brooklyn, New York, U.S.A., 14th June, 1895; 6 years.

Claim.—1st. A fishing net provided with a block line secured to its lower edge, and adapted to be held against longitudinal movement independently thereof, and a weight block slidingly mounted on said block line, substantially as set forth. 2nd. A fishing net provided at its lower part with a block line, a weight block detachably secured to said block line and adapted to be slid along the same, and a weight line connected to the block whereby the same may be hauled in, substantially as set forth. 3rd. An apparatus for closing and hauling in fishing nets, provided with a weight block comprising a weight, block sections, a swivel connection between the block sections and the said weight, and discs journalled in the ends of the said block sections, substantially as shown and described. 4th. An apparatus for closing and hauling in fishing nets, provided with a weight block comprising a weight, block sections, a swivel connection between the block sections and the said weight, discs journalled in the ends of the said block sections, and means, substantially as described, for closing the said block sections, as set forth. 5th. An apparatus for closing and hauling in fishing nets, provided with a bracket secured on the boat and carrying a pulley for the weight line, a pin held on the arms of the said bracket and rollers journalled loosely on the said pin, substantially as shown and described.

No. 49,215. Stitch Separating and Indenting Machine. (*Machine à séparer et denteler les points.*)



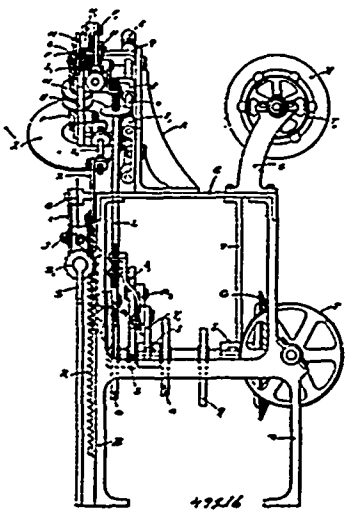
John Benjamin Hadaway, Brocton, Massachusetts, U.S.A., 14th June, 1895; 6 years.

Claim.—1st. A machine for separating or pricking up the stitches in a welted shoe sole, comprising the following elements, viz., a work support, a rocking lever or frame mounted upon a movable fulcrum pin, a tool stock pivoted to said rocking lever, a separating tool carried by said tool stock, a tension device constructed and arranged to hold said tool stock in its normal position relative to said rocking lever until moved from said position by the application of power to overcome said tension, a cam and lever for positively moving said rocking lever about its fulcrum in one direction to raise said tool and its stock, a spring to move said parts in the opposite direction, stops to limit the vibrations of the tool stock, a cam and lever for imparting to said rocking lever a positive reciprocation in a direction at right angles to the axis of its fulcrum pin, and a cam and lever for applying force to said rocking lever to force said separating tool into the work. 2nd. In a machine for separating the stitches of boot or shoe soles, the combination of a work support, an automatically adjustable

separator for locating the intervals between the stitches whether of uniform or varying lengths, and means having provision for forcing said tool between the stitches when the point of said tool has located itself in the space between two stitches. 3rd. In a machine for separating the stitches in the soles of boots or shoes, the combination of a work support to receive the thread surface of the sole, an upper work support or table arranged to bear upon the upper surface of the welt, a separating tool means having provision for pressing said tool lightly upon the line of stitching and moving it longitudinally thereof, in two steps, whereby said tool is made to automatically locate the intervals or spaces between the stitches whether of uniform or varying lenghts, and mechanism having provision for forcing said tool between said stitches to separate them. 4th. In a machine for separating the stitches of boot and shoe soles, the combination of a work support to receive the tread surface of the sole, an upper support or table to rest upon the upper surface of the welt, a gauge to determine the position of the shoe, a rocking lever mounted on a movable fulcrum, a tool stock pivoted to said lever by its middle, a separating tool adjustably mounted on the lower end of said stock, a tension device for normally holding the upper end of said stock in a given position relative to said rocking lever, adjustable stops for limiting the vibration of said tool about its fulcrum, mechanism having provision for moving said rocking lever about its fulcrum in one direction, with a positive and uniform motion, a spring for moving it in the opposite direction and pressing the separating tool lightly upon the stitch, a cam and lever for reciprocating said rocking lever in a direction at right angles to the axis of its fulcrum pin, and mechanism having provision for applying pressure, in addition to the spring, to said rocking lever to force the separating tool into the work between the stitches. 5th. In a machine for separating the stitches of boot and shoe soles, the combination of a revoluble work support to receive the thread surface of the sole, an upper work support or table arranged to bear upon the upper surface of the welt *and slotted at its front end for the passage of the separating tool*, a gauge to guide the work, mechanism having provision for clamping the sole edge between said revoluble work support and the table, a rocking lever or frame mounted upon a movable fulcrum, a tool stock pivoted to said rocking lever, a separating and indenting tool carried by said tool stock, a tension device for holding said tool stock in its normal position relative to said rocking lever, a spring for moving said rocking lever in one direction about its fulfrum, a cam and lever for reciprocating said rocking lever at right angles to its axis of oscillation, a cam and lever for applying pressure in addition to the tension of said spring to force the tool into the material between the stitches, and mechanism having provision for moving said rocking lever about its axis in the opposite direction, against the tension of said spring. 6th. In a machine for separating the stitches of boot and shoe soles, the combination of a yielding work support the tread surface of the sole, a ratchet plate connected to said yielding support, an upper work support or table arranged to bear upon the surface of the welt, a lever, a cam constructed and arranged to intermittently vibrate said lever, a pawl pivoted upon said lever and arranged to engage the teeth of said ratchet plate when the pawl end of said lever is moved upward, and a fixed pin to be engaged by said pawl, when it is moved downward, and throw it out of engagement with said ratchet, whereby said yielding work support is alternately locked in a fixed position as to vertical movement, and rendered yielding. 7th. In a machine for separating the stitches of a boot or shoe sole, the combination of the vertically movable bar I, the work support L carried thereby, the rod J pendent from said bar, the connection K leading from said rod to a treadle, the sleeve J^1 surrounding said rod and adjustable vertically in a fixed bearing, the spring d, the collars a, c and c^1, the rubber cushion b, the ratchet plate h, the pawl h^1 the pivoted lever M, the cam F, and the fixed pin i all constructed, arranged and operating substantially as set forth. 8th. The combination of the shaft B, the cams E F G and H, the horizontally reciprocating plate O provided with the ears O^1 and O^2 and the transverse groove k, the lever P provided with the arms k^1 and k^2 and the lug l and pivoted to the ear O^1, the spring n^1 connected at one end to the arm k^2 of said lever P and at its other end to some fixed part of the machine, the tool stock Q and the roll S^2 carried by the arm k^2 the tool j adjustably set in said tool stock, the tension rod o pivoted to said tool stock and having a bearing in the lug, the nuts o^1 o^2 and o^3 fitted to and adjustable on said rod, the spring o^3, the lever S engaging the roll S^2 to depress the arm k^2 of the lever P and provided with the adjustable screw stop t, the lever R provided with the adjustable stud r^1 carrying a rectangular block fitted to the groove k, and the lever P constructed and arranged to act upon the upper side of the arm k^1 of the lever P, all constructed and arranged to operate, substantially as described. 9th. In a machine for separating the stitches of boot or shoe soles the combination of a vertically movable work support to receive the tread surface of the shoe sole, mechanism having provision for intermittently locking said work support in its raised position, a vertically oscillating and horizontally reciprocating lever or frame, a separating tool carried by said lever, a spring connected to said lever and adapted to press said tool upon the stitch, mechanism having provision for moving said tool along said stitch under the tension of said spring until the point of said tool drops into the space between two stitches, means having provision for pressing said tool into said space and indenting the welt by a positive pressure in addition to the tension of said spring, mechanism for moving said tool another step in the same direction to feed the work, mechanism having provision for raising said tool from the work and moving it horizontally to the starting point. 10th. In a machine for separating the stitches of boot and shoe soles, the combination of a work support, a gauge to determine the position of the sole upon said support an automatically adjustable separator for locating the intervals to receive between the stitches, and mechanism having provision for forcing said separator between the stitches when the point of said separator has been located between the stitches. 11th. In a machine for separating the stitches of boot and shoe soles, the combination of a work support to receive the tread surface of the sole, an upper work support or table arranged to bear upon the upper surface of the welt, a gauge to determine the position of the work on said supports, an automatically operated separating tool adapted to locate the intervals or spaces between the stitches whether of uniform or varying lengths, and mechanism having provision for forcing said tool between said stitches to separate them and indent the welt. 12th. In a machine for separating the stitches of boot and shoe soles, the combination of a work support to receive the tread surface of the sole, a gauge to determine the position of said sole on the support, a vertically and horizontally movable separating tool adapted to automatically locate the spaces between the stitches whether said stitches are of uniform or varying lengths, a spring for moving said tool into contact with the stitches, mechanism for moving said tool horizontally in one direction in two steps with a stand still between them, mechanism having provision for moving said tool another step downward by a positive pressure to force said tool into the work between two stitches, and mechanism for raising said tool and moving it horizontally to its position before being depressed by the spring.

No. 49,216. Saw Sharpening Machine.

(*Machine à affuter les scies.*)

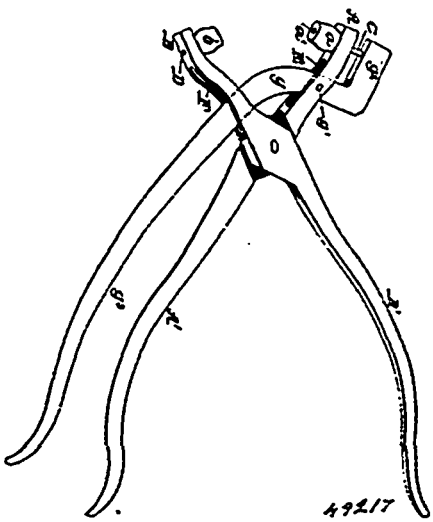


Dexter Hazard, Marquette, Michigan, U.S.A., 14th June, 1895; 6 years.

Claim.—1st. In a saw sharpening machine, the combination with supporting bracket A, guide rod o and o^1 mounted thereon, of frame U, slidably mounted upon said rods, arbour 3, journalled in said frame U, connecting rod Z^1, elbow Z, rod y, connected to slotted arm m^1, wheel a^1, attached to slotted arm m^1, cam a, arbour 3, provided with collar M, and collar 2, collar M being connected by link N^1, to rocking bar F^1, rocking bar F^1, held in position by standard N, block F, threaded rod L^1, threaded rod L connected to slotted arm m^2, arm m^2 provided with wheel b^1, in connection with cam b, shaft K^2, gear-wheel G, pinion h, and shaft K^1, all substantially as shown and described. 2nd. In a saw sharpening machine, the combination with jawl H, upright arm I, attached to shaft I, shaft I provided with upright arm I^2, pawl H^1, arm I^1, provided with wheel g^1, in connection with cam g, shaft K^2, gear-wheel G, pinion h, and shaft K^1, all substantially as shown and described. 3rd. In a saw sharpening machine, the combination with swinging frame A^1, in connection with block 4, provided with threaded rod 1^1, arbour 5 journalled in said frame, casting n^1, in connection with m, held in position by standard Y, casting m, provided with wheel c^1, in connection with cam c, shaft K^2, gear-wheel G, pinion h, and shaft K^1, all substantially as shown and described. 4th. In a saw sharpening machine, the combination with supporting bracket A, guide rod o and o^1 mounted thereon, of frame U, slidably mounted upon said rods, arbour 3 journalled in said frame U, connecting rod Z^1, elbow Z, rod y connected to slotted arm m, wheel a^1, attached

to slotted arm m^1, cam a, arbour 3 provided with collar M, and collar 2, collar M being connected with link N^1, to rocking bar F^1, rocking bar F^1, held in position by standard N, block F, threaded rod L^1, threaded rod L connected to slotted arm m^2, arm m^2, provided wheel b^1, in connection with cam b, swinging frame A^1, in connection with block 4, provided with threaded rod 1^1, arbour 5 journalled in said frame, casting n, in connection with casting m, held in position by standard Y, casting m, provided with wheel c, in connection with cam c, pawl H, upright arm I, attached to shaft 1, shaft 1, provided with upright arm I^2, pawl H^1, arm I^1, provided with wheel g^1, in connection with cam g, shaft K^2, gear-wheel G, pinion h, and shaft K^1, all substantially as shown and described.

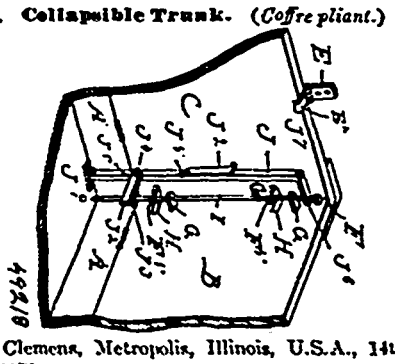
No. 49,217. Staking Tool. (*Outil pour piqueter.*)



Charles C. Branson, Granite Canon, Wyoming, U.S.A., 14th June, 1895; 6 years.

Claim.—1st. A staking tool comprising a pair of plier arms, having their jaw members apertured, the upper one of which is adapted to receive the stake, and a third or supplemental plier lever having a push portion adapted to engage the stake or punch when operated, all arranged substantially as shown and for the purposes described. 2nd. As an improvement in watchmakers tools, the combination with the plier jaws A, B, having apertured clamp ends, and a stake or punch detachable held in the upper jaw, of the supplemental jaw G pivotally connected to the jaw A and having an angle member projected over and adapted to press down on the stake or punch when the handle of the said supplemental lever is pressed inward all arranged substantially as shown and described.

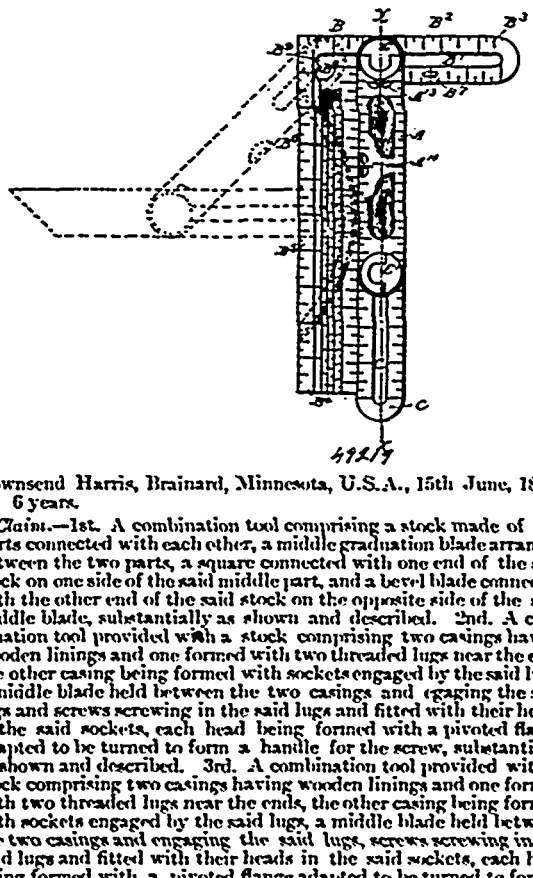
No. 49,218. Collapsible Trunk. (*Coffre pliant.*)



Eliza J. M. Clemens, Metropolis, Illinois, U.S.A., 14th June, 1895; 6 years.

Claim.—1st. A collapsible trunk provided with a removable corner plate having lugs projecting from its inner surfaces and overlapping and means for securing the plate to the trunk, substantially as specified. 2nd. A collapsible trunk having openings in its side and end and having corner plate with lugs passing through said openings and overlapping each other, substantially as specified. 3rd. A collapsible trunk having holes in a side or end and holes and slots in an adjacent side or end and a corner plate having lugs projecting from its inner faces at right angles to and overlapping each other and means for maintaining the slotted side or end in a distended position, substantially as specified. 4th. A collapsible trunk having openings in a side and end, a corner plate having perforated projections in line with each other and passed through said openings and a single bolt passed through said perforations, substantially as specified. 5th. A collapsible trunk having openings in its side and end, a corner plate provided with perforated base and perforated lugs arranged with all the perforations in the same vertical plane and passed through said openings, and a bolt screw-threaded at its lower end and passed through all of said perforations, substantially as specified. 6th. A collapsible trunk provided with openings in the side and a folding tray support, a removable corner-piece having lugs passed through said openings and a bolt for passing through the tray-support and all of said lugs, substantially as specified. 7th. A collapsible trunk having tray-supporting horizontally-foldable standards in its corners and having trays comprising corner plates cut away and strengthened and constructed to escape the supports and foldable sides and ends, substantially as specified. 8th. A collapsible trunk having tray-supports in the corners thereof and trays having pivoted wire frames and corner plates concaved to escape the supports and to rest upon tray-supporting arms carried by the supports, substantially as specified. 9th. In a collapsible trunk, top and bottom sections and intermediate foldable and hinge-leaves one connected to the top and the other to the bottom section and connected to each other by a jointed strap, substantially as specified. 10th. In a collapsible trunk, top and bottom sections, intermediate folding sections, terminal hinge-leaves, one of which is connected with the top section and the other with the bottom section, and one of which carries a fastening device and the other of which carries co-operating fastening lugs, substantially as specified. 11th. In a foldable trunk, and in combination with the top and bottom and intermediate folding sections thereof, a jointed connecting-strap pivoted at either end to a hinge leaf, and means for detachably connecting the hinge-leaves, substantially as specified.

No. 49,219. Combination Tool. (*Outil à combinaison.*)

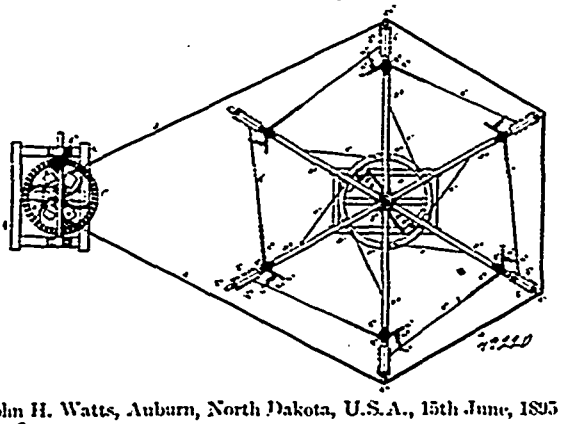


Townsend Harris, Brainard, Minnesota, U.S.A., 15th June, 1895; 6 years.

Claim.—1st. A combination tool comprising a stock made of two parts connected with each other, a middle graduation blade arranged between the two parts, a square connected with one end of the said stock on one side of the said middle part, and a bevel blade connected with the other end of the said stock on the opposite side of the said middle blade, substantially as shown and described. 2nd. A combination tool provided with a stock comprising two casings having wooden linings and one formed with two threaded lugs near the ends the other casing being formed with sockets engaged by the said lugs, a middle blade held between the two casings and engaging the said lugs and screws screwing in the said lugs and fitted with their heads in the said sockets, each head being formed with a pivoted flange adapted to be turned to form a handle for the screw, substantially as shown and described. 3rd. A combination tool provided with a stock comprising two casings having wooden linings and one formed with two threaded lugs near the ends, the other casing being formed with sockets engaged by the said lugs, a middle blade held between the two casings and engaging the said lugs, screws screwing in the said lugs and fitted with their heads in the said sockets, each head being formed with a pivoted flange adapted to be turned to form a handle for the screw, and a spring on the pivoted part of the head and engaging the fixed part of the head to hold the said movable part in position, substantially as shown and described. 4th. A combination tool, comprising a stock made of two parts adapted to be fastened together, a middle blade held between the said two parts and two levels arranged in one of the said parts, substantially as shown and described. 5th. A combination tool provided with a stock having levels, each formed at the ends of the glass tube with rubber cushions embedded in cement, substantially as shown and described. 6th. A combination tool, comprising a stock made of two parts and having lugs near their ends between the two parts, a

square having one slotted member engaging one of the said lugs between the two parts, and a slotted bevel blade engaging the other lug between the parts, substantially as shown and described. 7th. A combination tool, comprising a stock made of two parts and lugs between the two parts to form pivots, a square having a slotted member engaging one of the said lugs and provided with a protractor on one of the members, and a bevel blade held on the other lug of the stock and adapted to hold on the said protractor, substantially as shown and described. 8th. A combination tool, comprising a middle blade forming part of the stock, a square having a slotted member, and a member formed with a protractor, a pivot blade adapted to indicate on the said protractor, and bolts for uniting the said middle blade to the said square and bevel blade, substantially as shown and described. 9th. A combination tool, comprising a stock, slotted bevel blades held adjustable on the ends thereof, a square having a slotted member, a clamp for fastening one member of the square to one of the bevel blades, and a bolt for fastening the other member of the square to the bevel blade, substantially as shown and described. 10th. A combination tool, comprising a stock, two levels arranged in the said stock, a square held adjustable on one end of the said stock, and a pivot blade held adjustable on the other end of the said stock, substantially as shown and described. 11th. A combination tool, comprising a square blade, a bevel blade, and a stock made of two parts, one or both of said parts being formed of a metal shell having cross webs and level pockets formed thereby, and a wood filling set in cement within said shell, substantially as described. 12th. A combination tool, comprising a stock made of two parts adapted to be fastened together, a middle blade held between the said parts, two levels arranged in one of said parts, the stock and middle blade having sight apertures therein adjacent to each other and to the level phials, substantially as described.

No. 49,220. Rope and Cable System for Operating Machinery. (*Système de corde et cable pour actionner les machines.*)

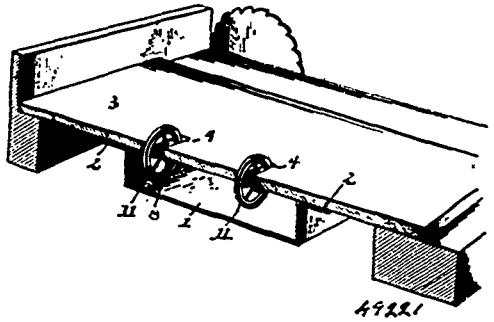


John H. Watts, Auburn, North Dakota, U.S.A., 15th June, 1895; 6 years.

Claim.—1st. A series of arms radiating from a common centre and adapted to be revolved, a gripping mechanism upon the outer end of each arm, a cable encircling the gripping mechanism of said arms and also the mechanism to be driven, a base frame for supporting said radiating arms, a chain sheive H^3, upon the outer end of each arm, a draft chain or cable connected to the outer end of each of said arms, and passing around the chain sheive of the arm next in advance, and with adjustable connections m^2, m^3, between the chains or cables of each adjacent pair of arms, in combination with a shaft carrying grooved drums, pivoted jaws having arms fitting into said grooves, a loose collar surrounding said shaft between said drums, an endless cable fitting around said arms within said gripping mechanism and between said jaws, whereby said cable is gripped and said jaws distended when the tension of the cable is applied, substantially as set forth. 2nd. In a cable system for operating machinery, a series of arms radiating from a common centre and adapted to be revolved, each of said arms being provided on its outer end with a casing h^1, h^2, having reversely diagonal slotted partitions h^3, h^4, jointed clamp consisting of legs h^6, h^7, and jaws h^9, h^{10}, held normally outward by springs and adapted to be distended or extended by the co-action of said legs and diagonal partitions, in combination with a shaft carrying grooved drums, pivoted jaws having arms fitting into said grooves, a loose collar surrounding said shaft between said drums, an endless cable fitting around said arms within said gripping mechanism, and between said jaws, whereby said cable is gripped and said jaws distended when the tension of the cable is applied, substantially as and for the purpose set forth. 3rd. In a rope or cable system for operating machinery, a shaft, grooved drums fast upon said shaft, pivoted jaws having arms fitting into said grooves, and a loose collar surrounding said shaft between said drums and adapted to actuate said jaws to distend them when the tension of the cable is applied, substantially as and for the purpose set forth. 4th. In a rope or cable system for operating machinery, a shaft, grooved drums fast upon said shaft, pivoted jaws having arms fitting into said grooves, and a loose collar surrounding said shaft between said drums and adapted to actuate said jaws to distend them when the tension of the cable is applied, said drums having holding collars surrounding them and enclosing the free ends of said arms, substantially as and for the purpose set forth.

No. 49,221. Shingle Marker.

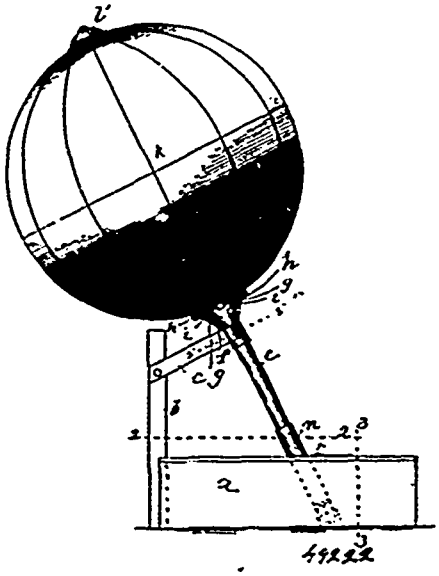
(*Appareil à marquer le bardeaux.*)



Caleb Guyer, Tyrone, Pennsylvania, U.S.A., 15th June, 1895; 6 years.

Claim.—1st. In a shingle marker, the combination of a liquid-tight pigment box secured to the under side of a slotted edging machine plate or table below the slot therein, an inverted L-shaped spring metal forked plate having its vertical shank portion removably supported against one side of said liquid-tight box, and a revolving marking wheel journalled directly on the outer horizontal extremity of said forked plate and normally and yieldingly projected through said slot, substantially as set forth. 2nd. The combination with the marking-table of an edging machine, the same being provided with a slot, of a box secured under the plate or table, a plate having a sunken recess applied to the side of the box, an inverted L-shaped spring-fork movably arranged in the recess, a shaft supported by the fork, and a marking wheel arranged upon the shaft and yieldingly pressed through the slot in the plate or table, substantially as specified. 3rd. The combination with the plate or table, of an edging-machine having a series of slots, of a box arranged thereunder, a plate secured to one wall of the box and having a series of depressed recesses, and a plurality of inverted L-shaped spring-forks, and wheels carried by the forks and projecting through the slots in the plate or table, substantially as specified.

49,222. Geographical Globe. (*Globe Géographique.*)

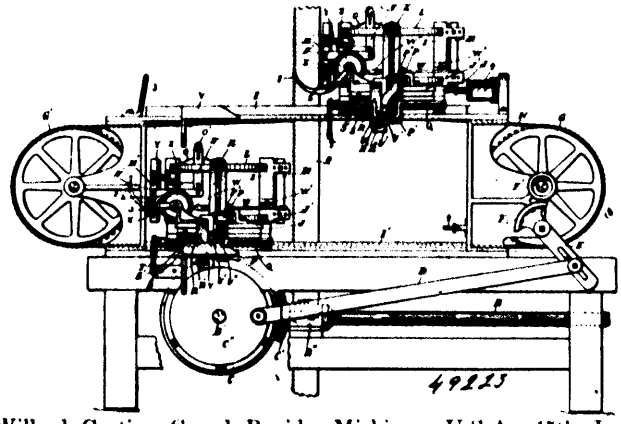


Isaac Hodgson, and Mary Ann Hodgson, both of Chicago, Illinois, U.S.A., 15th June, 1895; 6 years.

Claim.—1st. A geographical flexible globe being provided with clamping devices at the points indicating the two poles; an air-stem or tube; and mechanism by which one of these clamping devices of the globe are detachably connected to the air-tube or stem, substantially as specified. 2nd. In a flexible geographical globe apparatus,

the air-stem or tube through which the globe is inflated; two inflatable and collapsible globes attached to said tubes, the interior one being permanently secured thereto, the other one detachably secured thereto, by means of clamp-devices, substantially as specified. 3rd. In a geographical globe apparatus, the exterior globe *k*, provided at the points of the poles with clamping-devices inserted in the globes; and interior inflatable globe *j*; the hollow-air-tube or stem *e*; locking-devices for locking the clamps of the exterior globe to the stem or air-tube, whereby when the interior globe is inflated the two poles of the exterior globe with the meridian lines thereon, will assume their proper relative position to represent the geography of the world. 4th. In a collapsible geographical apparatus, the box *a*, adapted to receive the stem of the globe and hold it in position; the upright piece attached to the box and bifurcated arm pivoted to the upright piece for supporting the stem of the globe, substantially as specified. 5th. The stem *e* of the geographical globe; the tube *n*; the openings *g* and plug-stopper *p* whereby the operator can adjust these parts and inflate the globe and by re-adjustment immediately retain the air in the globe, substantially as specified.

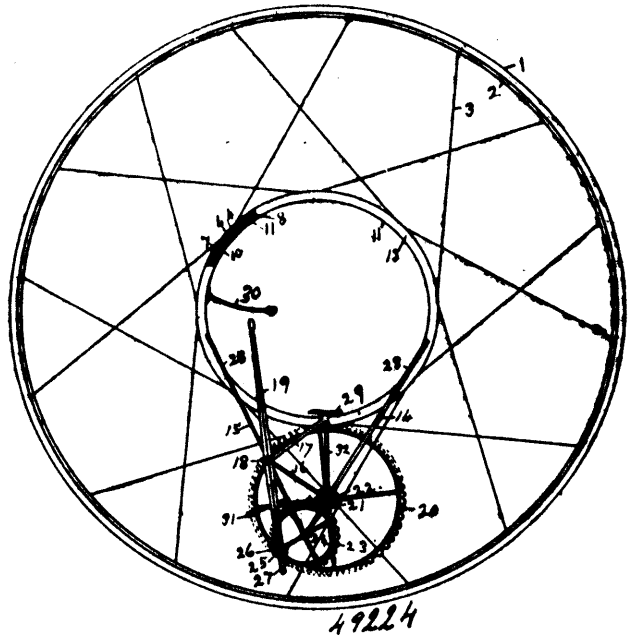
49,223. Sawing Machine. (*Scierie.*)



Willard Curtiss, Grand Rapids, Michigan, U.S.A., 15th June, 1895; 6 years.

Claim.—1st. In a sawing machine, in combination with two oppositely moving reciprocating carriages having automatic feed mechanisms, an endless chain connected to said carriages, sprocket-wheels engaging said chain, a gear connected to one of said wheels, a pivoted lever having a sector engaging said gear, a shaft having a crank-wheel, and a pitman connecting said crank-wheel and lever and means for rotating said shaft, substantially as described. 2rd. In a sawing machine in combination with two reciprocating carriages, an endless chain and sprocket-wheels and a gear connected to one of said wheels and a pivoted lever, crank-wheel shaft and pitman to reciprocate said gear, oppositely faced bevel friction wheels, a bevel friction pinion between said wheels and mounted on a driving shaft, a movable journal box for said shaft and a lever and connecting rods to move said box, substantially as described. 3rd. In a sawing machine in combination with a saw, and a reciprocating carriage having a transversely movable table and a rack bar attached, and a pinion engaging said bar, and a pawl and lever to operate said pinion, a spring latch and a hook to engage the same, said latch and hook connected to said table and lever, substantially as described. 4th. In a sawing machine, in combination with a rack bar, for moving the stock forward to the saw, a shaft having a hand wheel attached, a pinion on said shaft engaging said rack bar, a feed wheel loosely mounted on said shaft, a clutch connecting said wheel and shaft, a lever to operate said clutch, a friction pawl engaging said feed wheel, a lever operating said pawl, a spring catch on said lever, and a hook on said rack bar to engage said catch, substantially as described. 5th. In a sawing machine, in combination with a reciprocating carriage, having a transversely movable table, a frame mounted on said table to vibrate on a vertical axis, a lever attached to said frame, a serpentine cam wheel engaging said lever, and mechanism to periodically move said cam wheel, substantially as described. 6th. In a sawing machine, a reciprocating carriage, a transversely movable frame on said carriage and pivoted to vibrate on a vertical axis, a forked lever connected to said frame, a shaft having a serpentine cam wheel engaging the forked end of said lever, a ratchet-wheel on said shaft, a lever having a pawl engaging said ratchet-wheel, and a fixed bar to engage said lever, substantially as described. 7th. In a sawing machine in combination with a reciprocating and transversely movable frame, pivoted to vibrate on a vertical axis and provided with dogs to hold the stock, a lever connected to said frame, having a forked end, a serpentine cam wheel mounted on a shaft and engaging the forked end of said lever, a ratchet-wheel having as many teeth as the inclined cam surfaces of said cam wheel, a pivoted lever having a pawl engaging said ratchet-wheel, and a fixed bar to engage said lever, substantially as described. 8th. In a sawing machine, reciprocating carriage, a transversely movable table on said carriage, a vertical frame on said table pivoted to vibrate on a vertical axis, a rack bar attached to said table, a shaft having a pinion engaging said rack bar, a feed wheel on said shaft, a friction pawl engaging said feed wheel, a lever operating said friction pawl, and a fixed incline to operate said lever, a lever attached to said vertical vibrating frame, a serpentine cam wheel engaging said lever, a ratchet-wheel connected to said cam wheel, a lever having a pawl engaging said ratchet-wheel and a fixed bar to operate said lever, substantially as described. 9th. In a sawing machine, a reciprocating frame, pivoted to vibrate on a vertical axis, a pivoted lever and means for periodically vibrating the same, a slot in said lever, and a bar pivoted at one end to said frame and at the other to a bolt adjustable in said slot, whereby the vibration of said frame may be varied, substantially as described. 10th. In combination with two oppositely moving reciprocating carriages, an endless chain connecting said carriages, sprocket-wheels engaging said chain, a crank-wheel, means for rotating said wheel and a pitman rod connected to said crank-wheel and to one of said sprocket wheels to impart reciprocating motion to the latter, substantially as described. 11th. In a sawing machine, two oppositely moving reciprocating carriages, an endless chain and sprocket-wheels for moving said carriages and mechanism for reciprocally moving said wheels and chain, substantially as described. 12th. In a sawing machine, in combination with a reciprocating carriage and a saw, a transversely movable table on said carriage a rack bar attached to the same, a shaft having a pinion engaging said rack bar, a feed wheel on said shaft, a friction pawl engaging said wheel, a lever to operate said pawl, a fixed incline to operate said lever, and an adjustable screw to limit the return movement of the same, substantially as described. 13th. In a sawing machine, two oppositely reciprocating carriages moving in parallel planes one above the other, and mechanism for operating the same, substantially as described.

No. 49,224. Unicycle. (*Unicycle.*)



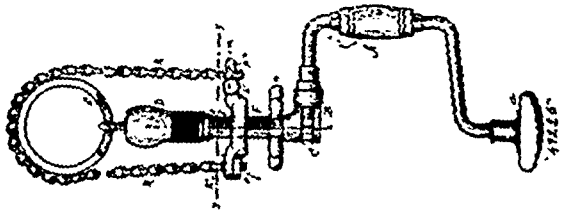
John Alfred Webster, Petrolia, Ontario, Canada, 15th June, 1895; 6 years.

Claim.—1st. In a unicycle wheel with the large annular axle 11, having the annular gearing guard 13, and the groove for balls 12, the combination of the large cushion tire 1, the felloe 2, the single circle of tangent spokes 3, the large annular hub 8, having the single circle of spoke fasteners 4, the double circle of cogs 7, on the outside of the hub, the single groove 9, for anti-friction balls on the inside of the hub, and the single circle of anti-friction balls 10. 2nd. In a unicycle hub, the combination with the spoke fasteners 4, having spoke sockets 6, of straight tangent spokes 3, having enlarged ends 5, for fastening therein, substantially as described. 3rd. In a unicycle hub, the combination of a single groove 9, inside said hub for anti-friction balls, with a double outer circle of cogs 7, and a single outer circle of spoke fasteners 4, substantially as described. 4th. In the double driving gearing carriage frame for a unicycle, the combination with the wheel, having tire 1, felloe 2, spokes 3, hub 8, ball bearings 10, axle 11, and guards 13, of the two oppositely inclined members thereof 14 and 15, attached at their upper ends to either side of the annular axle of the wheel at 28, on the front and rear end thereof, and united at their bottom ends into a V-shaped frame supported by the three cross-braces 16, 17 and 32, all three of the angles of the frame supporting some of the driving mechanism of the wheel, the said frame being in duplicate one on each side of the wheel, substantially as described. 5th. In a unicycle, the combination of axle 11, guard 13, gearing carriage frame 14, 15, 16, 17 and 32, fastened to the axle one on each

side of the axle, with the large cog-wheel 20, small cog-wheel 21, counter-shaft 22, pedal cog-wheel 23, pedal cog-wheel shaft 24, pedal crank pin 25, pedals 26, hand levers 19, and pivot or fulcrum 18, all connected to said frame and one set on each side of the unicycle, substantially as described. 5th. In a unicycle wheel with the large annular axle having the annular gearing guard and the groove for balls, the combination of the large cushion tire, the felloe, the double circle or tangent spokes spreading apart at the felloe, the large annular hub, having the single circle of spoke fasteners, the double circle of cogs on the outside of the hub, the single groove for anti-friction balls on the inside of the hub and the single circle of anti-friction balls, substantially as described. 7th. The combination in a unicycle of a unicycle wheel consisting of cushion tire, felloe, single tangent spokes, or double tangent spokes spreading at the felloe, hub, and anti-friction balls, with the axle, the gearing guard, the saddle, the handle bar, and the gearing carriage frame fastened to said axle with its double set of driving mechanism, consisting of 8 large cog-wheel, small cog-wheel and their counter shaft, pedal cog-wheels and their shafts, and crank pins, pedals, hand levers and their shafts, pivots or fulcrums, and the foot rests, one set on each side of the unicycle, substantially as described. 8th. In a unicycle, the combination of a wheel consisting of the cushion tire, felloe, tangent spokes, hub and anti-friction balls, with the axle and the gearing guard and the saddle and hand bar fastened thereto, substantially as described. 9th. In a unicycle, the combination of the wheel consisting of the cushion tire, felloe, double tangent spokes spreading at the felloe, or single as desired, hub, anti-friction balls, axle, saddle and hand bar, with the frame, foot rest, large cog-wheel, small cog-wheel and their counter shaft, pedal cog-wheel and its shaft, and crank pin with or without the foot pedals as desired, and the hand levers with their pivots or fulcrums, one set on each side of the wheel, substantially as described. 10th. In a unicycle, the combination of the wheel consisting of the cushion, tire, felloe, tangent spokes, single or spreading at the felloe, hub, anti-friction balls, axle, saddle hand bar, with the frame, large cog-wheels, small cog-wheels, and their counter shafts, pedal cog wheels and their shafts and crank pins, pedals and foot rests, with or without the hand levers with their pivots or fulcrums, substantially as described. 11th. In a unicycle wheel the combination of a tire, felloe and large annular hub with a single circle of wire spokes, connecting said hub and felloe, substantially as described. 12th. In a unicycle wheel the combination of a tire, felloe and large annular hub with a double circle of wire spokes spreading apart at the felloe, instead of at the hub as in bicycle wheels, connecting said hub and felloe, substantially as described. 13th. In a unicycle wheel the combination of a tire, felloe and straight tangent spokes spreading at the hub, with a large annular hub having a groove for balls, double circle of the spoke fasteners 4, with sockets 6, therein to hold the heads 5, of the spokes, and the double outer circle of cogs 7, to engage the cog-wheels 20, substantially as described. 14th. In a unicycle the combination with the wheel consisting of tire, felloe, spokes, and hub, and with the axle, and ball bearings between the hub and the axle, of a brake pivoted on said axle and adjusted to rub on the sides of the hub, when desired, operated by a lever, substantially as described.

No. 49,225. Bit-Brace, and Hand Drill Combined.

(*Vilbrequin pour percer à la main et foret combinés.*)



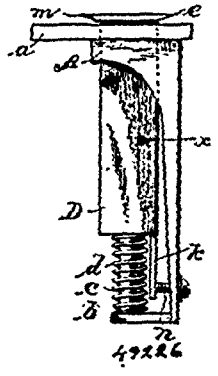
Charles Davis Cutts, Fort Fairfield, Maine, U. S. A., 15th June 1895; 6 years.

Claim.—1st. In a bit-brace and hand-drill combined, the combination with the stock, chuck, shaft E, sleeve F, on said shaft and externally screw-threaded, hand wheel or feed wheel H, rigid with said sleeve and nut K, running on said threaded sleeve, of the removable yoke consisting of a pair of jaws pivoted together at one end and adapted to be secured together at the other end, said jaws being adapted to clamp the nut and prevent movement thereof with relation to the yoke, and said yoke being adapted to receive the opposite ends of the chain which is passed around the work, substantially as set forth.

No. 49,226. Bench Hook. (*Mentonnet.*)

Andrew McFarland, Thomaston, Maine, U.S.A., 15th June, 1895; 6 years.

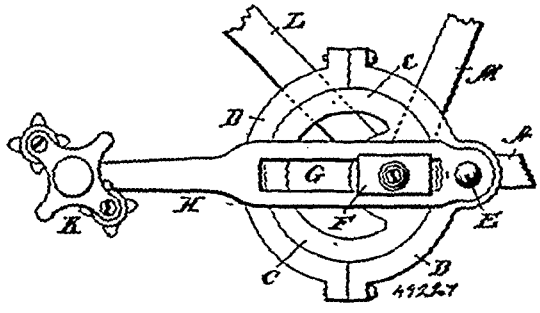
Claim.—1st. A bench hook, consisting of a socket, a sleeve provided with the hook, and arranged to slide vertically in the socket, a locking lever in the sleeve, and a cam provided with a thumb piece in the sleeve, all substantially as described. 2nd. In combination with a socket, the vertically sliding sleeve, the lever pivoted



thereon and having sliding connection with the socket at its lower end, and an eccentric having a thumb piece pivoted in the upper end of the sleeve and arranged to lie when down in a recess in the sleeve and flush with or below the surface of the hook, substantially as described.

No. 49,227. Mechanical Movement.

(*Mouvement mécanique.*)



Frank La Morte Salisbury, assignee of John Rau, both of Chicago, Illinois, U.S.A., 15th June, 1895; 6 years.

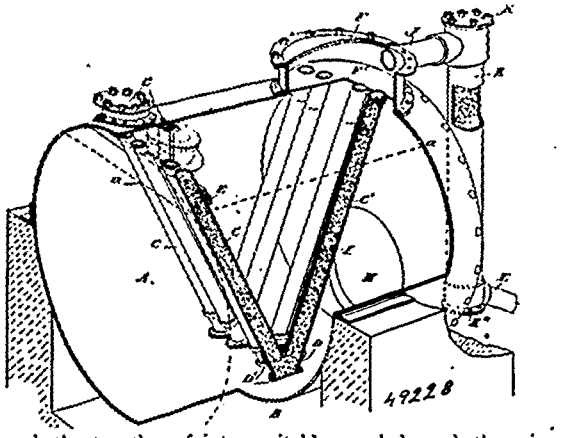
Claim.—A mechanical movement comprising a revolvable shaft with a slide block firmly secured thereto, a non-revolvable circular body fixed around said shaft and in a plane at a right angle and eccentric thereto, a yoke fitted to revolve on the circular body, one end of a crank pivotally attached to one side of the yoke and fitted to the slide block to revolve the shaft and to slide longitudinally upon or within the slide block, whereby the revolution of the crank causes the shaft to revolve and the yoke to revolve around the circular body, and slide the crank alternately centrifugally and then centripetally in each revolution thereof, substantially as shown and described.

No. 49,228. Process of, and Apparatus for Refining Oil. (*Procédé et appareil pour raffiner l'huile.*)

Lawrence George McKam, and Peter Ryan, both of Toronto, Ontario, Canada, 15th June, 1895; 6 years.

Claim. 1st. In refining crude petroleum, the process hereindescribed of removing the sulphur from the oil consisting of passing the vapour arising from the oil in the still through the interstices of a body of pebbly oxide kept at the same degree of temperature as the oil in the still, as and for the purpose specified. 2nd. In the process described, and in combination, the pipes located in the still having their tops extending above the level of the oil, and pebbly oxide located in the pipes and filling the same, and conduits leading from the ends of the pipes to the condensor, as and for the purpose specified. 3rd. In the process described, and in combination, the still, pipes located in the still having their tops extending above the level of the oil, and pebbly litharge located in the pipes and filling the same, and a pipe leading from the ends of the pipes in the still

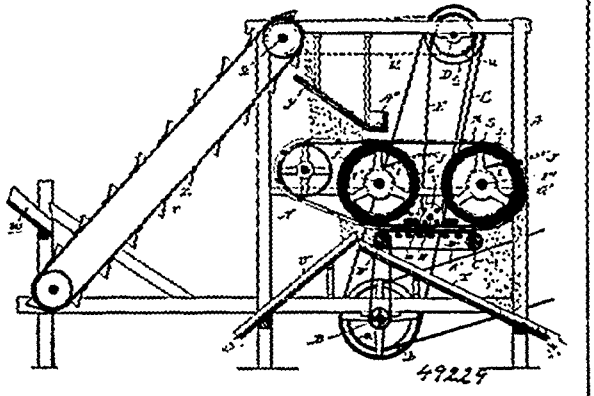
to the condensor such pipes being filled with litharge and located outside the still, as and for the purpose specified. 4th. In a still, in combination with the pipes leading from the bottom of the still



through the top thereof into a suitable man-hole, and other pipes leading from the lower ends of the aforementioned pipes to a point above the level of the oil in the still, and a suitable elbow jointing the lower ends of the two pipes, and a filling of pebbly litharge for the pipes, and an outlet pipe leading to the condensor, as and for the purpose specified. 5th. In a still, in combination with the pipes leading from the bottom of the still through the top thereof into a suitable man-hole, and other pipes leading from the lower ends of the aforementioned pipes to a point above the level of the oil in the still, and a suitable elbow joining the lower ends of the two pipes, a bottom cover D^1, for each opening at the lower ends of the pipes, and a filling of pebbly litharge for the pipes, and an outlet pipe leading to the condensor, as and for the purpose specified. 6th. In a still, in combination, the pipes C, and C^1, filled with litharge as specified, the upper ends of the pipes C, leading above the level of the oil, and the upper ends of the pipes C^1, leading into the man-hole F, the pipe J, leading from the man-hole F, and the pipe K, to the outside of the still filled with litharge, and the pipe L, leading to the condensor, all arranged as and for the purpose specified. 7th. In a still, in combination, the pipe C^1, having the upper ends leading into the completely enclosed man-hole F, the pipes C, leading from the lower end of the pipes C^1, to above the the oil in the still, and the man-holes C, provided with covers, at the top for the purpose specified.

No. 49,229. Magnetic Separator.

(*Séparateur magnétique.*)

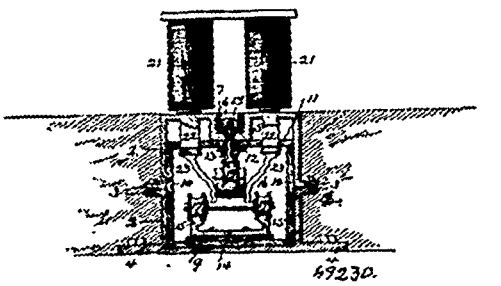


James D. McKinnon, Portland, Oregon, U.S.A., 15th June, 1895; 6 years.

Claim. 1st. In a magnetic separator, an endless magnetized belt, magnets, and an agitator arranged in the magnetic field, substantially as specified. 2nd. In a magnetic separator, the combination with a plurality of magnetized cylinders, a metallic belt connecting the cylinders, a non-metallic belt arranged over the metallic belt, and an agitator for said belts, substantially as specified. 3rd. In a magnetic separator, a plurality of magnetized cylinders connected by an endless belt, a non-metallic belt passing over the metallic belt, a pully receiving the non-metallic belt from the metallic belt and a suitable means for delivering material to be separated, and a suitable means for receiving the separated material, substantially as specified. 4th. A magnetic separator, comprising a suitable frame, two magnetic cylinders supported therein, an endless metallic belt connecting the cylinders, a pulley, a non-metallic belt passing over the metallic belt and also over the pulley, an agitator arranged in the magnetic field, a suitable means of feeding the material to be separated and two chutes disposed in opposite directions and meeting at a point where the belt becomes de-magnetized so as to receive the separated material, substantially as specified. 5th. In a magnetic separator, the combination with a plurality of magnetic cylinders, a metallic belt connecting the cylinders, a non-metallic belt passing over the metallic belt, an agitator arranged in the magnetic field, and a bar or bars of magnetized material arranged in the field so as to keep the belts under magnetic influence, substantially as specified. 6th. In a magnetic separator, a plurality of magnetized cylinders, in combination with a metallic belt connecting the same, a non-metallic belt passing around the metallic belt, and an agitator arranged in the magnetic field, and comprising the skeleton frame composed of a central shaft, the heads thereon, and the rods connecting the heads, substantially as specified. 7th. In a magnetic separator, the combination with a plurality of magnetized cylinders, a metallic belt connecting the cylinders, a non-metallic belt arranged over the metallic belt, an agitator arranged in the magnetic field, chutes to receive the non-metallic and metallic material respectively, and a movable, endless, non-metallic belt interposed between the magnetic belt and one of the chutes to receive metallic material shaken off by the agitator, substantially as specified. 8th. In a magnetic separator, the combination with a movable and magnetized endless belt, an agitator for said belt arranged in the magnetic field, receivers for the separated material, and a non-magnetic endless belt interposed between the magnetized belt and the receivers, substantially as specified. 9th. In a magnetic separator, an endless magnetized belt, an endless belt arranged below the first named belt, and magnets arranged within the lower belt, substantially as specified. 10th. In a magnetic separator, an endless magnetized belt, an endless belt disposed horizontally and interposed between the said magnetized belt and one of the chutes, and magnets arranged in the interposed belt, substantially as specified.

49,230. Closed Conduit Electric Railway.

(*Conduit de chemin de fer électrique.*)



James Francis McLaughlin, Philadelphia, Pennsylvania, U.S.A., 15th June, 1895; 6 years.

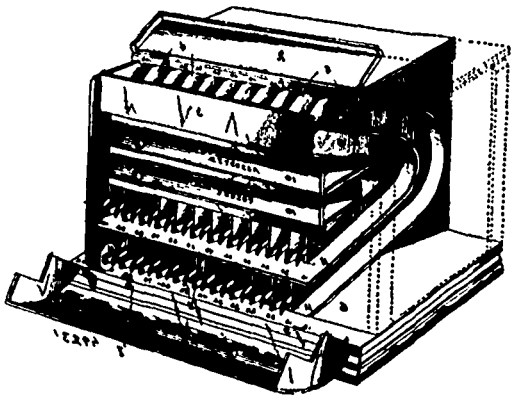
Claim.—1st. An electric railway having a closed conduit provided with a central exposed conductor, and an interior main or supply conductor, a travelling electro-magnet straddling the exposed conductor, and a trolley in the conduit for establishing the circuit between the main and exposed conductors and carrying an armature in operative relation to the magnet, substantially as described. 2nd. In an electric railway, the combination with a closed conduit provided with a central exposed conductor and an interior main or supply conductor, of a travelling electro-magnet straddling the exposed conductor, travelling collectors in contact with the exposed conductor, and a trolley in the conduit for establishing the circuit between the main and exposed conductors, and provided with an armature in operative relation to the magnet, substantially as described. 3rd. In an electric railway having a closed conduit, a travelling electro-magnet above the conduit, a circuit closing trolley in the conduit carrying an armature for the magnet, and lugs or projections in the conduit between the magnet and armature and constituting stationary polar extensions of the magnet, substantially as described. 4th. In an electric railway, the combination with a closed circuit, provided with an interior main conductor, an exterior exposed conductor, and interior lugs projecting downwardly from the top of the conduit, of travelling magnets above the conduit, and a trolley in the conduit for establishing the circuit between the main and exposed conductors, and provided with pivoted armatures for the magnets constituting catches engaging the lugs when the magnet circuit is broken, substantially as described.

No. 49,231. Spool-Cabinet. (*Porte-bobine.*)

Elijah H. Northcot, James W. Legg, both of Marietta, Georgia, and William C. Douglas, Baltimore, Maryland, all in the U.S.A., 17th June, 1895; 6 years.

Claim. 1st. A spool-cabinet provided within it with a series of inclined spool passages, and having partitions arranged at opposite sides of the passages and separating the same, said passages having their outlet ends arranged at the front of the casing, combined with the horizontally-disposed, curved diverging-springs, mounted in pairs at the outer edges of the partitions, and projecting outward

therefrom beyond the spool passages, one spring of each pair extending in front of the adjacent spool passage to engage an end of a spool



and the other spring of said par extending in front of the next passage to engage an end of a spool thereof, whereby a spool is exposed at each passage and held outward beyond the same in convenient position for ready removal, substantially as described. 2nd. In a spool-cabinet, the combination with the casing having its upper end provided with a front opening, and the hinged cover, arranged thereover, of the plurality of sets of spool-passages having their upper ends located at said opening, each set being offset from the other and declining from said point backward to the rear end of the cabinet, thence depending, and finally declining from the back-wall to the front of the cabinet above the base, where the exit ends of the passages are offset, the pairs of curved spring-holders at the ends of the passages and exceeding in length the diameter of the spools to be received by the passages, and the curved glass cover hinged at its lower edge to the front of the base and adapted to be swung up over the exit ends of the passages or down to form a receptacle for the spools, and the set of drawers arranged between the upper and lower branches of said passages, substantially as specified. 3rd. In a spool-cabinet, the combination with the casing having its upper end provided with a front opening, of the plurality of spool-passages having their upper ends located at said opening, and declining from said point backward to the rear end of the cabinet, thence depending, and finally declining from the back-wall to the front of the cabinet above the base, and the curved glass cover hinged at its lower edge to the front of the base in advance of the outer ends of the spool passages and adapted to be swung up over the exit ends of the passages to close the same or swung down to form a receptacle for the spools, substantially as specified.

No. 39,232. Preparation of Ammonium Chromates.

(*Préparation d'ammoniaque chromaté.*)

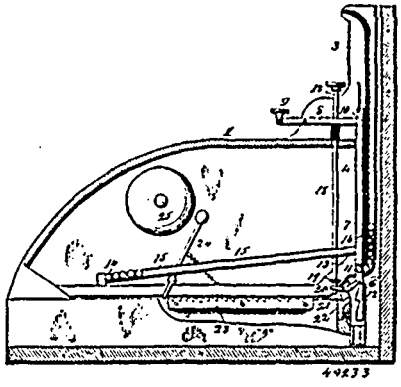
The United States Smokeless Powder Company, assignee of Eric A. Starke, both of San Francisco, California, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. The process of preparing bi-chromates, consisting in mixing a solution of ammonium picrate and a solution of potassium bi-chromate together, and afterwards separating the ammonium bi-chromate solution from the precipitated crystals of potassium picrate, and evaporating the ammonium chromate solution to dryness. 2nd. The method of preparing an explosive compound, consisting in mixing a solution of potassium bi-chromate and ammonium picrate in proper proportions, then evaporating the resultant mixture of ammonium picrate, ammonium bi-chromate and potassium picrate, substantially as described.

No. 49,233. Cash Register. (*Registre de monnaie.*)

Charles A. Powell and Dawson M. Humiston, both of Peree, Illinois, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. In a cash register, the combination with the main frame having key levers therein registering different amounts, a series of vertically disposed tubes containing balls, one for each key lever, vertically disposed registering bars, one for each tube and key lever, the said bars provided with openings therein for the reception of one ball at a time and adapted to be raised by the depression of its key lever the said bars having notches at their lower ends, a till or drawer and locking mechanism therefor engaged by the notches and released by the upward movement of said bars, and an inclined registering table having longitudinal independent grooves upon its upper surface, the said grooves representing respectively amounts corresponding to the number of the key lever, whereby upon the depression of the key lever representing a certain amount, a ball will be elevated from the lower end of the tube corresponding with said lever and deposited upon the registering table in a groove corresponding in amount with said key lever, substantially as and for the purposes specified. 2nd. In a cash register, the combination with a main frame having key levers therein registering different amounts, a series of key bars attached thereto, and an elbow lever engaging notches in the lower ends of said bars and adapted to simultaneously



drop all of the same that are raised and release the drawer without actuating the registering mechanism, and a single key independent of said key levers adapted to actuate said elbow lever, substantially as and for the purpose specified. 3rd. In a cash register, the combination with a main frame having key levers therein registering different amounts and a series of vertically disposed registering bars connected to said levers provided with notches at the lower end thereof, a drawer or till mounted for movement in said frame, and locking mechanism therefor consisting of a pivoted angle lever adapted to fit a notch at the rear end of the said till or drawer, an elbow lever engaging the notches in said bars having a laterally disposed pin engaging the upper arms of said angle lever, whereby upon the upward movement of said bar the said angle lever will be elevated out of engagement with the notches in said drawer and the latter will be released, substantially as and for the purposes specified. 4th. In a cash register, the combination with the main frame having key levers therein registering different amounts, a series of vertically disposed registering bars connected with said key levers and provided with notches at their lower ends, a drawer or till at the lower part of said frame and locking mechanism therefor consisting of a pivoted angle lever adapted to fit a notch at the rear end of said till or drawer, and an elbow lever extending laterally across the frame and adapted to engage the notches in the lower ends of said bars, having a laterally disposed pin which engages the said angle lever upon the upward movement of any one of said bars, whereby upon the depression of one of the key levers the registering mechanism is actuated and the drawer released and an independent key lever engaging the outer end of said elbow lever whereby upon the depression of said independent key lever the drawer mechanism will be released without actuating the registering mechanism, substantially as and for the purpose specified. 5th. In a cash register having a series of registering balls, the combination of elevating bars for said balls, a registering table with grooves therein to receive the balls, keys for operating the bars, a till or drawer having locking mechanism therefor consisting of a pivoted angle lever adapted to fit a notch at the rear end of the said till or drawer, an elbow lever engaging the notches in said bars having a laterally disposed pin engaging the upper ends of said angle lever and a single key engaging said elbow lever, whereby upon the depression of said lever, the till or drawer is released without actuating the registering mechanism, substantially as and for the purposes set forth.

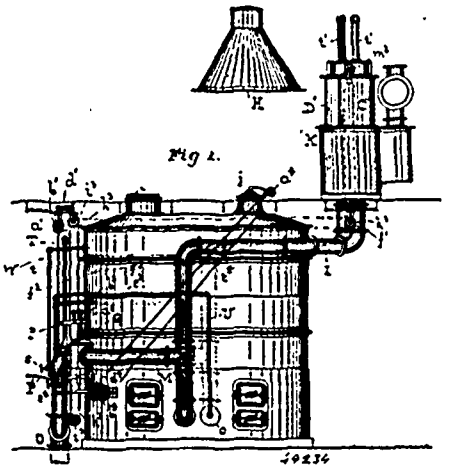
No. 49,234. Apparatus for Manufacturing Gas.

(*Appareil pour fabriquer le gaz.*)

Frederick Mayer, Batimore, Maryland, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. In a gas making apparatus, twin generators having two conduits which extend through the brick-work thereof, and are in communication with blast pipes, the said conduits having ducts which connect them with the generators, a gas pipe leading from each conduit to a hydraulic main, a system of steam pipes whereby steam may be introduced into the said conduits alternately, vertically moving dip valves in the hydraulic main, and mechanism to connect the dip valves whereby on the elevation of one valve the other is depressed or lowered, combined substantially as specified. 2nd. In a gas making apparatus, twin generator having conduits adapted to receive an air-blast situated in the brick-work of the generator, the said conduits having ducts which connect them with the generators, gas pipes leading from the conduits to the hydraulic main, a system of pipes whereby steam may be introduced into the conduits alternately, vertically moving dip valves in the hydraulic main, mechanism to unite the dip valves whereby in the raising of one dip valve the other is lowered, and an indicator or a pointer having a movement in common with the dip valves to indicate their positions in the hydraulic main, combined substantially as specified. 3rd. In a gas making apparatus, twin generators having conduits

adapted to receive an air-blast and in communication with the generators by means of ducts, gas pipes leading from the conduits to a hydraulic main, a system of steam pipes whereby steam may

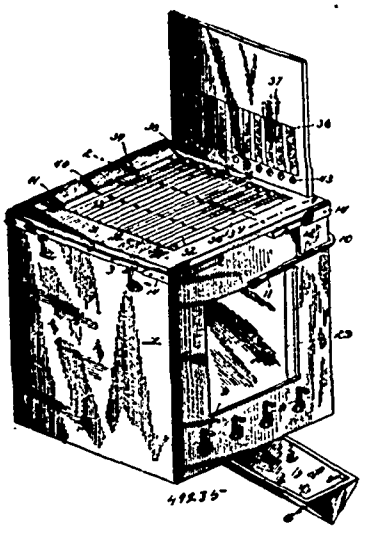


be introduced to the conduits alternately, controlling valves in the steam pipes, dip valves in the hydraulic main, connecting mechanism which unites the dip valves, and whereby the same are moved in opposite directions, a pointer having a movement in common with the dip valves arranged to indicate their positions, and also to indicate which controlling steam valve is to be opened at certain stages of the gas making operation, combined substantially as specified. 4th. In a gas making apparatus, twin generators each having a conduit adapted to receive an air-blast and in communication with the generator, a gas pipe leading from each conduit to a hydraulic main and controlled by a dip valve, and a system of steam pipes, whereby steam may be introduced into the said conduits, and thence through the generators to the said hydraulic main, combined substantially as specified. 5th. In a gas making apparatus, the combination with two generators and a hydrulic main, a gas pipe leading from the bottom of each generator and underneath the fuel therein, to the hydraulic main and through the water in the said main to a point somewhat above the water level, dip valves which at all times cover the gas pipes and are sealed by the water, and mechanism whereby the dip valves are moved together, vertically, but in opposite directions, whereby the relative resistance offered by the two valves to the passage of gas from the two generators may be changed or the resistance equalized, substantially as, and for the purpose specified. 6th. In a gas making apparatus, the combination with two generators and a hydraulic main, a gas pipe leading from the bottom of each generator and underneath the fuel therein to the hydraulic main, and in communication with the air blast pipe, dip valves which at all times cover the gas pipes and are sealed by water, and mechanism whereby the dip valves are moved together, vertically, but in opposite directions, whereby the relative resistance offered by the two valves to the passage of gas from the two generators may be changed or the resistance equalized, substantially as, and for the purpose specified. 7th. In a gas making apparatus, the combination with two generators and a hydraulic main, a gas pipe leading from the bottom of each generator and underneath the fuel therein to the hydraulic main, and through the water in the main to a point somewhat above the water line, two dip valves having actuating racks situated in reverse positions, a spindle, and pinions on the spindle in engagement with the said racks, whereby in the revolution of the spindle, one valve is raised and the other lowered, substantially as, and for the purpose specified.

No. 49,235. Ballot Box. (*Boîte à scrutin.*)

Henry Herman Nilbur, Ferndale, California, U.S.A., 17th June 1895; 6 years.

Claim.—1st. A ballot-box having a series of compartments therein, a removable tray or series thereof having holes or openings therein coincident with said compartments and adapted to receive ball-ballots, and means for releasing said ball-ballots, substantially as described. 2nd. A ballot-box having a series of removable compartments with passage-ways therethrough, a removable tray or series thereof having holes or openings therein coincident with said passage-ways for receiving ball-ballots, means for releasing said ball-ballots, and means for registering votes as cast, substantially as described. 3rd. A ballot-box having a series of compartments with passage-ways therethrough, a removable tray having holes or openings therein corresponding to said passage-ways and designed to receive ball-ballots and a movable frame beneath said holes or openings, substantially as described. 4th. A ballot-box having a series of compartments with passage-ways therethrough, a removable tray



having holes or openings therein corresponding to said passage-ways, a movable frame beneath said holes or openings, and a lever fulcrumed on said ballot-box and designed to operate said frames, substantially as described. 5th. The combination with a ballot-box having a series of compartments and passage-ways therethrough, of a tray having holes or openings corresponding to said passage-ways, a frame loosely attached to said tray and having cross-bars beneath said holes or openings, and a spring-pressed lever fulcrumed on said box and having arms engaging said frame, substantially as described. 6th. The combination with a ballot-box having a series of separate passageways, of a tray having a series of holes or openings, slides between corresponding holes or openings, and a movable frame beneath said holes or openings of said tray, substantially as described. 7th. The combination of the box having separate passage-ways provided with inclined bottoms and discharge holes at the ends thereof, the tray having holes or openings corresponding to said passageways, slides having cross-bars normally held beneath said holes or openings, and means for operating the same, substantially as described. 8th. A ballot-box having a removable compartment supplied with a passage-way therethrough, a vertical screw-shaft therein with a lower spiral of increased dimension, a scale, and an index hand adjustably mounted on said vertical screw-shaft, said spiral being engaged and operated by a ball-ballot, substantially as described. 9th. In a ballot-box, the combination of a compartment having a passage-way therethrough for the reception of a ball-ballot, a registering mechanism comprising a lower spiral having a straight portion at the lower end thereof, and a lock engaging the said lower straight portion of the said spiral, substantially as described. 10th. A removable tray having a series of openings therein and a box upon which said tray is adapted to be placed having a series of removable compartments with passage-ways therethrough adapted to coincide with the openings of the tray, substantially as described. 11th. A tray for ballot-boxes having a series of grooves and slides therein and rows of openings extending longitudinally of said tray and between the slides and the adjacent terminations of the grooves, and means for opening and closing the said rows of openings, substantially as described. 12th. In a ballot-box, the combination of a box proper having a sight-opening in one end thereof, a series of compartments with registering mechanism therein having open sides adapted to be exposed to said sight-opening, and a slide for covering said sight-opening, substantially as described. 13th. In a ballot-box, the combination of a box proper having a series of removable compartments therein with passage-ways extending therethrough, registering mechanism in said compartments, a lid or cover for said box having a series of openings therein, a removable tray with slides and openings therein and adapted to receive ball-ballots, a slide-plate on the under side of said tray and lever mechanism adapted to operate said slide-plate to release the ball ballots and permit them to pass through the compartments, substantially as described.

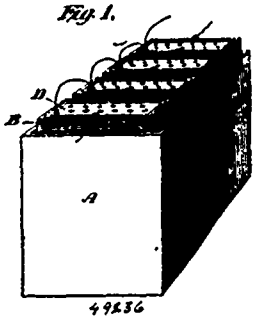
No. 49,236. Storage Battery. (*Batterie secondaire.*)

George A. Washburn, Cleveland, Ohio, U.S.A., 17th June, 1895; 6 years.

Claim. In a *secondary battery, the combination, substantially as* set forth, of perforated metallic electrodes separated by an inter-

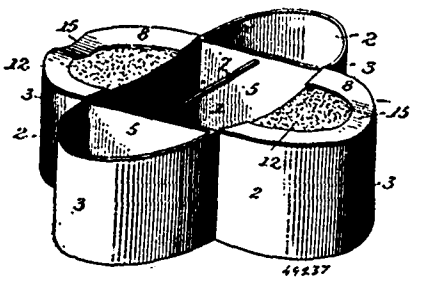
posed porous diaphragm, and insoluble active material permeated

Fig 1.



by an electrolytic solution placed between and held in position by said diaphragm and electrodes.

No. 49,237. Smokers' Tray. (*Plateau pour fumeur.*)



William H. O'Dwyer, New York, State of New York, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. A tray or receptacle for the purposes named, the same comprising a number of compartments one or more of which is provided with a lid or cover, a scratching surface, and a cigar rest, substantially as described. 2nd. A tray or receptacle for the purposes named, the same comprising a central or main compartment, and outer compartments bounding the sides thereof, substantially as described. 3rd. A tray or receptacle for the purposes named, the same comprising a central or main compartment, and outer compartments bounding the sides thereof, one or more of which latter being provided with a dished or concaved cover constituting a rest for cigars, substantially as described. 4th. A tray or receptacle for the purposes named, the same comprising a central or main compartment, and outer compartments bounding the sides thereof, one or more of which latter being provided with a dished or curved cover, and having a removable match scratching pad, substantially as described. 5th. A tray or receptacle for the purposes named, the same comprising a central or main compartment having the cross-rod or knock-off 7, and outer compartments bounding the sides of said main compartment, one or more of which side compartments being provided with a dished or concaved cover, inwardly projecting flanges supporting the latter, and a removable scratching pad, substantially as described. 6th. A tray or receptacle for the purposes named, the same comprising a suitable number of compartments joined together, the end wall of one of the compartments being formed of a double curve and the sides thereof being notched, and the rest or support A, roughened on its upper surface and curved or concaved, all substantially as shown and for the purposes set forth.

No. 49,238. Pills or Tablets. (*Pilules.*)

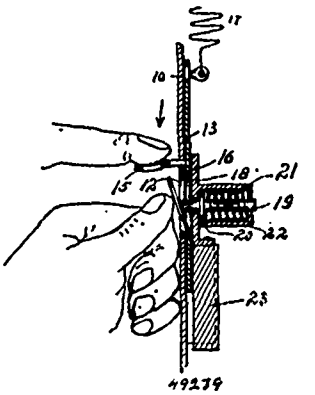
Parker J. Noyes, Lancaster, New Hampshire, U.S.A., 17th June, 1895; 6 years.

Claim 1st. A pill or tablet provided with a coating of effervescent material. 2nd. A pill or tablet having a non-effervescing body provided with an effervescent coating.

No. 49,239. Means for Protecting Receiving Openings of Coin-Controlled Machines. (*Moyen de protéger les ouvertures des machines actionnées par une pièce de monnaie.*)

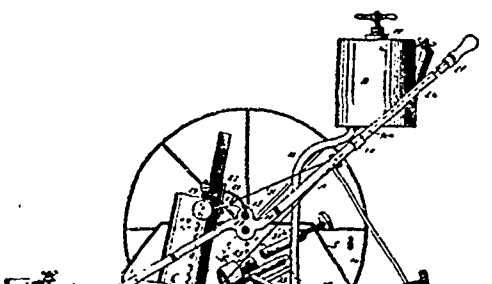
Almy LeGrand Peirce, Grand Rapids, Michigan, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. In a device to protect the receiving opening of coin-controlled vending-machines, the combination of the outer case having a circular opening, a reciprocating slide with a similar opening back of the case, and open at one side to permit the coin to escape, and a magnet back of the slide. 2nd. In a device to protect the receiving opening of coin-controlled vending-machines, the com-



bination of the outer case having a circular opening, a reciprocating slide with a similar opening back of the case, and open at one side to permit the coin to pass out, and a spring-actuated ejector back of the slide and projecting normally within the opening therein. 3rd. In a device to protect the receiving opening of coin-controlled vending-machines, the combination of the outer case having a circular opening, a reciprocating slide with a similar opening back of the case, which opening extends at one side to the edge of the slide, a housing 18 to guide the latter, an outlet-opening in this housing which receives the coin from the slide, and a magnet back of the latter. 4th. In a device to protect the receiving opening of coin-controlled vending-machines, the combination of the outer case having a circular opening, a reciprocating slide with a similar opening back of the case, which opening at one side extends to the edge of the slide, a housing 18 to guide the latter, an outlet opening in this housing which receives the coin from the slide, and a spring actuated ejector carried by it and projecting through this housing into the opening in the slide. 5th. In a device to protect the receiving opening of coin-controlled vending-machines, the combination of the outer case having a circular opening, a reciprocating slide with a similar opening back of the case, which opening at one side extends to the edge of the slide to permit the coin to pass out, a spring-actuated ejector back of the slide and projecting normally within the opening therein, and a magnet below the ejector. 6th. In a device to protect the receiving opening of coin-controlled vending-machines, the combination of the outer case having a circular opening, a reciprocating slide with a similar opening back of the case, which opening at one side extends to the edge of the slide, a housing 18 to guide the latter, an outlet-opening in this housing which receives the coin from the slide, a spring-actuated ejector carried by said housing and projecting through it within the opening in the slide and a magnet below the ejector and in line with the inside of the housing.

No. 49,240. Soldering Machine. (*Appareil à souder.*)



Charles Lewis Olmstead, Big Timber, Montana, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. In a soldering machine, the combination with a solder receptacle, a soldering iron located at the rear of the said receptacle and a lead wheel located in advance of the solder receptacle of an acid receptacle located in advance of the lead wheel, and means substantially as shown and described, for heating the solder receptacle and the soldering iron, and regulating the outlets of the solder and acid receptacles, as and for the purpose specified. 2nd. In a soldering machine, the combination with a wheel supported frame, a solder receptacle having a forward inclination, carried by the frame

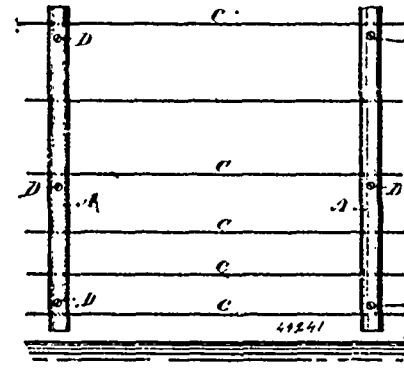
a valve located in the solder receptacle, controlling its outlet, and a soldering iron located at the rear of the solder receptacle, said iron being constructed in sections independent of each other, of an acid receptacle located in advance of the solder receptacle, a weighted valve operating to close the outlet for the acid receptacle, a handle by means of which the machine is guided, levers carried by the said handle, connections between the said levers, the valve of the solder receptacle and the support for the soldering iron, and means, substantially as shown and described, for heating the soldering iron and solder receptacle, as and for the purpose set forth. 3rd. In a soldering machine, the combination with a wheel supported frame, a solder receptacle having an inclination in a predetermined direction and an outlet at its lower portion, a valve controlling the said outlet a soldering iron constructed in two independent sections, the iron being provided with a conical chamber extending through from end to end, and a pivoted support for the sections of the iron, of a peripherally grooved lead or guide wheel located in advance of the solder receptacle, an acid receptacle located in advance of the lead wheel, a valve controlling the outlet of the said receptacle and operated by the lead wheel, burners one of which is located adjacent to the solder receptacle, the other burner extending into the chamber of the soldering iron, and hand levers located upon the frame of the machine, connected with the valve of the solder receptacle, and a support for the soldering iron, all combined for operation, substantially as herein shown and described. 4th. A soldering iron comprising two sections arranged arranged adjacent to each other, and pivotally connected by means of a pivot that is essentially perpendicular to the opposed inner faces of the sections, whereby the sections will be allowed a pivotal movement to bring their operating or bottom faces out of registry without altering the distance between the said opposed faces, substantially as described. 5th. The combination with the acid receptacle having a valve-controlled outlet, of a frame pivotally connected to the said receptacle and operatively connected to the valve thereof, one end of the frame being weighted to close the valve, and the said weighted end extending downward to engage the supporting surface and cause the valve to be opened, substantially as described. 6th. The combination with the acid receptacle having an outlet, of a pivoted frame, a valve connected thereto and adapted to control the outlet of the said receptacle, and a lead wheel journalled in the frame and adapted when raised off its supporting surface, to actuate said frame, whereby the valve in the outlet of the acid receptacle is closed, substantially as set forth. 7th. In a soldering machine, the combination, with a frame, a solder receptacle carried by the frame and provided with a valve controlling its outlet, and a burner whereby the receptacle is heated, of a soldering iron comprising two sections, each section being provided with a semi-circular substantially conically shaped chamber, a supporting frame pivotally connected with the frame of the machine and having independent attachment to each section of the soldering iron, a burner extending into the chambers of the sections, whereby the material to be soldered is heated in advance of its reception of the solder, and means, substantially as shown and described, for operating the valve of the solder receptacle and elevating the soldering iron, as and for the purpose set forth. 8th. In a soldering machine, the combination with a wheel supported frame, a rock shaft journaled in the frame, a solder receptacle carried by the frame and provided with a needle valve, an arm projected from the rock shaft and connected with said valve, and a weighted arm independent of the valve and connected with the said rock shaft, of a soldering iron located at the rear of the solder receptacle and provided with a conical chamber extending through it from end to end, the said chamber being reduced at its forward end, a supporting frame pivotally connected with the main frame and with the soldering iron, an acid receptacle carried by the main frame in advance of the solder receptacle, the acid receptacle being provided with an automatically operated valve for the outlet therefrom, a burner extending within the chamber of the soldering iron, a turner located adjacent to the lower portion of one face of the solder receptacle, a handle connected with the frame, and levers carried by said handle, one of the levers being in connection with the rock shaft and the other with the soldering iron, as and for the purpose specified. 9th. A soldering machine having a lead wheel and a soldering iron provided with aligned grooves, substantially as and for the purposes set forth. 10th. A soldering iron, comprising two sections movably mounted relatively to one another, said iron having in one of its faces a longitudinal groove, one half of said groove being formed in each of the sections, substantially as set forth. 11th. A soldering machine, provided with a solder receptacle, a soldering iron, means for heating the same, and a shield covering the said receptacle, iron and heating device, substantially as described.

No. 49,241. Wire Fence-Stay. (*Renfort pour clôtures de fil de fer.*)

Edward Litt, Rostock, Ontario, Canada, 17th June, 1895; 6 years.

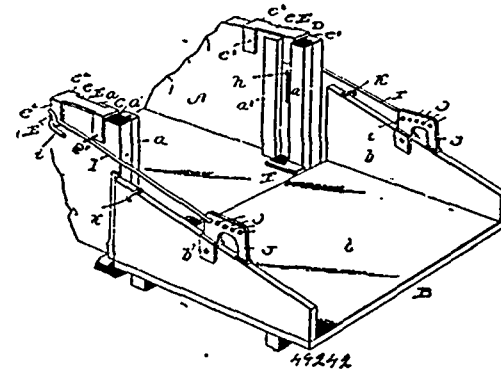
Claim.—A wire fence-stay, comprising two metallic bars, A, B, one having threaded holes and the other holes to correspond, one or both of said bars grooved transversely to receive horizontal fence-wires and connected by threaded bolts D, screwing into one of said

Fig.



bars, for clamping said wire between the bars when placed vertically and screwing the bolts, as described and shown.

No. 49,242. Combined end Gate and Shovelling board for Wagon Bodies. (*Arrière-panneau de tombereau et pelle combinés.*)

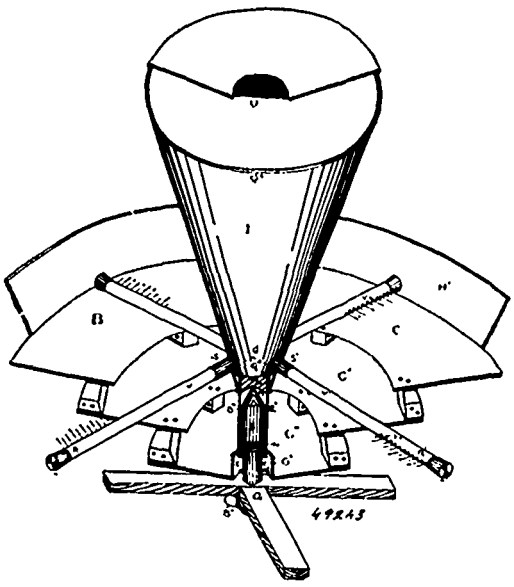


Samuel Fackler, Astoria, Illinois, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. The combination with a wagon body, of vertical hangers each provided at its upper part with a clamp, E, and, at its lower part, with a rearwardly extending foot, F, and an end gate hung to the feet, F, of said hangers, substantially as and for the purposes described. 2nd. The combination with a wagon body, and cleats thereon, of vertical hangers each having its shank fitted between said cleats, each hanger provided at its upper end with a laterally-extending clamp, E, and further provided, at the lower end, with a rearwardly extending foot, F, and an end gate hung to said feet of the hangers, substantially as and for the purposes described. 3rd. The vertical hangers provided with the rearwardly extending feet, F, which are formed with pintle-receiving loops, in combination with a wagon body over the rear edge of which the feet F are fitted, an end gate, and hinged plates provided with pintles which are fitted in the loops of said hanger-feet, substantially as and for the purposes described. 4th. The combination with a wagon body, and an end gate, of the perforated plate, J, attached to said end gate, the fixed projection E on the wagon body, the catch, E, fastened to the end gate at one side of the plate, J, and the rod, I, adjustably and pivotally attached to the plate, J, and adapted, when the gate is closed, to be sprung around the catch, K, substantially as and for the purposes described. 5th. The combination with a body, of hangers provided with feet and with clamps which carry the projections E^1, a gate hinged to the feet and provided with catches, K, and rods attached to the gate and adapted to engage the projections, E^1, and the catches, K, substantially as and for the purposes described. 6th. An end gate hanger comprising a vertical shank, a foot, F, which extends beyond the line of the shank, and clamp, E, arranged at one side of the shank, substantially as described, for the purposes set forth. 7th. An extensible hanger for end gates made in sections which are adjustably held together, one section provided with a clamp, and the other section having a bearing-foot, substantially as and for the purposes described. 8th. The combination with a body having vertical retainers, of extensible hangers confined between said retainers and each hanger having a clamp at its upper end and a bearing foot at the lower end, and a gate hinged to said feet, substantially as and for the purposes described. 9th. An end gate hanger provided with an adjustable heel, for the purposes de-

scribed. 10th. An end gate hanger having a foot at the lower end of its vertical shank, and an adjustable heel carried by said foot, for the purposes described, substantially as set forth.

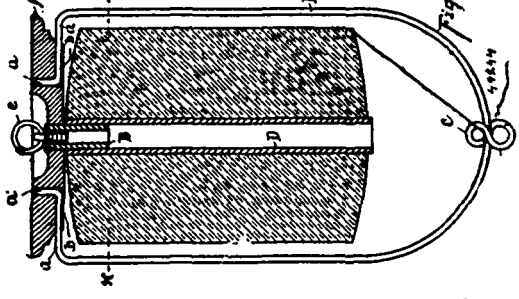
No. 49,243. Aerator for Milk. (*Aérateur à lait.*)



Robert Wherry Knowlton, Quebec, Canada, assignee of Thomas Asa Knowlton, Boston, Massachusetts, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. In an aerator, the combination of the revolving holder I, adapted to be secured to the cylinder bearing a^1, supported by the pivot rod B to rotate thereon, having tubes S, S in its side, and bottom convex in shape, substantially as described. 2nd. In an aerator, the combination of the receiver B^1, having steps C^1, C^{11}, C^{111}, arranged so as to admit air to circulate under them through the openings F, F^1, the outer rim H^1, and the inner rim G^{11}, with the openings E, E^1, substantially as described. 3rd. In an aerator, the combination of the cylinder-bearing a^1, revolving on the pivot point M, around the rod B, by means of the ball-bearing G, G^1, the rod B being secured perpendicularly in the frame *a*, substantially as described. 4th. In an aerator, the combination of the tubes V. V^1, fitted to the tubes S, S, secured to the holder I, openings in their sides p^1, p^{11}, and their outer ends closed, substantially as described. 5th. In combination, an aerator having a concave strainer adapted to a revolving holder, secured to a pivot and ball-bearing enclosed by a three or more step-receiver and secured to a frame, substantially as described.

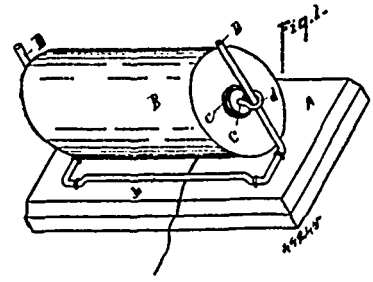
No. 49,244. Twine Holder. (*Porte-ficelle.*)



Benjamin W. Putnam and James J. Hooker, both of Cincinnati, Ohio, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. A twine holder composed of the base, a spool supporting stud, a yoke frame springing from opposite sides of the base adapted to span the spool of twine, said frame being provided with a delivery eye in the end opposite the base, and centrally over the spool axis, substantially as specified. 2nd. A twine holder composed substantially of a base, a spool supporting stud, a detachable tube upon which the twine is wound, adapted to engage with said stud, a yoke frame springing from opposite sides of the base, spanning the spool of twine and provided with a delivery eye centrally over the axis of the spool, and means for suspending the holder either end uppermost, substantially as specified. 3rd A twine holder composed of a base, a yoke frame springing from said base, and spanning a spool and twine, and provided with a delivery eye *c*, and a suspending eye *d*, formed by bending of the wire forming the yoke frame, substantially as specified. 4th. A twine holder composed of the cylindrical tube D, in combination with the frame, provided with the supporting stud attached to the base thereof, a yoke frame springing from the base and spanning the spool and twine, provided with a delivery eye centrally over the axis of the spool, and the suspending ring attached to the base of the holder, substantially as specified.

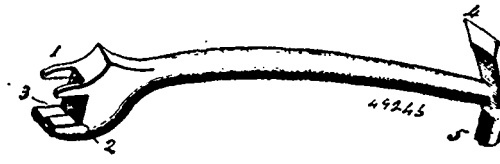
No. 49,245. Twine Holder. (*Porte-ficelle.*)



Benjamin W. Putnam and James J. Hooker, both of Cincinnati, Ohio, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. A twine holder composed of a base, a sleeve, and detachable axis provided with means for engaging loosely over the supports at the end of the twine roll whereby the surface of the roll is kept in frictional engagement with the base, substantially as specified. 2nd. A twine holder consisting of the base A, axis C, provided with eyes *d*, engaging with the standard upon the base and the elevated bale forming a race for the free end of the twine, substantially as specified. 3rd. A twine holder composed of the base A, axis C, sleeve c, the eyes *d*, the supports B, bale *b*, elevated above the base, substantially as specified.

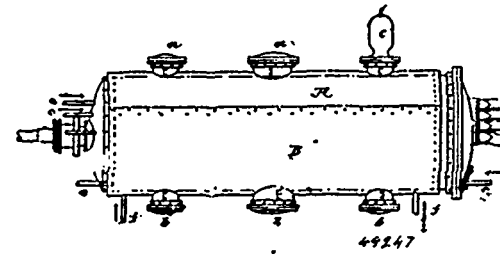
No. 49,246. Railroad Tool. (*Outil de chemin de fer.*)



Bernard Molloy, Golconda, Nevada, U.S.A., 17th June, 1895; 6 years.

Claim.—The herein described tool, having a shank with a head at one end provided with a pair of parallel arms with an intermediate throat, and an adjacent heel to form a claw-bar, a ledge or extension parallel to said arms, provided with stops to form wrenches for nuts of different sizes, substantially as and for the purpose described.

No. 49,247. Method of Utilizing Garbage and Other Waste Products. (*Méthode d'utiliser les tripailles, etc.*)

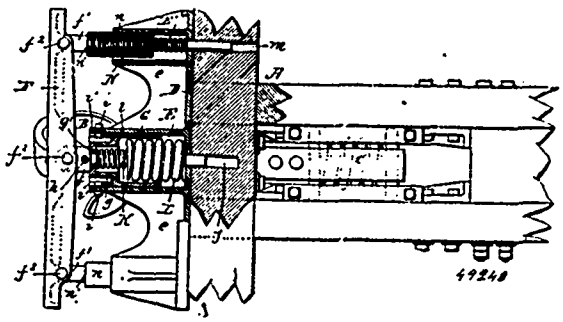


Nathaniel Barrett Powter, New York, State of New York, U.S.A., 17th June, 1895; 6 years.

Claim.—1st. The above described method of utilizing garbage and other waste products, which consists, first, in reducing the same to a condition of sludge by steaming or boiling in the presence of sulphuric acid and removing the grease therefrom; second, mixing the sludge with a proper amount of insoluble alumina phosphate; and lastly, subjecting the same to a simultaneous stirring and avapouration in vacuum, until the same is converted into a dry, granular mass, substantially as described and for the purpose specified. 2nd. The above described method of utilizing garbage and other waste products, which consists, first, in reducing the same to

a condition of sludge by steaming or boiling and removing the grease therefrom; second mixing the sludge with insoluble alumina phosphate; and lastly, subjecting the same to a simultaneous stirring and evapouration in vacuum, until the same is converted into a dry, granular mass, substantially as described and for the purposes specified. 3rd. The above described method of utilizing garbage and other waste products, which consists, first, in reducing the same to a condition of sludge by steaming or boiling in the presence of sulphuric acid and removing the grease therefrom; second, mixing the sludge with a proper amount of phosphate of lime or other suitable phosphate; and lastly, subjecting the same to a simultaneous stirring and evapourating in vacuum, until the same is converted into a dry, granular mass, substantially as described and for the purposes specified. 4th. The above described method of utilizing garbage and other waste products, which consists, first, in reducing the same to a condition of sludge by steaming or boiling and removing the grease therefrom, second, mixing the sludge with phosphate of lime or other suitable phosphate; and lastly, subjecting the same to a simultaneous stirring and evapourating in vacuum, until the same is converted into a dry, granular mass, substantially as described and for the purposes specified.

No. 49,248. Freight Car Buffer. (*Tampon de chars.*)



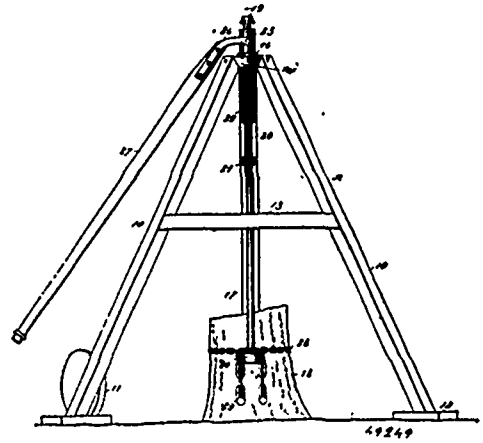
The Gould Coupler Company, New York, assignee of Willard Fillmore Richards, Buffalo, both in New York, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. In a car buffer, the combination with the base plate or bracket secured to the end of the car and having a forwardly projecting socket, of a follower guided in said socket, a buffer spring or springs arranged in said socket, and a buffer having a supporting stem attached to said follower, substantially as set forth. 2nd. In a car buffer, the combination with the base plate or bracket secured to the end of the car and having a forwardly projecting socket, of a follower guided in said socket and provided in its front portion with a reduced portion or pocket closed at its front end and forming a shoulder within the follower, a heavy spring arranged in said socket and adapted to bear at its front end against the shoulder of the pocket, a light spring bearing against the closed front end of said pocket, and a buffer carried by said follower, substantially as set forth. 3rd. In a car buffer, the combination with a base plate or bracket secured to the end of the car and provided with a forwardly projecting socket, of a follower guided in said socket, and provided at its front end with perforated ears, a buffer having a supporting stem passing through said socket, a pin or key passing through the the buffer stem and the perforated ears of the follower, and a buffer spring or springs arranged in said socket, substantially as set forth. 4th. In a car buffer, the combination with a base plate, secured to the end of the car and having forwardly projecting central and side sockets, of a follower arranged in the central socket and carrying a stem, a buffer pivoted centrally to said stem, springs arranged in said socket, side stems pivoted to the end portions of the buffer and passing through said side sockets, and springs applied to said side stems and arranged in the side sockets, substantially as set forth.

No. 49,249. Stump Puller. (*Arrache-souche.*)

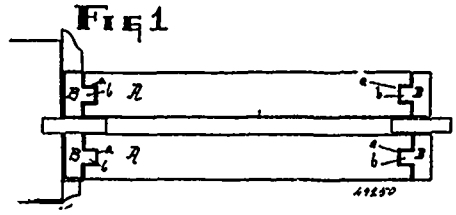
The Montague Iron Works Company, assignee of James D. Wilson, both of Montague, Michigan, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. In a stump puller, the combination with a support and a nut mounted to turn thereon, of a short hollow shaft exteriorly and interiorly threaded and upon which the nut is mounted, and a lifting shaft projecting through the hollow shaft and having a thread of finer pitch than the exterior of the said hollow shaft, said lifting shaft being adapted to be locked to the short hollow shaft when it has been carried up a predetermined distance, whereby when the nut is first turned, the lifting shaft will travel slowly up through the hollow shaft and after it has been moved a given distance, both it and the hollow shaft will move upward at a greater rate of speed, as and for the purpose set forth. 2nd. In a stump puller, the combination with a support, a lifting shaft mounted upon the said support and provided with an exteriorly threaded surface, a hollow shaft interiorly threaded to receive the threaded surface of the lifting shaft, the said hollow shaft having an exterior thread of coarser pitch than its interior thread, a clutch adjustably secured upon the lifting shaft and adapted for locking engagement with the hollow shaft, and a nut supported upon the frame and



mounted to turn upon the exterior of the said hollow shaft, substantially as described. 3rd. In a stump puller, the combination, with a support, of a lifting shaft mounted upon said support and provided with an exteriorly threaded surface, a hollow shaft interiorly threaded to receive the threaded surface of the lifting shaft, the said hollow shaft having an exterior thread of coarser pitch than its interior thread, a clutch adjustably secured upon the lifting shaft and adapted for locking engagement with the hollow shaft, a nut supported upon the frame and mounted to turn upon the exterior of the said hollow shaft, arms projected from the said nut, a lever or sweep attached to the said arms, and means substantially as described, for permitting the swinging movement of the lifting shaft, as and for the purpose set forth.

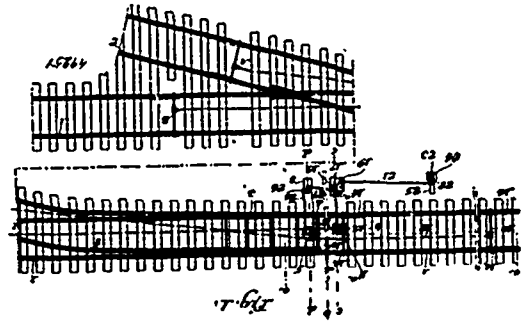
No. 49,250. Window and Window Frame. (*Fenêtre et cadre de fenêtre.*)



Joseph R. Tanre, Assignee of Samuel C. P. Moffett, both of Waterloo, Quebec, Canada, 18th June, 1895; 6 years.

Claim.—1st. The herein described movable stile having a square tongue to fit a corresponding channel in the sash and a notch c^1 to receive the catch c^2, substantially as and for the purposes set forth. 2nd. The stop a^1 combined with the groove a, of the sash A, operated through the sash cord and weight to engage and move with the sash, substantially as set forth. 3rd. The catch c, engaging through the notch c^1, of the stile B, to hold it down while the sash is being removed as set forth.

No. 49,251. Railway Switch. (*Aiguille de chemin de fer.*)

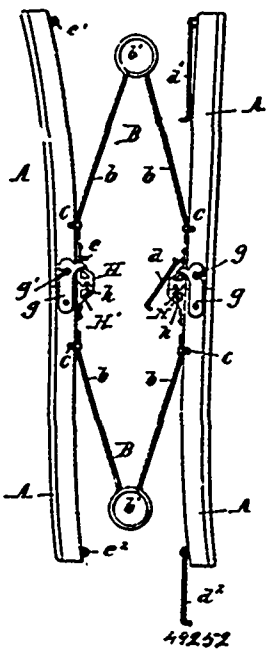


William Bartram Lansdowne, Assignee, of John Morvey, Deal Fernwood, both of Pennsylvania, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. The combination with the main trackway, the siding

and the switch, of a main switch-controlling mechanism arranged in the main trackway beyond the switch, connected with the latter and constructed to be actuated by the passing train to close the switch, a supplemental normally inactive switch-controlling mechanism arranged in the main trackway intermediate the switch and the main controlling mechanism, operating devices for said supplemental mechanism located intermediate the latter and the main controlling mechanism, and connections between said operating devices and the supplemental mechanism, said operating devices being constructed to be operated by the train under the circumstances stated to connect the supplemental mechanism operatively with the switch, and said latter mechanism being constructed to be actuated thereupon by the passing train to open the switch, substantially as described. 2nd. The combination with the main trackway, the siding and the switch, of a set of switch-controlling mechanism arranged in the main trackway forward of the switch, a set arranged therein rearwardly of the switch, and a set arranged in the siding (or branch track) a rotable head eccentrically connected with the switch and eccentrically connected with each set of switch-controlling mechanism, said mechanism being constructed to be actuated by the passing train at predetermined intervals, a supplemental normally-inactive switch-controlling mechanism arranged in the main trackway intermediate the forward controlling mechanism and the switch, operating devices for said supplemental mechanism located intermediate the latter and the forward controlling mechanism, connections between said operating devices and the supplemental mechanism, said operating devices being constructed to be actuated by the train under the circumstances recited to connect the supplemental mechanism operatively with the switch, the said latter mechanism being constructed to be actuated thereupon by the passing train to open the switch, together with lever and link connections between the said head and the said operating devices constructed to release the operative connection of the supplemental mechanism with the switch under the circumstances stated, substantially as described. 3rd. The combination with the main trackway, the siding and the switch, of a mechanism connected with the switch and adapted to be actuated to open or close the latter, an intermediate or supplemental switch-controlling mechanism comprising a rock-shaft, arms thereon, levers adapted to actuate said rock-shaft, a head eccentrically connected with the switch, and a rod connected with said head and extended to the said crank-arm, and means for engaging said rod with the latter and disengaging it therefrom, at predetermined intervals, substantially as described. 4th. The combination with the trackway and the switch rails, of a supplemetal switch-controlling mechanism, comprising a rock-shaft, arms thereon, levers adapted to actuate said arms, a depending crank-arm on said shaft, a head eccentrically connected with the switch rails, a rod connected with said head and extended to and below the crank-arm, a reciprocative cam bar adapted to act upon said rod to engage it with the crank-arm, a lever with which said cam bar is connected, and means for operating said lever at predetermined intervals, substantially as described.

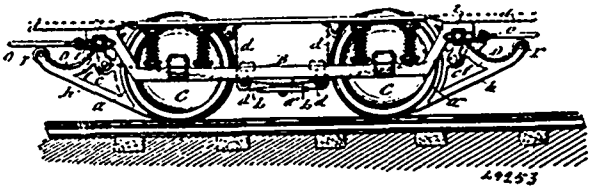
No. 49,252. Pantaloon Stretcher.
(*Tendeur pour pantalons.*)



Thomas William Grant and Peter Swanson, Buffalo, New York, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. The combination with a pair of longitudinal stretcher bars arranged to extend from end to end of the pantaloons leg, of springs connecting said bars and each composed of a pair of arms or branches having their outer portions connected by a coil and their inner ends secured to the stretcher bars, and hooks or links whereby said bars are retained in their contracted position, substantially as set forth. 2nd. The combination with the hinged bars of the pantaloons stretcher and the expanding devices, of braces arranged to extend across the joints of the bars on the inner sides thereof, substantially as set forth. 3rd. The combination with the hinged bars of the pantaloons stretcher and the expanding springs, of a brace arranged at the joint of each bar on the inner side thereof and composed of toothed plates secured respectively to the sections of the bar and adapted to interlock with each other in the unfolded position of the bar, substantially as set forth.

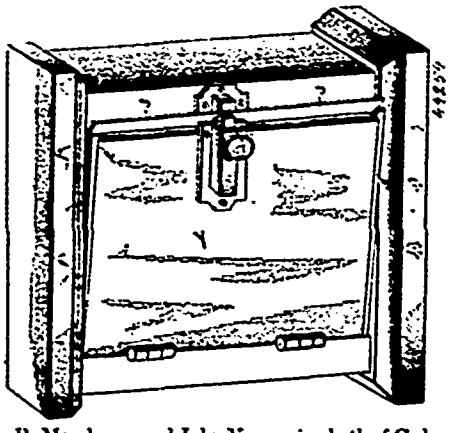
No. 49,253. Car-Brake and Fender Combined.
(*Frein et tampon de chars combinés.*)



Joseph Casper Walier, Syracuse, New York, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. The combination with a car-brake, of a fender carried on said brake to move to a forwardly projecting position simultaneously with the setting of the brake to stop the motion of the car, as set forth. 2nd. The combination, with a car-truck, of a brake suspended from said truck by vertically yielding hangers and a fender carried by said brake to its forwardly projecting position, simultaneously with the setting of the brake, as set forth. 3rd. The combination, with a car, of a combined wheel and-truck-brake consisting of segmental brake-shoes engaging the treads of the wheels, and straight brake-shoes extending from the segmental shoes and engaging the track simultaneously with the engagement of said segmental shoes, as set forth. 4th. The combination, with a car-truck, and wheel-brake, of brackets extending forward from said brake, and a fender spanning the space between said brackets and supported on said brakes and brackets, as set forth. 5th. The combination, with a car-truck, and hangers, of hanger supports having movable couplings for engaging and releasing the hangers, and track-brakes attached to said hangers, as set forth. 6th. The combination, with a car-truck and brake-hangers, of hanger-supports having movable couplings for engaging and releasing the hangers, track-brakes attached to said hangers and a fender attached to said track-brakes, as set forth. 7th. The combination, with a car-truck and brake-hangers, of hanger-supports having movable couplings for engaging and releasing the hangers, wheel-brakes attached to said hangers, track-brakes attached to the wheel-brakes, and a fender attached to said brakes, as set forth and shown. 8th. The combination, with a track-brake, of track rollers secured to the front end of the brake and sustained with its tread above and in proximity to the plane of the track-bearing of the brake, as and for the purpose set forth.

No. 49,254. Weather Strip. (*Bourrelet de porte.*)

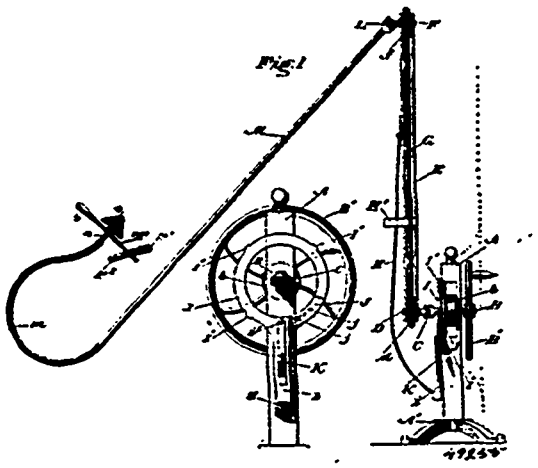


Alexander P. Morehouse and John Young, jr., both of Cedar Bluffs, Nebraska, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. The combination with a door, window, or the like, provided at its edges with a longitudinal groove and bevelled or cut

away at the outer side of the groove to form a space, and an elastic weather strip having its inner edge seated in the groove, and adapted to be partially received in the recess or space formed by the cut away portion, substantially as described. 2nd. A weather strip, comprising a strip of elastic material, and a sheet metal binding strip folded longitudinally to form two sides and receiving the elastic strip between the latter, and provided at each side with indentations located at intervals, those at one side being arranged between those of the other side, said indentations being formed by a flat ended tool, substantially as described.

No. 49,255. Farrier's Tool. (*Outil de maréchal.*)



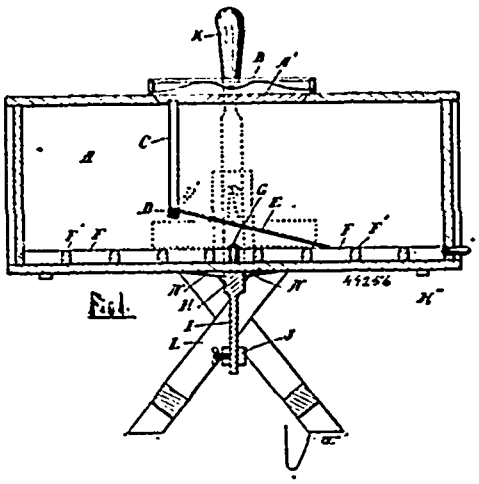
Alvia Byron Smith, Middlebury, Vermont, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. The combination of a driving shaft, a frame, a stub shaft journalled in said frame, and a universal joint connection between said stub shaft and driving shaft, said joint also constituting a connection between the frame and driving shaft, and suspending the former on the latter, a second stub shaft journalled in the outer end of the frame, and means for driving the latter stub shaft from the former, with a tool carrying shaft mounted in a hand frame, and a flexible universal connection between said shaft and the second stub shaft, substantially as set forth. 2nd. The combination of the hand frame, the handles adjustably attached thereto, and the tool carrying shaft journalled therein, with the flexible shafting connections between said tool carrying shaft and a main driving shaft, substantially as described. 3rd. The combination of the triangular frame, a tool carrying shaft journalled therein, the handle adjustably attached to the frame, and the grip piece adjustably attached to one of the handles, substantially as set set forth. 4th. The combination of the main shaft journalled in a suitable support, and means for rotating it, a frame carrying stub shafts at its opposite ends, a universal joint connection between one of the stub shafts and the main shaft, whereby the frame is supported on the main shaft, means for driving one of the stub shafts from the other, a rod connected to the second stub shaft by a universal joint, a holder for a rotating tool provided with adjustable handles, and a flexible connection between said rod and the tool holder, substantially as described. 5th. The combination of the standard, the plate fixed thereon, the rotatable plate attached to and adjustable on the fixed plate, a spring supported on said movable plate, a main shaft on the standard, and a frame upheld by the spring and adjustably supported on the main shaft, a tool holder, flexible connections between said holder and the outer end of said frame, and means for transmitting motion from a main shaft on the standard along said frame and flexible connections to the tool holder, substantially as described.

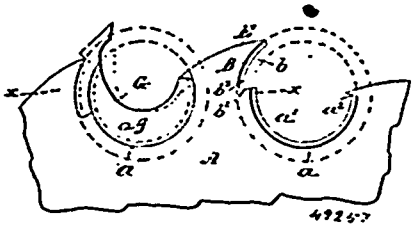
No. 49,256. Churn. (*Baratte.*)

George Washington Crabb, Sand Lake, Michigan, U.S.A., 18th June, 1895, 6 years.

Claim.—1st. In a churn, in combination with a box pivoted to vibrate on a horizontal axis, a deflector plate arranged in an inclined position within said box, and pivoted near its upper end to said box, and having its lower end detached and freely movable vertically, whereby the cream or products thereof pass alternately below and above said plate, substantially as described. 2nd. In a churn, in combination with a box, substantially as described, and having an opening at the top, and having vertical grooves in the sides of the same, a removable bar pivotally mounted in said grooves, and a deflector plate attached at the upper end to said bar, and freely movable in a vertical plane at the lower end, substantially as described. 3rd. In a churn, in combination with a box substantially as described, to contain the cream and pivoted to vibrate on a horizontal axis, a rack divided near the middle, spurs in the ends of said rack engaging the ends of said box, and a bottom engaging the middles of said rack, whereby said rack is detachably secured in the bottom of said box, substantially as described.



No. 49,257. Saw Teeth. (*Dent de scie.*)



Moses Harry Goulding, Trenton, New Jersey, U.S.A., 18th June, 1895; 6 years.

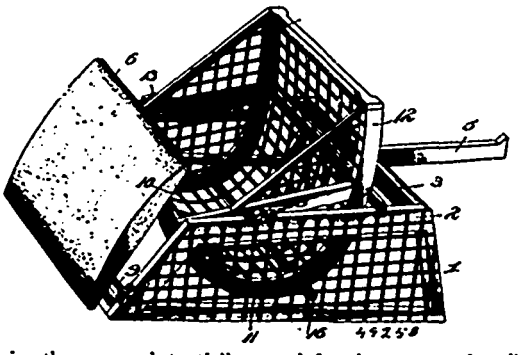
Claim. 1st. The combination with the saw-plate having a semi-circular recess therein, at one end of which is an abrupt shoulder, a concentric tooth-receiving recess, and an offset or shoulder between the two recesses, said tooth-receiving recess having an indentation or notch, of the tooth or bit having the same width throughout and substantially equal in width to the offset of its recess from the other recess, and having at its inner end a lug engaging the identation or notch, and the locking plate having its edge cut on a true circle substantially corresponding to that of the semi-circular recess and the outer edge of the tooth, substantially as described. 2nd. The combination with the saw-plate having the semi-circular recess, at one end of which is an abrupt shoulder, said recess having a tongue, and the tooth recess having a tongue and concentric with the first recess, from which it is offset by a shoulder, at the inner end of which recess is an indentation or notch, the tooth having the same width throughout, and substantially equal in width to the offset in order that its outer edge may be in the same circle as the semi-circular recess, said tooth having a lug engaging the aforesaid notch, and having also a rear groove engaging the tongue in the tooth recess, which is in circle with the tongue of the semi circular recess, and the locking piece curved on substantially the same circle as the semi-circular recess, and tooth and having a groove that engages the tongues, substantially as described.

No. 49,258. Car Fender. (*Défense de chars.*)

Adolphus Decker, Lindenmville, New York, U.S.A., 17th June 1895; 6 years.

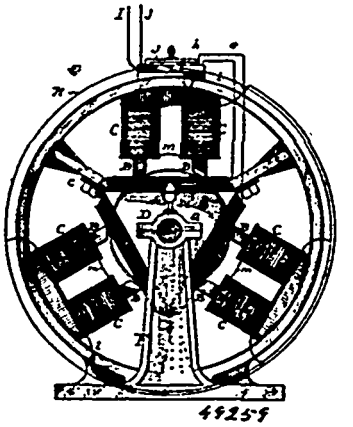
Claim.—1st. The combination of a supporting frame, a cradle or receptacle journalled thereon, and a tilting fender located in advance of the cradle or receptacle and having its upper portion resting upon the front of the same, and arranged to form a skid to cause a person to be thrown into the receptacle, substantially as described. 2nd. The combination of a supporting frame, substantially semi-cylindrical cradle or receptacle journalled on the supporting frame, and a tilting fender arranged at an inclination and located in advance of the cradle or receptacle and having its upper portion supported by the front of the cradle or receptacle, substantially as and for the purpose described. 3rd. The combination of a supporting frame, provided with opposite sides having their rear portions inclined and forming shields, a cradle or receptacle journalled between the sides of the frame, and a rectangular tilting fender hinged near

its bottom to the supporting frame and arranged at an inclination and resting upon the front of the cradle or receptacle and adapted



to swing the same, substantially as and for the purpose described. 4th. The combination of a supporting frame, having opposite sides, a tilting fender arranged at an inclination and located at the front of the frame, and a cradle or receptacle journalled between the sides of the frame, and provided with stops to limit its swing, and having at its front a transverse roll receiving and supporting the tilting fender, substantially as described.

No. 49,259. Electro-Motor. (*Electromoteur.*)



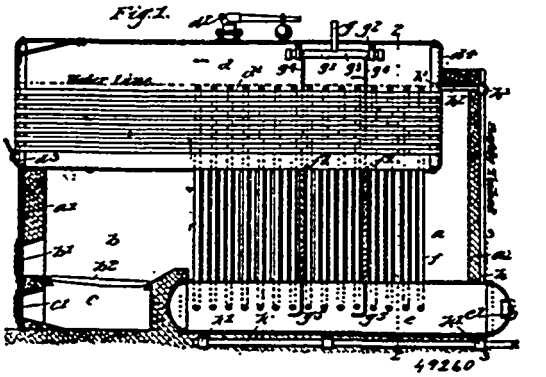
Joseph A. G. Trudeau, Ottawa, Ontario, Canada, 18th June 1895; 6 years.

Claim.—1st. In an electro-motor, the combination of a main frame A, a rotatable armature D mounted therein, stationary coils G, encompassing said armature D, field magnet cores B, extending inward toward the armature, and coils C, for energizing said magnet cores, said coils being so wound as to produce opposite polarity in those cores on the same side of the armature coil. 2nd. In combination with the rotatable armature, stationary energizing coils wound about said armature but leaving portions of its circumference exposed, and a field magnet provided with polar projections, two of said projections of unlike sign being arranged opposite each exposed portion of the armature. 3rd. In an electro-motor, the combination with suitable field magnets, of a rotatable armature having a circumferential iron hoop and a non-magnetic central portion, and an energizing coil encompassing the armature and having its outer folds within the inner circumference of said hoop, substantially as set forth, whereby that portion of the hoop outside the coil will be of one polarity through its entire thickness. 4th. In combination with an electro-motor, a switch comprising connected contacts *d*, *e* and *f*, *g*, conducting bar *h*, contact bar *i*, *j*, and binding post *k*, all constructed and arranged to operate, substantially as set forth. 5th. In an electro-motor, the combination of a rotatable magnetic armature, a coil for energizing the same, field magnet cores, coils for energizing the same, said coils being independent of those of the armature and wound to produce poles of unlike sign on opposite sides of the armature poles, the field poles of unlike sign being brought as near together as practicable without mutual neutralization, whereby the points of maximum effect in field and armature are brought close together.

No. 49,260. Boiler. (*Chaudière.*)

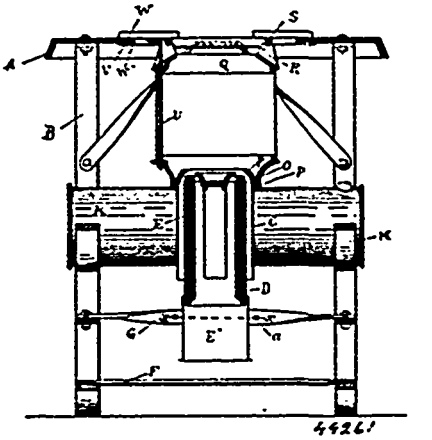
Patrick Meehan and John J. Meehan, both of New Castle, Pennsylvania, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. The combination with a furnace having a fire-chamber therein, of a boiler having smoke-flues, a drum, a series of tubes connecting said boiler and drum and exposed to the heated products of combustion, and safety-tubes leading from the rear end



of said drum upwardly and constructed so as to enter the rear head of said boiler at the water-line just above the said smoke-flues, and a wall interposed between said tubes and the heated products of combustion on their way to said smoke-flues, said safety-tubes being exposed where they enter said boiler, whereby said safety-tubes will *be directly acted upon by the heated products entering said smoke-*flues, substantially as and for the purposes set forth. 2nd. The combination with a furnace having a fire-chamber therein, of a boiler, a drum beneath said boiler, a series of ascending water-tubes connecting said boiler and drum, safety-tubes connecting said drum and the rear of the boiler at or about the water-line, a series of descending water-tubes connecting said drum and the sides of the boiler at or about the water-line, and water-feed pipes for supplying the water from the feed water heater to said drum, substantially as and for the puposes set forth. 3rd. The combination with a furnace, of a boiler, a drum beneath said boiler, a series of water-tubes connecting said boiler and said drum, and water feed-pipes passing down through said water-tubes into said drum, said feed-pipes having the lower ends thereof turned at an angle to the main body, substantially as and for the purposes set forth. 4th. The combination with a furnace, of a boiler, a drum beneath said boiler, a water reservoir suspended within the steam space of said boiler, and pipes leading therefrom to said drum, substantially as and for the purposes set forth. 5th. The combination with a furnace, of a boiler, a drum beneath said boiler, a water reservoir within the steam space of said boiler having openings in the top thereof, and pipes leading therefrom to said drum, substantially as and for the purposes set forth. 6th. The combination with a furnace, of a boiler, a drum beneath said boiler, a series of water tubes connecting said boiler and said drum, and a blow-off pipe outside of said drum, arranged longitudinally of said drum and connected thereto, said drum having two or more exits leading to said pipe, substantially as set forth.

No. 49,261. Oil Cook Stove. (*Poêle à huile.*)

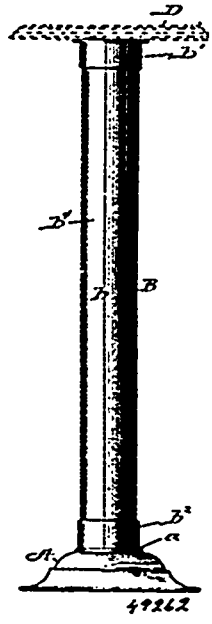


Charles H. Boeck, Jackson, Michigan, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. An oil-stove comprising a frame, a table resting thereon, a burner and chimney supported in said frame beneath said table, a grating covering an orifice in the table, over the chimney, and a horizontal, cylindrical tank removably supported in said frame near the level of the bottom of said burner, and suitably connected with said burners, substantially as described. 2nd. In an oil-stove, the combination with the table and supporting standards of a bur-

ner and tank supported in position below the table, a chimney provided at its upper end with an open frame work forming a support for the culinary vessel, and an aperture in the table adapted to receive and hold said support and thereby form the means of removably holding the chimney in position upon the burner, substantially as described. 3rd. In an oil-stove, the combination with the table and its supporting standards, of a burner and its tank removably supported in position by the standards below the table, independently of the chimney, a chimney provided at its lower end with a collar adapted to fit over the cap of the burner and its upper end with a support for the culinary vessel, and a table having an aperture adapted to removably hold said support and thereby form the means of removably supporting the chimney in position upon the burner, substantially as described. 4th. In an oil-stove, the combination with the table and its supporting standards, of a chimney provided at its upper end with an open frame-work forming a support for the culinary vessel, and by means of which the chimney is removably suspended from the table, of a burner provided with a depending skirt, a supporting bar provided with means for clamping the skirt in position, a tank located in rear of and united with the burner, and bearings formed in the supporting standards to removably hold the tank in position, substantially as described. 5th. In an oil-stove, the combination with the table and supporting standards, of a burner removably supported in position below the table independent of said chimney, a chamber N provided with the collars O and Q, the lugs R on the collar Q provided with notches R^1, the support T of the culinary vessel provided with a depending flange S, and supporting rim W, and a table provided with the aperture V, and supporting rim V^1, all arranged and combined to operate substantially as described. 6th. In an oil-burner, the combination with a table and its supporting standards, of a chimney provided at its upper end with a support for the culinary vessel by means of which the chimney is removably suspended from the table, of a burner and its tank removably supported from the standards below the table, the depending skirt E from the burner, and a shelf F supported in proximity to the skirt by the standards of the table, substantially as described.

No. 49,262. Stand, Table, or Analogous Article. (*Support, table, etc.*)



Samuel H. Hoggson, St. Louis, Missouri, U.S.A., 18th June, 1895; 6 years.

Claim.—A stand whose column is tubular and having in its lower end a cross-bar b^4, and the block D, combined with the base A, socketed at *a*, and the fastening bolt C, substantially as set forth.

No. 49,263. Cross-Cut Saw-Handle. (*Manche de scie de travers.*)

Matthew Charles Drew, Burk's Falls, Ontario, Canada, 18th June, 1895; 6 years.

Claim. The combination of the screw handle D with the

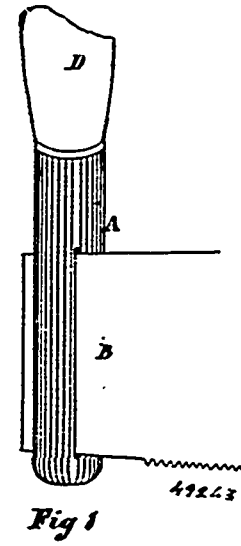
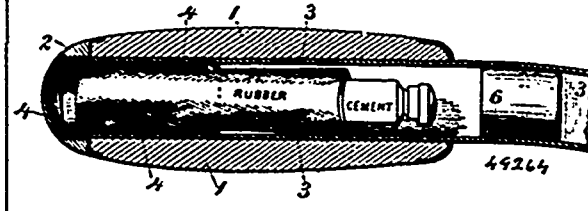


Fig 1

slotted tube A by means of the screw E, substantially as and for the purpose hereinbefore set forth.

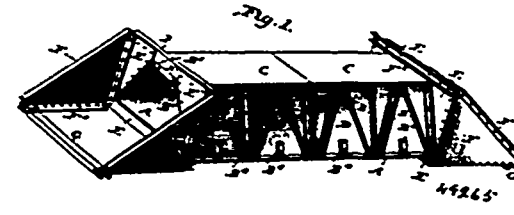
No. 49,264. Bicycle. (*Bicycle.*)



Francis Joseph Lindsay Cavanagh, Toronto, Ontario, Canada, 18th June, 1895; 6 years.

Claim.—1st. A bicycle handle having a removable cap on its rear end to which a case adapted to enter the end of the handle bar freely is secured, substantially as shown and described. 2nd. The combination of a bicycle handle having a removable cap on its rear end and to which a case adapted to freely enter the handle bar is secured, with a stopper placed in the handle bar and at the length of the handle from the rear end of said handle bar, substantially as shown and described.

No. 49,265. Bridge. (*Pont.*)

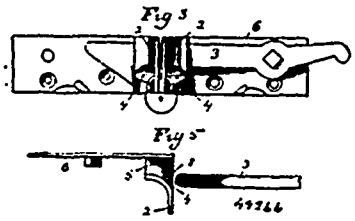


William Albert Nichols, St. Davids, Pennsylvania, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. A portable bridge or culvert, comprising the bottom A, the truss pieces secured thereto, the side pieces secured inside the truss pieces, the cross-pieces secured to said side pieces, and the top secured thereto, the parts being riveted or otherwise joined, substantially as described. 2nd. A portable bridge or culvert comprising the bottom sides and top plates secured by truss pieces and having the face plates secured to the end of the bridge and extending beyond the same, substantially as described. 3rd. The combination with a bridge or culvert, of the face plates secured thereto, the wings connected to the face plates, and a sill uniting the outer ends of the wings, the face plates and wings extending beyond the limits of the bridge or culvert, substantially as described. 4th. The combination with a bridge or culvert, of the face plates, and wings and the angle pieces attached thereto forming lateral extentions or abutments for the earth or packing material surrounding the bridge,

substantially as described. 5th. The combination with a bridge or culvert, of the face plates secured thereto and projecting above and at the sides beyond the bridge, the angle pieces E^1, F^2, above and below the bridge, the wings connected to the face plates, the sill connecting the wings, and the angle plates F^1, F^3, secured to the wings, substantially as and for the purpose set forth.

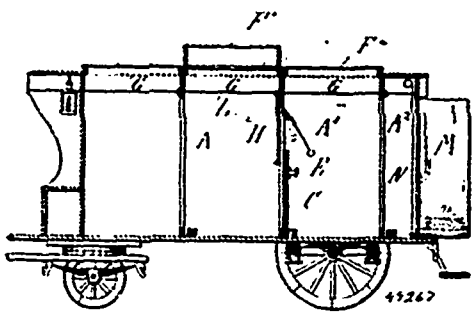
No. 49,266. Door Fastening. (*Fermeture de porte.*)



Alonzo Dillenback, Palatine Bridge, New York, U.S.A., 18th June, 1895; 6 years.

Claim.—1st. A door latch or fastener having a keeper with a foot arranged to receive and retain a latch, and an ear rising above the foot and forming a notch into which and out of which the latch may be downwardly and upwardly swung and also longitudinally entered, the face of the ear on the keeper presented to the nose of the latch as it is longitudinally entered in the keeper sloping toward the opening or notch therein, in order that the latch may be guided into said keeper when out of truth with the notch therein, substantially as described. 2nd. A door latch or fastening having a keeper with a foot arranged to receive and retain a latch and an ear, which together with the foot forms a notch or opening into which and out of which the latch may be longitudinally entered the face of the ear presented to the nose of the latch as it is longitudinally entered in the notch or opening, sloping toward the opening or notch in order that the latch may be guided into said keeper when out of truth with the notch or opening therein, substantially as described.

No. 49,267. Dust Cart. (*Charrette.*)



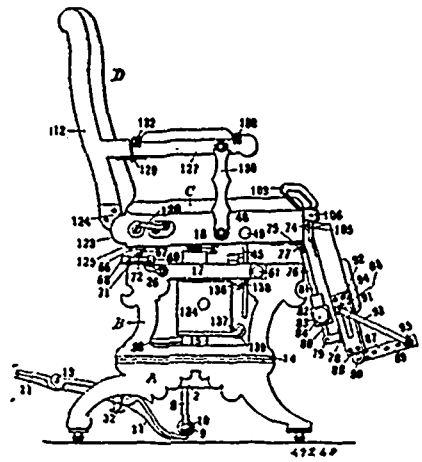
Hermann Scheller, Berlin, Germany, 18th June, 1895; 6 years.

Claim.—1st. A dust or scavenging cart having in its interior cross walls A A^1, A^2, and provided with openings in said cross walls or its side walls, said openings being provided with curtains or flap covers H, substantially as set forth. 2nd. A dust or scavenging cart having inner cross walls A provided with door like openings, a plate C being inserted into the lower part of said openings, whereas the upper part receives a curtain H, which latter is displaceably suspended from the cover of said cart, substantially as set forth. 3rd. A dust or scavenging cart having in combination with the arrangements described for receiving dust and the like a ventilation arrangement G in the cover of said cart, consisting of openings F equal in their length to the width of the respective compartments covered by a wire netting and closed with folding boards or covers, substantially as set forth.

No. 49,268. Surgical Chair. (*Fauteuil de chirurgie.*)

Tiffin J. Shackelford, Warsaw, Indiana, and Charles A. L. Kirkpatrick, Fort Wayne, Indiana, assignees of John F. Miltonberger, Denver, Colorado, all in the U.S.A., 18th June, 1895; 6 years.

Claim.—1st. In a convertible chair, a base-structure, a hub part, a pivot-post, provided in its upper part with a number of annular grooves and having its lower end inserted down through said hub or base and rigidly fixed therein, a lifting plate, loosely mounted on the pivot-post, the companion lift-rods, having their upper ends fixed in the lift-plate, a cross-bar, connecting the lower ends of said rods, a foot lever, fulcrumed in the base-structure, the chair-part resting on and elevated by the lift-plate and operating mechanism, and the means described, sustaining the chair in an elevated position, substantially as set forth. 2nd. In a convertible chair, the combination with the chair part proper, of a base-structure, a lifting foot-lever, fulcrumed therein, a cross-bar, a friction roller, loosely mounted thereon, the lift-rod, having their lower ends

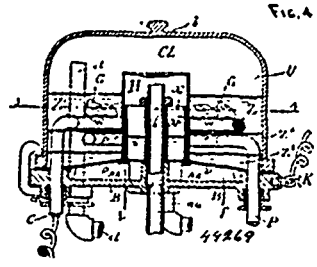


fixed in the respective ends of said cross-bar, a lift-plate, in which the upper ends of said rods are fixed, a pivot or guide-post, and the means described for sustaining the chair in an elevated position, substantially as set forth. 3rd. In a convertible chair, the combination with the chair-part proper, of a base-structure, a pivot or guide post, fixed therein, a lift-plate loosely embracing said post, the companion lift-rods, having their upper ends fixed in the lift-plate, a cross-bar, connecting the lower ends of the lift-rods, a friction-roller, loosely mounted on said bar, a foot-lever, provided with a suitable fulcrum-bearing, the inner end presenting a curved surface to said roller, and the outer end having a pivotal joint and folding over upon itself, and the means described for sustaining the chair in an elevated position, substantially as set forth. 4th. In a convertible chair, a supporting-base, a pivot-post, having its lower end fixed in said base, the chair-frame, a cross-bar, secured to the chair-frame and provided centrally with a collar loosely embracing the pivot post, a lift-plate, the lift-rods, the cross-bar, connecting the lower ends of said rods, a lifting foot-lever and the means described for sustaining the chair in an elevated position, substantially as set forth. 5th. In a convertible chair, a pivot-post, having a fixed position and provided with a number of annular grooves, the chair-frame, a cross-bar, having its respective ends secured to the chair-frame and provided centrally with a guide sleeve, loosely inclosing the grooved part of the pivot-post, a shaft, journalled in the chair-frame, a pinion-wheel, mounted on said shaft and adapted to engage with the grooves in the pivot-post through an opening in said sleeve, ratchet-wheels, mounted on the respective ends of the pinion-shaft, a rod, running parallel to said shaft, the pawls, mounted on said rod and engaging with said ratchet-wheels, and means for rotating said rod for the purpose of throwing the pawl out of engagement, whereby the chair-structure may be locked at any elevation above the base, substantially as set forth. 6th. In a convertible chair, the combination of a supporting base, a pivot-post, provided with annular grooves for a part of its length and rigidly secured in the hub part of said base, a lift-plate, embracing the pivot-post, the rods, extended up through the base and having their upper ends fixed in the lift-plate, a cross bar, connecting the lower ends of said rods, a lifting or foot-lever, the chair-frame, a cross-bar, secured to the lower part of the chair-frame and provided centrally with a collar loosely inclosing said pivot post, a cross-bar secured to the upper part of said frame and provided centrally with a guide-sleeve, loosely inclosing the grooved part of the pivot-post, a shaft, journalled in the chair-frame, a pinion wheel, mounted on said shaft and adapted to engage with the grooved part of the pivot-post, ratchet-wheels, mounted on the respective ends of the pinion-shaft, a rotatable rod, running parallel to said shaft, the pawls, mounted on said rod and engaging with said ratchet-wheels, whereby the chair may be raised and locked at any elevation, lowered, and revolved at any point between the lowest and highest position, substantially as set forth. 7th. In a convertible chair, the combination of the chair-frame, the seat-frame, the rear pivotal connection, joining the chair and seat frames, a guide-bar, pivoted at its upper end to the under side of the seat-frame, a curved rod, having one end secured to said guide-bar, a sleeve, fixed in the seat-frame, and provided on one end with a guide-lug through which the undetached end of said curved rod is inserted, a clamping-screw, having a threaded engagement in said sleeve and bearing against said rod, whereby the seat-frame may be tilted laterally and locked at any angle, substantially as set forth. 8th. In a convertible chair, the combination of the chair-frame, the seat-frame, the pivotal connection, joining the chair and seat-frame at the rear, a brace-rod, pivoted at its inner end to the front of the seat frame, a guide-bar pivoted at its upper end to a lug formed on said brace-rod, a curved radius rod, to which the outer end of said brace-rod is secured, and means, substantially as described, for locking the seat-frame with

reference to said curved rod, substantially as set forth. 9th. In a convertible chair, the combination of the chair-frame, the seat-frame, the rear pivotal connection, joining the chair and seat-frames, a guide-bar, having a pivotal connection with the front part of the seat-frame, a cross-bar, having its respective ends secured to the chair-frame and provided with guide-lugs which loosely embrace the edges of the guide-bar, a guide-bracket, rigidly secured to the chair-frame, a curved radius rod, secured at its lower end to the guide-bar, the upper end extending up through one side of the seat-frame, a clamping screw, engaging with the radius rod, a brace-rod, and means, substantially as described, for locking said guide-bar in any position to which it is capable of being adjusted, substantially as set forth. 10th. In a convertible chair, the combination of the chair-frame, the seat-frame, the rear pivotal connection joining the chair and seat-frame, a guide-bar, pivoted at its upper end to the under side and front part of the seat-frame and provided in its lower end with a curved slot, a guide-bracket secured to the chair-frame, a friction-roller, journalled in said bracket and working in the slotted end of said guide-bar, and the locking-rod, adapted to engage with the guide-bar, whereby the chair part may be rocked longitudinally, substantially as set forth. 11th. In a convertible chair, the combination of the tilting seat-frame, a guide-bar, pivoted at its upper end to said seat-frame, the lower end being slotted and provided with a series of apertures, the chair-frame, a bifurcated bracket rigidly secured to the lower part of the chair-frame and guiding the movement of said guide-bar, a friction-roller, journalled in said bracket and engaging with the slotted part of the guide-bar, a sleeve secured in said bracket, a locking-rod extending in through said sleeve and adapted to engage with the apertures in the guide-bar, a lever provided with a fulcrum-bearing in the chair-frame and connected at one end to the outer end of the locking-rod, and a stem connected to one end of the fulcrumed lever, whereby said locking rod may be thrown into and out of engagement with reference to the guide-bar in adjusting the chair, substantially as set forth. 12th. In a convertible chair, the combination of the chair-frame, the seat-frame, the pivotal connection, joining the chair and seat-frame at the rear, a guide-bar having apertures in the lower part thereof and pivoted at its upper end to the seat-frame, a bifurcated bracket rigidly secured to the chair-frame and loosely embracing the lower end of said guide-bar, a friction-roller journalled in said bracket and engaging with the slotted end of said guide-bar, a sleeve secured in said bracket, a locking rod inserted through said sleeve and engaging with the apertures in the guide-bar, and a spring enclosed by said sleeve and coiled on the rod passing therethrough, whereby the latter is held normally in a locked position, substantially as set forth. 13th. In a convertible chair, the combination of the chair-frame, the seat-frame, the pivotal connection, joining the chair and seat-frame, a plate secured to the chair-frame and provided with an aperture, and a notch opening into said aperture, a hand-stem inserted through the chair-frame and plate and provided with a lug adapted to engage with the notch in said plate in one position, a fulcrumed lever, to one end of which said hand-stem is connected, a locking rod, connected at one end to the opposite end of said lever, a bifurcated bracket, rigidly secured to the chair-frame, a sleeve, inserted in said bracket, a spring, coiled on said locking rod inside of said sleeve, a guide-bar, pivoted at its upper end to the seat-frame and provided in the lower part, loosely embraced by said bracket, with a number of apertures with which the inner end of the locking-rod is adapted to engage in locking said guide-bar in the different positions to which it is capable of being adjusted, and a friction-roller, journalled in said bracket, and engaging with the slotted end of the guide-bar, substantially as set forth. 14th. In a convertable chair, the combination of the seat-frame, a cross-bar, provided with projecting lugs, and secured to said frame, the chair-frame, the journal or pivot-bearings, secured thereto, a rocking pivot-pin, journalled in said bearings and provided with a lug pivotally connecting with the lugs on the cross-bar secured to the seat-frame, a guide-bar, pivoted at its upper end to the under side and front part of the seat-frame, a curved rod, having one end secured to said guide-bar, a sleeve fixed in the seat-frame, and provided on one end with a guide-lug through which the undetached end of said curved rod is inserted, a clamping-screw, having a threaded engagement in said sleeve and bearings against said curved rod, a bifurcated bracket, rigidly secured to the chair-frame and loosely embracing the lower part of the guide-bar, and means, substantially as described, for locking said bar in place with reference to said bracket whereby the seat-frame may be tilted laterally and longitudinally, and locked at any angle, substantially as set forth. 15th. In a convertible chair, the combination of the seat-frame, the leg-rest, hinged thereto, a tube pivoted at one end to said frame, a rack-bar, pivoted at one end to said leg-rest and extending into the tubular connection of the seat-frame, an angle-sleeve, embracing one end of said tube, a hand locking-rod, inserted through the angle-part of said sleeve and engaging with said rack-bar, and a spring coiled on said rod and normally holding the same in a locked position, substantially as and for the purpose set forth. 16th. In a convertible chair, the combination of the seat-frame, the leg-rest, having a hinged connection therewith, a transverse-bar, secured to the under side of the seat-frame, a tube, pivoted at one end to said bar, a rack-bar, pivoted at one end to the leg-rest and loosely inserted in said tube, an angle-sleeve, embracing one end of said tube, a locking rod, inserted through said sleeve and bearing against the rack-bar, the hinged plates, provided with slots ending in angular recesses and secured to the leg-rest, the foot-rest extension, the hinged connection, joining the leg and foot-rest, and the connecting links, pivoted at one end in the respective ends of the foot-rest, the opposite ends of said links adjustably engaging with the slotted plates of the leg-rest, substantially as set forth. 17th. In a convertible chair the combination with the side rails of the seat-frame, of the companion box-plates, the back standards, the pivot plates, secured to said standards, and having rounded toothed ends projecting into said box-plates, the pivot-shaft the pawls, engaging with the toothed surface of said pivot-plates, the tripping-fingers, for disengaging said pawls, the rock-shaft, on which said fingers are mounted, and the spring, retaining said pawls in their engaged position, substantially as set forth.

No. 49,269. Process of and Apparatus for Electro-Chemical Decomposition. (*Procédé et appareil de décomposition électro-chimique.*)

FIG. 4

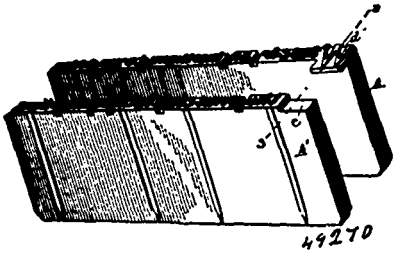


Henry Carmichael, Malden, Massachusetts, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. An electro-chemical process which consists of displacing an ion in solution in an electrolyte by supplying the electrolyte to the electrolytic cell, and withdrawing the displaced ion from the electrolytic cell, such supply of the electrolyte and withdrawal of the ion being at a rate corresponding substantially to the rate of diffusion of the ion from its electrode through the electrolyte toward the opposite electrode. 2nd. An electro-chemical process which consists of displacing an ion in solution in an electrolyte by supplying the electrolyte to the electrolytic cell and withdrawing from the electrolytic cell the ion thus displaced such supply of the electrolyte and withdrawal of the ion being at a rate equal to or greater than the rate of diffusion of the ion from its electrode through the electrolyte toward the opposite electrode said displacement being in a direction substantially opposite to the direction of said diffusion. 3rd. An electro chemical process which consists of displacing an ion of superior specific gravity by supplying the electrolyte to the electrolytic cell, and withdrawing the displaced ion from the electrolytic cell such supply of the electrolyte and withdrawal of the ion being at a rate corresponding substantially to the rate of diffusion of the ion through the electrolyte toward the opposite electrode. 4th. An electro-chemical process which consists in maintaining within the electrolytic cell a zone of undecomposed electrolyte interposed between the ions at the electrodes by supplying to such zone fresh quantities of the electrolyte, thereby displacing the ions toward appropriate electrodes, and by withdrawing from the electrolytic cell *the ions thus displaced, the supply of the electrolyte and the with*drawal of the ion being made to proceed at such a rate as to maintain the zone of undecomposed electrolyte between the ions substantially constant in volume. 5th. An electro-chemical process for producing sodium hydrate and chlorine from a solution of sodium chloride which consists of maintaining within the electrolytic cell a zone of undecomposed solution of sodium chloride interposed between the sodium hydrate and chlorine at their respective electrodes by supplying to such zone fresh quantities of sodium chloride solution so as to displace the sodium hydrate toward its appropriate electrode and by withdrawing from the cell the sodium hydrate thus displaced, the supply of sodium chloride solution and the withdrawal of sodium hydrate being made to proceed at such a rate as to maintain the zone of undecomposed sodium chloride between the ions substantially constant in volume. 6th. A process of progressive concentration of an ion in solution in an electrolytic cell, which consists of conducting the ion from that region in the electrolytic cell where it is diffuse, and passing it across the surface of the electrode where the ion is being liberated, thus giving the diffuse ion, in its passage, successive increments of concentration from the electrode, and withdrawing from the electrolytic cell the ion thus laden with increments of concentration after its passage across the electrode. 7th. A process of progressive concentration of an ion, which consists of displacing the diffused ion by introducing fresh electrolyte to that region into which the ion tends to diffuse, conducting the diffused ion thus displaced from that point in the said region where it is most concentrated to the electrode at which the ion originates, and there passing the ion across the surface of the said electrode where constant increments of concentration are being supplied, and finally discharging the ion laden with increments of concentration after its passage across the electrode. 8th. A process of progressive concentration of the solution of sodium hydrate obtained from electrolysis of a solu-

tion of sodium chloride which consists in displacing the diffused sodium hydrate by introducing a supply of sodium chloride into that region in the electrolytic cell into which sodium hydrate tends to diffuse from the cathode, conducting the diffused sodium hydrate thus displaced by the fresh supply of sodium chloride from the point in the said region where the sodium hydrate is most concentrated to the cathode where sodium hydrate orginates, and there passing the diffused sodium dydrate across the surface of the cathode, where constant increments of sodium hydrate are added to the solution, and discharging the sodium hydrate solution after it has received increments of concentration in its passage across the cathode. 9th. An electrolytic apparatus containing in combination with horizontal electrodes, a diaphragm located between the electrodes and separating the electrolytic cell into compartments, a supply inlet to one compartment, a passage between the compartments, and a discharge outlet from the other compartment substantially as and for the purpose described. 10th. In an electrolytic apparatus, the combination of electrodes situated in diaphragm separated compartments, a supply inlet to one compartment, a discharge outlet from the other compartment, and a passage between the compartments, substantially as and for the purpose set forth. 11th. In an electrolytic apparatus, the combination of electrodes situated in diaphragm separated compartments, a supply inlet to one compartment, a discharge outlet from the other compartment, a passage between the compartments and a gas-chamber, so situated as to receive the gases rising in the lower compartment, substantially as and for the purpose set forth. 12th. In an electrolytic apparatus, the combination of compartments separated by a porous diaphragm, a gravity contact electrode situated in one compartment, a supply pipe for electrolyte, entering the apparatus en one side of the diaphragm, a discharge pipe from the apparatus on the other side of the diaphragm, a passage between the compartments, and a gas chamber, so situated as to receive the gases rising in the lower compartment, substantially as and for the purpose set forth. 13th. In an electrolytic apparatus, the combination of compartments separated by a porous silicious diaphragm, an electrode of carbon in gravity contact with platinum wires situated in one compartment, a supply pipe for electrolyte on one side of the diaphragm, a discharge pipe on the other side of the diaphragm, a passage between the compartments and a gas chamber, so situated as to receive the gases rising *in the lower compartment, substantially as and for the purpose set* forth. 14th. In an electrolytic apparatus, the combination of an inclined diaphragm supported by a corrugated electrode, and a gas-chamber at the uppermost part of the inclined diaphragm, substantially as and for the purposes set forth. 15th. In an electrolytic apparatus, the combination of a concavo-convex porous diaphragm supported by a corrugated electrode and a gas-chamber, situated at the highest point in the diaphragm, substantially as and for the purposes set forth. 16th. In an electrolytic apparatus, an electrode containing a series of connecting chambers, a supply inlet to one end of the series, and a discharge outlet from the other end thereof, substantially as described. 17th. The combination in a containing vessel composed of separable parts, of electrodes, leading wires, a supply pipe for electrolyte, and outlets for electrolytic products all of whose connections are made through one of the separable parts of the containing vessel, substantially as and for the purpose set forth. 18th. The combination, in a containing vessel having a separable base of electrodes, *leading wires, a supply pipe for electrolyte, and outlets for products* of electrolysis, all of whose connections pass through the separable base, substantially as and for the purpose set forth. 19th. An electrolytic apparatus whose cathode is the base of the apparatus, and in which the leading wire of the anode, the supply pipe for electrolyte and the discharge pipes for the products of the electrolysis pass through the cathode-base, substantially as described. 20th. In an electrolytic apparatus the combination of electrodes, diaphragm separated compartments and a conduit from one compartment to the other provided with a gas-trap, substantially as and for the purpose set forth. 21st. In an electrolytic apparatus, a containing case, electrodes situated in diaphragm separated compartments, the diaphragm, a passage between the compartments, a supply inlet to one compartment, a series of connecting chambers in the other compartment, a supply inlet for said series arranged at one end thereof, and a discharge outlet for said compartment and series located at the other end of the series, substantially as described. 22nd. An electrode which consists of two systems, first, an internal system of corrodible conductors surrounded and insulated by non-corrodible material, second, an external system of uninsulated, non-corrodible conductors, the internal and external systems being connected electrically by non-corrodible metallic pins, which pass through the insulation of the internal system in such manner as to exclude all corrosive agents from the internal system while maintaining and preserving good electrical contact with the external system. 23rd. A leading-in wire composed of a copper conductor enveloped in a rubber jacket, and platinum-pins which pass through the rubber jacket to the copper, establishing electric contact with the latter, the ends of the platinum pins which project out of the rubber being adapted to the attachment of electrical connections with an electrode. 24th. The combination with an insulated leading-in wire, of metallic conductors which pierce the insulation and make contact with the leading-in wire, and an electrode consisting of non-metallic conducting pieces in gravity contact with metallic conductors, the latter attached to the metallic conducting points, which pierce the insulation of the leading-in wire. 25th. The method of constructing a porous diaphragm, which consists in filling a reinforcing framework with Portland or analogous cement, and moulding the framework thus filled, while plastic, into the shape desired. 26th. A diaphragm of porous Portland or analogous cement, reinforced by fibrous or textile material, the fibrous or textile material being filled and protected by the cement. 27th. A diaphragm of porous Portland or analogous cement, reinforced by asbestus fibres, substantially as described. 28th. The method of increasing the disparity of the specific gravities of gravimetrically disposed strata in an electrolyte, which consists in maintaining the upper strata at a temperature higher than the lower strata, meanwhile preserving the said strata from agitation and disarrangement of their gravimetric distribution. 29th. The method of increasing the disparity of the specific gravities of gravimetrically disposed strata in an electrolyte which consists of permitting the heat of the electrolyte to radiate more freely from the lower strata than from the upper strata, meanwhile preserving the said strata from agitation and disarrangement of their gravimetric distribution. 30. In an electrolytic apparatus, a metallic, corrugated base, and sides of non-heat conducting material.

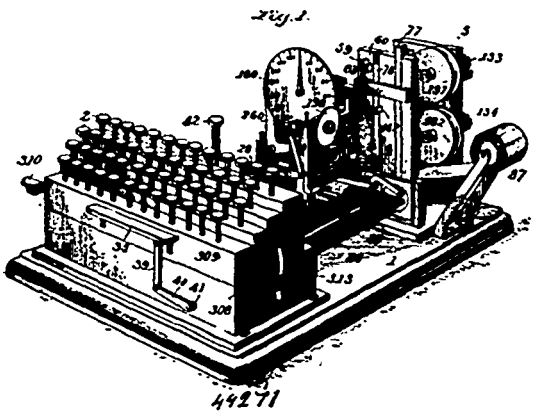
No. 49,270. Linotype. (*Linotype.*)



The Mergenthaler Linotype Company, New York, State of New York, Assignee, of Ottmar Mergenthaler, Baltimore, Maryland, both in the U.S.A., 20th June, 1895; 6 years.

Claim.—1st. Complementary linotypes, one having an enlarged overhanging character, and the other having a space to receive and support the same. 2nd. A linotype having on its upper edge a series of type characters, one or more of which project beyond the vertical side face of the body. 3rd. In a linotype casting mechanism, the combination of a mould and a series of matrices, one or more of which has its character or matrix proper, arranged to overlap the front face of the mould. 4th. The herein described method of producing complementary linotypes with two-line characters, consisting in presenting to the mould a line of matrices one or more of which have characters of abnormal size to overlap the face of the mould, and producing a linotype therefrom, and also presenting to the mould a second line of matrices, one of which has a blank surface above the level of the characters, and casting a linotype therefrom.

No. 49,571. Controller for Composing Machines.
(*Contrôleur pour machines à composer.*)



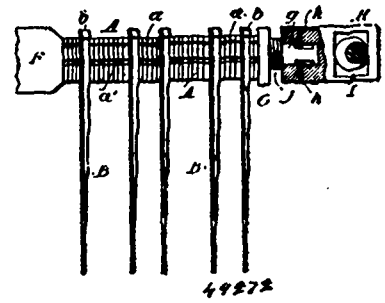
The Tachytype Manufacturing Company, Minneapolis, Minnesota, Assignee of Frank Amos Johnson, Philadelphia, Pennsylvania, both in the U.S.A., 20th June, 1895; 6 years.

Claim.—1st. In a machine of the class described, mechanism for inserting justifying word space impressions upon a controller, the same consisting of a feeding device for the controller, an impression device, and means governed by the controller for bringing said impression device into action each time a space between word groups of impressions is presented to it, substantially as described. 2nd. In a machine of the class described, the combination with devices for producing character-selecting impressions, of a justifying device, and means controlled thereby for producing justifying impressions, whereby a justified controller may be produced, substantially as de-

scribed. 3rd. In a machine of the class described, the combination with devices for producing character-selecting impressions, of a justifying device, and a second impression device controlled by the justifying device and arranged to insert word-space impressions adapted to select justifying word-spaces, substantially as described. 4th. The combination with a feeding device for a controller strip, and means for producing character-selecting impressions, of a second and independent feeding device, and means for producing justifying word-space impressions, between the word groups of character-selecting impressions, substantially as described. 5th. In a machine of the class described, the combination of a primary impression device constructed to make character selecting impressions, and trip impressions to indicate the intervals between the words, with a second impression device arranged to be brought into action by the trip impressions and constructed to produce justifying word space selecting impressions, substantially as described. 6th. In a machine of the class described, the combination with a primary impression device constructed to make character selecting impressions and character space impressions, of a second and independent impression device, and a justifying device for controlling said second impression device, whereby proper word-space selecting impressions for justifying are produced, substantially as described. 7th. In a machine of the class described, the combination with a primary impression device arranged to make character-selecting impressions, a bank of keys, and connections between said keys and said impression device, of a justifying device, and a second impression device controlled by the justifying device and adapted to insert justifying word space selecting impressions, substantially as described. 8th. In a machine of the class described, the combination with slides, and rocking discs arranged adjacent to said slides, a series of rods having parts normally carried by said discs, a bank of character keys, and connections between said keys and rods whereby the latter may be projected into engagement with the slides, substantially as described. 9th. The combination, with T-slides, and rocking discs, of the rods having their rear ends carried by the discs, the rocking blades connected with the forward ends of the rods, and the slides and character keys for moving the blades, substantially as described. 10th. The combination, with the character keys, rods operated by said keys, and movable discs and slides, of punches adapted to produce character selecting impressions upon a strip or the like, and means for operating said punches, substantially as described. 11th. The combination, with the character-keys, the groups of rods operated thereby, the rocking discs and the T-slides, of two sets of punches for making character selecting impressions upon a controller strip, a striker for operating the punches, and interponents for selecting the punches, said interponents being connected with the T-slides, substantially as described. 12th. In a machine of the class described, the combination with a group of punches, of a common striker for the punches, an interponent movable between the striker and the punches, a bank of character keys, and connections between said keys and the interponent for moving the latter, substantially as described. 13th. The combination with one or more groups of punches, of a common striker for said punches, an interponent for each group of punches, character-keys and connections between the character keys and the interponents for moving the latter, substantially as described. 14th. The combination, with one or more groups of punches, a striker, interponents between the striker and the punches, T-slides connected with the interponents, rocking discs and rods arranged transversely of the discs and adapted to be projected into engagement with the T-slides, substantially as described. 15th. The combination, with a group of punches or impression devices, of a common striker, a common interponent movable for selecting the punches, character keys and connections through which said keys control the interponent, an escape shaft adapted to be started by the character-keys, and connections between the escape shaft and the striker, substantially as described. 16th. The combination with character keys, T-slides, and intermediate connections, of punches for making charater selecting impressions, interponents for selecting the punches, a striker for the interponents, slides connected with the interponents for moving the latter, and racks, pinions, and shafts connecting said slides with the T-slides, substantially as described. 17th. In a machine of the class described, the combination with a character key, of two impression devices arranged to make character selecting impressions upon a controller corresponding to said key, a bank of type movable in two directions to centre selected type, mechanism controlled by the key for making one of said impressions and moving the bank of type in one direction, and different mechanism also controlled by the key, for making the second impression and imparting the other movement to the bank of type, substantially as described. 18th. The combination with the character keys, of a series of punches, interponents controlled by the character keys, a bank of type connected with the interponents, a striker for the interponents and a hammer or impression device for the type, substantially as described. 19th. The combination with the character keys and the T-slides controlled by the character keys, of a series of punches, interponents connected with the T-slides, a bank of type connected with the interponents, a striker for the interponents, and a hammer, or impression device for the type connected and operated simultaneously with the striker, substantially as described. 20th. The combination with a set of character keys, of two groups of punches for making character-selecting impressions upon a controller, a striker for operating the punches, interponents for selecting the punches, a type-writer arranged to record the characters upon the strip consisting of a bank of type movable in two directions, an escape shaft, and mechanism operated by the escape shaft and controlled by the character keys for simultaneously moving the interponents and moving the bank of type in two directions to centre selected characters, substantially as described. 21st. The combination with a set of character keys, of two groups of punches for making character-selecting impressions upon a controller strip, two interponents for selecting said punches, a type carrier mounted in a sliding yoke, and having a movement therein transverse to that of the yoke, a yoke, a pair of T-slides controlled by the character keys one of said slides being connected with the yoke and one of the interponents and the other slide being connected with a second interponent and arranged to move the type carrier in the yoke, substantially as described. 22nd. In a machine of the class described, the combination with a common striker, of two sets of punches for making character-selecting impressions in a controller strip, a set of punches for making character space impressions, a special trip impression punch arranged to make word space indicating impressions and interponents for selecting the punches substantially as described. 23rd. In a machine of the class described the combination with a striker and die plate, of sets of punches for making character and space selecting impressions on a controller strip, special punches for indicating word spaces and lines, and interponents for selecting any of said punches substantially as described. 24th. The combination with the rocking discs, the T-slides, the rods arranged in transverse series in the dicks, and the character keys and connections for moving the rods, of a space counting dial and index operated by one of T-slides and means controlled by the remaining T-slides for making character selecting impressions upon the controller, substantially as described. 25th. In justifying mechanism, a key-piece having a series of setting surfaces predetermined for the justification of different lines, in combination with space and character keys, and mechanism controlled by said keys for rendering said setting surfaces operative, substantially as described. 26th. In justifying mechanism, a movable key-piece provided with a series of setting surfaces, in combination with mechanism for moving the key-piece in accordance with the amount of character space and the number of word spaces in a line, substantially as described. 27th. In justifying mechanism, a key-piece capable of two movements and provided with a series of setting surfaces, the configuration of said surfaces being predetermined for the justification of different lines, in combination with space and character keys and connections of the same for moving the key-piece, substantially as described. 28th. In mechanism adapted to effect justification upon the quotient and remainder principle, a key piece movable in two directions and provided with a series of individual keys, each key having two setting surfaces constructed to govern the introduction of word spaces in a line according to the quotient and remainder obtained for said line by dividing the total word-spaces, substantially as described. 29th. The combination with a bank of character keys and a word space key, of a key-piece having two movements, one movement being controlled according to the character spaces and the other according to the number of word-spaces, said key-piece being provided with a series of keys arranged in rows and constructed to control justifying operations, substantially as described. 30th. In justifying mechanism, a word-space determining device adapted to be set for word spaces of any given value, in combination with automatic mechanism for resetting said device, if necessary, after a portion of the word-spaces of a line have been determined, to effect justification by uniformly increasing or decreasing the remaining word spaces, substantially as described. 31st. In justifying mechanism operating according to the quotient and remainder principle, a word space determining device adapted to be set for word spaces of any given value, in combination with mechanism for resetting said device, if there be a remainder, after a portion of the word spaces have been determined, to effect justification by increasing or decreasing the remaining word spaces uniformly by a single unit, substantially as described. 32nd. In justifying mechanism, a word space determining device adapted to be set for word spaces of any given value by a forward movement, in combination with mechanism for imparting to said device a backward movement during the justification of a line, substantially as described. 33rd. In justifying mechanism, a word space determining device adapted to be set for word spaces of any given value, embracing a stepped part having two movements for setting said device, one movement according to quotient and the other according to remainder, in combination with means for feeding said stepped part backward during the operation of said device, substantially as described. 34th. In justifying mechanism, a word space determining device adapted to be set for word spaces of any given value, and embracing a stepped part, in combination with a ratchet for moving said part, and a pawl connected with the device and operating on the ratchet, whereby the movements of said device may bring into action the step to change the setting of the device, substantially as described. 35th. In justifying mechanism, a word space determining device adapted to be set to determine word spaces, a key-piece, and intermediate mechanism whereby said device may be set and controlled from the key-piece, substantially as described. 36th. In justifying mechanism, in combination with a word space determining device, embracing a stepped part arranged to be set by two movements, a key-piece provided with keys, each having two setting surfaces, and means for setting the stepped part by the key-piece, substantially as described. 37th. In justifying mechanism, a

word-space determining device adapted to be set to determine word-spaces, a key-piece, a transfer carriage and devices carried thereby for transferring a setting from the key-piece to the space determining device, and mechanism constructed to move said carriage from an intermediate position to the space determining device to impart its previous setting, then to the key-piece to receive a new setting, and then to the intermediate position, whereby the transfer of a setting may be delayed, substantially as set forth. 38th. In justifying mechanism, a stepped part capable of two movements, a key-piece provided with keys each having two setting surfaces, a transfer carriage provided with devices for transferring a setting from the key-piece to the stepped part, and mechanism constructed to move said carriage from an intermediate position to impart its previous setting to the stepped part, then to the key-piece to receive a new setting, and lastly to the intermediate position, whereby the transfer of a setting may be delayed, substantially as described. 39th. In justifying mechanism, a word-space determining device adapted to be set to determine word-spaces of uniform value, embracing a stepped part arranged to be set by two movements, one movement according to quotient and the other according to remainder, in combination with a key-piece provided with keys each having two setting surfaces, and a pair of setting transfer slides adapted to be set by a key of the key-piece and movable to transfer said setting to the stepped part, substantially as described. 40th. The combination with the key-piece and the stepped part capable of two movements, of the transfer carriage, and the setting transfer slide mounted in said carriage, said slides being adapted to be set by the key-piece and to transfer their setting to the stepped part, substantially as described. 41st. In justifying mechanism, the transfer carriage, the setting transfer slides provided with racks and mounted in the carriage, the common pawl pivoted on the carriage and arranged to engage the racks, and the switch for disengaging the pawl from the racks as the carriage is lowered, substantially as described. 42nd. The combination, with a word space impression device consisting of a series of punches, of an interponent movable to select punches, a stepped part capable of two movements, and connections intermediate the interponent and the stepped part whereby the former is controlled by the latter, substantially as described. 43rd. In mechanism for inserting word space impressions, a series of punches, an interponent movable to select punches, a movable part for driving the interponent, a stepped part capable of two movements and arranged to place the interponent, a ratchet connected with said part, and a pawl operating upon the ratchet, said pawl being connected with the movable part which drives the interponent, substantially as described. 44th. In justifying mechanism, the combination with the key-piece movable in two directions and provided with a series of individual keys, of the starting shaft and means operated by said shaft and constructed to lock the key-piece to prevent movement while its setting is being transferred, substantially as described. 45th. The combination, with the movable justifier key-piece, of a carriage movable to and from said key-piece, a pair of setting transfer slides mounted in said carriage and provided with racks or teeth, a pawl also mounted on said carriage and arranged to engage the teeth to hold the slides, and means for releasing the pawl from the slides when the setting has been transferred, substantially as described. 46th. In a machine of the class described, the combination with a stepped part capable of two adjustments, one corresponding to quotient and the other to remainder, of a ratchet-wheel for moving the stepped part, a series of punches for making word-space selecting impressions, an interponent controlled by said part, a slide for driving the interponent, and a pawl connected with the slide and arranged to operate the ratchet-wheel and effect a backward movement of the stepped part, whereby the step may be brought into action to change the adjustment of the interponent, substantially as described. 47th. In a machine of the class described, an impression device constructed to insert word-space impressions, means for feeding a controller to said device, and means controlled by trip impressions upon the controllers for bringing said impression device into action, substantially as described. 48th. In a machine of the class described, the combination with means for producing trip impressions to indicate word-spaces, of a feeler in the line of said impressions, a word-space impression device, and means whereby said device is brought into action each time the feeler finds a trip impression, whereby justifying word-spaces may be inserted, substantially as described. 49th. The combination with means for producing trip impressions in a controller to indicate word-spaces, of a feeler and means for reciprocating the same in the line of said impressions, a word-space impression device consisting of a series of punches, an interponent for selecting the punches, a constantly moving slide, and an interponent connected with the feeler and arranged to interpose between the moving slide and the first named interponent, or its support, each time the feeler finds a trip impression in the controller, substantially as described. 50th. The combination with means for making impressions in a controller to indicate the division into lines, of an impression device arranged to make justifying word-space selecting impressions, a feeler arranged in the path of the line impressions, mechanism for feeding the controller to the word-space impression device, and a stopping device for said mechanism arranged to be brought into action each time the feeler finds a line impression, substantially as described. 51st. The combination with means for making impressions in a controller to indicate the division into lines, of an impression device arranged to make justifying word-space selecting impressions, a feeler arranged to vibrate upon the controller in the path of the line impressions, mechanism for feeding the controller to the word-space impression device, a sliding bolt arranged to stop the feeding mechanism, a constantly moving slide or part, and an interponent connected with the feeeler and arranged to interpose in the path of said slide, to throw the bolt each time the feeler finds a line impression, substantially as specified. 52nd. The method of making a justified controller for composing machines which consists, first, in making character-selecting impressions therein in sequence to form the words of a line, "trip" impressions to indicate the word-spaces, and line impressions to indicate the ends of the line, then determining the widths of the word-spaces, and line impressions to indicate the ends of the line, then determining the widths of the word-spaces necessary to justify the line, and finally inserting word-space selecting impressions adjacent to the "trip" impressions and adapted to select such spaces in the composing machine as will perfectly justify the line of type substantially as described. 53rd. The method herein described of preparing a justified controller for composing machines which consists in consecutively forming therein character-selecting impressions for the characters constituting words, leaving blank intervals for the word-space selecting impressions, and after the impressions for the words to be included in a line are completed, forming in said blank intervals such word-space selecting impressions as shall select spaces of proper size to perfectly justify the line, substantially as described. 54th. The method herein described of making a justified controller for a type casting and composing machine which consists, first, in making character selecting impressions therein to form the words of a line and corresponding character-space impressions, leaving blank intervals between the words, and after the impressions for the words necessary for a line are completed, forming in said blank intervals such impressions as shall select spaces of a proper size to perfectly justify the line of type, substantially as described.

No. 49,272. Justifying Mechanism for Type and Type Matrices. (*Mécanisme pour justifier les caractères et matrices.*)



The Mergenthaler Linotype Company, New York, State of New York, assignee of Philip Tell Dodge, Washington, Columbia, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. In a linotype machine, elongated tapered spaces, provided with sustaining shoulders at their thicker ends, whereby they may be sustained with their thicker ends in the line during its composition. 2nd. In a linotype machine, and in combination with a composed line of matrices, and means for sustaining the same, a series of elongated spaces diminishing in thickness from their upper to their ends, and adapted to be lifted endwise through the line, and means for applying a compression to the line, as the spaces are withdrawn. 3rd. In a linotype machine, and in combination with a composed line of matrices, a series of tapered spaces, adapted and arranged to be inserted with their thicker ends in the line in the first instance, jaws or abutments to determine the length of the line, means for automatically advancing one of said jaws toward the other, to compress the line, as the spaces are withdrawn, and means to limit the approximation of the jaws to prevent excessive reduction in the length of the line. 4th. Method of justifying a composed line of matrices, consisting in introducing therein the thicker ends of elongated tapered spaces, applying compression endwise to the line and at the same time adjusting the spaces endwise through the line, without removing them therefrom, until the line is reduced to the requisite length.

No. 49,273. Gas Burner Regulator.

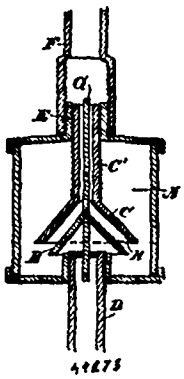
(*Régulateur pour brûleurs de gaz.*)

The Faultless Gas Saver Company, assignee of Joseph Kraker, both of San Francisco, California, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. An independent gas burner regulator, consisting of a closed casing having its lower end secured to the gas supply pipe, and a burner secured to the upper end, a valve seat of conical form within said casing, having a hollow extension adjustably fitted to the top of the casing, and a valve of conical form having a guiding

stem adapted to enter said extension, said valve having channels or passages formed in its face extending from the lower edge to the

Fig. 1.



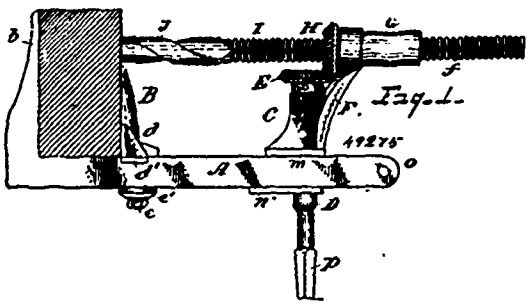
apex and communicating with the hollow extension. 2nd. In a gas burner regulator, the combination with the gas supply pipe, the burner and the chamber between said pipe and burner, of a conical valve seat and conical valve adapted to close against the same, said valve seat having grooves or passages in its inclined walls connecting at one end with the chamber and at the upper end with a hollow extension from the valve seat, and said valve having a stem adapted to enter said extension and guide the valve.

No. 49,274. Pruning Implement. (*Sécateur.*)

Thomas Evans Bateman Mason, Shenandoah, Iowa, U.S.A., 20th June, 1895; 6 years.

Claim.—The combination pruning implement comprising the handles B and G, the guide E, carried by said handle G, the bar D, provided with the hook H, and the arm *d*, pivoted to said bar and provided with the blade P, adapted to be operated by said handle G, the arms *a* and a^1, fixed to said handle B, and pivotally connected with said arm *d*, one of which terminating in the chisel C, and provided with the saw blade S, adjustably fixed thereto, substantially as and for the purpose specified.

No. 49,275. Boring Machine. (*Foret.*)

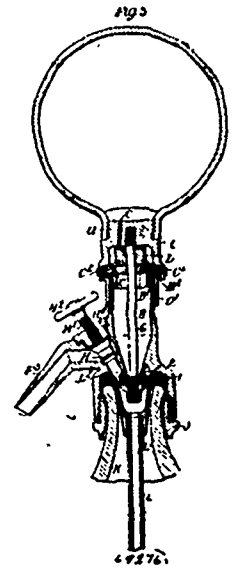


John Miner, Detroit, Michigan, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. In a boring machine, the combination with a suitable support, of the head mounted thereon carrying the drive shaft and gear-wheel, the internally threaded sleeve supported at an angle to said shaft, the threaded spindle adapted to screw through said sleeve, the gear-wheel splined upon said spindle and meshing with the gear on the drive shaft. 2nd. In a boring machine, the combination with a suitable base, of the head mounted thereon, the drive shaft carrying a gear-wheel journalled in said head, the sleeve supported at an angle to said shaft and provided with internal threads, the gear-wheel journalled in said sleeve and meshing with the drive gear, the threaded spindle passing through the sleeve and splined upon the gear journalled therein, said spindle carrying a bit or drill. 3rd. The combination of the drive shaft, the gear-wheel thereon, the fixed sleeve having an internal thread, the gear-wheel journalled in said sleeve and meshing with the gear of the drive shaft, the threaded bit-carrying spindle adapted to screw through said sleeve and pass through the gear journalled therein, said spindle having a key-way running longitudinally thereof, and said gear through which it passes, having a key adapted to enter said way, whereby, by the rotation of said drive shaft, said spindle is rotated and fed longitudinally. 4th. In a boring machine, the combination of the base formed of the side bars having the integral fixed jaws, the movable jaw mounted between said bars, the movable head also mounted between said bars, and carrying the bit driving and feeding mechanism.

No. 49,276. Method and Apparatus for Producing and Containing Aerated or Gaseous Liquids. (*Méthode et appareil pour produire et contenir des liquides gazeux.*)

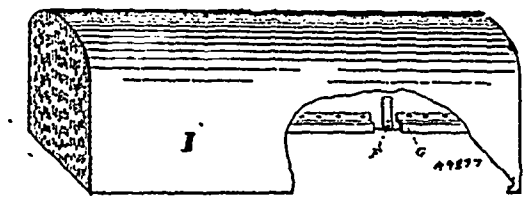
Fig 3



Christopher Hatton, Clapham, England, 20th June, 1895; 6 years.

Claim.—1st The method of producing an aerated or gaseous liquid which consists in measuring off the required quantity of aerating gas from a portable container into a measuring vessel connected with said container, and then discharging said measured quantity of gas into the bottle or other vessel containing the liquid to be aerated, substantially as described. 2nd. In apparatus for producing aerated or gaseous liquids, the combination with a vessel for containing a store of gas, of a secondary or measuring vessel and valves for closing the inlet and outlet openings of said measuring vessel, for the purposes specified. 3rd. A syphon having an opening at the breast or near the foot, or both at the breast and near the foot, for the purpose specified. 4th. A syphon having an ordinary head and fittings for drawing off the contents, and two inlet openings at the side, in combination with an aerator attached to the syphon at one of said openings, and a supply vessel connected with the syphon at the other of said openings, substantially as described for the purpose specified.

No. 49,277. Grave Vault. (*Voûte pour tombeaux.*)

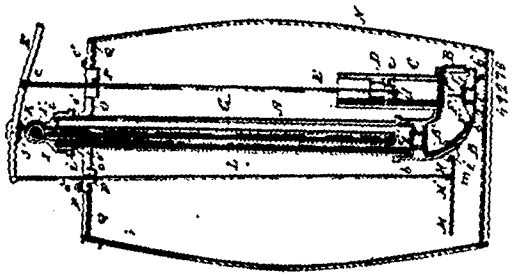


John Gibson Gray, Connersville, Indiana, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. The air-tight cap or cover I, in combination with the elevated platform A, H, and D, all substantially as described. 2nd. The air tight cap or cover I, provided with spring catches F, in combination with the platform A, H and D, provided with lugs B, to be engaged by the spring catches F, of the cap or cover I, which engagement locks the vault, all substantially as herein shown, set forth, and described.

No. 49,278. Insect Destroyer.

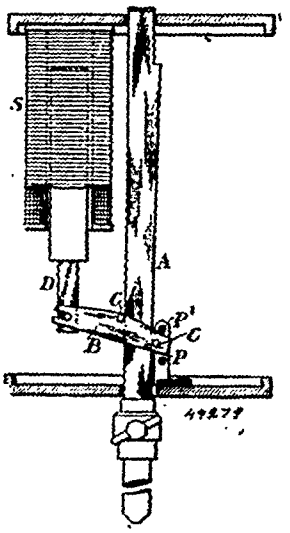
(*Appareil pour détruire les insectes.*)



Roland Morrill and Ferando Morley, both of Benton Harbor, Michigan, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. The casting formed with a neck to receive the cylinder and having a diaphragm with an opening to receive a valve seat, a removable plug at right angles to the neck, an inlet opening with valve and exterior lug, combined with the pump barrel, the discharge pipe and the valves, an agitator mounted on a pivot held in said lug and means for operating the agitator, substantially as specified. 2nd. The combination with the body portion of the pump having a lug upon one side and an inlet opening in its bottom, of an agitator horizontally disposed near the bottom and pivotally mounted on said lug and adapted to force the current beneath said inlet opening, the plunger, the discharge spout and co-operating means, substantially as specified. 3rd. The two-part head-plate each part formed with a semi-circular recess and oppositely-disposed recesses to form slots for the passage of the operating rods of the pump and agitator, the said two parts being pivotally connected together at one corner, as set forth. 4th. The combination with the elbow body portion, of the cylinder secured in a neck thereof, the cap-piece secured to the upper end of the cylinder, the discharge pipe held suspended eccentrically within the cylinder and supported by the cap-piece, the operating handle pivotally mounted on said cap-piece the plunger connected therewith, and the horizontally-disposed oscillatory agitator pivotally mounted on the body portion and pivotally connected with the operating handle, as set forth.

No. 49,279. Electric Arc Lamp. (*Lampe électrique à arc.*)

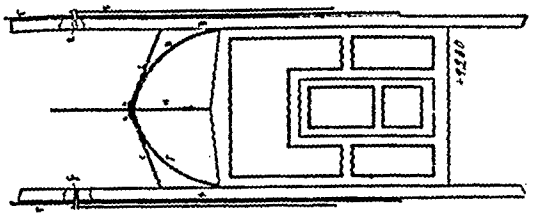


James Brockie, 12 Tyson Road, Forest Hill, England, 20th June, 1895; 6 years.

Claim.—In an electric arc lamp having its carbons fed by the sliding of a rod or grooved rod or tube or by the rotation of a wheel or grooved wheel, when the part subjected to a clutch is released, the formation of the edge, side or periphery on which the clutch acts with slope or inclinations to the path of its motion such that when on its release a feeding movement begins, the fresh part thus brought to the clutch, if of a rod is wider, if of a groove or tube is narrower, if of a wheel is of greater radius and if of a wheel groove is of less radius than the part just released, so that, without any fresh clamping movement of the clutch the fresh part becomes clamped in virtue of its greater or less width or radius, substantially as described.

No. 49,280. Mechanism for operating Elevator Doors.

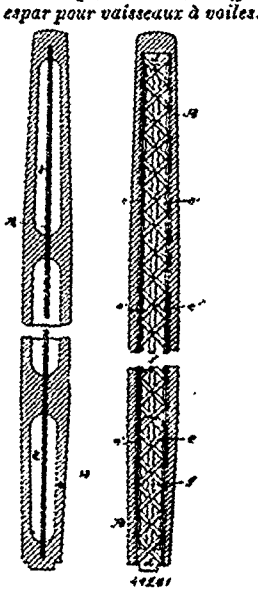
(*Mécanisme pour actionner les portes d'élévateurs.*)



George W. Morgan, St. Thomas, Ontario, Canada, 20th June, 1895; 6 years.

Claim.—1st. The combination of the rod D, D, the elevator car A, and the operating cable H, with the doors C, C, and the grooved pullies A, A, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the locking devices E, E, with the doors C, C, and the releasing rods F, F, and G, G, substantially as and for the purpose hereinafter set forth.

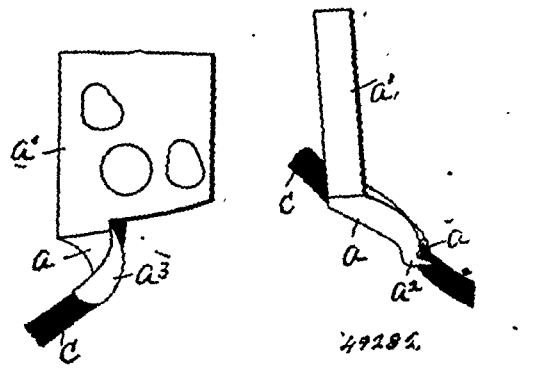
No. 49,281. Mast and Spar for Sailing Vessels. (*Mât et espar pour vaisseaux à voiles.*)



William Edgar Lewis, Newark, New Jersey, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. The combination with a hollow wooden mast, the inner surface of which is grooved longitudinally upon its opposite sides, of a plate, *b*, extending across the hollow of the mast with its edges seated in recesses, formed in the latter, and a cross-plate *c*, at the bottom of each recess and arranged at right angles to the plate *b*, whereby the strain upon the edges of the plate *b*, will be taken up by the plate *c*, and the liability of splitting the mast along the line of the edges of plate, *b*, is avoided, substantially as set forth. 2nd. In a hollow wooden mast, the combination of a central longitudinal plate, and transverse braces arranged at intervals between the top and bottom of the mast to stay and support said plate, as described, and for the purposes set forth. 3rd. In a hollow wooden mast, the combination of a metal plate passing through the centre thereof, longitudinally, and seated at its opposite sides in a recess formed in the wooden shell, a supplemental plate arranged at right angles to the plate aforesaid and a cross-plate also seated in the shell against which one edge of the supplemental plate abutts, substantially as set forth. 4th. The improved mast or spar, herein described in which is combined a hollow or tubular wooden shell composed of two sections joined together longitudinally, and having an inwardly projecting tongue or plate at each side thereof, and a series of braces arranged diagonally with respect to the mast or spar and firmly secured to said tongues or plates and to one another, as described and for the purposes set forth. 5th. The improved mast or spar herein described in which is combined a hollow or tubular wooden shell composed of two sections joined together longitudinally, and having an inwardly projecting tongue or plate at each side thereof; a series of braces arranged diagonally with respect to the mast or spar and firmly secured to said tongues or plates and to one another; and a plate passing longitudinally through said mast or spar at right angles with said braces and connecting therewith and with one section of the shell, as described and for the purposes set forth.

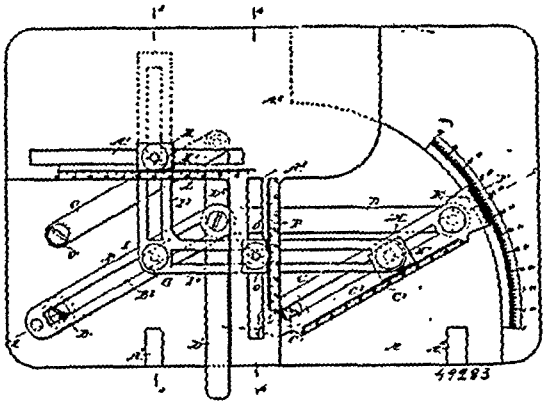
No. 49,282. Channel Guide for Shoe Sewing Machines. (*Guide de cannelure pour machines à coudre les souliers.*)



Myron Lee Keith, Brockton, Massachusetts, U.S.A., 20th June, 1895; 6 years.

Claim.—A channel-guide for welt-sewing machines, comprising in its construction an inclined arm, having means for attachment to a sewing machine, a sole guiding rib or fin projecting from the lower end of said arm, and arranged to enter the bottom of the channel of an inner sole, and hold the same in the path of the needle, and an inclined strip-guiding slot or way in said arm arranged to present a reinforcing-strip to the path of the needle so that the needle will pass through the centre of the strip, the rib causing the needle to enter the bottom of the channel, as set forth.

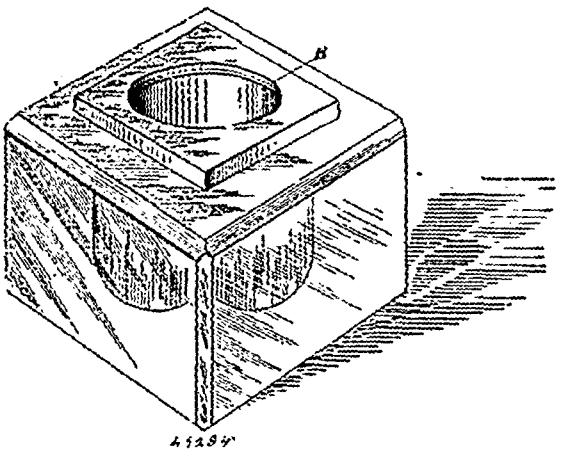
No. 49,283. Trigonometrical Calculating and Measuring Instrument. (*Machine à mesurer et calculer.*)



Adolphe Laurent Lacoste, Natchitoches, Louisiana, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. An instrument of the class described, comprising a pivoted moving arm, a square or right angle arm pivotally connected with the said arm, and guides for keeping the members of the square parallel to their initial position during the movement of the said pivoted arm, substantially as described. 2nd. An instrument for the purpose described, comprising two pivoted parallel arms, a square whose respective members are pivotally connected to the said arms, slides having movement longitudinally of the members of the square, and stationary guide-ways for the slides, said guide-ways extending transversely of the members of the square, substantially as described. 3rd. A measuring instrument of the class described, comprising two pivoted parallel moving arms, a link for connecting the said arms for simultaneous movement, and a square or right angle arm held adjustable on the said parallel arms and moving with the same, substantially as shown and described. 4th. A measuring instrument of the class described, comprising two pivoted parallel moving arms, a link for connecting the said arms for simultaneous movement, a square or right angle arm held adjustable on the said parallel arms and moving with the same, and verniers actuated by the legs of the said square and indicating on fixed graduations arranged at right angles to each other, substantially as shown and described. 5th. A measuring instrument of the class described, comprising two pivoted parallel moving arms, a link for connecting the said arms for simultaneous movement, a vernier held on one end of the said arms and indicating on a fixed graduation indicating degrees and sub divisions, the arm carrying the vernier, and also provided with a distance graduation, a square or right angle arm held adjustably on the said parallel arms, a vernier held on one end of the said square and indicating on the said distance graduation of the corresponding arm, and two movable verniers controlled from the legs of the said square and indicating on fixed distance graduations arranged at right angles to each other, substantially as shown and described. 6th. A measuring instrument of the class described, comprising two pivoted parallel moving arms, a link for connecting the said arms for simultaneous movement, a vernier held on one of the said arms and indicating on a fixed graduation indicating degrees and sub divisions, the arm carrying the vernier being also provided with a distance graduation, a square or right angle arm held adjustably on the said parallel arms, a vernier held on one end of the said square and indicating on the said distance graduation of the corresponding arm, and two movable verniers controlled from the legs of the said square and indicating on fixed distance graduations arranged at right angles to each other, substantially as shown and described. 7th. A measuring instrument of the class described, comprising two pivoted parallel moving arms, a link for connecting the said arms for simultaneous movement, a vernier held on one of the said arms and indicating on a fixed graduation indicating degrees and sub divisions, the arm carrying the vernier being also provided with a distance graduation, a square or right angle arm held adjustably on the said parallel arms, a vernier held on one end of the said square and indicating on the said distance graduation of the corresponding arm, two movable verniers controlled from the legs of the said square and indicating on fixed distance graduations arranged at right angles to each other, and a handle held on the said link for actuating the latter and the arms and square, substantially as shown and described. 8th. A measuring instrument of the class described, comprising two pivoted parallel moving arms, a link for connecting the said arms for simultaneous movement, a vernier held on one of the said arms and indicating on a fixed graduation indicating degrees and sub divisions, the arm carrying the vernier being also provided with a distance graduation, a square or right angle arm held adjustably on the said parallel arms, a vernier held on one end of the said square and indicating on the said distance graduation of the corresponding arm, two movable verniers controlled from the legs of the said square and indicating on fixed distance graduations arranged at right angles to each other, and fixed stops for the said arms, to cause the first named vernier to indicate on zero on the degree graduation, substantially as shown and described. 9th. An instrument of the class described, comprising a pivoted moving arm, a sighting device secured on the said arm to move therewith, a square pivotally connected with the said arm, and guides for keeping the members of the square parallel to their initial position during the movement of the said pivoted arm, substantially as described. 10th. An instrument of the class described, comprising a pivoted moving arm, a two-membered arm pivotally connected to the said moving arm, and guides for keeping the members of the two membered arm parallel to their initial position during the movement of the said pivoted arm, substantially as described.

No. 49,284. Ink Well. (*Encrier.*)

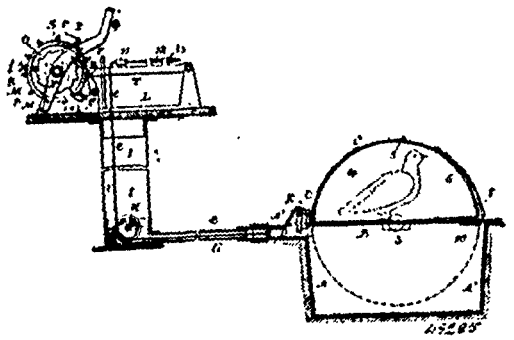


Joseph Morton, New York, State of New York, U.S.A., 20th June, 1895; 6 years.

Claim.—As an improved article of manufacture, the ink well herein described composed of the transparent block having a comparatively small cup recess, its walls being comparatively thick heightening the block appearance with its transparency unobstructed from its surface to the interior of or the space within such cup recess, whereby the vision may penetrate the walls of such block into the cup recess and may perceive objects fitted removably in such recess, and the imperforate ink cup formed in correspondence with and

fitted in such recess, made opaque whereby to exclude the ink from view and having a polished light reflecting surface, whereby when fitted in the cup recess of the transparent block, the polished surface of the ink cup will be visible through the walls of the transparent block, but will not interfere with, but will rather heighten the effect of the pure empty crystal ink well, substantially as and for the purpose set forth.

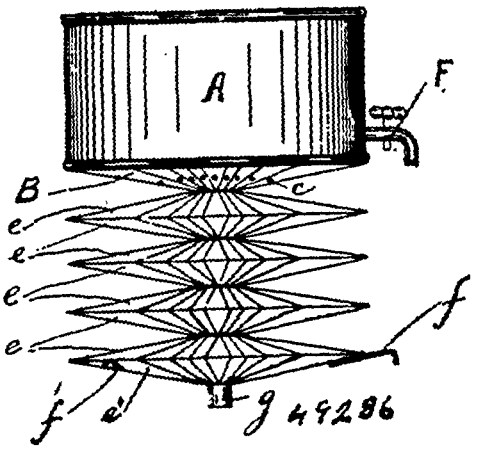
No. 49,285. Pigeon Trap and Trap Pulling Device. (*Trappe à pigeon et appareil pour tirer les trappes.*)



Jordon Lawrence Mott, jr., New York, State of New York, U.S.A., 20th June, 1895; 6 years.

Claim.—1st. The combination in a trap, of a box having a top plate, a pivoted hood adapted to cover the bird, there being an opening in the top plate through which the pivoted hood can be swung down into the box in uncovering the bird, and mechanism for acting upon the pivoted hood to swing it, substantially as set forth. 2nd. The combination in a trap, of a box having a top plate, a pivoted hood adapted to cover the bird, there being an opening in the top plate through which the pivoted hood can be swung down into the box in uncovering the bird, a bolt for holding the pivoted hood, and a pivoted finger acting to bring down one side of the hood in swinging the same, substantially as set forth. 3rd. The combination in a trap, of a box having a top plate, a pivoted hood adapted to cover the bird, there being an opening in the top plate through which the pivoted hood can be swung down into the box in uncovering the bird, and mechanism for acting upon the pivoted hood to swing it, there being openings in the pivoted hood for the admission of light at the distant side of such hood, substantially as set forth. 4th. The combination in a trap, of a box having a top plate, a pivoted hood adapted to cover the bird, there being an opening in the top plate through which the pivoted hood can be swung down into the box in uncovering the bird, and mechanism for acting upon the pivoted hood to swing it, and a spring latch for holding the hood when swung down into the box, substantially as set forth. 5th. The combination with the traps for holding and uncovering the birds, of wires or ropes extending from such traps and by which they are operated, an enclosure or desk into which such wires or ropes are passed, and keys with which they are connected, a pin cylinder for acting upon such keys, and a lever, pawl and ratchet for progressively rotating the cylinder, substantially as set forth. 6th. The combination with the traps for holding and uncovering the birds, of wires or ropes extending from such traps and by which they are operated, an eclosure or desk into which such wires or ropes are passed, and keys with which they are connected, a pin cylinder for acting upon such keys, and a lever, pawl and ratchet for progressively rotating the cylinder, the pin cylinder having ranges of holes for the movable pins, substantially as set forth. 7th. The combination in an apparatus for actuating traps, of a shaft, a lever, pawl and ratchet-wheel for rotating the shaft progressively, a pin cylinder upon such shaft with ranges of holes longitudinally and peripherally, movable pins within such holes, a bolt for holding the cylinder in its proper position upon such shaft, a range of keys acted upon by the pins of the cylinder and connections from such keys to the respective traps, substantially as set forth. 8th. The combination in an apparatus for traps, of a shaft, a lever and pawl and ratchet-wheel for rotating the shaft progressively, a pin cylinder upon such shaft with ranges of holes longitudinally and peripherally, removable pins within such holes, a spring bolt for holding the pin cylinder in position upon the shaft, automatic means for sliding the cylinder endwise upon the shaft, substantially as set forth. 9th. The combination with the traps for holding pigeons or other birds, keys and connections between the traps and the keys, of a cylinder with projections for acting upon the keys and means for rotating the cylinder progressively by hand, substantially as set forth. 10th. The combination with the traps for holding pigeons or other birds, keys and connections between the traps and the keys, of a cylinder with projections for acting upon the keys and means for rotating the cylinder progressively by hand, and automatic mechanism for moving the cylinder endwise for bringing different ranges of projections upon the cylinder into action upon the keys, substantially as set forth. 11th. The combination with the traps for holding pigeons or other birds, of keys and connections between the traps and the keys, a cylinder with projections for acting upon the keys, means for rotating the cylinder progressively by hand, a plate with intersectang grooves inclined in opposite directions, a switch upon the cylinder for engaging the grooves of the plate and moving the cylinder endwise first in one direction and then in the other, substantially as set forth.

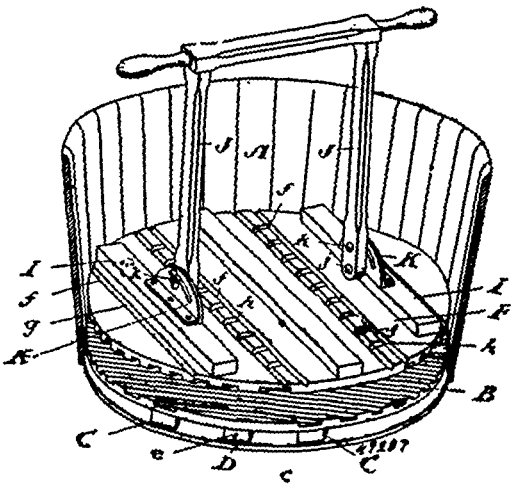
No. 49,286. Machine à aérer le lait. (*Milk aerator.*)



Joseph Anselm Gosselin, Drummondville, Québec, Canada, 20 juin, 1895; 6 ans.

Résumé. Dans un appareil à aérer le lait, la combinaison du réservoir A dont le fond en forme de tronc de cône est percé d'une série de trous *e*, *e*, *e*, et muni du tube E se terminant par le robinet F, monté sur une série de troncs de cônes communiquant ensemble par des ouvertures circulaires *i*, *i*, *i*, le dernier tronc de cône *é* étant muni d'une douille *g* et des pattes *f*, *f*, *f*, le tout telque décrit et pour les fins indiquées.

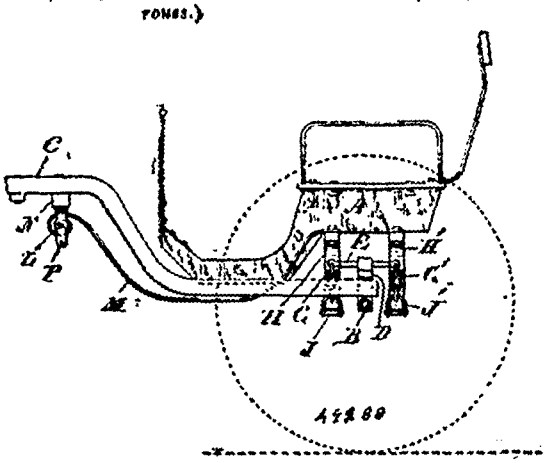
No. 49,287. Wash-Tub. (*Cuve à blanchir.*)



Andrew Schrag, Brantford, Ontario, Canada, 21st June, 1895; 6 years.

Claim.—1st. A wash-tub provided with a corrugated and perforated bottom wash-board, suitably secured in place and forming a false bottom, and a sediment chamber at the bottom of the tub, in combination with an upper movable wash-board also perforated and corrugated and provided with a handle, substantially as described and for the purpose specified. 2nd. In a device of the class specified, a wash-tub A, in combination with the lower corrugated and perforated wash-board B, cross-braces C forming with the lower wash-board B and the bottom of the tub, the sediment chamber L, pins *e* e^1, upper corrugated and perforated wash-board F, and adjustible handle J, suitably secured to the upper wash-board F to operate the same, substantially as described and specified. 3rd. In a device of the class specified, a wash-tub A, in combination with the lower corrugated wash-board B, having holes *c*, and slits *d*, cross-braces C, slotted adjusting piece D, clamping bolts *d*, *d*, pins *e* e^1, upper corrugated and movable wash-board F, having grooves *f*, holes *g* and slits *h*, cross-braces I, handle J, pivot bolt *j*, slotted bracket K, and clamping bolt *k*, substantially as described and for the purpose specified.

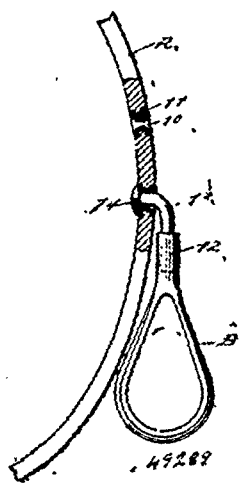
No. 49,287. Two-Wheeled Vehicle. (*Voiture à deux roues.*)



Joseph Kunkel, Mildmay, Ontario, Canada, 21st June, 1895; 6 years.

Claim.—1st. The combination with the vehicle body A, and axle B, of the upwardly curved spring D, secured at the middle to the middle of the axle, the free ends carrying a cross-bar E, transversely to the axle, the parallel front and rear semi-elliptic springs G, G¹, secured at the middle to the bed pieces H, H¹, repectively at the underside of the body, and the ends of said springs G, G¹, supported in shackles hung to the ends of the cross-bars, as set forth. 2nd. The combination with the vehicle body A, and shafts B, of the side springs M, M, bolted near one end to projections from opposite sides of said body, said springs curving downwardly and upwardly and spirally turned and terminating in a bolt hole, and the hanger P, secured to the cross-bar of the shafts and connected to the free end of said springs by a bolt L, passing through holes, as and for the purpose set forth.

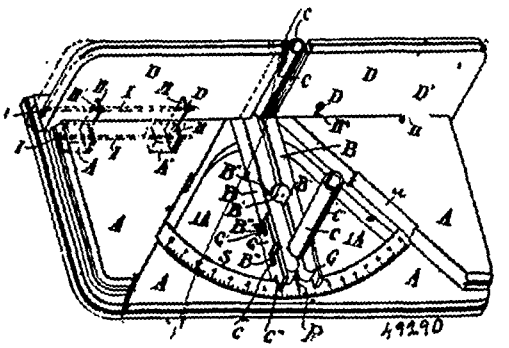
No. 49,289. Check Rein Swivel. (*Tourret de rêne.*)



Julius Carwin Clausen, Hensall, Ontario, Canada, 21st June, 1895; 6 years.

Claim.—1st. The combination, with an apertured strap, of a swivel having a shank section passed through one of the apertures and terminating in a head of greater diameter than that of the apertures, as and for the purpose specified. 2nd. A swivel, the same comprising a body section and a shank section, the shank section being removably attached to the body and curved at its outer end, terminating in a head of greater diameter than the openings through which the shank is to be passed, as and for the purpose specified. 3rd. A swivel, the same consisting of a body provided with a tubular interiorly threaded neck, and a shank curved at its outer end, terminating at the said end in a T-head, the opposite end of the shank being threaded to enter the neck of the body, as and for the purpose specified. 4th. The combination, with a bridle or similar strap having a series of apertures therein, of a swivel comprising a body, a tubular neck interiorly threaded and forming a portion of the body, and a shank threaded to enter the neck of the body, the shank being curved at its outer end, the said curved portion of the shank being made to enter one of the apertures in the strap, and a head firmly secured to the curved extremity of the shank, the head being of a larger size than the aperture through which the shank is passed, as and for the purpose specified.

No. 49,290. Mitre Box. (*Boîte à onglet.*)



Samuel Levan, Saginaw, Michigan, U.S.A., 21st June, 1895; 6 years.

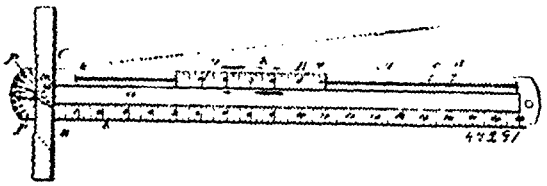
Claim.—1st. A mitre box comprising a base, a two-part movable back adjustably hinged to the base, pivoted guides for the saw adapted to be moved to any desired angle, a scale to indicate when the guides are set to the angle desired, substantially as described. 2nd. A mitre box comprising a base and a back and guides for the saw located in pivoted supports pivoted at the middle of the back and in line with the back, the outer end adapted to adjustably engage a scale whereby any angle desired may be obtained, and removable standards fitting the guides provided with a gauge whereby the depth of the cut may be regulated, substantially as described. 3rd. In a mitre box, the combination with the base and guides for the saw located in a pivot, of a support pivoted at one end to the back of the base and provided at the other with a catch adapted to engage as desired serrations on a scale of a laterally movable two part hinged back in line with the pivot of the guides, substantially as described. 4th. In a mitre box of the class described, a laterally movable two part hinged back comprising a back piece on each side of a pivotal guide, the back hinged to the base by the hinge described and held in a vertical position by the catch N, and adapted to move laterally on the rod I when desired, substantially as described. 5th. In a mitre box of the class described, a hinge for securing the back to the base comprising L shaped pieces H, and rods I and I¹, passing through the ends thereof respectively, and the back and the base, respectively, one end of the hinge H, fitting into and adapted to move on the rod I¹, in the slot A¹¹, the other end of the hinge fitting into the groove D¹, in the back D, and held therein by the rod I, upon which the back D, moves when turned down, substantially as described. 6th. In a mitre box of the class described, removable standards C, fitting into saw guides and provided with a guage whereby the depth of the saw-cut may be regulated, substantially as described. 7th. In a mitre box of the class described, a pivoted guide for the saw comprising metal guides C, and 1 C, supported by the bars B, B, the guide C, passing below the bars B, and forming a pivot for the bars in the base A, the guide 1 C, being removable and adjustable to a different position from the bars B, B, and the spring catch G, removably secured to the bars, and having its front end serrated and adapted to engage corresponding serrations arranged on the edge of a segment of a circle upon which a scale is formed, substantially as described. 8th. In a mitre box, the combination with the base, a two part laterally movable hinged back provided with longitudinal grooves D¹¹, upon the top edge thereof for receiving the saw when turned down and not in use, of pivoted guides for the saw comprising hollow metal guides supported upon a pivoted base, the inner guide forming a pivot of the base, a spring catch on the outer end of the base having serrations upon its outer end, and a pointer on the line with the saw guides, a circular scale having serrations on its inner edge adapted to be engaged by serrations on the end of the spring catch, and removable standards fitting into metal guides, and a guage upon the standards for regulating the depth of the cut, substantially as described.

No. 49,291. Square. (*Equerre.*)

Major Romeyn Jewell, Rochester, New York, U.S.A., 21st June, 1895; 6 years.

Claim.—1st. A ruler consisting of a body or plate and a slide movable forward and back thereon, the ruler being struck up and slotted to form a seat for the slide, and the slide provided with a rivet or rivets that rests in the slot of the seat, as and for the purpose specified. 2nd. A ruler consisting of a body or plate, and a T-head to which the ruler is pivoted, the T-head consisting of a strip folded double and slotted for the passage of one end of the ruler, one or both of the flanges being bent at right angles to form a riding edge, as

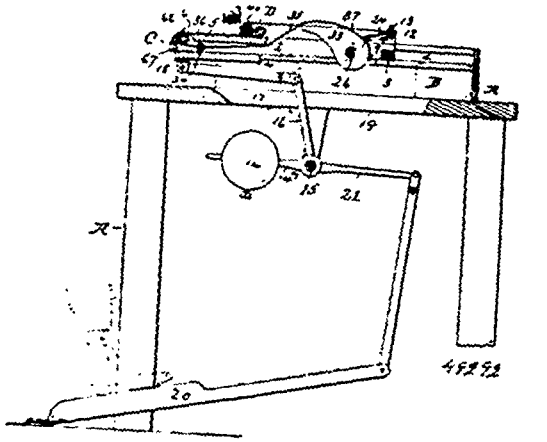
shown in coin and described. 3rd. The combination of the T-head, consisting of a strip folded double and slotted for the passage of the



end of the ruler, the ruler projecting through the head, pivoted thereto, and provided with holes in the projecting end registering with degree lines, and the spring attached to the head and provided with a pin entering the holes, as shown and described and for the purpose specified. 4th. The combination of a ruler provided with two or more sets of holes alternating with each other and arranged in line with graduations on the scale, a T head attached to one end of the ruler, and a graduated slide attached to the ruler and fitted to move over a convex seat of the same, as shown and described and for the purpose specified.

No. 49,292. Cigar Bunching Machine.

(*Machine à lier les cigares.*)



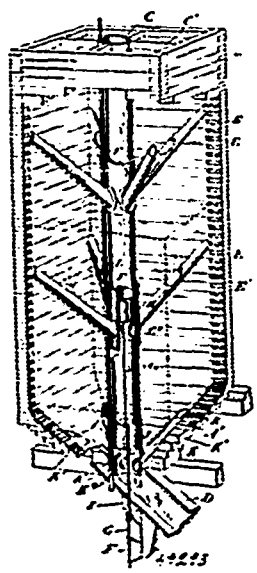
Joseph Delamer and Leon Klein, both of New York, State of New York, U.S.A., 21st June, 1895; 6 years.

Claim.—1st. In a cigar bunching machine, the combination, with a reciprocating carriage of a rolling bed mounted on the carriage, a bunching-roller, a bunch-rolling-apron mounted wholly upon and carried by the carriage and supported wholly thereby so as to move bodily therewith, and means for tightening the apron as the carriage performs its rearward working movement during bunching, substantially as shown and described. 2nd. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed mounted thereon, a bunching-roller, a bunch rolling-apron mounted upon and carried wholly by the carriage and supported wholly thereby so as to move bodily therewith, means for preventing change in the relative positions of the rear end of the apron and of the bunching-roller during the closing of the bight upon the first working movement of the carriage rearward, and means for drawing upon the forward end of the apron in advance of the bight so as to tighten the apron as the carriage continues to move rearward after the closing of the bight, substantially as shown and described. 3rd. In a cigar bunching machine, the combination with a bunch rolling apron, the working portion of which is elastic throughout its entire width, of a rolling-bed, a bunching-roller, means for closing the bight of the apron by changing the relative positions of the bunching-roller and rolling-bed, means for preventing change in the relative positions of the rear end of the apron and of the bunching-roller during the closing of the bight, and means for drawing upon the apron in advance of the bight after the same is closed so as to tighten and stretch the same, substantially as shown and described. 4th. In a cigar bunching machine, the combination with a bunch-rolling apron the working portion of which is elastic throughout its entire width, of a rolling-bed, a bunching-roller of the form of a right cylinder, means for closing the bight of the apron by changing the relative positions of the bunching-roller and rolling-bed, means for preventing change in the relative positions of the rear end of the apron and of the bunching-roller during the closing of the bight, and means for drawing upon the apron in advance of the bight after the same is closed so as to tighten and stretch the same, substantially as shown and described. 5th. In a cigar bunching machine, the combination with a reciprocating carriage of a rolling-bed, a bunching-roller, a bunch rolling apron the working portion of which is elastic throughout its entire width, positive means for preventing the drawing of the bunch filling from the bight during the movement of the carriage while closing the same, and means for drawing upon the forward end of the apron in advance of the bight so as to tighten the apron as the carriage continues to move rearward after the closing of the bight, substantially as shown and described. 6th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron mounted upon the carriage and carried wholly thereby and supported wholly thereon so as to move bodily therewith, means for preventing the drawing of the bunch filling from the bight during the first rearward working movement of the carriage, and means for drawing upon the forward end of the apron in advance of the bight as the carriage continues its rearward working movement after the closing of the bight, substantially as shown and described. 7th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron mounted upon the carriage and carried wholly thereby and supported wholly thereon so as to move bodily therewith, means for preventing change in the relative positions of the rear end of the apron and of the bunching-roller during the first movement of the mechanism in closing the bight, and means for drawing upon the forward end of the apron in advance of the bight so as to tighten the apron as the carriage continues to move rearward with the carriage, substantially as shown and described. 8th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling-apron mounted upon the carriage and carried wholly thereby, means for preventing the rear end of the apron from being carried rearward during the first portion of the rearward working movement of the carriage, and means for drawing upon the apron so as to tighten the same after the rear end of the apron begins to move rearward with the carriage, substantially as shown and described. 9th. In a cigar bunching machine, the combination with a carriage reciprocating in a plane, of a rolling-bed, a bunching-roller, a bunch-rolling apron mounted upon the reciprocating carriage and carried wholly thereby, means for preventing the rear end of the apron from changing its position relative to the bunching-roller during the closing of the bight, and means for tightening the apron after the closing of the bight, substantially as shown and described. 10th. In a cigar bunching machine, the combination, with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron the working portion of which is elastic throughout its entire width mounted upon the carriage and carried wholly thereby, positive means for preventing the throwing of the bunch filling from the bight during the first rearward working movement of the carriage, and means for drawing upon the front end of the apron in advance of the bight as the carriage continues its rearward working movement after the closing of the bight, substantially as shown and described. 11th. In a cigar bunching machine, the combination, with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron the working portion of which is elastic throughout its entire width mounted upon the carriage and carried wholly thereby, means for preventing change in the relative positions of the rear end of the apron and of the bunching-roller during the first movement of the mechanism in closing the bight, and means for drawing upon the front end of the apron in advance of the bight so as to tighten the same during the rearward working movement of the carriage after the closing of the bight, substantially as shown and described. 12th. In a cigar bunching machine, the combination, with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron the working portion of which is elastic throughout its entire width mounted upon the carriage and carried wholly thereby, means for preventing the rear end of the apron from being carried rearward during the first portion of the rearward working movement of the carriage, and means for drawing upon the apron so as to tighten the same after the rearward end of the apron begins to move rearward with the carriage, substantially as shown and described. 13th. In a cigar bunching machine, the combination, with a carriage reciprocating in a plane, a rolling-bed, a bunching-roller, a bunch-rolling apron the working portion of which is elastic throughout its entire width mounted upon the reciprocating carriage and carried wholly thereby, means for preventing the rear end of the apron from changing its position relative to the bunching roller during the closing of the bight, and means for tightening the apron after the closing of the bight, substantially as shown and described. 14th. In a cigar bunching machine, the combination, with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron mounted upon the carriage and carried wholly thereby and supported wholly thereon so as to move bodily therewith, and means for automatically tightening the apron during the rearward working movement of the carriage while forming the bunch, substantially as shown and described. 15th. In a cigar bunching machine, the combination, with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron the working portion of which is elastic throughout its entire width, mounted upon and carried wholly by the carriage and supported wholly thereon so as to move bodily therewith, and means for automatically tightening the apron during the rearward working movement of the carriage while forming the bunch, substantially as shown and described. 16th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed, a bunching roller, a bunch rolling apron mounted upon the carriage and carried wholly thereby, and supported wholly thereon so as to move bodily therewith means for

preventing change in the relative positions of the bunching-roller and the rear end of the apron during the first movement of the mechanism in closing the bight and means for automatically tightening the apron during the rearward working movement of the carriage after the closing of the bight, substantially as shown and described. 17th. In a cigar bunching machine, the combination with a support of a carriage mounted upon the support and reciprocating through a plane, a rolling-bed mounted upon the carriage, a bunch-rolling apron, a bunching-roller, a yielding connection or connections by which the rear of the apron is secured to the rear of the reciprocating carriage, means for forcing such connection or connections toward the front of the carriage to slacken the apron, means secured to the support for stopping such yielding connection or connections short of the extreme forward movement of the carriage, and means for automatically tightening the apron during the rearward working movement of the carriage, substantially as shown and described. 18th. In a cigar bunching machine, the combination with a support of a carriage mounted upon the support and reciprocating through a plane, a rolling-bed mounted upon the carriage, a bunching-roller, a bunch-rolling apron, a yielding connection or connections by which the rear of the apron is secured to the rear of the reciprocating carriage, means for forcing such connection or connections toward the front of the carriage to slacken the apron, means secured to the support for stopping such yielding connection or connections short of the extreme forward movement of the carriage, and means for automatically drawing the forward end of the apron to the rear beneath the rolling-bed during the rearward working movement of the carriage so as to tighten such apron, substantially as shown and described. 19th. In a cigar bunching machine, the combination with a support of a carriage mounted upon such support and reciprocating through a plane, a rolling-bed, a bunching-roller, a bunch-rolling apron the working portion of which is elastic throughout the entire width thereof, a yielding connection or connections by which the rear of the apron is secured to the rear of the reciprocating carriage, means for normally facing such connection or connections toward the front of the carriage to slacken the apron, means secured to the support for stopping such yielding connection or connections short of the extreme forward movement of the carriage, and means for automatically drawing upon the forward end of the apron so as to tighten the same during the rearward working movement of the carriage, substantially as shown and described. 20th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed, a bunching roller, a bunch-rolling apron, a yielding connection or connections by which one end of such apron is secured to the carriage for the purpose stated, means for limiting the movement of such connection or connections to less than the full forward movement of the carriage, and means for drawing upon the opposite end of the apron during the rearward or working movement of the carriage so as to tighten the same, substantially as shown and described. 21st. In a cigar bunching machine, the combination with a reciprocating carriage, of a bunching-roller, a rolling-bed, a bunch rolling apron, a sliding bracket or brackts 12 mounted upon the carriage, and in connection with one end of the apron, a spring or springs 24, by which such bracket or brackets are normally forced toward the front of the carriage, and a stop or stops 23 for limiting the forward movement of the bracket or brackets for the purpose stated mounted upon the support for the carriage, substantially as shown and described. 22nd. In a cigar bunching machine, the combination with a reciprocating carriage mounted upon a suitable support, of a bunching-roller, a rolling-bed, a bunch-rolling apron, a movable bracket or brackets 12, mounted upon the carriage, and in connection with one end of the apron, a spring or springs 24, by which such bracket or brackets are normally forced toward the front of the carriage, a stop or stops 23, mounted upon the support for the carriage, by which the forward movement of the bracket or brackets is limited to less than the full forward movement of the carriage, and means for automatically tightening the apron during the rearward movement of the carriage, substantially as shown and described. 23rd. In a cigar bunching machine, the combination with a bunch-rolling apron the working portion of which is elastic throughout its entire width, of a rolling-bed, a bunching roller, and means for tightening and stretching the apron after the bight is closed, substantially as shown and described. 24th. In a cigar bunching machine, the combination with a reciprocating carriage, of a bunching roller, a rolling-bed, a bunch-rolling apron, a shaft 26, mounted in the carriage, a cam or cams 33, mounted upon the shaft 26, and in actuating connection with the apron in such manner as to tighten the same when actuated, a cam-lever 28, secured to the shaft 26, and a cam-piece 30 for actuating the cam-lever 28, substantially as shown and described. 25th. In a cigar bunching machine, the combination with a reciprocating carriage, of a bunching-roller, a rolling-bed, a bunch-rolling apron the working portion of which is elastic throughout the entire width thereof, a shaft 26, a cam or cams 33, mounted upon the shaft, mechanism connecting the cam or cams 33, with the apron in such manner that the actuation of the cam or cams will tighten and stretch such apron, a cam lever 28, secured to the shaft 26, and a cam-piece 30 adjacent to the cam-lever 28, by which the same is actuated, substantially as shown and described. 26th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed, a bunching-roller, a bunch-rolling apron one end of which is secured to such carriage by a yielding connection, a shaf, 26, mounted upon the carriage, a cam or cams 33, mounted upon the shaft 26, mechanism connecting the end of the apron which is unconnected with the yielding connection with the cam or cams 33, and means for actuating the shaft 26, as the carriage is reciprocated, substantially as shown and described. 27th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling bed, a bunching roller a bunching rolling apron one end of which is secured to such carriage by a yielding connection, a shaft 26, mounted upon the carriage, a cam or cams 33, mounted upon the shaft 26, mechanism connecting the end of the apron that is unconnected with the yielding connection with the cam or cams 33, a cam-lver 28 secured to the shaft 26, and a cam-piece 30 adjacent to such cam-lever for actuating the same, substantially as shown and described. 28th In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed, a bunching roller, located above the rolling-bed, a bunch-rolling apron the forward end of which is secured to the reciprocating carriage by a yielding connection, means for limiting the forward movement of the yielding connection to less than the entire forward movement of the carriage, and means for automatically drawing the forward end of the apron toward the rear underneath the rolling bed as the carriage is moved to the rear while working substantially as shown and described. 29th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed formed of a sheet of flexible material mounted upon the carriage, and means for tightening and loosening such sheet, substantially as shown and described. 30th. In a removable shaper for cigar bunching machines, the combination with a suitable block having a mold-cavity extending through the same, of an ejecting plunger located in the mold cavity and adapted to be reciprocated in the same, means for normally holding such plunger in a retracted position with the end thereof in the mold cavity, and a movable piece 53 adapted to close the open side of the mold cavity, substantially as shown and described. 31st. In a removable shaper for cigar bunching machines the combination with a suitable block having a mold-cavity extending through the same, of an ejecting plunger located in such cavity so that one end thereof may be pushed entirely through the same, and suitable springs by which such plunger is kept normally in a retracted position with the end thereof within the cavity so as to form one wall of such cavity, and a movable piece 53 for closing the open side of the cavity so as to hold the filler tobacco therein when the shaper is held in the ejecting position, substantially as shown and described 32nd. In a removable shaper for cigar bunch machines, the combination with a suitable block having a mold-cavity extending through the same, of an ejecting plunger located in the mold-cavity the end of which is adapted to be pushed entirely through the mold-cavity, rods 49 secured at the lower ends to the mold block, the cross bar 48 secured to the top of the plunger and having holes in the ends, through which pass said rods 49, adjustable nuts on the rods 49 above the cross-bar 48, a spring or springs 52 interposed between the mold-block and the cross bar, and a swinging movable piece 53 by which the open side of the mold cavity is closed and adapted to be forced open by the pressure of the ejecting-plunger when the same is forced down through the mold-cavity, substantially as shown and described. 33rd. In a removable shaper for cigar bunching machines, the combination with the block having a mold cavity extending through the same, and having the extending end portions 44, of an ejecting-plunger located in the mold-cavity the end of which is adapted to be pushed entirely through the same, means for normally holding such plunger in a retracted position with the end thereof within the cavity so as to form one wall thereof, and a movable piece 53 adapted to close the open side of the mold cavity and to be pushed open by the end of the plunger when the same is pushed down through the cavity, substantially as shown and described. 34th. In a removable shaper for cigar bunching machines, the combination with a suitable block having a mold-cavity extending through the same, of a hinged bottom-piece 53, an ejecting-plunger located in the mold-cavity, and a portion of the block forming one side wall of the mold cavity separated from the rest of the block so as to be moved aside, substantially as shown and described. 35th. In a removable shaper for cigar-bunching-machines, the combination with a suitable block having a mold-cavity extending through the same, of a hinged bottom piece 53, an ejecting plunger reciprocating in the cavity, and a portion of the block forming one side wall of such cavity separated from the rest of the block and hinged thereto so as to be swung aside, substantially as shown and described. 36th. In a removable shaper for cigar-bunching machines, the combination with a suitable block having a mold-cavity extending through the same, of an ejecting plunger reciprocating in such cavity, a portion of the block forming one side wall of the cavity being separated from the rest of the block and hinged thereto so as to be swung open, and a piece 53 for covering the open end of the mold-cavity hinged to the swinging piece of the block, substantially as shown and described. 37th. A removable shaper for cigar bunching machines, having an ejecting plunger reciprocating in the mold cavity, a hinged wall to such cavity, and a hinged bottom piece therefor, substantially as shown and described. 38th. In a cigar bunching machine, the combination with a bunch rolling apron the working portion of which is elastic throughout its entire width, of a rolling bed, a bunching roller of the form of a right cylinder, and means for tightening and stretching the apron after the bight is closed, substantially as shown and described. 39th. In a cigar bunching machine, the combination with a bunch rolling apron the working portion of which is elastic throughout its entire width, of a rolling-bed, a bunching-roller of

the form of a right cylinder, means for closing the bight without disturbing the filler tobacco therein, and means for tightening and stretching the apron after the bight is closed, substantially as shown and described. 40th. In a cigar bunching machine, the combination with a bunch-rolling apron, the working portion of which is elastic throughout its entire width, of a rolling-bed, a bunching-roller substantially in the form of a right cylinder, means for preventing change in the relative positions of the rear end of the apron and of the bunching-roller during the closing of the bight, and means for drawing upon the front end of the apron so as to tighten and stretch the same after the bight is closed, substantially as shown and described. 41st. In a cigar-bunching-machine, the combination with a reciprocating carriage, of a rolling-bed mounted thereon, a bunch-rolling apron the working portion of which is elastic throughout its entire width mounted upon and carried wholly by the reciprocating carriage, a bunching-roller substantially in the form of a right cylinder, means for preventing the rear end of the apron from moving rearward with the carriage while the bight is being closed and for carrying it rearward after the bight is closed, and means for drawing upon the front end of the apron so as to tighten and stretch the same as the carriage moves rearward after the bight is closed, substantially as shown and described. 42nd. In a cigar bunching machine, the combination with a bunch-rolling apron the working portion of which is elastic throughout its entire width, of a rolling-bed, a bunching roller, means for closing the bight without disturbing the filler tobacco therein, and means for tightening and stretching the apron after the bight is closed, substantially as shown and described. 43rd. In a cigar bunching machine, the combination with a bunch-rolling apron the working portion of which is elastic throughout its entire width, of a rolling-bed, a bunching-roller, means for preventing change in the relative positions of the rear end of the apron and of the bunching roller during the closing of the bight, and means for drawing upon the front end of the apron so as to tighten and stretch the same after the bight is closed, substantially as shown and described. 44th. In a cigar bunching machine, the combination with a reciprocating carriage, of a rolling-bed mounted thereon, a bunch-rolling apron the working portion of which is elastic throughout its entire width mounted upon and carried wholly by the reciprocating carriage, a bunching-roller, means for preventing the rear end of the apron from moving rearward with the carriage while the bight is being closed and for carrying it rearward after the bight is closed, and means for drawing upon the front end of the apron so as to tighten and stretch the same as the carriage moves rearward after the bight is closed, substantially as shown and described.

No. 49,293. Grain Bin. (*Coffre à avoine.*)

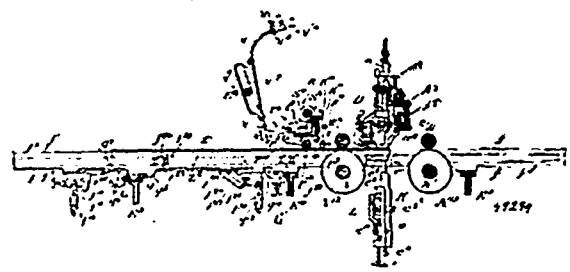


Francis Napier Denison, Toronto, Ontario, Canada, 21st June, 1895; 6 years.

Claim.—1st. In a grain bin, a central pipe suitably supported and extending from the top to the bottom of the bin, one or more sets of oblique radiating spouts provided with elongated openings at the top intermediate of their length, and valves for closing their inner ends, as and for the purpose specified. 2nd. In a grain bin, the combination with the pipe open at both ends located centrally in the bin and extending from top to bottom of same, and the radiating oblique spouts provided with elongated openings at the top intermediate of their length, of the ring valves operated by rods extending into and secured in the hubs of same, as and for the purpose specified. 3rd. In a grain bin, the combination with the pipe C, open at both ends, located centrally in the bin and extending from top to bottom of same, and the radiating oblique spouts provided with elongated openings at the top intermediate of their length, of the ring valves and sleeves, I, i, and rod F, connected to the hubs of the same, and the levers I^1, i^1, and F^1, having a clotted connection to the sleeves I and i, and rod F, as and for the purpose specified. 4th. In a grain bin, the combination with the central pipe and hopper shaped bottom of the apron K, fitting the bottom of the hopper, the spout portion K^1, provided with elongated openings k, and the openings k^1, in the pipe C, at the bottom of the apron, as and for the purpose specified. 5th. In a grain bin, in combination, a supplemental tube n, provided with a thermometer, and means for lowering the thermometer to any desired level in the bin, as and for the purpose specified. 6th. In a grain bin, the combination with the central pipe and spouts, of a supplemental tube n, provided with a thermometer and means for lowering the thermometer to any desired point in the bin, and electrical means from such thermometer to an indicating plate, as and for the purpose specified. 7th. In a grain bin, the combination with the central pipe and spouts, of a supplemental tube n, provided with a thermometer, and means for lowering the thermometer to any desired point in the bin, and electrical means from such thermometer to an indicating plate and an enclosing bottom casing for the thermometer provided with spring fingers n, and a weighted bottom N^1, as and for the purpose specified.

No. 49,294. Machine for Making Box Blanks.

(*Machine pour faire des blancs de boîtes.*)

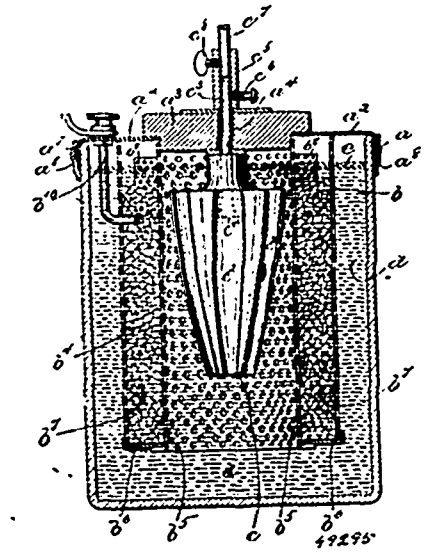


Thurston Louis Knudtson and Jacob Uhri, both of Chicago, Illinois, U.S.A., 21st June, 1895; 6 years.

Claim.—1st. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally in their guides and with a sheet through the machine an intermittingly actuated staple driver adjacent to the path of each cleat, alternating in its action with said feed mechanism, to fasten the sheet, by successive operations to the cleat, and means for guiding strengthening wires with the cleats and sheet across the staple drivers, substantially as and for the purpose set forth. 2nd. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of outer and intermediate guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally in said guides with a sheet through the machine, an intermittingly-actuated staple driver adjacent to the path of each cleat alternating in its action with said feed mechanism to fasten the sheet and strengthening wires by successive operations to the cleat at intervals in the direction longitudinally of the cleat, and means for guiding strengthening wires with the sheet across the staple drivers, substantially as described. 3rd. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally in their guides and with a sheet through the machine, an intermittingly actuated staple driver above the path of each cleat, alternating in its action with said feed mechanism, to fasten the sheet, by successive operations, to the cleat at intervals in the direction longitudinally of the cleat, means for guiding strengthening wires with the sheet across the staple drivers, and reciprocating clinchers below the paths of the said cleats co-operating with the staple drivers, substantially as described. 4th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally in their guides and with a sheet through the machine, an intermittingly actuated staple driver above the path of each cleat, an intermittingly actuated clincher below the path of each cleat, the said staple drivers and clinchers being adjustable with relation to each other and co-operating in their action to alternate with the said feed mechanism to fasten the sheet, by successive operations, to the cleats at intervals in the direction longitudinally of the cleats, and means for guiding strengthening wires with the sheet across the staple drivers, substantially as described. 5th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of laterally adjustable guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally in their guides and with a sheet through the machine, a laterally adjustable intermittingly actuated staple driver adjacent

to the path of each cleat, alternating in its action with said feed mechanism, to fasten the sheet, by successive operations, to the cleat at intervals in the direction longitudinally of the cleat, and means adjustable with the staple drivers for guiding strengthening wires with the sheet across the staple drivers, substantially as and for the purpose set forth. 6th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally in their guides and with a sheet through the machine, an intermittingly actuated staple driver and a guide for a strengthening wire adjacent to the path of each cleat, the staple drivers alternating in their action with the said feed mechanism to fasten the strengthening wires and sheet, by successive operations, to the cleat at intervals in the direction longitudinally of the cleat, substantially as described. 7th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforce cleats, the combination with intermittingly actuated staple drivers, of guides for the lateral edges of the sheet, guides for cleats intermediate of the said sheet guides, guides for strengthening wires at the staple drivers and intermittent feed mechanism alternating in its action with the said staple drivers for advancing the cleats and sheets in their guides with the strengthening wires across the staple drivers, substantially as and for the purpose set forth. 8th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of intermittent feed mechanism for advancing the cleats longitudinally with a sheet through the machine, an intermittingly actuated staple driver adjacent to the path of each cleat, alternating in its action with said feed mechanism, to fasten the strengthening wires and sheet, by successive operations, to the cleat at intervals in the direction longitudinally of the cleat, a strengthening wire guide at each staple driver, guides for the lateral edges of the sheet and guides for the cleats adjustable with relation to the said sheet guides according to the width of the cleats and thickness of the sheet, substantially as and for the purpose set forth. 9th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of an adjustable bed frame mounted in guides with means for raising and lowering it therein, guides for the cleats on the said bed frame, intermittent feed mechanism for advancing the cleats longitudinally with the sheet through said guides, an intermittingly actuated staple driver adjacent to the path of each cleat alternating in its action with said feed mechanism, to fasten the strengthening wires and sheets, by successive operations, to the cleat at intervals in the direction longitudinally of the cleat, and a strengthening wire guide at each staple driver, substantially as and for the purpose set forth. 10th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination with intermittingly actuated staple drivers, of guides for the cleats, guides for the strengthening wires and intermittingly actuated feed rollers for advancing the sheet strengthening wires and cleats in their guides longitudinally across the said staple drivers, the said feed rollers alternating in their action with the said staple drivers, substantially as described. 11th. In a machine for forming box blanks by fastening sheets to reinforcing cleats, the combination with intermittingly actuated staple drivers, of guides for the sheet and cleats, intermittent feed rolls, alternating in their action with the said staple drivers to advance the sheet and cleats in their guides longitudinally across the staple drivers, and a sliding frame, provided with means for gripping the cleats through the sheets, and operative to engage the same, when initially fed to the machine, slide them to the said feed rolls, hold them together until the first staples are driven and then release them, substantially as described. 12th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally with a sheet through the machine, a series of intermittingly actuated staple forming and driving machines, alternating in their action with the said feed mechanism, disposed above the path of the sheet and cleats and in a horizontal line at right-angles to said path, and means for guiding strengthening wires across the staple drivers, whereby the strengthening wires and sheet, by successive operations of the staple drivers, are fastened to the cleats at intervals in the direction longitudinally of the cleats, substantially as described. 13th. In a machine for forming box blanks by fastening sheets and strengthening wires to reinforcing cleats, the combination of guides for the cleats, intermittent feed mechanism for advancing the cleats longitudinally with a sheet through the machine, an intermittingly actuated staple driver adjacent to the path of each cleat, alternating in its action with said feed mechanism, and means for severing and initially advancing a strengthening wire across each staple driver before the first staple is driven into a cleat, substantially as and for the purpose set forth. 14th. The combination with the main-frame, of a driver and drive-shaft mounted thereon, clutch mechanism between the said driver and shaft, shipping mechanism on the frame for engaging and releasing the clutch members to start and stop the machine, staple forming and driving machines mounted on the frame and actuated from the said drive shaft, guides at said staple machines for strengthening wires y, strengthening wire engaging and advancing means, and strengthening wire severing means at the said guides normally inactive and brought into action by movement of said shipping mechanism, to disengage the said clutch-members, and a feed for the material to be stapled actuated from the said drive-shaft to advance the material intermittingly across the said staple machines, substantially as described. 15th. In a machine of the character described, the combination with the main-frame, drive shaft, staple forming and driving machines mounted on the frame and actuated from the drive shaft, strengthening wire guides, and intermittent feed for the material to be stapled, of rotary spools on the main frame for the strengthening wires y, and staple wires x, and brakes for the said spools engaged by said wires and operating when the wires are at rest normally to engage the spools, and under pressure against them exerted by the wires when drawn upon, to release the spools, substantially as and for the purpose set forth.

No. 49,295. Galvanic Battery. (*Pile galvanique.*)



Ralph Wardlaw Gordon, Boston, Massachusetts, U.S.A., 21st June, 1895; 6 years.

Claim.—1st. In a battery cell, the combination with a jar containing an exciting fluid, of a perforated receptacle suspended therein and forming the negative element of the battery, a depolarizing agent contained in said receptacle, and a positive element also suspended in said jar, as described. 2nd. In a battery cell, the combination with a jar containing an exciting fluid and a perforated receptacle containing a depolarizing agent, said receptacle forming the negative element of the battery, of a positive element of zinc connected to the cover, and means for preventing the action of the battery from breaking the connections between said zinc and cover, until the zinc is substantially entirely dissolved, as set forth. 3rd. In a battery cell, the combination with a jar containing an exciting fluid, of a perforated receptacle containing particles of oxide of copper suspended therein, and a positive element also suspended therein, the points of suspension being at or near the bottom of said positive element, substantially as described. 4th. In a battery cell, the combination with a jar containing a solution of caustic soda, of a cover for said jar fitting tightly thereon, a perforated receptacle containing particles of oxide of copper, said receptacle being secured to the under side of said cover and extending downward into the said solution, a positive element consisting of zinc suspended in said solution by a suspender connected at the upper end to the said cover, as described. 5th. In a battery cell consisting of a jar containing an exciting fluid and positive and negative elements and a depolarizing agent suspended therein, the herein described positive element comprising a piece of zinc decreasing in diameter from a point near the surface of the exciting fluid to its lower end, substantially as and for the purpose described. 6th. In a battery cell, the combination with a jar containing an exciting fluid, of a positive element suspended therein, and a receptacle for the depolarizing agent also suspended therein, said receptacle consisting of outer and inner perforated walls and perforated chambers between said walls, as and for the purpose described.

No. 49,296. Motor. (*Moteur.*)

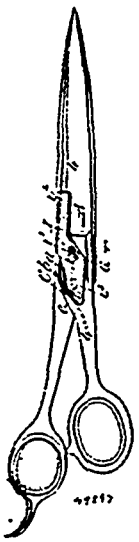
John C. Luenenburg, Lakefield, Minnesota, U.S.A., 21st June, 1895; 6 years.

Claim. 1st. In a motor, the combination with a main driving shaft and gear wheels for imparting a rotary motion to the said shaft, of a travelling sprocket chain for imparting motion to the said gear wheels, and a reciprocating cross-head carrying spring-pressed jawls adapted to engage the strands of the said chain to impart a travelling motion to the chain in one direction on reciprocating the said cross-head, substantially as shown and described. 2nd. In a

motor, the combination, with a main driving shaft and gear wheels for imparting a rotary motion to the said shaft, of a travelling

sprocket chain for imparting motion to the said gear wheels, a reciprocating cross-head carrying spring-pressed pawls adapted to engage the strands of the said chain to impart a travelling motion to the chain in one direction on reciprocating the said cross-head, and a reversing mechanism connected with the said gear wheels to shift the same to rotate the main driving shaft in either direction, substantially as shown and described. 3rd. In a motor, the combination, with a travelling sprocket chain connected with the mechanism to be driven, of a reciprocating cross-head carrying independent spring-pressed pawls adapted to engage the said sprocket chain, a slide provided with foot rests, and connected with the said cross-head, a lever pivotally connected with the said slide, and a mechanism substantially as described, and connected with the said lever for imparting a swinging motion to the same, substantially as set forth. 4th. In a motor, the combination, with a slide provided with foot rests and connected with the machinery to be driven, of a lever pivotally connected with the slide, a link pivotally connected with the said lever, and a bar mounted to slide longitudinally and provided with handle bars one of which is connected with the said link, substantially as shown and described.

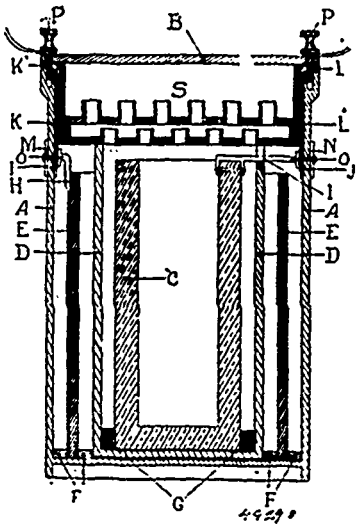
No. 49,297. Joint for Shears. (*Joint de cisailles.*)



Alfred Jacob Krank, St. Paul, Minnesota, U.S.A., 21st June, 1895; 6 years.

Claim.—1st. The combination, with a pair of blades, and a pin passing through both blades and provided with a head at one end and notches at the other, of a spring plate engaging one of the notches and provided with a spring tongue engaging another notch above the plane of the spring plate, substantially as set forth. 2nd. The combination, with a pair of blades, and a pin passing through both blades and provided with a head at one end and notches at the other, of a spring plate having a hole drilled through it at an angle to its face, through which the pin passes, the spring plate also being provided with a spring tongue projecting above the plane of the spring plate, substantially as set forth. 3rd. The combination, with a pair of blades, and a pin passing through the openings in both blades and provided with a head at one end and a pair of notches at the other end, of a spring plate resting on one of the blades and provided with a spring tongue projecting above the plane of the spring plate, the said spring tongue engaging one of the notches in the pin, the other notch in said pin engaged by the lower opposite inner edge of the pin hole in the spring plate, substantially as set forth. 4th. The combination, with a pair of blades, each having a curved slot and a pin hole, a segmental block for each slot, each block being movable in its slot, and a pin passing loosely through each block, one pin being screwed into the pin hole of one blade, and the other pin projecting through the pin hole in the other blade, and provided with notches, of a spring plate resting on one of the blades and having a spring tongue, the spring tongue engaging one of the notches in the pin, the other notch being engaged by the lower opposite inner edge of the pin hole in the spring plate through which the notched pin passes, substantially as set forth.

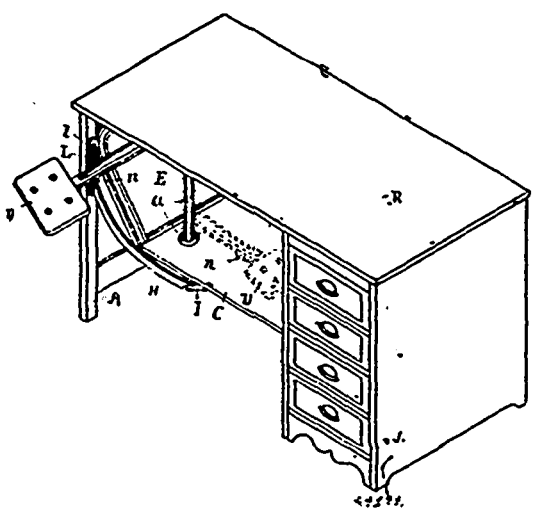
No. 49,298. Primary Battery. (*Pile électrique.*)



J. Arthur G. Trudeau, Ottawa, Ontario, Canada, 21st June, 1895; 6 years.

Claim.—1st. In a primary one or two fluid battery, the connections H, from the carbon to the container box, and fitted to an outside connection M, on the side of the box, as shown and described for the purpose set forth. 2nd. In a primary one or two fluid battery, the bottom of the container box provided with a slot and depression, as shown and described for the purpose set forth. 3rd. In a primary one or two fluid battery an oxidizing box fitted to the under side of the cover, and provided with perforate bottoms having tubes in the perforations for the purpose described and set forth. 4th. In a primary one or two fluid battery, the connection from the zinc to the container box and fitted to an outside connection N, on the side of the box, as shown and described for the purpose set forth. 5th. In a primary one or two fluid battery, having an oxidizing box with external side electrical connections, substantially as shown and described and shown for the purpose set forth. 6th. In a primary one or two fluid battery provided with an oxidizing box, the prolongation of the connections H and L, to the top of the container box, and provided with a binding post for top connection, as shown and described for the purpose set forth.

No. 49,299. Desk. (*Pupitre.*)

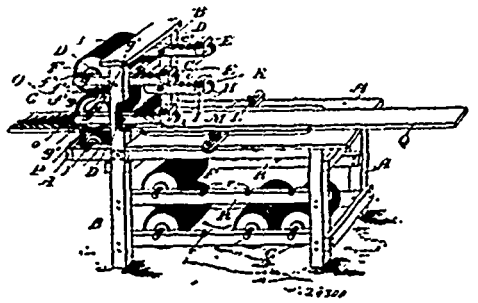


Oliver B. Bowlett, Richmond, Indiana, U.S.A., 21st June, 1895; 6 years.

Claim.—1st. In combination with a desk, a typewriter compartment under the desk table and a typewriter support located therein, and provided with devices for swinging the typewriter out of the

compartment and elevating it into position for use, substantially as specified. 2nd. In combination with a desk, having a typewriter compartment, a typewriter support consisting of the swivelling bracket arm D, adapted to be raised or lowered, substantially as specified. 3rd. In combination with a compartment of a desk, a typewriter support consisting of the shaft E, and the arm D, journalling thereon, and adapted to be raised or lowered on said shaft and devices for sustaining the said support in its elevated outward position, substantially as specified. 4th. In a typewriter desk having a compartment under the table thereof, the combination of the swinging typewriter support and an incline secured to the shelf, and to the table leg and located in the path of travel of said typewriter support, substantially as specified. 5th. In a typewriter desk, having a compartment under the table thereof, the combination of the swinging typewriter support journalled within said compartment, and an incline pivotally attached to the shelf, and to the table leg in front of the compartment, and in the path of travel of the said typewriter support, and means for adjusting the height of said incline, substantially as specified. 6th. In combination with a typewriter desk, having a compartment under the desk, a typewriter support journalled within the compartment, the incline H, secured to said desk and table in front of the compartment and in the path of travel of the swinging support, and provided with a recess at its upper end into which the typewriter support enters and is secured in position, substantially as specified. 7th. In a typewriter desk, having a compartment under the table thereof, the incline H, supported on the front of the shelf C, the adjusting plate F, secured to the table leg and to which the upper end of the incline is pivoted, and means for adjusting said plate vertically on the table leg, substantially as specified.

No. 49,300. Graining Lumber. (*Machine pour creneler le bois.*)



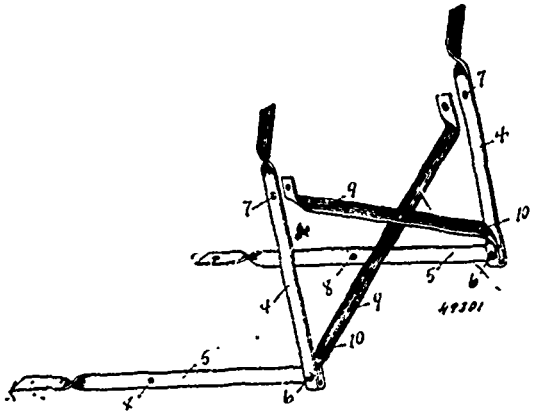
Hugh Silver, Lindsay, Ontario, Canada, 21st June, 1895; 6 years.

Claim.—1st. In a machine for graining lumber, the combination of a paint roller and an adjustable graining roller provided with a covering of elastic material on which the grain pattern is formed, substantially as described and for the purpose specified. 2nd. In a machine for graining lumber, the combination of an adjustable paint roller provided with a covering of absorbent material, an adjustable graining roller provided with a covering of elastic material on which the grain pattern is formed, a suitably journalled friction roller between which and the graining roller the planed lumber is passed, substantially as described and for the purpose specified. 3rd. In a machine for graining lumber, the combination of suitably covered paint roller journalled on adjustable bearing pieces pivotally connected to standards; a graining roller below the paint roller, and in adjustible contact therewith, provided with a covering of elastic material on which the grain pattern is formed and similarly journalled, and a friction roller journalled on the main frame below the graining roller, and adjusting bolts for preserving a space between the friction roller and graining roller after the planed lumber has been passed through the machine, substantially as specified. 4th. In a machine for graining lumber, the combination of the standards B, the bearing pieces C, provided with grooves c and c^1, the screw bolts D, and weights E, substantially as described and for the purpose specified. 5th. In a machine for graining lumber, the combination of the standards B, the bearing pieces C, provided with grooves c and c^1, the screw bolts D, the weights E, provided with lugs e, the cross-brace N, hinges o^1, and adjusting bar O, substantially as described and for the purpose specified. 6th. In a machine for graining lumber, the combination of frame A, grooved top A^1, slotted gauge pieces L, set-screws M, standards B, grooved bearing pieces C, screw bolts D, weights E and I, with lugs formed thereon, paint roller F, covering f, spindles f', graining roller G, elastic covering g, spindles g^1, grooved bearing piece H, friction roller J, spindle j, brush K, cross-brace N, adjusting bar O, provided with handle o, hinges o^1 adjusting bolts P, substantially as described and for the purpose specified.

No. 49,301. Wheel Barrow. (*Brouette.*)

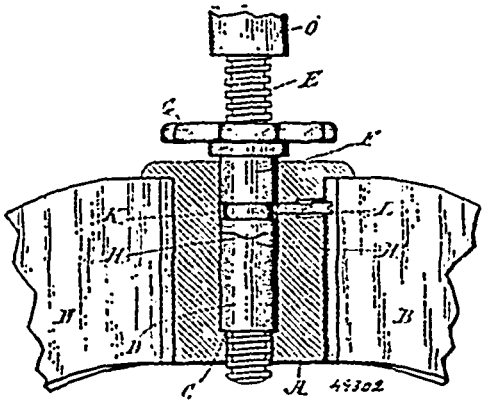
Martin V. Garver, Bryan, Ohio, U.S.A., 21st June, 1895; 6 years.

Claim. 1st. In a wheel barrow, the frame thereof having all its members pivotally connected, whereby the parts of said frame may be folded upon each other horizontally and vertically in substantially parallel lines, substantially as shown and described for the purpose specified. 2nd. In a wheel barrow, the legs having the side-braces



and cross braces g, pivotally connected therewith, substantially as shown and described for the purpose specified. 3rd. In a wheel barrow, the legs having the side-braces and cross-braces g, pivotally connected therewith, in combination with the handles and pivotal connections between said handles and said side-braces, substantially as shown and described for the purpose specified. 4th. A folding or collapsible wheel barrow frame, comprising in its construction the handles, the legs, side-braces pivotally connected with said handles and legs, cross-braces pivotally connected with said legs, and folding braces connecting said handles, all substantially as shown and described for the purpose specified.

No. 49,302. Revolving Chair. (*Chaise tournante.*)



James M. Morgan, Port Washington, Wisconsin, U.S.A., 22nd June, 1895; 6 years.

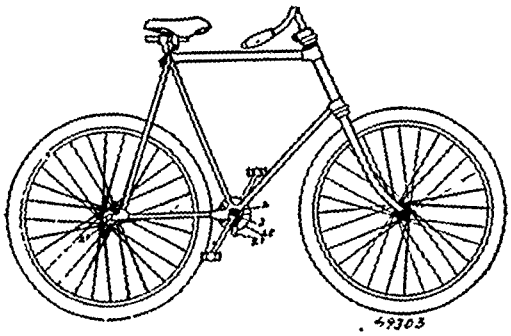
Claim.—1st. The combination with a hub having a vertical aperture, of a sleeve supported and freely revoluble therein, a nut supported on and releasably engaging the sleeve, a screw threaded chair-spindle extending through the nut and the sleeve, the screw of the nut engaging the screw of the spindle, and means holding the sleeve to revolution with the spindle, while permitting vertical movement of the spindle in the sleeve, substantially as described. 2nd. The combination with a hub having a vertical aperture and an annular shoulder, of a sleeve, supported revolubly on the shoulder and provided with a depression in its upper end, a lug projecting inwardly from the sleeve, a nut supported revolubly on the sleeve, a projection on the nut fitting releasably in the depression in the sleeve, and a screw-threaded spindle turning in the nut and extending through the sleeve and having a vertical groove for the lug on the sleeve, substantially as described.

No. 49,303. Bicycle. (*Bicycle.*)

Edward J. O'Connor, Newport, Rhode Island, U.S.A., 22nd June, 1895; 6 years.

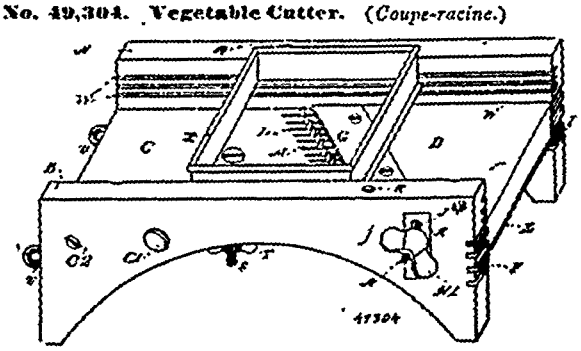
Claim.—1st. In a bicycle in combination, the crank shaft 3, having a gear thereon and supported by the frame, a connecting shaft 9, supported in a part of the frame, one end of the shaft bearing a pinion 8 in mesh with the gear on the crank shaft, said pinion being supported on balls and fastened to the shaft by means of an adjustable sleeve and locking nut 12, on the end of the shaft and in front of the pinion, the opposite end of the shaft bearing a gear in mesh with a gear on the hub of the rear wheel, for the purpose set forth. 2nd. In a bicycle, the combination of crank shaft 3, having a gear thereon and supported by the frame, a connecting shaft 9, supported in a

part of the frame, one end of said shaft bearing a pinion 8, in mesh with the crank shaft gear, said pinion being supported on balls, a



sleeve 11, with an interior thread screwed upon the end of the shaft, a hollow nut 12, with an exterior thread screwed into a socket in the pinion over the sleeve, the opposite end of the shaft bearing a gear in mesh with the rear hub gear, substantially as set forth. 3rd. In a bicycle, the combination, a crank shaft supported by the frame and having thereon a gear 7, between the shaft bearings, a connecting shaft 9, having at one end a pinion in mesh with the gear on the crank shaft and bearing at the other end and in front of the hub of the rear wheel a gear 13, in mesh with a gear 14, which latter gear is on an extension of the hub of the rear wheel and outside the former gear 13, substantially as described and shown. 4th. In a bicycle, the combination, a crank shaft 3, having a gear thereon and supported by the frame, a connecting shaft, 9, supported by the frame and bearing at one end a pinion, 8, in mesh with the gear on the crank shaft, and bearing at the opposite end a rearwardly facing gear, 13, in mesh with an inwardly facing gear, 14, on the hub of the rear wheel, substantially and for the purpose set forth. 5th. In a bicycle, the combination, a crank shaft, 3, having a gear thereon and supported by the frame, a connecting shaft, 9, supported in a part of the frame and bearing at one end a pinion, 8, in mesh with the gear on the crank shaft and at the opposite end a gear in mesh with a gear on the hub of the rear wheel, brackets, 16, 23, projecting from the ends of the lower side tubes, 1, 1, of the frame to the axle of the rear wheel, said brackets having oblong slots, a tie rod, 24, passing through the oblong slots, and adjustable cones, 26, 21, connected by the tie rod and holding antifriction balls in contact with portions of the hub of the rear wheel, substantially as set forth. 6th. In a bicycle in combination, a crank shaft having a gear thereon and supported by the frame, a connecting shaft supported in a part of the frame, and bearing at one end a pinion in mesh with the gear on the crank shaft and at the opposite end a gear in mesh with a gear on the hub of the rear wheel, brackets, 16, 23, projecting from the ends of the lower side tubes of the frame, said brackets having oblong slots and longitudinal mortises, cones held to the ends of the brackets in the mortises and balls between the cones and portions of the hub of the rear wheel, substantially as shown. 7th. In a bicycle, the combination, a crank shaft with a gear thereon and supported by the frame, a connecting shaft supported in a portion of the frame and bearing at one end a pinion in mesh with the gear on the crank shaft, and at the opposite end a gear in mesh with a gear on the hub of the rear wheel, brackets projecting from the ends of the lower side tubes of the frame, studs, 17, 23, passing through the ends of the brackets, cones, 26, 21, adjustably mounted on these studs, and a tie rod passing through the hollow hub and both of the said studs, said tie rod holding together the said brackets, arranged substantially as described for the purpose set forth.

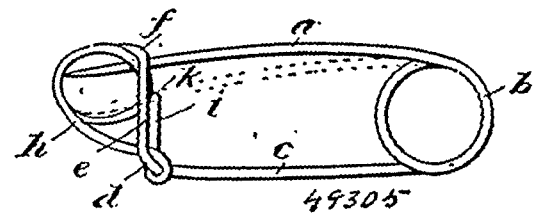
No. 49,304. Vegetable Cutter. (*Coupe-racine.*)



Lee Joseph Kraemer, Denver, Colorado, U.S.A., 22nd June, 1895; 6 years.

Claim. 1st. In a vegetable cutter the combination with the sides A and B, and the table C, of the horizontal slicing knife G, the plate O, the springs V, the slots U^1, the holes U, the knives M, the slots L, the cross-bar P, the bolt S, and the thumb-nut T, substantially as and for the purpose hereinbefore set forth. 2nd. In a vegetable cutter the combination with the sides A and B, of the table C, the vertical knife carrying plate O, the holes U, the springs V, the bolt S and the thumb-nut T, substantially as and for the purpose hereinbefore set forth. 3rd. In a vegetable cutter the combination of the sides A and B, the table C, the slicing knife G, the plate D, the blade E, the slots F, the rod H, and the thumb-nuts on each end of said rod, substantially as and for the purpose hereinbefore set forth. In a vegetable cutter the combination with the sides A and B, of the table C, the stripping knives M, in the adjustable plate O and the bar P, substantially as and for the purpose hereinbefore set forth. 5th. In a vegetable cutter the combination with the sides A and B and table C, of a horizontal slicing knife G, and the plurality of vertically arranged stripping knives M, co-acting therewith the bolt S, and the thumb-nut T, substantially as and for the purpose hereinbefore set forth. 6th. In a vegetable cutter the combination of the sides A and B, table C, of the horizontal slicing knife G, the vertical stripping knives M, the bolt S, the thumb-nut T, and the pointed pins 2, at the bottom corners of said slides, substantially as and for the purpose hereinbefore set forth.

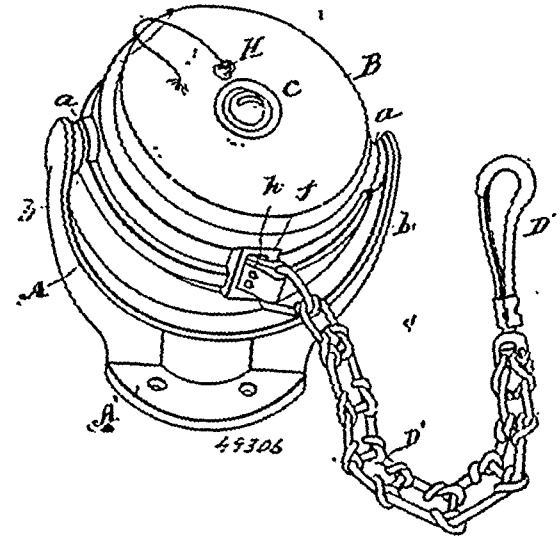
No. 49,305. Safety-Pin. (*Epingle de sûreté.*)



Elias Lewis, Terre Haute, Indiana, U.S.A., 22nd June, 1895; 6 years.

Claim. 1st. As a new article of manufacture, a safety-pin consisting of a single piece of wire having at one end a shield-aperture formed between the flat shield loop *h*, and transverse shield-bar *c*, upon one side and the shield loop *g*, and resilient locking-member *i*, resting tangent to said shield-loop *g*, upon the other side, said resilient locking member *i*, being formed by carrying shield-loop *h*, downward to the lower part of the pin and so winding said end of the wire upon the said lower portion of the pin as to project upward and end tangent to the shield-loop *g*, the other end of the wire forming the fixed-bar of the pin, the resilient coil and the sharpened member, substantially as described. 2nd. As a new article of manufacture, a safety pin of integral wire, which is bent substantially as described, into a sharpened member, a resilient coil, a bar or fixed-member, a transverse shield-bar *c*, with shoulder *f*, two shield-coils *g* and *h*, for guarding the sharpened-member, the latter of which extends downward to the lower portion of the pin and is so wound upon it that the wire ends tangent to the said shield loop *g*, all of these members being in the same general plane.

No. 49,306. Hitching Device. (*Enrênoire.*)

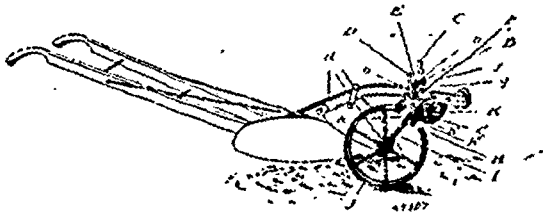


Charles H. Wallow and John Van Slyke, both of Detroit, Michigan, U.S.A., 22nd June, 1895; 6 years.

Claim.—1st. In a hitching device, the combination of the fixed bracket or yoke, the case pivoted thereon, the spring-actuated drum

within said case and the hitching strap wound upon said drum. 2nd. In a hitching device, the combination of the bracket or yoke, the case pivoted therein, the spring-actuated drum within said case, the strap wound upon said drum and passing through an aperture in said case, the section of chain attached to the outer end of said strap and the stop thereon arresting the retraction thereof. 3rd. In a hitching device, the combination of the inclosing case pivotally mounted, the spring-actuated drum located therein, the strap wound upon said drum and passing from said case and means for locking said drum to prevent the rotation thereof. 4th. In a hitching device, the combination of the yoke, the case pivoted therein, the spring-actuated drum in said case, the strap wound upon said drum and the removable locking pin passing through the case and drum to prevent the rotation of the latter, substantially as set forth.

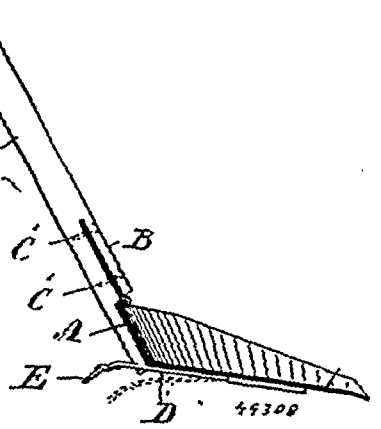
No. 49,307. Plough. (*Charrue.*)



The Wilkinson Plough Co., Toronto Junction, Assignee of Richard Field, Aurora, both in Ontario, Canada, 22nd June, 1895; 6 years.

Claim.—1st. In a plough, in combination with the beam thereof a saddle provided with a clip and adapted to carry adjustably on either side of the beam the furrow wheel and land wheel abreast of each other, substantially as described and for the purpose specified. 2nd. In a plough, the combination of a plough beam A, the saddle B provided with holes $b\ b^1$ and seat g, the clip F, adjusting nuts f, the land wheel shaft C, and furrow wheel shaft D, adapted to carry adjustably the axle C^1 and axle I, the furrow wheel J, and land wheel K, substantially as described and for the purpose specified. 3rd. In a plough, the combination of the plough beam A, the saddle B, provided with holes $b\ b^1$ and seat g, the clip F, adjusting nuts f, land wheel shaft C, set screw E, axle C^1, land wheel K, furrow wheel shaft D, set screw E^1, bearing piece H, rung h, threaded shank h^1, clamping nut $h^{1\ 1}$, axle I, and furrow wheel J, substantially as described and specified.

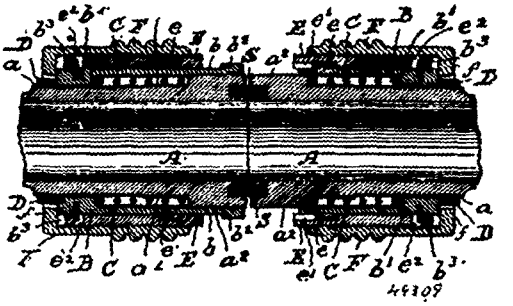
No. 49,308. Dust Pan. (*Porte-ordure.*)



William H. Church, Toronto, Ontario, Canada, 22nd June, 1895; 6 years.

Claim.—1st. A dust pan having a back rim a^1, a plate b, hinged to said rim, a handle c, attached to said plate, and a spring loop d, secured to the exterior bottom of the pan and engaging the end of the handle, to hold the handle fixedly in position for use, as set forth. 2nd. A dust pan having a handle c, attached to a pan a, by a plate b, and engaging a spring loop d, secured to the pan as set forth. 3rd. A dust pan having a handle c, hinged to the pan to fold across the front and a spring d, to engage the handle, substantially as set forth.

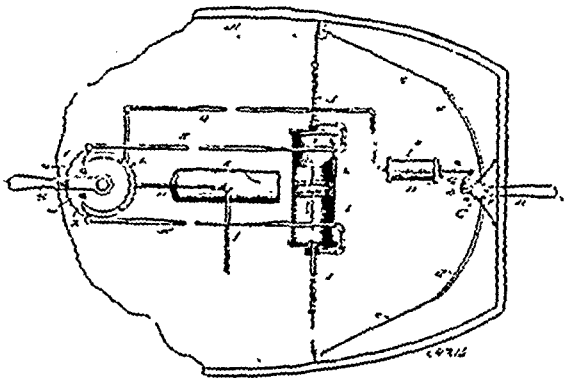
No. 49,309. Hose Coupling. (*Joint de boyaux.*)



Alden Lee Bailey, St. Johnsbury, Vermont, U.S.A., 22nd June, 1895; 6 years.

Claim.—1st. In a hose coupling composed of duplicate parts or sections each section being provided with tongues having projections on their outside, a longitudinally and rotatively movable sleeve having an internal annular groove near its outer end and slots connecting said groove with said outer end, said sleeve being provided with [illegible] rnal threads and a nut threaded thereto, and having a flang[illegible] at its rear adapted to bear against a suitable shoulder for making a t[illegible]ht joint of said coupler-sections. 2nd. In a hose coupling comp[illegible] of duplicate sections each section being provided with retractile tongues having projections on their outside, said tongues being normally flush, or nearly so, with the coupling face of said sections, a longitudinally and rotatively movable sleeve having an internal annular groove near its outer end and slots connecting said groove with said outer end for the entrance of the tongues of either section, said sleeve being provided with external threads, and a nut threaded thereto having a flange at its rear end adapted to bear against a ring or collar from which said tongues project, and a ring or collar adapted to limit the rearward movement of the tongues, all substantially for the purpose set forth. 3rd. In a hose coupling composed of duplicate sections, suitable spring actuated coupling tongues having a limited movement, a longitudinally and rotatively movable sleeve mounted upon said tongues, having an internal annular groove near its outer end, and slots connecting said groove with said outer end for the entrance of the tongues of either section, and a nut threaded to said sleeve and having a flange at its rear adapted to bear against said spring-actuated coupling tongues, substantially for the purpose set forth.

No. 49,310. Mechanism to be Actuated by Fluid Pressure. (*Mécanisme actionné par pression hydraulique.*)



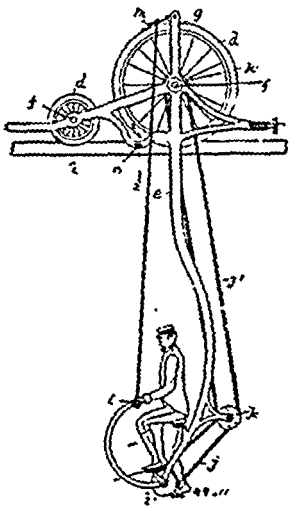
William T. Bothwell, Jersey City, New Jersey, U.S.A., 22nd June, 1895; 6 years.

Claim.—1st. The combination with a rudder, of a piston cylinder H, a piston in said cylinder, a piston cylinder D, a piston in said cylinder D, a source of fluid pressure supply, a valve interposed between the cylinders H, D, and the source of supply and adapted to effect communication between the source of supply and the piston cylinder H, on opposite sides of the piston, communication between the piston cylinder H, on opposite sides of the piston, and an exhaust communication between the source of supply and the piston cylinder D, and communication between said cylinder D, and an exhaust and suitable means adapted when actuated by the piston of the cylinder D, to lock or hold the rudder against movement, substantially as and for the purpose set forth. 2nd. The combination of piston cylinder H, a piston in said cylinder, a piston cylinder D, a piston in said cylinder D, a source of fluid pressure supply and a valve interposed between the cylinders H, D, and the source of supply and adapted to effect communication between the source of supply and the piston cylinder H, on the opposide sides of the piston, communicating be-

tween the piston cylinder H, on the opposite sides of the piston and an exhaust, a direct and unbroken communication between opposite sides of the piston so as to permit fluid to flow from the space at one side of the piston into the space at the opposite sides thereof, communication between the source of supply and the piston cylinder D, and communication between said cylinder D, and an exhaust, substantially as and for the purpose set forth. 3rd. The combination of a piston cylinder H, a piston in said cylinder, a piston cylinder D, a piston in said cylinder D, a source of fluid pressure supply, and a valve interposed between the cylinders H, D, and the source of supply and adapted to effect communication between the source of supply and the piston cylinder H, on opposite sides of the piston, communication between the piston cylinder H, on the opposite sides of the piston and an exhaust, communication between the source of supply and the piston cylinder D, and communication between said cylinder D, and an exhaust, and also adapted to close communication with the cylinder H, on both sides of the piston simultaneously at the same time that fluid is admitted to the cylinder H, substantially as and for the purpose set forth. 4th. The combination of a piston cylinder H, a piston in said cylinder, a piston cylinder D, a piston in said cylinder D, a source of fluid pressure supply, and a valve interposed between the cylinders H, D, and the source of supply and adapted to effect communication between the source of supply and the cylinder H, on the opposite sides of the piston, communication between the piston cylinder H, on the opposite sides of the piston and an exhaust, a direct and unbroken communication between opposite sides of the piston so as to permit fluid to flow from the space at one side of the piston into the space at the opposite side thereof, communication between the source of supply and the piston cylinder D, and communication between said cylinder D, and an exhaust and also adapted to close communication with the cylinder H, on both sides of the piston simultaneously, at the same time that fluid is admitted to the cylinder D, substantially as and for the purpose specified. 5th. The combination of a rudder, a piston cylinder D, a piston in said cylinder, a source of fluid pressure supply, a valve interposed between the piston cylinder and the source of supply and adapted to effect communication between the same and also adapted to effect communication between the piston cylinder and an exhaust, and suitable mechanism adapted when actuated by the piston to lock or hold the rudder against movement, substantially a specified. 6th. The combination of a rudder, a piston cylinder D, a piston in said cylinder, a source of fluid pressure supply, means whereby the fluid may be let in and exhausted from the cylinder, and a suitable mechanism adapted when actuated by the piston to lock or hold the rudder against movement, substantially as specified. 7th. In a fluid pressure mechanism for operating or actuating rudders, and other devices, the combination of a piston cylinder H, a piston in said cylinder, a piston cylinder D, a piston in said cylinder D, a source of fluid pressure supply, a valve casing having a port or passage communicating with the source of fluid pressure supply, ports or passages communicating with the piston cylinder H, at opposite sides of the piston, and a port or passage communicating with the piston cylinder D, and a valve arranged in said casing and adapted to effect communication between the port communicating with the source of supply and the ports communicating with the cylinder H, on opposite sides of the piston, communication between said ports communicating with the cylinder H, and an exhaust, communication between the port communicating with the source of supply and the port communicating with the cylinder D, and communication between the said port communicating with the cylinder D, and an exhaust, all substantially as and for the purpose set forth. 8th. In a fluid pressure mechanism for operating or actuating rudders and other devices, the combination of a piston cylinder H, a piston in said cylinder, a piston cylinder D, a piston in said cylinder D, a source of fluid pressure supply, a valve casing having a port or passage communicating with the source of fluid pressure supply, ports or passages communicating with the piston cylinder H, at opposite sides of the piston, and a port or passage communicating with the piston cylinder D, and a valve arranged in said casing and adapted to effect communication between the port communicating with the source of supply and the ports communicating with the cylinder H, on opposite sides of the piston, communication between the said ports which communicate with the cylinder H, on opposite sides of the piston, communication between said ports communicating with the cylinder H, and an exhaust, and communication between the port communicating with the cylinder D, and an exhaust and also adapted to effect communication between the port communicating with the source of supply and the port communicating with the cylinder D, and simultaneously therewith cut off the supply to the cylinder H, and lock the air in said cylinder on opposite sides of the piston, substantially as and for the purpose set forth. 9th. In a valve for the purpose described, the combination with a casing having ports or passages as g, g^1, h, and exhaust ports or passages as j, j^1, of a valve arranged in the casing and having a port or passage n, adapted to effect communication between the port or passage h, and the ports or passages g, g^1, alternately and recesses or channels adapted to connect the ports g, g^1, and the exhaust ports j, j^1, substantially as and for the purpose set forth. 10th. In a valve for the purpose described, the combination with a casing having ports or passages as g, g^1, h, exhaust ports or passages j, j^1, and ports I, I^1, communicating at one end with the interior of the casing and at their opposite ends with the ports or passages g, g^1, at an intermediate point in the length thereof; of a valve arranged in the casing and having a port or passage n, adapted to effect communication between the port or passage h, and the ports or passages g, g^1 alternately, recesses or channels s, s^1, adapted to connect the ports g, g^1, and the exhaust ports j, j^1, and the diametrical intersecting passages m, m^1, adapted to connect the ends of the ports or passages l, l^1, substantially as specified. 11th. In a valve for the purpose described, the combination, with a casing having ports or passages as g, g^1, h and i, exhaust ports or passages as j, j^1 and k, and a recess or channel k^2, or a valve arranged in the casing and having a port or passage n, adapted to effect communication between the port or passage h, and the ports or passages g, g^1, and the recess or channel k^2 alternately, recesses or channels s, s^1, adapted to connect the ports g, g^1, and the exhaust ports j, j^1, a recess or channel adapted to connect the port i, and the exhaust port k, and a recess or channel q, adapted to connect the recess or channel k^2, and the port i, substantially as specified. 12th. In a valve for the purpose described, the combination, with a casing having ports or passages as g, g^1, h and i, exhaust ports or passages j, j^1, exhaust ports or passages k, k^1, arranged on opposite sides of the port i, and a recess or channel k^2, of a valve arranged in the casing and having a port or passage n, adapted to effect communication between the port or passage h, and the ports or passages g, g^1, and the recess k^2 alternately, recesses or channels s, s^1, adapted to connect the ports g, g^1, and the exhaust ports j, j^1, recesses or channels p, p^1, adapted to connect the port i, and the exhaust ports k, k^1, and a recess or channel q, adapted to connect the recess or channel k^2, and the port i, substantially as specified. 13th. The combination of a rudder having a post as C, loosely connected clamping jaws supported upon opposite sides of the post, bolts taking through the said jaws, a cam lever fulcrumed between said bolts and adapted to bear against one of the jaws and clamp the same upon the post, and a suitable means for actuating said cam lever, substantially as specified. 14th. The combination of a rudder having a post as C, loosely connected clamping jaws supported upon opposite sides of the post, bolts taking through the said jaws, a cam lever fulcrumed between said bolts and adapted to bear against one of the jaws and clamp the same upon the post, a piston cylinder, a piston arranged in said cylinder and having its rod connected with the cam lever, a source of fluid pressure supply, and means whereby the fluid may be let in and exhausted from the cylinder, substantially as and for the purpose set forth.

No. 49,311. Aerial or Overhead Bicycle and Track.

(*Bicycles aériens et voies.*)

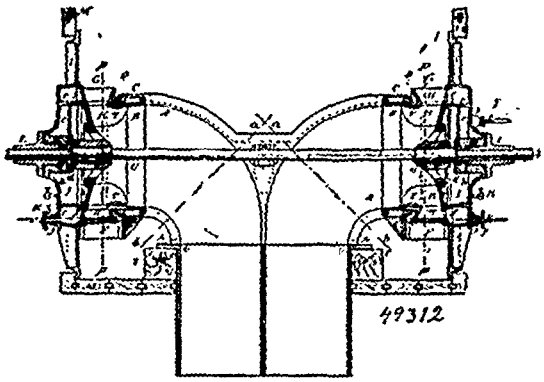


Hiram Bassett Nickerson, Boston, Massachusetts, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. In an aerial or overhead bicycle or velocipede, the combination, with the overhead track, of traction wheels arranged to run on the track, a seat-provided frame supported from the said wheels beneath he track, and power transmitting mechanism in the said frame within reach of the occupant's feet and adapted to transmit motion to at least one of the said wheels, substantially as and for the purposes set forth. 2nd. In an aerial or overhead bicycle or velocipede, the combination, with the overhead track, of traction wheels arranged to run on the track, a seat-provided frame supported from the said wheels beneath the track, power transmitting mechanism in the said frame within the reach of the occupant's feet and adapted to transmit motion to at least one of the said wheels, and handle-bars adapted to be grasped by the occupant of the seat, substantially as and for the purposes set forth. 3rd. In an aerial

or overhead bicycle or velocipede, the combination, with the overhead track, of traction wheels arranged to run on the track, a seat-provided frame supported from the said wheels beneath the track, power-transmitting mechanism in the said frame within the reach of the occupant's feet and adapted to transmit motion to at least one of the said wheels, and handle-bars and a brake adapted to be grasped by the occupant of the seat, substantially as and for the purposes set forth. 4th. In an aerial or overhead bicycle or velocipede, the combination, with the overhead track, of traction wheels arranged to run on the track, a seat-provided frame supported from the said wheels beneath the track, power-transmitting mechanism in the said frame within the reach of the occupant's feet and adapted to transmit motion to at least one of the said wheels, and a protecting buffer both fore and aft of the wheels on the track, substantially as and for the purposes set forth.

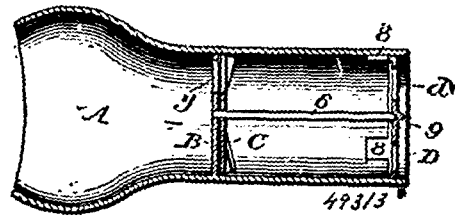
No. 49,312. Turbine Water-Wheel. (*Roue hydraulique.*)



Asa Micajah Swain, Tyngsborough, and Charles F. Perkins, Brookline, both of Massachusetts, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. Two vertical turbine water-wheels discharging their effluent water towards each other, combined with a common receptacle into which the water from both wheels is discharged, said receptacle being so constructed on the inside as to form a partition or obstruction therein, located between the wheels, whereby the direction of the stream from each wheel is diverted and its action against the stream of the other wheel is wholly or partially obviated, substantially as described. 2nd. Two turbine wheels provided with a surrounding flume case and induct passages, each wheel discharging its effluent water into a quarter turn A, having its top surface curved outwardly and downwardly from said wheel, said quarter turn being located between the wheels, in combination with said quarter turns A, A, and a draft pipe O, having a verticle partition *i*, throughout its entire length, which is practically a continuation of the central walls between the quarter turns, whereby the entire educt is divided into two separate passages, substantially as described. 3rd. The combination of two turbine wheels provided with a surrounding flume case and induct passages and arranged to discharge the water into a common educt passage located between them and provided with a dividing partition, which curves outwardly and downwardly from each wheel, substantially as described. 4th. The combination of a turbine water-wheel, its surrounding flume case educt passage, the wheel shaft and its supporting box located in the wall of the educt, said box being provided with an annular chamber within it surrounding the shaft, and a suitable water passage-way to said chamber, such as the tube *c*, all substantially as described. 5th. The combination in a turbine wheel having a sideways delivery from the floats, of the series of floats surrounding the shaft and an outer band attached to and surrounding the floats, said band having a cylindrical exterior surface fitting closely the educt passage and an inner surface bevelled to a thin edge at the joints of attachment to the ends of the floats so that its outer delivery edge substantially coincides with the outer diameter of the wheel, whereby the freedom of the delivery of the wheel is increased, substantially as described. 6th. The combination of the gate curb C, provided with an annular extension over the cylindrical gate G, and presenting an outer inclined surface approximately parallel therewith, the leather packing *c*, arranged to rest upon this outer inclined surface and bear upon the gate, the segments D, clamping the leather packing in place and the bolts securing the same to said annular extension, and arranged to present their heads radially outward, or substantially so, between the gate and the curb, whereby they are made accessible for removing and replacing the packing, substantially as described. 7th. Two turbine wheels provided with a surrounding flume case and induct passages, and having a discharge pipe located between the wheels and having a vertical partition therein dividing it into two separate passages, combined with an air inlet passage in one of said passages near its upper end arranged to be opened, when the water is shut off from one wheel, substantially as described.

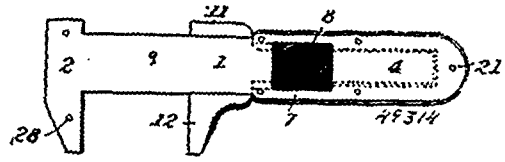
No. 49,313. Whistle. (*Sifflet.*)



The Mossberg Wrench Company, Attleboro, assignee of Simon Willard Wardwell, jun., Boston, and Frank Mossberg, Attleboro, all of Massachusetts, U.S.A., 24th June, 1895; 6 years.

Claim. 1st. A siren whistle having a case consisting of a tube flattened at one end to form an elongated mouth-piece, substantially as set forth. 2nd. The combination with the case, of a thin metal perforated disc secured in the case, and a thin metal disc cut to form radial blades, a spindle upon which the bladed disc is mounted, and a spider having a central bearing, radial arms and flanges, the latter bearing frictionally inside of the case, substantially as described.

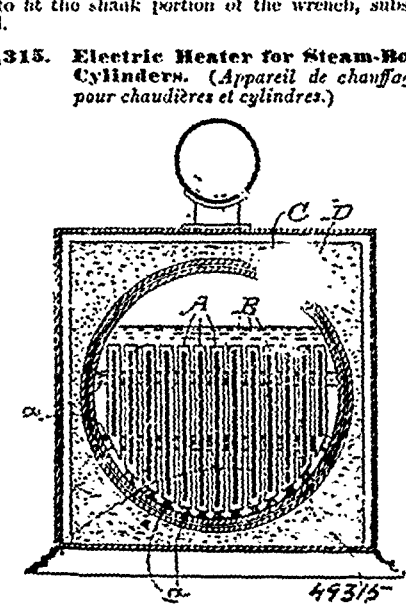
No. 49,314. Wrench. (*Clé à écrou.*)



The Mossberg Wrench Company, assignee of Frank Mossberg, both of Attleboro, Massachusetts, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. A wrench consisting of two similar pieces of flat metal secured parallel to each other and constituting the stationary jaw and handle, a movable piece sliding between said side pieces and constituting the movable jaw, and means for moving the jaws, substantially as described. 2nd. A wrench consisting of similar flat side pieces secured to each other and constituting the handle and stationary jaw, filling pieces inserted between said side pieces in the handle and jaw, a movable jaw working between said side pieces, and means for adjusting said latter jaw, substantially as described. 3rd. A wrench comprising two similar pieces of flat metal secured parallel to each other and constituting the stationary jaw and handle and having openings therein, a filler inserted in said jaw, a filler between the handle portions formed with an elongated recess enlarged at one end, a movable jaw formed with a reduced threaded shank portion, and a nut surrounding said shank and held in the openings in the handle, substantially as shown and described. 4th. The combination with a wrench constructed, substantially as hereinbefore set forth, of a screw-driver having a notch at its end and adapted to fit the shank portion of the wrench, substantially as described.

No. 49,315. Electric Heater for Steam-Boilers and Cylinders. (*Appareil de chauffage électrique pour chaudières et cylindres.*)

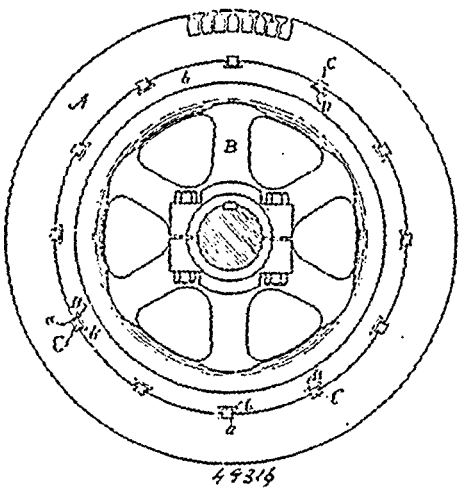


Eugene Shydecker and Harvey S. Brown, both of San Francisco, California, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. An apparatus for generating steam, consisting of a

boiler having longitudinal vertical plates fixed therein extending from near the bottom of the boiler to near the surface of the water, with intervening circulating spaces between the plates and between them and the sides of the boiler, said plates being composed of material which is a non-conductor of electricity, but will diffusively conduct heat, and exterior enclosing metallic plates, wires extending throughout the interior mass and adapted to develop heat therein by their resistance to the passage of an electric current, and insulating plugs fixed in the end of the boiler through which the wires lead to a source of electric energy. 2nd. An apparatus for generating and keeping up the temperature of steam, consisting of a boiler with electrically heated vertically disposed longitudinal plates fixed in the water space of the boiler, with circulating spaces between the plates and between them and the boiler sides, engine cylinders to which steam passes from the boiler, said cylinders having jackets formed of electrically heated plates, and a transfer steam chest with tubes through which steam passes from the higher to the lower pressure cylinders, the tubes in said chest being jacketed with live steam from the boiler.

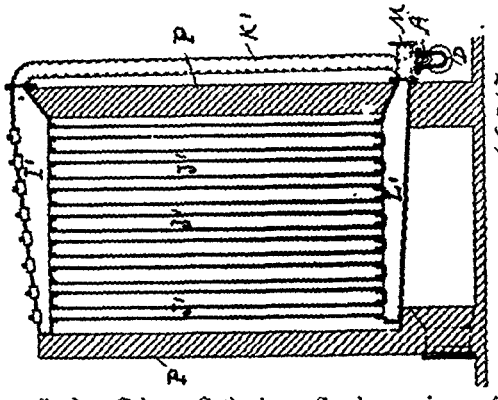
No. 49,316. Armature. (*Armature.*)



The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Horace F. Parshall, Lynn, Massachusetts, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. An armature consisting of an annular core, fitting and surrounding an internal concentric support, and keys between said support and said core, whereby any motion of one independently of the other is prevented, as set forth. 2nd. An armature comprising a spider or spiders carrying a cylindrical shell, an annular core adapted to fit said and be supported thereby, and projections or keys integral with one of said parts and adapted to engage with corresponding grooves or key-seats in the other part, whereby said parts are locked together, as described.

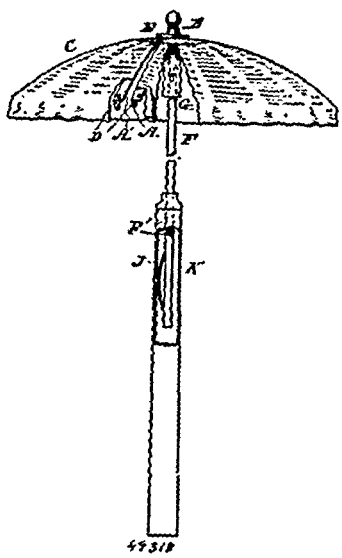
No. 49,317. Feed Water Heaters.
(*Réchauffeur d'eau d'alimentation.*)



James Gardner Calvert, Gothenburg, Sweden, assignee of Owen Norton Evans, Montreal, Quebec, Canada, 24th June, 1895; 6 years.

Claim.—1st. In a fuel economizer, feed water heater, or tubulous boiler, the employment of a back-pressure valve between the lower junction box or boxes of one or more sections of heating pipes or tubes and the blow-off pipe, substantially as described and for the purpose specified. 2nd. In a fuel economizer, feed water heater, or tubulous boiler, the employment of an obturating pipe in the blow-off pipe having openings corresponding to the branches from the lower junction boxes of the sections of heating pipes or tubes, arranged and operating substantially as described and for the purposes specified. 3rd. The construction of a fuel economizer, feed water heater, or tubulous boiler, which consists in connecting the upper junction box of each section of heating pipes or tubes with the lower junction box of the next section by a pipe K^1, K^2, etc., the blow-off pipe being shut off from the said lower junction boxes by means of back-pressure valves or by means of an obturating pipe, whereby circulation of the water upwards successively through all the sections of heating pipes or tubes is affected, substantially as described and illustrated in the drawing. 4th. The construction of a fuel economizer, feed water heater, or tubulous boiler, which consists in connecting the upper junction box of one section of heating pipes or tubes with the upper junction box of the next section and the lower junction box of one section of heating pipes or tubes with the lower junction box of the next section, the blow-off pipe being shut off from the said lower junction boxes by means of back pressure valves, or by means of an obturating pipe, whereby circulation of water upwards and downwards alternately and successively through all the sections of heating pipes or tubes is effected, substantially as described and illustrated in the drawings.

No. 49,318. Parasol and Fan. (*Parasol et éventail.*)



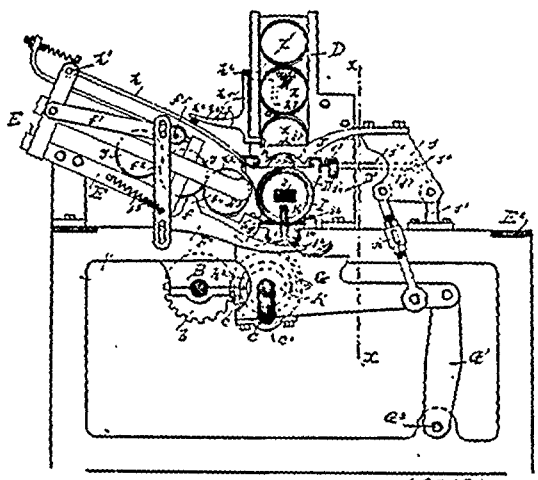
Mathias Stockmeier, and Charles A. Bronaugh, both of Los Gatos California, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. A parasol consisting of flat elastic ribs, a pin passing through the meeting ends of said ribs about which they are turnable, a covering fixed to the ribs and capable of folding or unfolding when the ribs are moved about their pivot pin, said covering being sufficiently less in extent than a complete circle, so that when the ribs are separated to their fullest extent, a space will be left between the two adjacent ribs whereby the closing of this space will cause the elastic ribs to curve and the parasol to take a concavo-convex shape. 2nd. In a parasol, a head or pin, radial ribs pivoted thereon, discs fixed to the pin upon each side of the ribs forming a groove or channel within which they turn, a covering attached to the ribs and forming sufficiently less than a complete circle when spread out to leave the two adjacent ribs slightly separated, and the disc thus formed approximately flat, and when the two ribs are brought together and caused to overlap, the tension upon the covering will curve the disc into a concavo-convex shape. 3rd. In a parasol, a head or a pin having discs fixed thereto, radial ribs pivoted to said pin between the discs and all turnable thereon except the inner one which extends directly from the inner disc, a covering fastened to the ribs so that they are approximately equi-distant from each other when the device is extended, the rib adjacent to the inner stationery one being adapted to overlap it, and a hook or fastening by which the two are united together whereby the tension curves the ribs so that the disc takes a concavo-convex shape when the two are united. 4th. In a parasol, a series of ribs reclinable about a pin or head to which they are pivoted, having a covering, the edges of which may be united by overlapping and securing the two adjacent ribs, an extension inwardly of the pin which is flattened on one side, a rod having a corresponding flattened and pivoted to the flattened end of the pin so that the two are turnable about the pin with relation to each other to stand at right angle, or in line, and a spring-actuated slide adapted

to move over the joint thus formed and lock it when the parts are in straight line with each other to form a handle for the parasol. 5th. In a parasol, a pin or a head having radial ribs loosely pivoted and revolubie about it, with a covering, the edges of which overlap when two adjacent ribs are joined together, a flattened extension of the pin toward the interior a corresponding flattened end of the rod forming the handle of the parasol, a pin uniting the two so that they are turnable about it with relation to each other, and bevelled ends or shoulders forming stops when the two are in line, a spring-actuated slide adapted to move over the joint and lock the two parts when in line, said slide being retractible for the purpose of allowing the joint to bend so that the parts stand at right angles with each other, and a notch formed upon one side of the head pin into which the edge of the slide drops so as to lock the two in position at right angles with each other. 6th. A parasol consisting of the ribs revolubie about a central pin or head and having a covering attached to them separable at one side whereby the ribs and covering may be closed and folded together or extended into a circular concavo-convex form by uniting the two adjacent separable ribs, a joint formed between the pin and the upper end of the handle whereby the parasol may be turned to stand at right angles with the handle or parallel therewith and an extension handle into which the upper portion is slidable with a spring catch by which it is held in the extended position. 7th. A parasol consisting of ribs revolubie about a central pin or head to which they are pivoted having a covering fixed to the ribs so that they may be folded into a compact form or extended to form a complete circle or a semi-circle and a handle having a joint formed close to the central portion of the parasol so that the handle may be bent and locked to stand parallel with the fixed rib while the other ribs may be opened to one-half their full extent whereby the device forms a fan.

No. 49,319. Can Heading Machine.

(*Machine pour foncer les boîtes.*)



The Jensen Can Filling Machine Company, assignee of Mathias Jensen, both of Astoria, Oregon, U.S.A., 24th June, 1895; 6 years.

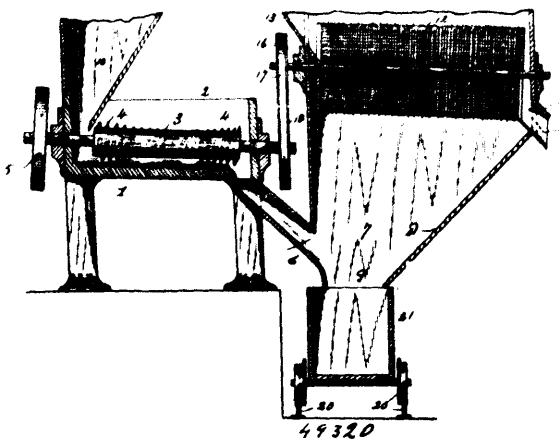
Claim.—1st. In a can heading machine, the can head holder having a semi-circular recess into which the can heads are received, and a semi-circular hinged guide adapted to hold the can head in said recess and to close and remain closed by gravitation alone, means for rocking the can head holder so that it may force the can head upon the contiguous end of the can body, and means for opening said guide to deliver the headed can. 2nd. In a can heading machine, the can head holder having a recess for the can heads and having a semi-circular guide with a bevelled mouth or opening, hinged to said holder and closing over the face of the holder and remaining closed thereon by gravitation whereby the can head is held in the recess so as to receive the lower edge portion of the can body, and means for rocking the holder to cause said can head to receive the remaining portion of the edge of the can body, said guide serving to direct the end of the can body into the can head. 3rd. In a can heading machine, a can head holder having a semi-circular recess for the reception of the can heads, a semi circular guide hinged to the upper part of the holder and adapted to close thereon to retain the can head in the recess while it is forced upon the can body, and a device for adjusting the distance between the holder and the guide, by which the can body is sized to fit the can. 4th. In a can heading machine, a normally inclined can head holder having a semi-circular recess for the can heads, a semi-circular hinged guide adapted to close over the face of the holder for holding the can heads in the recess while one side of one head of the can body is first placed in the flange of the can head, means for rocking the holder to cause the can head to be forced on the remaining portion of the end of the can body, and means for releasing the headed can by opening the guide while said holder recedes from an upright to an inclined position. 5th. In a can heading machine, a can head holder having a recess for receiving the can heads, a semi-circular guide hinged so as to close by gravitation, and means for placing the end of a can body in the flange of the can head on one side and afterward force the remaining parts of the flange of the can head, upon the opposite side of the end of the can body, and the oscillating lever for lifting the guide while it retracts from the headed can. 6th. In a can heading machine, a normally inclined can head holder adapted to rock and provided with a recess for receiving the can head, and having a bevelled mouth guide fixed upon one side thereof and overlapping a small portion of the circumference of the flange of the can head so as to insure a closer fit by less sizing in not overlapping the whole circumference of the flange of the can head. 7th. In a can heading machine, a chute or carrier whereby the can bodies are delivered intermittently between inclined can head chutes, can head holders having recesses adapted to receive the heads from the chutes, mechanism whereby the can bodies are pressed downward so that the lower peripheries of their ends are pressed into the lower parts of the can head flanges, guides hinged to the can head holders having semi-circular bevelled conical openings adapted to close down upon the upper parts of the can heads, and to serve as guides through which the upper portion of the can body enters the upper portion of the can head flange, and mechanism whereby the holders are forced inwardly toward the end of the can whereby the heads are placed thereon, substantially as herein described. 8th. In a can heading machine, the inclined chute into which the can bodies are received, a stop f^3 by which they are arrested, a mechanism consisting of the fulcrumed levers F, f^1, and connecting link f^2, the crank-shaft, the rotary crank whereby the arms are moved to allow the cans to pass one at a time over the stop f^4, and a stop E^3, into which the cans are received after this movement, substantially as herein described. 9th. In a can heading machine, the can head chute having stops whereby the can heads are delivered one at a time upon the stop E^3, a crank-shaft, a carrier mounted thereon and provided with recesses, one of which lifts a can from the heading mechanism while the other simultaneously lifts a fresh can from the top which holds it, an oscillating fulcrum with which the free or outer end of the carrier is connected, and mechanism connected with and actuated by the carrier for opening the can head holding devices. 10th. In a can heading machine, a chute through which the can bodies are delivered to the heading mechanism, intermediate stops by which the cans are held, a crank-shaft and a carrier actuated thereby having recesses, one of which lifts a can from the heading mechanism while the other simultaneously lifts a fresh can from the stop which holds it, an oscillating fulcrum with which the outer end of the carrier is connected, a lever arm situated above the heading mechanism, an oscillating yoke to which said arm is connected, and a rod connecting the yoke with the crank actuated carrier whereby the lever arm is depressed so as to engage the can head holder guides, and open them in its return movement, substantially as herein described. 11th. In a can heading machine, the chute through which the can bodies pass, stops by which the bodies are prevented from passing down the chute, a crank actuated carrier by which they are lifted from the stops and deposited in the heading apparatus, inclined chutes through which the heads are delivered, oscillating can head holders adapted to tilt outwardly so as to receive the can heads from the chutes, mechanism, consisting of connecting rods i^1, pivoted to the can head holders, lever arms i^2, i^3, and a cam i^5, upon the crank-shaft whereby the can head holders are oscillated so as to be alternately separated and tilted to receive a can head from the chute, and then forced together to place the can head upon a can body which has been delivered between the two, substantially as herein described. 12th. In a can heading machine, means for delivering the can heads intermittently from the inclined chute through which they pass consisting of the fulcrumed levers h^5, h^7, adapted to alternately check the can heads from below and from above, and mechanism whereby these check levers are actuated consisting of a lever arm fulcrumed on the chute having a lower end adapted to extend down over the lowermost can body, a bar secured to the lever arm and extending to each side thereof, and arms with which the outer portions of the bar are designed to form contact. 13th. In combination with the oscillating holders by which the heads are received and placed upon the can body ends, the cam actuated releasing levers adapted to be forced against the cam heads and permitting the can head holders to be moved toward the can head chutes without interferring with the headed can. 14th. The oscillating holders adapted to receive can heads, overlapping guides hinged to and movable thereon, whereby the can head is retained and the can end guided, and means to open the guides and release the headed can as described. 15th. The crank arms fixed to the hinge shafts of the can headed holder guides, and movable arms engaging the crank-arms to retain the guides after they are opened, and allow the cans to pass as described.

No. 49,320. Apparatus for Manufacturing Artificial Fuel. (*Appareil pour fabriquer le combustible artificiel.*)

Ludwig Know, Bergen, Norway, 24th June, 1895; 6 years.

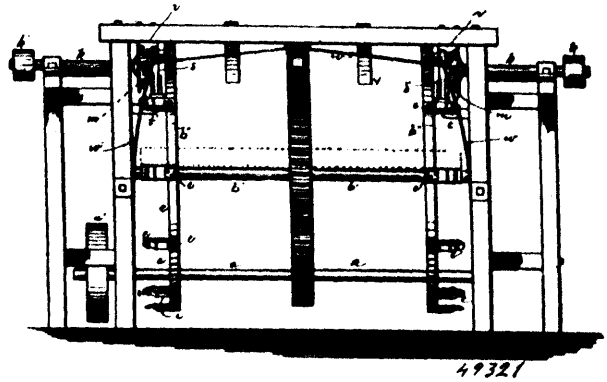
Claim.—In a mixer for manufacturing artificial fuel, the combination with the coal receiver provided with a hopper and an inclined

chute, and the rotatable cylinder provided with a series of knives



arranged in spiral rows, of the saw-dust receiver having an inclined side and an outlet at the bottom, the open ended wire gauze cylinder connected with said knife cylinder, the inclined chute, sliding board or gate and the hopper, substantially as described.

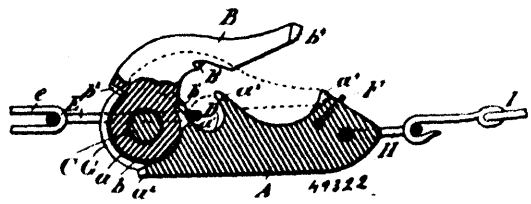
No. 49,321. Process and Apparatus for Making Barrels. (*Procédé et appareil pour faire les barils.*)



Donia Cornelius Putnam, Wayne Centre, New York, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. In the art of making barrels, the process of simultaneously crozing and chamfering the staves, substantially as described. 2nd. A shaft and means to drive it, a saw mounted thereon a head also thereon, and crozing and chamfering cutters mounted upon the head, in combination. 3rd. A shaft and means to drive it, a saw mounted thereon, and crozing cutters and chamfering cutters adjustably mounted thereon adjacent to the saw, in combination. 4th. The combination with the stave feeding mechanism, of two cutter shafts and the saws crozing cutters, and chamfering cutters mounted thereon and adapted to simultaneously engage with a stave at both ends. 5th. The combination with the feed drum and means to rotate it, having pockets in its periphery, of the cut-off saws, crozing cutters and the chamfering cutters adapted to simultaneously finish both ends of a stave. 6th. The combination with the feed drum having peripheral pockets, of the cut-off saws, crozing cutters and chamfering cutters, and means to rotate them, and a stationary knife adapted to chamfer the outer face of the stave. 7th. The combination with the feed drum and feed table, of the spring fingers engaging with the staves to centre them. 8th. The combination with the feed drum and feed table, the saws and the crozing and chamfering cutters, of the stave aligning and centering fingers. 9th. The combination with the feed drum and feed table, the saws, the crozing cutters and the inside and outside chamfering cutters, of the stave aligning and centering fingers. 10th. The combination with the feed drum and the arches above it, of the yielding tables engaging with the staves. 11th. The combination with the feed drum, the arches above it and the outside chamfering knives mounted therein, the cut-off saws, the crozing cutters and the inside chamfering cutters, of the yielding tables engaging with the staves. 12th. The combination with the feed drum, the arches above it, the cut-off saws, the crozing cutters and the inside chamfering cutters, of the yielding tables engaging with the staves. 13th. The combination with the feed drum having peripheral pockets, of the spring fingers engaging with the staves therein. 14th. The combination with feed drum having peripheral pockets, of the spring fingers engaging with the staves in said pockets and the pick-off bars engaging with said staves as they leave the spring fingers. 15th. The combination with the feed drum having peripheral pockets and the cut-off saws and chamfering cutters, of the spring fingers engaging with the staves in the pockets. 16th. The combination with the feed drum having peripheral pockets, the cut-off saws and chamfering cutters and the arches over the drum, of the yielding tables and spring fingers engaging with the staves in the pockets on opposite sides. 17th. The combination with the feed drum, of the crozed and chamfered fingers secured thereon. 18th. The combination with the feed drum, of the fingers thereon projecting laterally and radially. 19th. The combination with the feed drum of the adjustable fingers thereon projecting laterally and radially. 20th. The combination with the feed drum of the adjustable crozed and chamfered fingers thereon projecting laterally and radially. 21st. The combination with the feed drum and the adjustable and projecting fingers thereon, of the cut-off saws and chamfering cutters. 22nd. The combination with the feed drum and the adjustable and projecting fingers thereon, of the spring stave-adjusting fingers and the cut-off saws and chamfering cutters. 23rd. In a stave finishing machine, a combined cut-off saw a crozing cutter and an inside chamfering cutter rotating together. 24th. In a stave finishing machine, a combined cut-off saw and a crozing cutter rotating together.

No. 49,322. Detaching Block. (*Poulie à serrure.*)



Claudius Wilburn Moore, Gardiner, Oregon, U.S.A., 24th June, 1895; 6 years.

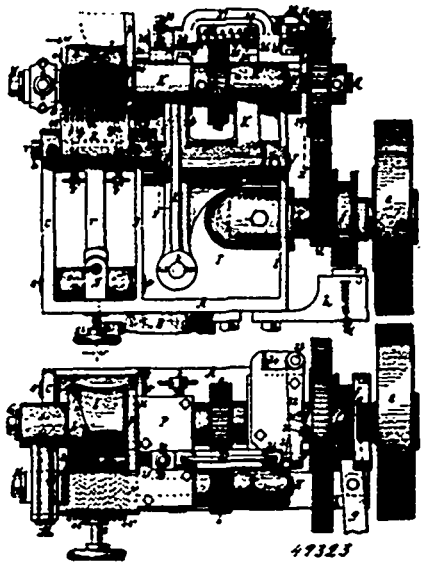
Claim.—1st. A detaching or latch-block consisting of a stock A having a tongue a^3 and a terminal bearing a^4, a keeper B hinged to the stock and adapted to bear upon the terminal bearing thereof, and to form between the hinge and tongue the bed D for the detaching link, and a suitable lock for holding the keeper to the stock, substantially as herein described. 2nd. A detaching or latch-block consisting of a stock A having ears a, a terminal bearing a^4 at the other end and an intervening uprising tongue a^3, the keeper B having the tenon pivoted between the ears of the stock, a bed D for the detaching link, and the locking clevis F, substantially as herein described. 3rd. A detaching latch-block consisting of a stock and a keeper hinged together at one end and having a locking device at the other end, a bed space D in which the detaching link is confined, and disc C on each side of the hinge, substantially as herein described. 4th. A detaching or latch-block consisting of a stock and a keeper hinged together at one end and having a locking device at the other end, a bed space D for the detaching link, and the discs C pivoted on the hinge pintle and having their peripheries projecting into the bed space of the link, substantially as herein described. 5th. A detaching or latch-block consisting of a stock A having ears a and the tongue a^3, a keeper hinged between the ears a bed space D for the detaching link, a lock for holding the keeper in a closed position and discs on each side of the hinge, substantially as herein described. 6th. A detaching or latch-block consisting of a stock having separated ears at one end a terminal bearing at the other end and an intervening uprising tongue a^3, a keeper B having a tenon pivoted between the ears and adapted to fit down upon the tongue and terminal bearing of the stock, a bed space D, a locking a clevice for the keeper, and discs C upon the hinge pintle, substantially as herein described.

No. 49,323. Leather Skiving Machine.
(*Machine à refendre les cuirs.*)

The Scott Shoe Machinery Company, assignee of Jacob R. Scott, both of New York, State of New York, U.S.A., 24th June, 1895; 6 years.

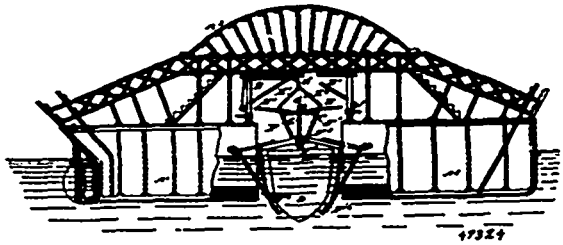
Claim.—1st. The combination with the die roller, the feed roller and the knife of an end-gauge movably fitted into the die roller and a stud 15 projecting from the end-gauge and made to engage a cam groove 16 in the edge gauge, substantially as described. 2nd. The combination with the die roller the feed roller and the knife of an end-gauge movably fitted into the die roller, a stud 15 projecting from the end-gauge and made to engage a cam groove 16, arranged in the edge gauge and having an open space 17, 17 to permit the feed roller to push back the end-gauge and take hold of the blank, substantially as described. 3rd. The combination with the die roller, the feed roller, the knife and the edge-gauge of a pusher 34 for adjusting the blank automatically in relation to the die and means for actuating the pusher, substantially as described. 4th. The combination with the die roller, the feed roller, the knife, the edge-gauge and the pusher 34 of a cam for moving the pusher forward and a spring for retracting the same, substantially as described. 5th. The combination with the die roller, the feed roller, and the knife, of a rocking knife head provided at opposite ends with projecting journals, one

of which is eccentric to the other, bearings oblong in cross-section into which the journals fit and in which said journals are adapted



to turn, and means for locking the journals in any desired position, substantially as described. 6th. The combination with the die-roller, the feed roller, and the knife, of a rocking knife head provided at its opposite ends with projecting journals, bearings oblong in cross-section in which the journals are adapted to turn, and devices engaging the journals for locking them in any desired position, substantially as described. 7th. The combination with a knife, and a die roller, of a shaft carrying a feed-roller composed of sections, gravitating clearing blades encircling the shaft between the roller sections, having spurs or projections and swung upward by choking of the feed roller, and a stop arranged in the path of the spurs or projections on the clearing blades for arresting their upward swinging motion, substantially as described. 8th. The combination, substantially as herein described, with the knife and the die roller of a feed roller made in sections, hubs formed on the sections and clearing blades hung on these hubs. 9th. The combination with the knife and the die roller of a feed roller made in sections, hubs formed on the sections, clearing blades hung on these hubs, spurs 46 extending from said clearing blades and an abutment N in the paths of these spurs, substantially as described.

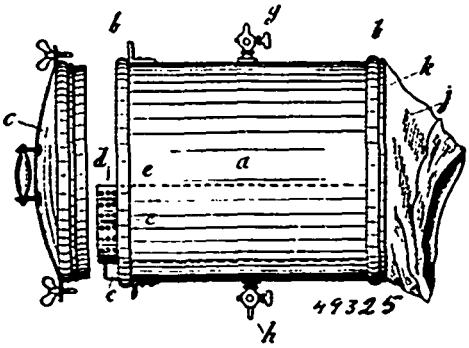
No. 49,324. Apparatus for Raising Sunken Vessels.
(*Appareil pour soulever les vaisseaux coulés.*)



Hubert Schon, Anton Lentz, and George Muth, all of Allegheny, Pennsylvania, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. An apparatus for raising sunken vessels, comprising a marine vessel having a two-part hull, with the parts placed a suitable distance apart and rigidly connected with each other overhead by a suitable framework, and hoisting devices supported in the said vessel and arranged to engage the sunken vessel, to raise the latter into the space between the two hull parts, substantially as shown and described. 2nd. An apparatus for raising sunken vessels, provided with a marine vessel comprising two hull parts placed a suitable distance apart longitudinally, and a framework for rigidly connecting the two hull parts with each other overhead, substantially as shown and described. 3rd. An apparatus for raising sunken vessels, comprising a marine vessel having a two-part hull, with the parts placed a suitable distance apart and rigidly connected with each other overhead by a suitable framework, two cranes held in adjacent ends of the said hull parts, and grappling devices held on the hoisting chains of the said cranes, substantially as shown and described. 4th. An apparatus for raising sunken vessels, comprising a marine vessel having a two-part hull, with the parts placed a suitable distance apart and rigidly connected with each other overhead by a suitable framework, two cranes held in adjacent ends of the said hull parts, grappling devices held on the hoisting chains of the said cranes, and a locking and tripping device for holding the grappling forks of the said grappling devices in an open position during the time the grappling devices are lowered and for automatically releasing the grappling forks when stricking a vessel, substantially as shown and described. 5th. An apparatus for raising sunken vessels, comprising a marine vessel having a two-part hull, with the parts placed a suitable distance apart and rigidly connected with each other overhead by a suitable framework, two cranes held in adjacent ends of the said hull parts, grappling devices held on the hoisting chains of the said cranes, a locking and tripping device for holding the grappling forks of the said grappling devices in an open position during the time the grappling devices are lowered and for automatically releasing the grappling forks when striking a vessel, and an indicator for indicating the engagement of the grappling forks with a vessel, substantially as shown and described. 6th. An apparatus for raising sunken vessels, provided with a grappling device comprising pivoted forks, arms extending therefrom, rods connected with the said arms, and pins engaging the said rods and held on a slidable bar, substantially as shown and described.

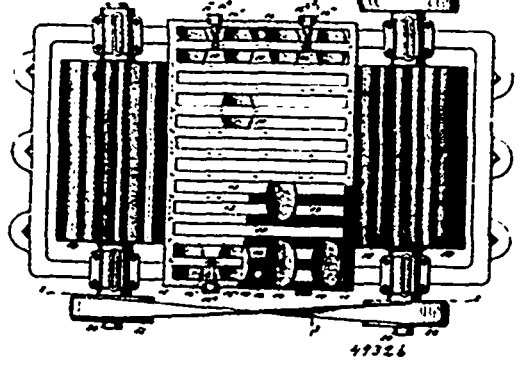
No. 49,325. Medical Dry Bath. (*Bain médical.*)



Lewis Abraham Tallerman and Evelyn Diana Turnoir, both of London, England, 24th June, 1895; 6 years.

Claim.—1st. A bath for the local application of hot dry air superheated steam vapours or gases to the human body, substantially as hereinbefore described and illustrated by the accompanying drawing. 2nd. The local application of hot dry air superheated steam vapours or gases to the human body by means of a bath, substantially as hereinbefore described and illustrated by the accompanying drawing.

No. 49,326. Brush Making Machine. (*Machine à faire les brosses.*)



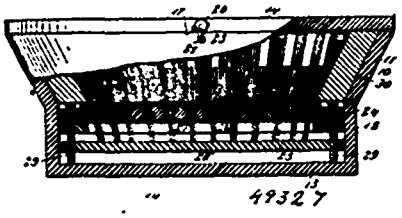
The National Brush Company, Brooklyn, Assignee of William F. Hutchinson, New York, both of New York State, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. The combination, of the reciprocating abutment plates, the boxes held loosely between the plates, and means for preventing the displacement of the boxes, substantially as described. 2nd. The combination, of the reciprocating abutment plates, movable in relation to each other, a fastening device to hold the plates together, the boxes held between the plates, and means for preventing the displacement of the boxes, substantially as described. 3rd. The combination, of the oppositely arranged reciprocating abutment plates, the boxes held loosely between them, the guides for the boxes, and guide posts carrying abutment plates, substantially as described. 4th. The com-

bination, of the oppositely arranged abutment plates, having openings therein to prevent excessive resistance to air, the guides between the plates, and the boxes held loosely on the guides, substantially as described. 5th. The combination, of the oppositely arranged reciprocating abutment plates, a fastening device to hold the plates together, guides arranged between the plates and limiting the distance between them, and boxes held to slide on the guides, substantially as described. 6th. A machine of the kind described, comprising guide posts, oppositely arranged abutments plates to slide on the posts, means for holding boxes between the abutment plates, and cog-wheels having their teeth supporting the lower abutment plate, substantially as described.

No. 49,327. Brush Making Machine.

(*Machine à faire les brosses.*)

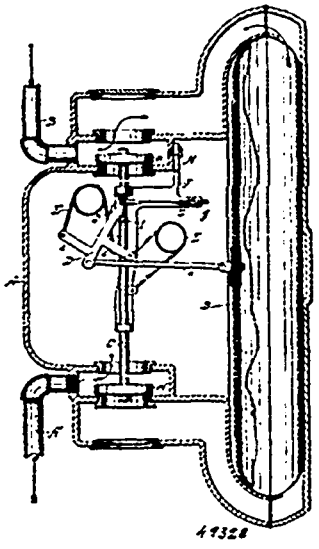


49327

The National Brush Company, Brooklyn, assignee of William F. Hutchinson, New York, both of New York State, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. The combination, with the box, of the brush back holding ring, the abutment plate held below the ring, the removable guide above the ring, and a cover to close the box top and fasten the parts in place, substantially as described. 2nd. The combination, with the box, of the brush back holding ring, the abutment plate secured to the ring and held beneath it, a tapering guide above the ring, and a cover for the box, substantially as described. 3rd. The combination, with the box, of the brush back holding ring, the abutment plate adjustably secured to the under side of the holder, the tapering guide to rest above a brush back and extend to the top edge of the box, and a cover to rest on the guide and lock the parts in the box, substantially as described. 4th. The combination of the box having a closed bottom, and a top closure, of the brush back holding ring, the abutment plate, the adjusting screws extending through the brush back holding ring and abutment plate and resting on the box bottom, and the guide between the brush back holding ring and box top, substantially as described.

No. 49,328. Gas-Meter. (*Gazomètre.*)



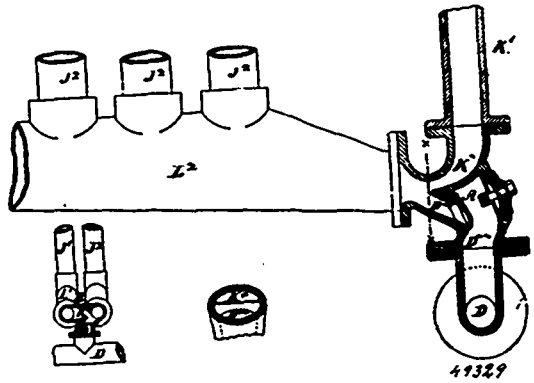
49328

Henry Hezekiah Sprague, Indianapolis, Indiana, U.S.A., 24th June, 1895; 6 years.

Claim.—1st. The herein described gas-meter consisting of the combination of the valve stem, the swinging frame actuated by the pulsations of the diaphragm, the springs carried by said frame by which said valve stem is impelled first in one direction and then in the other, and the lugs or stops by which the valve is held upon its seat while said frame is swinging from one end of its stroke to the other and the spring tension is being reversed, all substantially as shown and described. 2nd. The herein described gas-meter consisting of the combination of the valve stem C, the lug I located thereon, the swinging frame D actuated by the pulsations of the diaphragm, the lug J located thereon, and the springs E, E, carried by said swinging frame, all substantially as shown and described. 3rd. The herein described gas-meter consisting of the combination of the valve stem C, the lug I located thereon, the swinging frame D, the lug J located thereon, one or both of said lugs having a spring or yielding mounting, and the springs E, E, carried by said swinging frame, all substantially as shown and described. 4th. The herein described gas-meter consisting of the combination of the valve stem C, having the lug I thereon, the swinging frame D mounted upon the spring arm G, and having the lug J thereon, and the springs E, E, carried by said swinging frame, all substantially as shown and described. 5th. The herein described gas-meter consisting of the combination of the valve stem C, the lug I located thereon, the swinging frame D, the lug J located thereon, the springs E, E, one end of each being attached to said swinging frame, and the other end to said valve stem, all substantially as shown and described. 6th. The herein described gas-meter consisting of the diaphragm actuated by the pressure of the gas and the mechanism actuated thereby for controlling the movement of the valves in the manner shown and described.

No. 49,329. Feed Water Heater.

(*Réchauffeur d'eau d'alimentation.*)

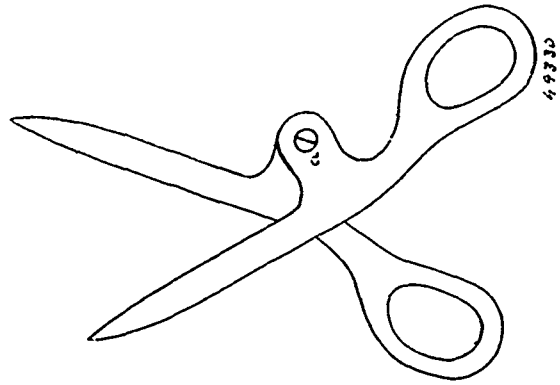


49329

James Gardner Calvert, Manchester, England, 25th June, 1895; 6 years.

Claim.—1st. In a fuel economizer, feed water heater, or tubulous boiler, an injector or ejector device consisting of a passage K^x connecting the return pipe to its corresponding junction box, and a passage D^{xx} of opposite curvature or direction connecting the said junction box to the blow-off pipe, substantially as described, with reference to the accompanying drawing and for the purpose specified. 2nd. In a fuel economizer, feed water heater, or tubulous boiler, the combination of an injector or ejector device with a back pressure valve interposed between the lower junction box and the blow-off pipe, substantially as described and for the purpose specified. 3rd. In a fuel economizer, feed water heater, or tubulous boiler, in which the sections of heating pipes or tubes are so connected together as to allow the water to circulate successively through all the said sections, the combination of an injector or ejector device with the return pipe, blow-off pipe and lower junction box or boxes of one or more sections of heating pipes or tubes, substantially as described and for the purpose specified.

No. 49,330. Scissors or Shears. (*Ciseaux et forces.*)



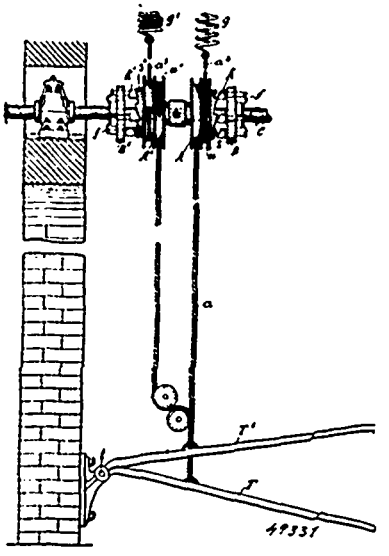
49330

Daniel G. McDonald, Sydney, Nova Scotia, Canada, 25th June, 1895; 6 years.

Claim.—The combination of the lugs a in a pair of scissors or

shears, and the pivot *a* placed out of the line of cutting edges of the blades to make a sliding or shearing cut, substantially as and for the purpose hereinbefore set forth.

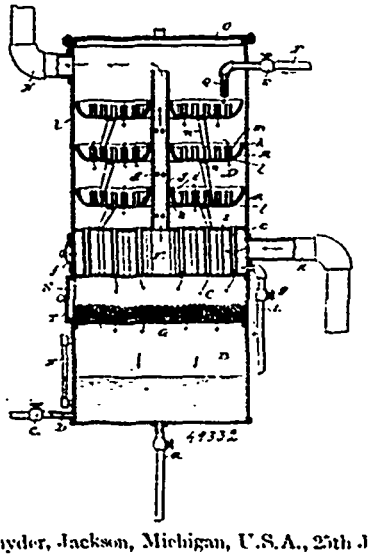
No. 49,331. Apparatus for Producing Rotary Motion. (*Appareil pour la production de mouvement rotatif*)



Hermann Ganswindt, Shoneberg, Germany, 25th June, 1895; 6 years.

Claim.—1st. In combination, with the shaft to be driven, the drum or pulley loosely journalled on said shaft, the operating rope connected to and wound upon said drum, the spring for returning the drum to its initial position, and the pawl devices comprising the disc B rigidly secured to the shaft the series of pawls extending through the same and the leaf springs bearing on the shanks of the pawls, said pawls engaging ratchet teeth on the side of the drum, substantially as described. 2nd. In combination, with the shaft to be driven, the drum or pulley having a snail or spiral tread and a portion concentric with the shaft and provided with ratchet teeth, the pawl device engaging said teeth, the idler shaft having two reversely arranged snail or spiral drums, the strap connecting one of said drums with the drum on the driven shaft, and the draft strap extending from the other drum on the idler shaft to the source of power, substantially as described.

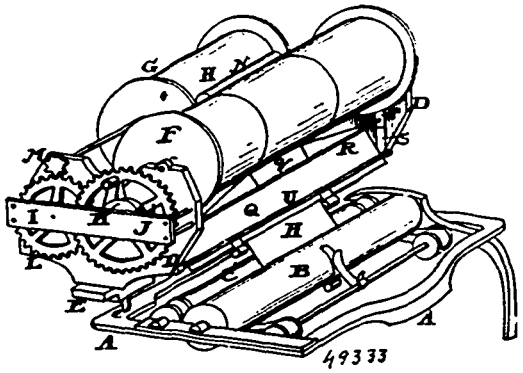
No. 49,332. Apparatus for Purifying and Filtering Water. (*Appareil pour purifier et filtrer l'eau.*)



Charles H. Snyder, Jackson, Michigan, U.S.A., 25th June, 1895; 6 years.

Claim.—1st. A water purifier and filter, comprising a suitable casing, having a clear water chamber in its bottom, a filtering chamber with perforated top and bottom walls arranged above the clear water chamber, a steam chamber arranged above the filtering chamber, a purifying chamber arranged above the steam chamber, a vertical pipe having lateral perforations rising from the steam chamber, tubes passing through the steam chamber and connecting the purifying chamber with the filtering chamber and pans surrounding the vertical pipe and having holes in their bottoms, and short tubes, rising from the holes, and a suitable steam inlet and steam exhaust and a water supply, all combined and adapted to operate, substantially as specified. 2nd. In a water purifier and filter, the combination with a suitable casing having a clear water chamber in its bottom, a filter chamber above the same, a purifying chamber above the filter chamber, a steam chamber interposed between the purifying chamber and the filter chamber, tubes connecting the the filter chamber, tubes connecting the filter chamber with purifying chamber, and a perforated pipe leading from the top of the steam chamber for distributing the steam through the purifying chamber substantially as specified 3rd. The casing having the pure water chamber in its bottom, the filter chamber above the same, the steam chamber, having the vertically-disposed tubes passing through the same, and also having the oil outlet, the steam pipe entering the steam chamber, the vertical pipe having the lateral apertures, the pans having the vertical, central apertures surrounded by a flange, and also having the short vertical tubes leading from holes in the bottom and of a less height than the vertical walls of the pan, and a water supply and steam discharge, substantially as specified.

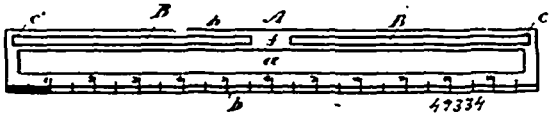
No. 49,333. Type-Writing Machine. (*Clavigraphe.*)



George L. Rawdon, Cleveland, Ohio, U.S.A., 25th June, 1895; 6 years.

Claim.—In a paper-feeding machine for type-writing machines the combination with the impression and feed roller on the type-writer of a supporting frame mounted on the carriage of the type-writer, rollers F and G journalled in said frame, ribbon H, attached to said rollers and passed under the feed roller C, of the type-writer, a spring K, and gear train J, L, M, attached to the roller plane D, D, and connected with and operating said ribbon roller G, a spring actuated roller N, bearing against rear side of ribbon roller F, and a self adjusting guide plate Q, journalled in grooves S, S, in the end plates D, D, all constructed and combined to operate substantially as described and for the purpose set forth.

No. 49,334. Ruler. (*Règle.*)

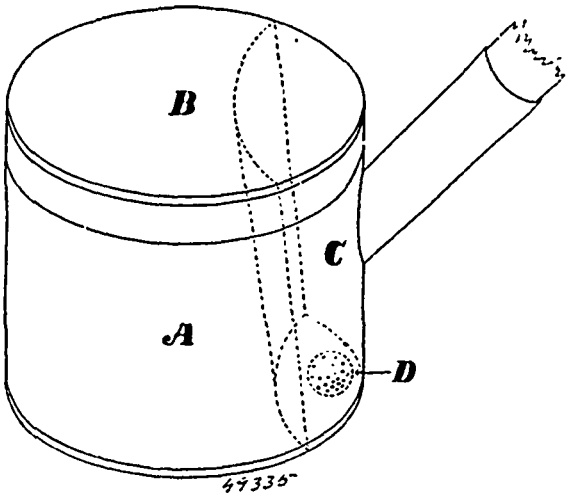


Major Romeyn Jewell, Rochester, New York, U.S.A., 25th June, 1895; 6 years.

Claim.—1st. The combination, with a ruler consisting of a thin plate, of a supporting strip seated loosely in the ruler adjacent to one edge only, and projecting on opposite sides in the same coincident line, whereby the opposite edge of the ruler can be brought in direct contact with a supporting surface either side up, said strip extending longitudinally of the ruler and being of such length as to support the same, as herein shown and described. 2nd. A ruler consisting of a body or plate and a supporting strip extending longitudinally of the same adjacent to one edge thereof, the plate having a slot to receive the strip and the strip provided with grooves in its sides to embrace the edges of the slot, as specified. 3rd. A ruler consisting of a body or plate and a supporting strip extending longitudinally of the same adjacent to one edge thereof, the plate provided with a slot to receive the strip, said slot having an offset to allow the entrance of the strip, and the strip provided with grooves to embrace the edges of the slot as specified. 4th. A ruler consisting of a body grooved near one edge and a flexible supporting strip of rubber or

the like material having its base inserted and held in said grooved part and the upper part projecting above the surface, substantially as set forth. 5th. A ruler consisting of a body and having a dovetailed groove near one edge and a flexible supporting strip of rubber or the like material having a dovetailed base inserted in said groove.

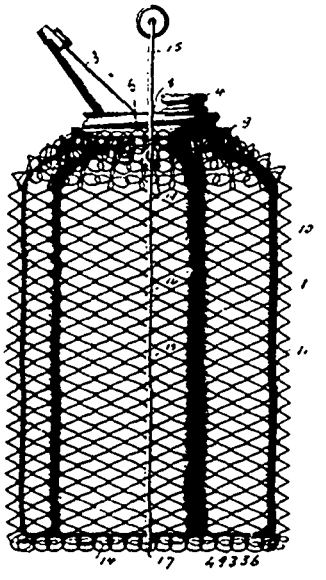
No. 49,335. Sprinkler for Putting Paris Green on Potatoes. (*Arrosoir pour patates.*)



J. Lathern Morse, Berwick, Nova Scotia, Canada, 25th June, 1895; 6 years.

Claim.—The chamber and ball in combination with the cups, substantially as and for the purpose hereinbefore set forth.

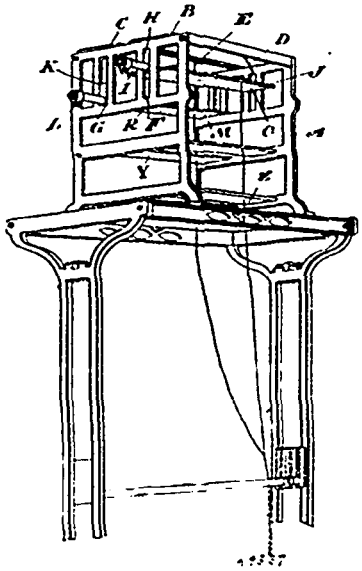
No. 49,336. Can Guard. (*Garde pour bidons.*)



Alfred L. Baron, Tiffin, Ohio, U.S.A., 25th June, 1895; 6 years.

Claim.—1st. The combination with a vessel, of an envelope of woven fabric made of spring metal and having inwardly projecting bends in the fabric to yieldingly support the vessel, substantially as set forth. 2nd. The combination with a vessel, of an envelope of woven fabric made of spring metal and having bends in the fabric on its sides, bottom and top adapted to afford at all points a cushion for the vessel within the envelope, substantially as set forth. 3rd. The combination with a can body and head having an externally screw threaded periphery of a jacket composed of spring wires and a flanged annulus screwed upon the head to secure the jacket in place, substantially as specified. 4th. The combination with a can body and head having a screw threaded periphery, of a jacket composed of interwoven spring wire spirals and a flanged annulus screwed upon the head to secure the upper end of the jacket in place, substantially as specified. 5th. The combination with a receptacle, having a smooth unyielding exterior surface, of a directly imposed circumferentially continuous envelope of loosely interwoven spiral spring wire, the convolutions of which yield toward or in the direction of the receptacle and laterally upon its surface, a head secured to and entirely closing the receptacle and provided with a spout and inlet cap and a flanged annulus secured to the head and securing the envelope to the receptacle, substantially as specified. 6th. The combination with a receptacle having a smooth unyielding exterior surface, of a directly imposed circumferentially continuous envelope of loosely interwoven spiral spring wire, the convolution of which yield toward or in the direction of the receptacle and laterally upon its surface, a head secured and entirely closing the receptacle and provided with a spout and inlet cap, a flanged annulus secured to the head and securing the envelope to the receptacle, a bail frame passing around the bottom of the can and through the convolutions of the envelope and a bail secured to the upper end of the bail frame, substantially as specified. 7th The combination with a can body, of a bottom plate means for securing it to the can, and yielding spring cushions located between the bottom of the can body and the bottom plate, substantially as set forth. 8th. The combination with a can body, of a jacket composed of interwoven spring wires, spring wire cushions formed therein around the bottom of the can body, a bottom plate supported upon said cushions, and means for attaching the bottom upon the cushion, substantially as set forth. 9th. The combination with the can body, jacket composed of interwoven spring wire spirals, and cushions therein around the bottom of the can body, of a bottom plate seated upon the cushions and a frame inserted through opposite spirals in the jacket, crossing the bottom, and means for holding the frame in place, substantially as set forth. 10th. The combination with a can body, jacket composed of spring wire spirals, and cushions therein upon the bottom of the can body, of a bottom plate, a diametrical groove therein, a wire frame embedded in the groove and extending upward through opposite spirals in the jacket and means for securing the wire frame in place, substantially as set forth. 11th. The combination with a can body, interwoven wire jacket and top jacket confining part, of a frame piece surrounding three sides of the can body, eyelets on the end thereof, loops secured to the top confining piece, adapted to receive the frame eyelets and a bail having eyelets at its ends inserted in the eyelets in the frame and adapted thereby to secure the frame rigidly in position, substantially as set forth. 12th. The combination with a can body, interwoven wire jacket and top jacket confining piece, of a bottom plate, a wire frame passing around three sides of the can including the bottom plate, loops secured to the top confining pieces, eyelets on the end of the frame piece passing through the loops, a bail piece and eyelets on the ends thereof engaging with the eyelets on the frame piece to unite the parts together, substantially in the manner and for the purpose specified. 13th. The combination with a can body, and interwoven wire jacket secured around the same of a handle composed of a frame piece and legs bent at right angles thereto and inserted through the meshes of the jacket between the interior wall thereof and the exterior wall of the can body, substantially as set forth.

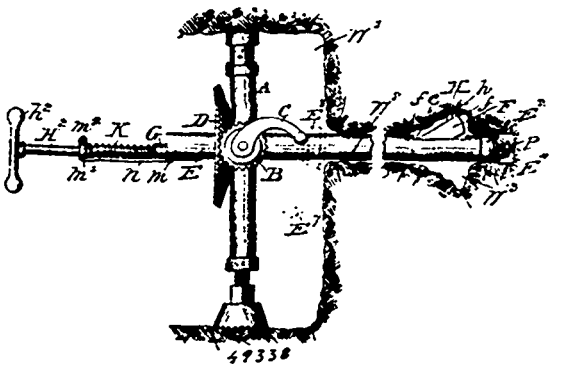
No. 49,337. Jacquard Mechanism for Looms.
(*Mécanisme jacquard pour métiers.*)



William Talbot, Toronto, Ontario, Canada, 25th June, 1895; 6 years.

Claim.—1st. In a jacquard mechanism for looms, the combination of the harness bands, a series of tail cords connected to each of the harness bands, and means for operating the tail cords whereby at one operation of the loom both the figure and ground may be woven, substantially as specified. 2nd. In a jacquard mechanism for looms, the combination of a series of trap boards the harness bands, a tail cord passing through each of the trap boards, one tail cord from each trap board connected to a single harness band, and means for operating the tail cords to lift the harness band, substantially as specified. 3rd. In a jacquard mechanism for looms, the combination of the frame, two trap boards vertically movable in the frame a tail cord passing through each of the trap boards, a harness band to which each of the tail cords is connected, and a needle for moving the tail cords, substantially as specified. 4th. In a jacquard mechanism for looms, the combination of the frame, two trap boards vertically movable in the frame and arranged to be lifted alternately, two tail cords connected to the frame and arranged to pass one through each of the said trap boards, a harness band, the lower ends of both the tail cords connected to the harness band, a needle to operate the tail cords and a pattern cylinder, substantially as specified. 5th. In a jacquard mechanism for looms, the combination of the frame, a top board for the frame, two trap boards vertically movable in the frame, two tail cords connected to the top board, one passing through each of the said trap boards, a needle to operate the said tail cords, a harness band to which each of the tail cords is connected, and a pattern cylinder to operate the needle and tail cords, substantially as specified. 6th. In a jacquard mechanism for looms, the combination of the frame, a top board for the frame, two trap boards vertically movable in the frame, two tail cords connected to the top board, one passing through each of the said trap boards, a needle to operate the said tail cords, a harness band to which each of the tail cords is connected, a pattern cylinder to operate the needle and tail cords, a guide board below the trap boards through which each of the tail cords passes, and a sinker connected to each of the tail cords below the guide, substantially as specified.

No. 49,338. Reamers, etc. (*Alésoir, etc.*)

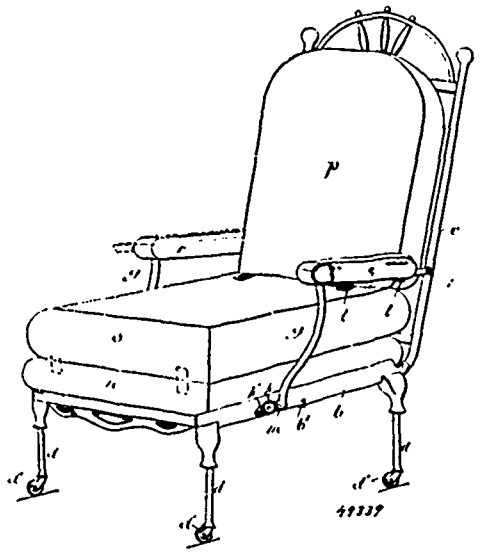


49338

Robert Habersham Elliott, Birmingham, and John Bruce Carrington, Jasper, both of Alabama, U.S.A., 25th June, 1895; 6 years.

Claim.—1st. In a drill of the character described, the combination with an air pipe, of a hollow tube revolubly connected thereto and receiving air therefrom, and means for revolving the same, of a cutter mounted in said tube, means for moving said cutter beyond the circumference of said tube, and means for blowing air through said pipe and said tube for the purpose of carrying off the cuttings, substantially as described. 2nd. In a mining drill of the character described, the combination with a rotating tube slotted near the forward end thereof, of a wing pivoted in said tube and adapted to swing outward through said slot, the said wing being provided with a longitudinal groove therein, an auxiliary cutter moving in said groove, and means for pressing said wing outwards, substantially as described. 3rd. In a mining drill of the character described, the combination with a spindle or drill body and means for rotating the same, of an extensory wing provided with a guideway therein, and an auxiliary cutter moving in said guideway, substantially as described. 4th. In a mining drill of the character described, the combination with a spindle or drill body and means for rotating the same, of an extensory wing provided with an inclined longitudinal guideway therein, an auxiliary cutter mounted in said guideway, and means for moving said cutter backwards and forwards, substantially as described. 5th. In a mining drill of the character described, the combination with a rotary spindle or drill body, of an extensory wing pivoted thereto and provided with a guideway therein, a yielding elastic device for pressing said wing outwards, an auxiliary cutter moving in said guideway, and means for moving said cutter backwards and forwards, substantially as described. 6th. In a mining drill of the character described, the combination with a rotary tube slotted near the forward end thereof, of an extensory wing pivoted in said tube and adapted to swing outward through said slot, the said wing being provided with a guideway therein, an auxiliary cutter mounted in said guideway, a rod movable longitudinally in said tube, and links connecting said rods and said auxiliary cutter, substantially as described. 7th. In a mining drill of the character described, the combination with a spindle or drill body and means for rotating the same, of an extensory wing provided with a guideway therein, and means for swinging said wing outwards about its pivot, and an auxiliary cutter mounted in said guideway, and means for moving said auxiliary cutter, substantially as described. 8th. In a mining drill of the character described, the combination with a rotating tube slotted near the forward end thereof, of a wing pivoted in said tube and adapted to swing outward through said slot, the said wing being provided with a longitudinal groove therein, an auxiliary cutter mounted in said groove, a yielding elastic device for pressing said wing outwards, a rod extending inwardly into said tube and projecting from the rear thereof, and links connecting said rod with said auxiliary cutter, substantially as described. 9th. In a mining drill of the character described, the combination with a spindle or drill body and means for rotating the same, of an extensory wing provided with a longitudinal guideway therein, an auxiliary cutter mounted in said guideway, and a rod and flexible connection between it and said cutter, for moving said cutter backwards and forwards in said guideway, substantially as described. 10th. In a mining drill of the character described, the combination with a spindle or drill body and means for rotating the same of an extensory wing provided with a longitudinal guideway therein with bottom sloping as shown, an auxiliary cutter mounted in said guideway, and adapted to move up said inclined bottom of said guideway, and a rod and a flexible connection between it and said cutter for moving said cutter backwards and forwards in said guideway, substantially as described. 11th. In a mining drill of the character described, the combination with a rotary tube slotted near the forward end thereof, of an extensory wing pivoted in said tube and adapted to swing outward through said slot, the said wing being provided with a guideway therein, an auxiliary cutter mounted in said guideway, a rod movable longitudinally in said tube, links connecting said rods and said auxiliary cutter, and an air blast passing through said tube for carrying off the chips or cuttings, substantially as described. 12th. In a mining drill of the character described, the combination with a rotating tube slotted near the forward end thereof, of a wing pivoted in said tube and adapted to swing outward through said slot, the said wing being provided with a longitudinal groove therein, an auxiliary cutter mounted in said groove, a yielding elastic device for pressing said wing outwards, a rod extending inwardly into said tube and projecting from the rear thereof, links connecting said rod with said auxiliary cutter, and an air blast passing through said tube for carrying off the chips or cuttings, substantially as described. 13th. The combination, with a reamer spindle of a centering device forming a journal bearing for the forward end thereof, the said centering device being provided with three or more extensory arms adapted to press outward when said centering device is subjected to longitudinal pressure, substantially as described. 14th. The combination, with a reamer spindle, of a cap forming a journal bearing therefor, a sliding cap mounted on said first cap, and extensory arms connected to said first cap and operated by said sliding cap, substantially as described. 15th. The combination, with a reamer spindle, of a centering device forming a journal bearing for the forward end thereof, the said centering device being provided with three or more extensory arms adapted to press outward when said centering device is subjected to longitudinal pressure, with a spring normally drawing said extensory arms inwards towards the axis of the reamer spindle, substantially as described. 16th. The combination, with a reamer spindle, of a cap forming a journal bearing therefor, a sliding cap mounted on said first cap, and extensory arms connected to said first cap and operated by said sliding cap, and a spring interposed between said caps and normally tending to draw said arms inwards towards the axis of the reamer spindle, substantially as described. 17th. In a reamer spindle centering device, the combination with the reamer spindle, of a cap forming a journal bearing therefor and terminating in a forwardly projecting lug, a sliding cap normally projecting beyond the end of said lug, and extensory arms connected to said first cap and operated by pressure on said sliding cap, substantially as described. 18th. In a reamer spindle centering device, the combination with the reamer spindle, of a cap forming a journal bearing therefor and terminating in a forwardly projecting lug, a sliding cap normally projecting beyond the end of said lug, and extensory arms connected to said first cap and operated by pressure on said sliding cap, and a spring interposed between said caps and normally tending to press forward said sliding cap, substantially as described. 19th. In a reamer spindle centering device, the combination with the reamer spindle, of a cap forming a journal bearing therefor and terminating in a forwardly projecting lug, a sliding cap normally projecting beyond the end of said lug, and toggle-joints connected to each of said caps and operated by pressure on said sliding cap, substantially as described. 20th. In a reamer spindle centering device, the combination with the reamer spindle, of a cap forming a journal bearing therefor and terminating in a forwardly projecting lug, a sliding cap normally projecting beyond the end of said lug, and toggle-joints connected to each of said caps and operated by pressure on said sliding cap, and a spring interposed between said caps and normally tending to press forward said sliding cap, substantially as described.

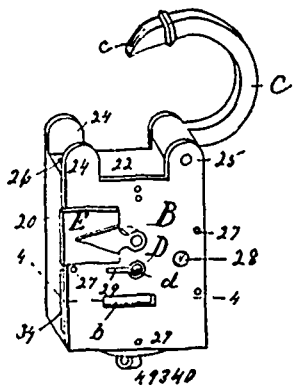
No. 49,339. Folding Bed, Etc. (*Lit pliant, etc.*)



Jacob Samuel Shapira, Montreal, Quebec, Canada, 26th June, 1895; 6 years.

Claim.—1st. A combined folding bed, lounge and chair, comprising a frame formed of a head section, a foot section and an intermediate section, the head section having a pivotal connection and the foot section, a sliding connection with the intermediate section, supports for such head, foot and intermediate sections and the whole adapted to carry cushions or other filling. 2nd. An arm chair, the arms of which are formed to provide enclosing receptacles for the purpose set forth. 3rd. A combined folding bed, lounge and chair, comprising a frame formed of a head section, a foot section and an intermediate section, the head section having a pivotal connection, and the foot section a sliding connection with the intermediate section, supports for such head, foot and intermediate sections arm forming bars pivotally connected together and to such head and intermediate sections, and the whole adapted to carry cushions or other filling. 4th. A combined folding bed, lounge and chair comprising a frame formed of a head section, a foot section and an intermediate section, the head section having a pivotal connection and the foot section a sliding connection with the intermediate section, supports for such head, foot and intermediate sections, arm forming bars pivotally connected together and to such head and intermediate section, a retaining device adapted to act upon one of the arm forming bars, and the whole adapted to carry cushions or other filling. 5th. A combined folding bed, lounge and chair comprising a frame formed of a head section, a foot section and an intermediate section, the head section having a pivotal connection and the foot section a sliding connection with the intermediate section supports for such head, foot and intermediate sections, arm forming bars pivotally connected together and to such head and intermediate section, each arm adapted to carry a receptacle and the whole adapted to carry cushions or other filling. 6th. A combined folding bed, lounge and chair comprising a frame formed of a head section, a foot section and an intermediate section, the head section having a pivotal connection and the foot section a sliding connection with the intermediate section, supports for such l ead foot and intermediate sections, arm forming bars pivotally connected together and to such head and intermediate section, a retaining device adapted to act upon one of the arm forming bars, each arm adapted to carry a receptacle and the whole adapted to carry cushions or other filling. 7th. A combined folding bed, lounge and chair comprising a frame formed of a head section, a foot section and an intermediate section, the intermediate section provided with rigid legs, the foot and head sections provided with pivoted supports, the head section having a pivotal connection and the foot section a sliding connection with an intermediate section, arm forming bars pivotally connected together *and to such head and intermediate section, a retaining device* adapted to act upon one of the arm forming bars, and the whole adapted to carry cushions or other filling. 8th. In a combined folding bed, lounge and chair frame, the combination of the foot section A, intermediate section B, and head section C, movably connected together, legs *d*, supports a^2, and c^2, and arm forming bars *g*, *g*, with their supporting ratchets *k*, and pawls k^1, the former adapted to engage notches *m*, in the bars *g*, as and for the purpose set forth. 9th. In a combined folding bed, lounge and chair frame the combination of the foot section A, intermediate section B, head section C, the front section having a sliding connection and the head section a pivotal connection with the intermediate section legs *d*, supports a^2, and c^2, folding end piece *c*, and arm forming bars *g*, *k*, with their supporting ratchets *k*, and pawls k^1, the former adapted to engage notches *m*, in the bars *g*, and receptacles *r*, and *s*, as and for the purpose set forth. 10th. In a combined folding bed, lounge and chair frame the combination of the foot section A, intermediate section B, head section C, the foot section having a sliding connection and the head section a pivotal connection with the intermediate section legs *d*, supports a^2 and c^2, folding end piece *c*, and arm forming bars *g*, *g*, with their supporting ratchets *k*, and pawls k^1, the former adapted to engage notches *m*, in the bars *g*, receptacles *r* and *s*, and pillow support *c*, as and for the purpose set forth.

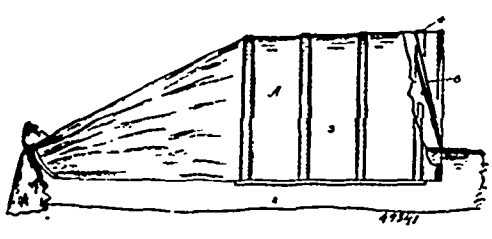
No. 49,340. Pad Lock. (*Cadenas.*)



Théophile Bélanger, Montreal, Quebec, Canada, 26th June, 1895 6 years.

Claim.—1st. In a pad lock, the combination with the casing having a slot for the insertion of a card or ticket, of a sliding plate adapted to close the said opening, a series of inclined faces on the underside of the said plate, a bolt having a series of inclined faces adapted to engage the said inclined faces on the sliding plate, the said bolt by being pushed one way will cause the sliding plate to close the opening and the other way will open it, substantially as set forth. 2nd. In a pad lock, the combination with a sliding plate adapted to close a slot in the side of the casing, inclined faces on the underside of the said plate, a bolt having a series of inclined faces adapted to engage the inclined faces on the said plate, a spring pressing the said bolt in one direction and the jaw of the lock, the nose of which is adapted to when the lock is being closed, press the said bolt against the said spring, substantially as set forth. 3rd. In a pad lock, the combination with the casing having a slot in the side for the insertion of a card or ticket and means for opening or closing the said slot, of a plate on which the ticket is pushed, a sliding bar sliding on the said plate, the said bar being connected by rivets passing through slots in the said plate to a sliding plate on the other side thereof, a spring pressing the said sliding plate and a notch adapted to be engaged by the bit of the key, substantially as set forth. 4th. In a pad lock, the combination with the key port D, having a cut away portion *d*, of the key K, having a knife edge 54 formed on the barrel, and a slot 55, substantially as set forth. 5th. In a pad lock, the combination with the casing and cover having a slot for the insertion of a card or ticket, a slot in the cover through which a portion of the said card is visible, an opening for the end of the jaw to pass through and a key hole, the jaw C pivoted to the said casing, the spring bolt F sliding in the upper portion of the casing and adapted to engage a slot in the said jaw, substantially as set forth.

No. 49,341. Sleeve Expander.
(*Appareil à déployer les manches.*)

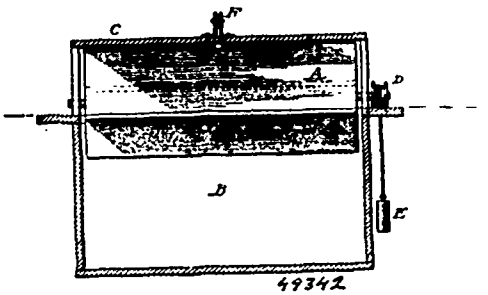


Carrie Belle Wright, St. Paul, Minnesota, U.S.A., 26th June, 1895; 6 years.

Claim.—1st. A sleeve expander comprising in combination the series of inverted U-shaped bows, their inelastic connection and

means for attachment to the upper part of the sleeve lining, and their elastic connection for the other end to the sleeve lining below. 2nd. A sleeve expander comprising in combination the series of elastic U-shaped bows arranged in inverted position, the inelastic covering and connection therefor forming a hollow arch, the inelastic connection from one end of the arch to the shoulder part of the sleeve lining and the elastic connection from the top of the lower end of the arch to the elbow part of the sleeve lining. 3rd. A sleeve expander, comprising in combination the sleeve lining, the series of inverted U-shaped bows flexibly connected thereto, the inelastic connection between the tops of said bows and between the top of the bow at one end of the sleeve and the shoulder part of the sleeve lining, and the elastic connection between the top of the bow at the other end of the series and the sleeve lining below said bow. 4th. A sleeve expander, comprising in combination the sleeve lining, the elastic collapsible hollow arch arranged thereon, the inelastic connection between the top of said arch at one end and the shoulder part of the sleeve lining, and the elastic connection between the top of the other end of the arch and the sleeve lining below the same. 5th. A sleeve expander, comprising in combination a sleeve lining, the elastic U-shaped bows attached in inverted position to the sleeve lining, the inelastic connection between the tops of said bows, the inelastic connection between the top of the bow at the upper end of the series and the shoulder part of the sleeve lining, and the elastic tapes or guys connecting the top of the last bow at the lower end of the series with the sleeve lining below said bow. 6th. A sleeve expander, comprising in combination the sleeve lining, the series of U-shaped elastic bows attached to said lining in inverted position, the inelastic flexible connection between the tops of said bows, the inelastic flexible connection between the top of the bow at one end of the series and the sleeve lining beyond the same, and the elastic connection between the top of the bow at the other end of the series and the sleeve lining beyond the same.

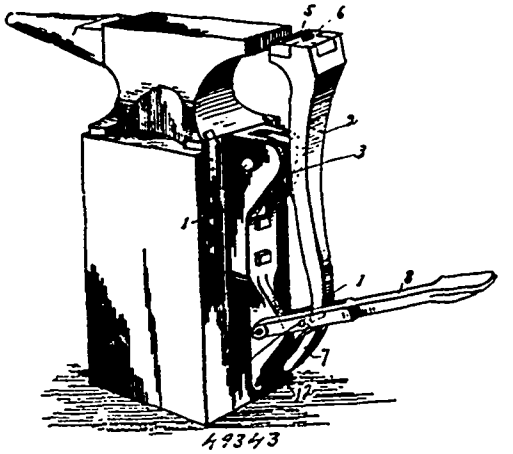
No. 49,342. Animal Trap. (*Piège.*)



John Sherrett, Nortfolk, Oregon, U.S.A., 26th June, 1895; 6 years.

Claim.—An animal trap comprising a covered base, an opening therein, a four leaved rotary platform pivoted in the same, a runway formed by the side and top of the cover and two of the leaves, a standard secured to the exterior of said cover, a lever centrally pivoted to said standard and having a depending bait hook at one extremity, and a latch at the other, and both passing through openings in the top, the latch bearing against one side of the platform leaf to arrest the same until the bait hook is drawn upon, and means to rotate the platform.

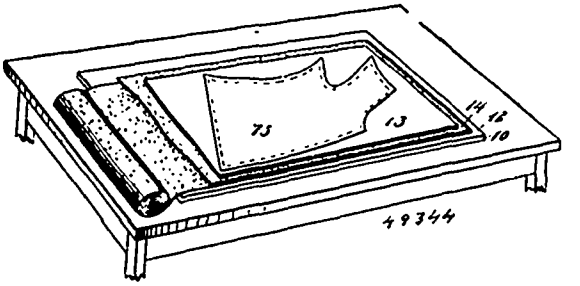
No. 49,343. Vice Attachment for Anvils.
(*Attache d'étau pour enclumes.*)



Albert F. Reed, Guthrie, Iowa, U.S.A., 26th June, 1895; 6 years.

Claim.—A vice attachment for anvils consisting of a bracket adapted to be removably attached to the anvil base, a vertical jaw pivoted to the upper end of the bracket and projecting above the same to co-operate with the adjacent end of the anvil, the lower end of said jaw being curved inwardly toward the lower end of the bracket and being adapted to swing normally toward the same, the foot lever bifurcated at its inner end, the two arms formed by the bifurcation embracing the curved lower end of the jaw and the adjacent part of the bracket, means for pivotally connecting the inner ends of the lever to the bracket, a roller journalled in the fork end of the lever in front of its pivotal point and adapted to bear upon the curved inner edge of the jaw when the lever is depressed, and a spring for normally holding the foot lever up, substantially as described.

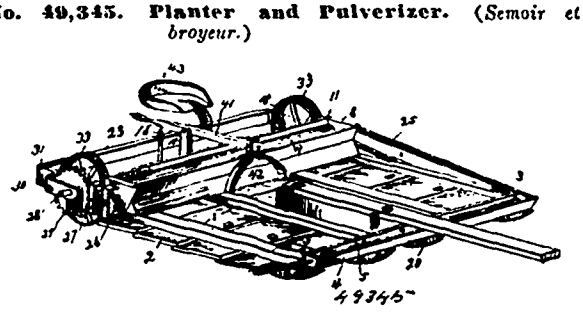
No. 49,344. System of Marking Patterns.
(*Système de marquer les patrons.*)



Louise Schaefer, Oneida, New York, U.S.A., 26th June, 1895; 6 years.

Claim.—1st. The herein described method of marking patterns on fabric, which consists in providing a marking board having a colouring pigment held on its surface, doubling the fabric and spreading it on the board, laying a flexible marker on the top layer of the fabric, the marker being also impregnated with a colouring pigment, placing the pattern on the marker, and then running a spur-wheel around the edge of the pattern. 2nd. In an apparatus of the kind described, the marking board having an open fabric fastened to its surface, and a colouring pigment held between the meshes of the fabric, substantially as described. 3rd. The herein described marker, comprising a flexible loosely wooven fabric, impregnated with a colouring pigment, the pigment being held in a free state in the fabric, substantially as described. 4th. The herein described marking board having on its surface a colouring pigment, the pigment being fastened to the board and being adapted to be freed from the board by the running of a spur-wheel across it, substantially as described.

No. 49,345. Planter and Pulverizer. (*Semoir et broyeur.*)



Edward Showell, Atchison, Kansas, U.S.A., 26th June, 1895; 6 years.

Claim.—1st. In a machine of the class described the combination with the front frame, the platform arranged thereunder, the series of longitudinally disposed and transversely arranged at the front end of the platform, the drill shoes arranged at the rear end of the same, a hopper arranged at the front and rear end of the platform, the latter being above the drill shoes, feed devices mounted in the hoppers, means for driving the feed devices of the rear hopper, and intermediate mechanism between said feed devices of the main hopper and those of the front hopper, substantially as specified. 2nd. In a machine of the class described, the combination with the front framework, the platform, and pulverizers carried thereby, and the hopper arranged thereover of a rear pivoted frame, a transverse axle journalled in the pivoted frame, a bail rising from the front frame, a yoke arranged upon the axle and having eyes engaging the same, and a lever fulcrumed on the yoke and having its front end extended and loosely connected with the bail, substantially as specified. 3rd. In a machine of the class described, the combination with the front frame carrying the pulverizer, the superimposed hopper, the feed shaft arranged therein and extending beyond the end walls of the hopper, of the frame bars 22 loosely mounted upon the ends of the

shafts, the rear frame bar 23, the transverse axle journalled in the bars 22, the ratchet discs 35 mounted on the axle, the ground wheels having their outer faces provided with oppositely disposed teeth for engaging the ratchets and loosely mounted on the axle coiled springs arranged at the inner sides of the ground wheels, collars between the wheels against which the springs abut, a gear-wheel carried by the outer end of the axle, a gear-wheel mounted on the feed shaft of the hopper, and an intermediate gear-wheel for communicating motion from the gear-wheel of the axle to that of the feed shaft, substantially as specified. 4th. In a machine of the class described, the combination with the front platform, the framework carrying the pulverizing devices, and the hopper arranged thereover and provided with a feed shaft extending beyond its ends, of a rear rectangular frame loosely connected at its terminals to said feed shaft, an axle journalled in the rectangular frame, ground wheels carried by the axle and adapted to rotate therewith, a gear loosely mounted on the outer end of the axle, an angular lever engaging the gear and adapted to reciprocate the same, a locking bar for said angular lever, a gear-wheel carried by the feed shaft of the hopper and an intermediate gear mounted upon the frame and adapted to communicate motion from the shifting gear to the gear of the feed shaft, substantially as specified. 5th. In a pulverizer, the combination of the beam 1, with the cross-planks 2 arranged in lap joint fashion, and the pulverizing knives 20 arranged at the front of the cross-planks and provided with rounded lower sides, and two or more tangs 21 formed on the upper edges of the knives and passing through openings of the planks to secure the knives thereto, substantially as described.

No. 49,346. Electric Train Signal.

(*Signal de chemin de fer électrique.*)

Edward James Devine, Schreiber, Ontario, Canada, 26th June, 1895; 6 years.

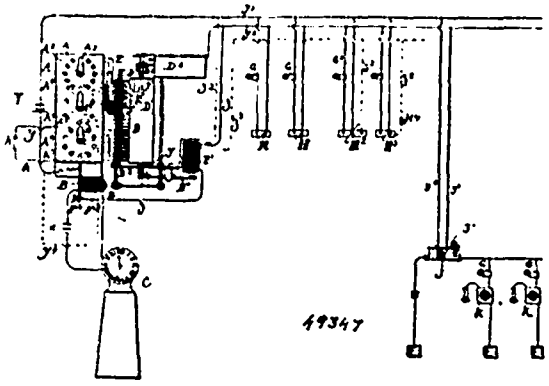
Claim. 1st. The herein described improvement in train signals, consisting of wires in each car of a train connected in series, signals and batteries at each end of the train, in circuit with said wires, and devices at each end of a car, said devices being provided with a fixed frame and a pivoted shutter, one of said wires being secured to the frame and also to the shutter, and another wire to the shutter, so that when the shutter drops said wires contact, substantially as set forth. 2nd. In a train signal, a series of wires, a circuit closer into which said wires extend, said closer having a movable portion designed to automatically close a circuit when out of its normal position, as set forth. 3rd. In a train signal, a series of wires, and a circuit closer provided with a frame and a movable shield or tongue, said wires being extended into or mounted on said frame and tongue, one of them having an uninsulated portion, another of said wires also having an uninsulated portion extending across the plane of said former uninsulated portion, as set forth. 4th In a train signal, a series of wires, a fixed frame into which said wires extend, and a movable shield or tongue to which said wires are also connected, one of said wires having an uninsulated portion extended from said shield or tongue, another of said wires having an uninsulated portion in said frame contiguous to said former uninsulated portion, both of said uninsulated portions being designed to contact when said shield or tongue is out of its normal position, substantially as set forth. 5th. In a train signal, a series of wires, and a circuit closer into which said wires extend, the same consisting of a frame having an opening or cut-away portion, a shield or tongue pivoted to said frame at the top of said opening, and a spring bearing on said shield or tongue, said wires also being carried by said shield or tongue and two of said wires arranged so as to intersect the plane of each other and designed to contact when said shield or tongue is lowered, substantially as set forth. 6th. In a train signal, a series of wires, fixed frames into which said wires extend having movable shields or tongues through which said wires are passed, two of said wires being arranged so as to intersect the plane of other and designed to contact when said shield or tongue is lowered, and couplers for uniting the corresponding wires of adjacent cars, the same comprising metallic plates, enclosing tubes and clamps, substantially as set forth. 7th. In a train signal, a series of wires, circuit closers into which said wires extend, having movable shields or tongues through which said wires are passed, and couplers for uniting the corresponding wires of adjacent cars, the same comprising metallic plates imbedded in gutta-percha at one end, semi-cylindrical tubes, and spring-held clamps encompassing said tubes, substantially as set forth.

No. 49,347. Electric Time Signalling System, etc.

(*Système de signal horaire électrique, etc.*)

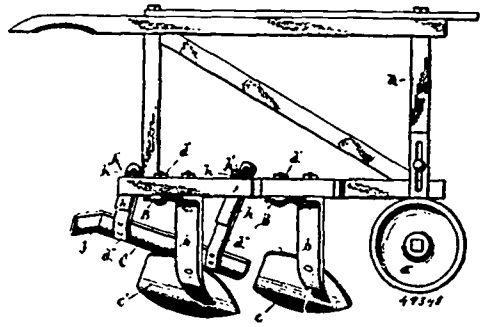
Walter Aloysius Pursell, Guttenberg, New Jersey, U.S.A., 26th June, 1895; 6 years.

Claim.—1st. In a system for electrically transmitting time signals, the combination of the time switch device divided into circles not concentric, each circle being provided with switch points and a



switch arm, brushes wired to said switch points, and a circuit wheel or drum through which one or a series of impulses may be sent, substantially as set forth. 2nd. A system for electrically transmitting time signals, comprising a time indicator, a time switch, a circuit wheel or drum, means for operating said circuit wheel or drum and said time switch, and means for controlling said operation comprising an electro-magnet in circuit with the time indicator and an electro-magnet in the main circuit or in a separate circuit, said electro-magnets operating armature levers to release the moving mechanism, and brushes connecting said circuit wheel or drum with said time switch, substantially as set forth. 3rd. A system for electrically transmitting time signals, comprising a time indicator, a time switch provided with contact points divided into series, each series being provided with a contact arm, means for operating said contact arms at suitable intevals, a series of brushes wired to said contact points, a circuit wheel or drum provided with contact ribs, and means for revolving said circuit wheel at proper intervals, substantially as set forth. 4th. In a system for electrically transmitting time signals the combination with a clock, a motor operated by said clock at determined intervals, of a time switch device divided into circles not concentric, each circle being provided with switch points and a switch arm, brushes wired to said switch points, and engaging with contacts upon a circuit wheel or drum, substantially as set forth. 5th. The combination with a time switch device provided with two or more series of contacts arranged in line, of a contact arm for each series, a circuit wheel formed as a cylinder adjacent to said time switch device, and brushes for said contact points, contracting with said cylinder to transmit one or a series of impulses through the same, substantially as set forth. 6th. The combination with a circuit wheel or drum provided with a series of contact ribs of definite width, of another rib or ribs of greater width, and a circuit breaker wired to the last named rib or ribs, substantially as set forth. 7th. In a system for electrically transmitting audible time signals, the combination with a time switch device provided with contact points and electrically actuated switch-arms of a circuit wheel or drum provided with a series of contact ribs of definite width, and another rib of greater width, brushes for contacting with said ribs and wired to the contacts upon said time switch device, and a circuit breaker interposed between the contact plate and the brush engaging with the rib or ribs of greater width, substantially as set forth.

No. 49,348. Cultivator. (*Cultivateur.*)

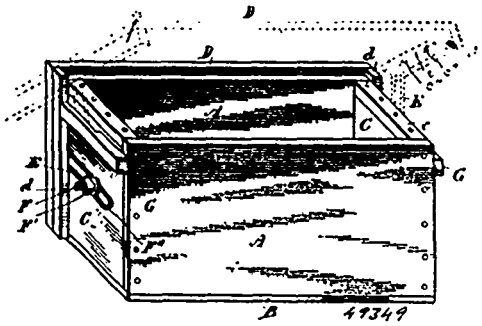


William Fletcher, Johnson, Addison, New York, U.S.A., 26th June, 1895: 6 years.

Claim.—1st. The combination with the cultivator-frame, of two sets of blades pivoted to the underside of the frame at opposite sides of the central line of draft, and all independently adjustable to different angles in relation to the line of draft as set forth. 2nd. The combination with the cultivator-frame, of a plant-guard

sustained over the cultivator-blade to keep the soil from the leaves of the plants as set forth. 3rd. The combination with the cultivator-frame and blade, of a plant-guard over said blade inclined toward the line of draft and laterally adjustable as set forth. 4th. The combination with a cultivator, of a plant-guard consisting of a shelf sustained laterally and vertically adjustable over the cultivator-blade and inclined forward and toward the central line of draft as set forth and shown. 5th. The combination with the cultivator-blade, of an inclined plant-guard over said blade and having a downwardly extending rear end portion for the purpose set forth. 6th. The combination with the frame A, of a plant-guard consisting of an inclined shelf C, formed with a downwardly extending leaf *j*, longitudinally slotted attaching arms *d d*, carrying said shelf, and attaching bolts *e e*, passing through said slots as set forth and shown. 7th. In combination with the cultivator-frame and blades, brackets secured to the frame adjustably toward and from the central line of draft and formed with downwardly extending and longitudinally slotted limbs, and the shelves C provided with longitudinally slotted vertical arms and secured to the aforesaid limbs by bolts passing through the latter as set forth.

No. 49,349. Crate and Cover Fastener. (*Caisse et attache de couvercle*)



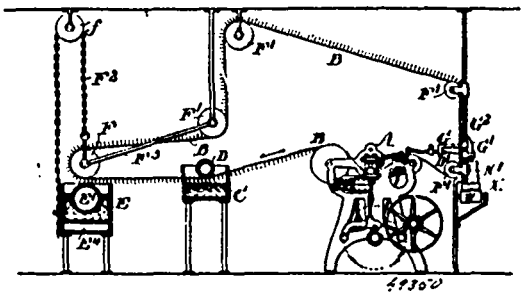
Charles Edward Weaver and Joseph Francis Weaver, both of Chelsea, Iowa, U.S.A., 26th June, 1895; 6 years.

Claim.—1st. The combination with a box or crate and its top or cover, of a hasp secured to each end of the cover and projecting down and close to each end and consisting of a wire forming a looped slot, a bolt passing through each end of the box through the slot of said hasp and a thumb-nut adapted to clamp said hasp against the end of the box, substantially as set forth. 2nd. In a box or crate, the combination of the sides and bottom with the ends having their grain running vertically and cut short at the top and the spaces thus left made up by strips forming continuations of the ends, substantially as set forth. 3rd. In a box or crate, the combination of the sides and bottom with ends having their grain running vertically and the upper edges cut short and made good by strips *c*, a top or cover D having ends *d*, hasps E secured to the ends of said cover, bolts F passing through the ends of the box and the slots of the hasps, thumb-nuts F^1 and washers $F^{1\,1}$ kept on said bolts by upsetting their ends, and notched cleats G secured to said ends of the box, substantially as set forth. 4th. In a box or crate fastening, a hasp consisting of doubled up wire forming a looped slot, arms bent in opposite directions to each other and in the same plane as the legs forming the slot and short ends bent at right angles to the plane of the legs and arms, substantially as set forth. 5th. The combination with the ends C of a box or crate, of a top or cover, a hasp secured to each end of said cover projecting down the ends and forming a slot, a bolt passing through each end through said hasp and having its end upset and a thumb-nut on each bolt made inseparable therefrom by said upsetting, substantially as set forth.

No. 49,350. Pump. (*Pompe.*)

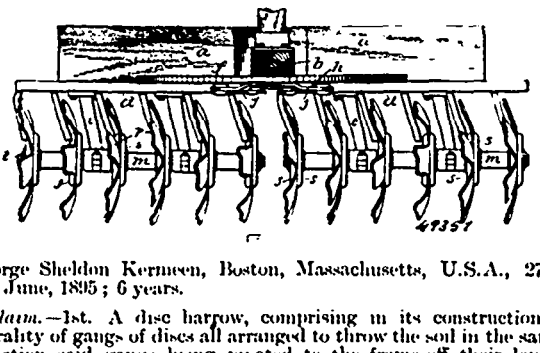
George Russell Hamilton and John McPherson, Ancaster, both of Ontario, Canada, 27th June, 1895; 6 years.

Claim.—1st. In a pump, a water pipe inserted into a cylinder, the latter having an opening at the bottom with a disc valve to open and close the opening, and having pins on the under side with shoulders to come in contact with the bottom of the cylinder to prevent the valve from rising too high, an outer cylinder encasing the inner cylinder to easily move vertically on it, and provided with a similar valve opening and valve, with shouldered pins on the under side to prevent its rising too high, a bale attached to the outer cylinder



connected by a rod to the top end of a pump handle, all substantially as and for the purpose specified. 2nd. In a pump a water tube A connected to an inner cylinder B, in the bottom of a well, and enclosed in an outer cylinder C, the latter made to slide vertically on the former, the inner cylinder B having an opening *a*, and a disc valve *c* and pins *d*, with shoulders 2 attached to the under side of the said disc valve to prevent it rising too high, the outer cylinder C having an opening *f* in the bottom and covered with a disc valve *g*, and pins *h* attached thereto having shoulders 3 at the lower end to prevent said disc valve from rising too high, a bale F attached to the outer cylinder C, and a connecting rod D, connecting the said bale of the outer cylinder to the pump handle *i*, all constructed substantially as and for the purpose specified. 3rd. In a pump, the combination of the water pipe A, inner cylinder B, outer cylinder C, valves *c*, *g*, and their openings, and the leather flange *n*, secured in the bottom of the inner cylinder C, all substantially as and for the purpose specified.

No. 49,351 Disc Harrow. (*Herse à disque.*)



George Sheldon Kermeen, Boston, Massachusetts, U.S.A., 27th June, 1895; 6 years.

Claim.—1st. A disc harrow, comprising in its construction a plurality of gangs of discs all arranged to throw the soil in the same direction, said gangs being pivoted to the frame off their longitudinal centres, an adjustable draft pole, a lever fulcrumed on the draft pole, and a link rod at each end of said lever and extending therefrom to the disc gangs, substantially as described. 2nd. A disc harrow, comprising in its construction the cross-beam *a*, the draft pole pivoted thereto, two gangs of discs all arranged to throw the soil in the same direction and pivoted to the beam *a*, each side of the draft pole, the segmental bar *f*, having teeth *g*, the lever *h* pivoted to the draft pole, and having pinion *i* engaging the teeth *g*, and link rods *j j*, connecting the said lever with the inner ends of the discs gangs, substantially as described. 3rd. A wheel or disc for disc harrows, comprising in its construction a clamping hub, and a plurality of independently removable blades curved from the hub to their ends, the forward or cutting edge of each blade extending in a plane with the body, and the lower or outer portion of the rearward or trailing part being re-entrant or curved inward toward the earth-work face, as described. 4th. A wheel or disc for disc harrows, comprising in its construction a plurality of independently removable blades, a two-part hub between which the inner ends or bases of the blades are held, the edges of each blade from its inner end outward to substantially the edge of the hub bearing against the opposing edges of the bases of the adjacent blades, as described.

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

3968. THE GOODYEAR SHOE SEWING-MACHINE ASSOCIATION, (assignee), 3rd five years of No. 21, 849, from 10th June, 1895. Sole Sewing-Machine, June 3rd, 1895.

3969. THE GOODYEAR SHOE SEWING-MACHINE ASSOCIATION, (assignee), 3rd five years of No. 21, 850, from 10th June, 1895. Sole Sewing-Machine. June 3rd, 1895.

3970. CHARLES ENOCH PARKS, 2nd five years of No. 34,926, from 28th August, 1895. Box or Crate, June 3rd, 1895.

3971. HIRAM DAVID BINKLEY, 2nd five years of No. 34,482, from 7th June, 1895. Potato Digger, June 4th. 1895.

3972. THE WESTERN ELECTRIC COMPANY, (assignee), 2nd five years of No. 34,500, from 9th June, 1895. Telephone Exchange System, June 7th, 1895.

3973. HERMANN BRUNGGER, 2nd five years of No. 34,582, from 27th June, 1895. Process of Lining Boilers of Digesters, June 7th, 1895.

3974. FRANKLIN W. MANN and CLARENCE H. FARRINGTON, 2nd five years of No. 34,506, from 10th June, 1895. Machine for Grinding Bones, June 7th, 1895.

3975. THE CHAMPION FLUE SCRAPER COMPANY, (assignee), 2nd five years of No. 34,498, from 9th June, 1895. Flue Scraper, June 8th, 1895.

3976. SILAS VERNOY, 3rd five years of No. 21,840, from 9th June, 1895. Electro Medical Batteries, June 8th, 1895.

3977. NAHUM E. THOMAS, 2nd five years of No. 34,550, from 19th June, 1895. Nut Wrench, June 10th, 1895.

3978. ELIJAH UPSON SCOVILLE, 3rd five years of No. 22, 040, from 9th July, 1895. Faucet, June 10th, 1895.

3979. HENRY ATHELSTAN ACWORTH DOMBRAIN and OLIVER TRUMPER, 2nd five years of No. 34,527, from 13th June, 1895. Apparatus for Extracting by means of Volatile Solvents, June 11th, 1895.

3980. WILLIAM BECK, 2nd five years of No. 34,511, from 12th June, 1895. Cigar Box, June 11th, 1895.

3981. DAVID W. CURTIS, 2nd five years of patent No. 34,519, from 13th June, 1895. Milk Vat, June 13th, 1895.

3982. THE LINOTYPE COMPANY, 3rd five years of No. 21,-918, from 17th June, 1895. Machine for Producing Stereotype Matrices, etc., June 13th, 1895.

3983. THE UNION SPECIAL SEWING-MACHINE COMPANY, (assignee), 3rd five years of No. 21,913, from 17th June, 1895. Sewing-Machine, June 15th, 1895.

3984. THE UNION SPECIAL SEWING-MACHINE COMPANY, (assignee), 3rd five years of No. 21,914, from 17th June, 1895. Sewing-Machine, June 15th, 1895.

3985. THE PATENT CORK PAVEMENT COMPANY, (assignee), 2nd five years of No. 34,591, from 28th June, 1895. Composition for Paving, June 18th, 1895.

3986. EARL G. WATROUS, 2nd five years of No. 34,622, from 5th July, 1895. Harvester, June 21st, 1895.

3987. ROBERT WESLEY AFRICA, 2nd five years of No. 34,-668, from 10th July, 1895. Car Replacer, June 27th, 1895.

3988. THOMAS HODGSON, 2nd five years of No. 34,635, from 8th July, 1895. Pump-Heads and Handle Attachment, June 29th, 1895.

TRADE-MARKS

Registered during the month of June, 1895, at the Department of Agriculture—Copyright and Trade-Mark Branch.

5324. JOHN WILLIAM LANG, Toronto, Ont., trading as J. W. LANG & CO. Whisky, 3rd June, 1895.

5325. BRISTOL MEDICINE COMPANY. Montréal, Qué. Un Sirop Composé pour la guérison du rhum, de la toux, de la bronchite, de la coqueluche, de l'asthme, du croup, de la consomption, etc., 3 juin, 1895.

5326. JAMES LUNHAM GRANT, Liverpool, Lancaster, England. Dairy and Farm Products, such as Butter, Cheese, Bacon, Hams, Lard and Eggs, 4th June, 1895.

5327. THE PUBLISHING, ADVERTISING AND TRADING SYNDICATE, LIMITED, Cheapside, London, England. General Trade Mark, 4th June, 1895.

5328. NIAGARA PAPER MILLS, Lockport, New York, U.S.A. Crinkled Paper and Paper Lining, 6th June, 1895.

5329. QUICK MEAL STOVE COMPANY, St. Louis, Missouri, U.S.A. Gasoline Stoves, Gas Stoves, Cooking Stoves and other Stoves and Stoveware, and Stove Furniture, 8th June, 1895.

5330. STEPHEN TOGHILL BRITTEN and ISAAC DAWSON BRADSHAW, Toronto, Ont., trading as BRITTEN AND BRADSHAW. Chewing Gum, 8th June, 1895.

5331. ALEXANDER YOUNG SCOTT and DANIEL MacMILLAN, Toronto, Ont., trading as THE EXCELSIOR LIME JUICE COMPANY. Lime Juice, 10th June, 1895.

5332. JAMES L. DENMAN & CO., 20 Piccadilly, London, England. Whisky, 10th June, 1895.

5333. EDWIN DELEVAN TILLSON, Tilsonburg, Ont. Flour, 11th June, 1895.

5334. WILLIAM DOUGLAS, Toronto, Ont. Cigars, 11th June, 1895.

5335. JOHN F. McLEAN and SAMUEL BULLEY, Toronto, Ont., Cycles, 11th June, 1895.

5336. LYMAN JONES WOODWARD, Toronto, Ont. Nerve Tonics, 12th June, 1895.

5337. THE STANDARD SILVER COMPANY, LIMITED, Toronto, Ont. Plated Ware, 14th June, 1895.

5338. THE DOMINION GLASS COMPANY, LIMITED, Montreal, Que. Fruit Jars, 15th June, 1895.

5339. AZURE MINING COMPANY, New York, N.Y., U.S.A. New Mexican Turquoises, 17th June, 1895.

5340. COX & COMPANY, King's Cross, London, N., England. Non-intoxicating beverage, 17th June, 1895.

5341. NARCISSE F. BÉDARD, Montreal, Que. General Trade Mark, 17th June, 1895.

5342. SAMUEL SHOBAL RYCKMAN, Hamilton, Ont. A medical preparation for the cure of Rheumatism, Gout, Grip, Kidney and Liver Complaints, Neuralgia, Eczema, Scrofula, Paralysis, also as a Tonic and Blood Purifier, 18th June, 1895.

5343. JOHN BALDWIN and WILLIAM BALDWIN, Halifax, Yorkshire, England, trading as J. & J. BALDWIN. Woollen and Worsted Yarns, 18th June, 1895.

5344. ROWAN BROTHERS, Terra Nova, B.C. Canned Salmon, 18th June, 1895.

5345. THE RATHBUN COMPANY, Deseronto, Ont. Shingles and Wooden Roofing Materials, 18th June, 1895.

5346. LOUIS OVIDE GROTHÉ, Montreal, Que. Cigars, Cigarettes and Tobaccos, 20th June, 1895.

5347. JOHN B. LOVELL & ERNEST LOVELL, Hamilton, Ont. Cigars, 21st June, 1895.

5348. KATHREINER'S MALZKAFFEE-FABRIKEN MIT BESCHRANKTER HAFTUNG, Munich, Bavaria, Germany. General Trade Mark, 21st June, 1895.

5349. COTÉ & AMYOT, Quebec, Que. Ales and Porters, 24th June, 1895.

5350. CHARLES DAVID DANIEL, Toronto, Ont. Medical Preparations, 27th June, 1895.

5351. JUNIUS BARNES, Burlington, Vermont, U.S.A. Medicine, 28th June, 1895.

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7940. REVUE CANADIENNE, JUIN, 1895. C. O. Beauchemin & Fils, Montréal, Qué, 1er juin, 1895.

7941. GAGE'S PRACTICAL SYSTEM VERTICAL WRITING, NUMBERS 1 to 8. The Educational Book Company, Toronto, Ont., 1st June, 1895.

7942. ABIDE WITH ME. Sacred Song. Music by J. B. Hutchins. The Anglo-Canadian Music Publishers' Association, Limited, London, England, 1st June, 1895.

7943. IMPRESSIONS DE VOYAGE. PREMIÈRE PARTIE—DE QUÉBEC A ROME. Par l'Abbé Henri Cimon, Chicoutimi, Qué, 3 juin, 1895.

7944. ELIZABETH GLEN, M.B. The Experiences of a Lady Doctor. By Annie S. Swan. William Briggs, (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 3rd June, 1895.

7945. ETCHINGS FROM A PARSONAGE VERANDA. By Mrs. E. Jeffers Graham. Illustrated by J. W. Bengough. William Briggs, (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 3rd June, 1895.

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7956. ATHLETIC WALTZ. By Georgina Van Felson. Whaley, Royce & Co., Toronto, Ont., 8th June, 1895.

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7958. MAP OF WINNIPEG. Showing the Sectional Plans of the Special Survey made by R. E. Young, P. L. S., Winnipeg, Man., 8th June, 1895.

7959. GUIDE MAP OF WINNIPEG, 1895. Prepared for WAGHORN'S GUIDE. By R. E. Young, P. L. S., Winnipeg, Man., 8th June, 1895.

7960. SLIGH'S SELF INSTRUCTING DRESS CUTTING METHOD. Book. James E. Sligh, London, Ont., 10th June, 1895.

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