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INVENTIONS PATENTED.

NOTE.—Patents are granted for 15 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 36,687. Artificial Fuel.

(Combustible artificiel.)

Louis Michael Heinig, assignee of Emile Karl Baoyerlin, Louisville, Kentucky, U. S. A., 1st June, 1891; 5 years.

Claim.—The composition of matter described, consisting of coal, wood-charcoal, carbonate of soda, saltpetre, nitric acid, chlorate of potash, black oxide of manganese, permanganate of potash, and borax, retained, covered by a suitable binding material, treated and combined, substantially as set forth and for the purpose specified.

No. 36,688. Inhaler. (Inhalateur.)

Henry Thomas Welch and August W. R. Borr, both of San José, Cal., U. S. A., 1st June, 1891; 5 years.

Claim.—1st. An inhaler for horses, consisting of a hollow medicine receptacle having top perforations and bent to fit the upper lip of the horse below the nostrils, substantially as herein described. 2nd. An inhaler for horses, consisting of the hollow medicine receptacle having screw capped ends and top perforations, and suitable straps to hold said receptacle in place under the nostrils of the horse, substantially as herein described. 3rd. An inhaler for horses, consisting of the curved hollow medicine receptacle having the top perforations, the cross strip connected with said receptacle, and the front strap connected with said receptacle, and with the cross strap, substantially as herein described. 4th. An inhaler for horses consisting of the curved hollow receptacle having top perforations, the cross and front straps for suspending the receptacle in place and the side straps for connecting it with the head gear of the horse, substantially as herein described.

No. 36,689. Magneto Telephone.

(Magnéto-téléphone.)

Elias Mushback Greene, assignee of Noel Becar Ginochio, both of New York, State of New York, U. S. A., 1st June, 1891; 5 years.

Claim.—1st. A magneto telephone in which a plurality of permanent magnets have their common poles of one name connected to the diaphragm, and their common poles of the other name connected to a core arranged opposite the centre of the diaphragm, substantially as described. 2nd. A magneto telephone in which a plurality of permanent magnets have their common poles of one name connected to a ring supporting the diaphragm of magnetic material, and their common poles of the other name connected to a plate supporting a common core opposite the centre of the diaphragm, substantially as described. 3rd. In a magneto telephone, the combination with the permanent magnets, a ring of magnetic material joining all the poles of one name and supporting the diaphragm, and a plate of magnetic material joining all the poles of the opposite name and supporting a core of five wires opposite the centre of the diaphragm, substantially as described. 4th. In a magneto telephone, the combination with the permanent magnets, of a plate connecting all the poles of one name, a flange on said plate, a core of five wires supported in said flange, a ring of magnetic material connecting the poles of the opposite name, and a diaphragm supported on said ring, substantially as described. 5th. In a magneto telephone, the compound electro magnet consisting of a central core, yoke pieces connected to said core and supporting the independent cores, and helices surrounding said independent cores, the connected poles being all of the same polarity, substantially as described. 6th. In a magneto telephone, the combination of a plurality of permanent magnets, a soft iron core common to all the magnets, yoke pieces connected to said core and supporting independent cores, and helices connected in series in the line surrounding said independent cores, substantially as described.

No. 36,690. Bolt and Fastening. (Arrête-écrou.)

Edwin Albert Selwyn, assignee of Cyrus H. McCargar, both of Ottawa, Ontario, Canada, 1st June, 1891; 5 years.

Claim.—1st. A bolt-head constructed substantially as hereinbefore shown and described, and as and for the purposes set forth. 2nd. The combination with the parts or numbers A, B, C, of the parts D, d, and e, substantially as and for the purposes set forth.

No. 36,691. Motor for Sewing Machines.

(Moteur pour machines à coudre.)

Francis L. Clark, John R. Cave and James M. Stewart, all of Hicks City, Missouri, U. S. A., 1st June, 1891; 5 years.

Claim.—The combination, with a fly-wheel, a shaft for the same, and a collar arranged at one side of the wheel and concentric with the shaft, of a pair of clutch levers, one of which is extended at one side of its pivot and both of which are loosely mounted on the shaft, a connecting rod pivoted to the extension of one of said levers and means for operating the rod, a shorter connecting rod pivoted to the connection lever and hinged to the first mentioned rod, and a stop or buffer arranged at the upper end of the first mentioned connecting rod and adapted for contact with the opposite roll, thereby limiting the separation of the clutch levers, substantially as specified.

No. 36,692. Suspender. (Bretelle)

Henri Beaudry, Montreal, Quebec, Canada, 1st June, 1891; 5 years.

Claim.—As a new article of manufacture, a suspender end or button hole formed of braid, cord or other material threaded.

No. 36,693. File Board. (Serre-papier.)

Frederick Roger, Ottawa, Ontario, Canada, 1st June, 1891; 5 years.

Claim.—1st. A file or pamphlet holder having a hinge on its left hand side, as shown or across the head of board A. 2nd. A file or pamphlet holder comprising a base or under board B, and a cover or top board A, having a hinge C, and attached with a fastener or lacing cord, as shown and described. 3rd. A file or pamphlet holder, comprising a base or under board B, and cover or top board A, having a hinge C, protected corners, and attached together by a fastener or lacing cord, as shown and described.

No. 36,694. Tooth Brush. (Brosse à dents.)

Rosario Roy, Richmond, Virginia, U. S. A., 1st June, 1891; 5 years.

Claim.—1st. The combination of a tooth brush, in cylindrical form mounted on a shaft provided with a pinion and journaled in bearings, of a frame having a fixed handle portion, a movable handle portion attached at its outer end to the outer end of the fixed portion of the handle by a joint permitting oscillating motion, and a segmental toothed rack fitted to slide in the frame to engage the aforesaid pinion and connected with the free end of the movable portion of the handle, substantially as described. 2nd. The combination of a handle 9, having the slideway 10, and the bearing 8, the segmental rack 11, fitted to the said slideway, the pinion 12, provided with a shaft 13, journaled in the bearing 8, to engage the rack 11, a rotatory brush 5, connected with the said shaft, and a handle portion 14, connected at its outer end with a handle 9, by a spring 15, and connected at its inner end with the said rack 11, a shaft journaled therein, means for rotating the shaft, a shield connected with the handle, a socket-bearing in the outer end of the said shield, a spring impelling the socket-bearing inward, and a cylindrical brush provided with a shaft adapted to be journaled at one end in the said socket and having a removable socket connection at its other end with the aforesaid pinion shaft, substantially as described.

No. 36,695. Slicer. (*Machine à trancher.*)

Marion John Page, Buffalo, New York, U.S.A., 1st June, 1891; 5 years.

Claim.—1st. A slicer, consisting of a main frame, a table supporting the articles to be sliced, a sliding knife board carrying a knife, a gage board arranged beside the knife board, and eccentric rollers pivotally engaged with the gage board by a rod which is connected to the knife board for adjusting the gage board to and from the knife board, substantially as described. 2nd. In a slicer, the combination, with the sliding frame carrying the knife, of a gage board supported on said frame, eccentrics pivoted on the end of said gage board and bearing on said frame, and the bars M, M¹, pivoted to the gage board and to the frame and pivoted to each other, whereby a movement of the eccentrics throws the gage board toward or from the knife, substantially as described. 3rd. In a slicer, the combination, with the sliding frame carrying the knife, of a gage board supported by said frame, eccentrics pivoted at their centres in slots on the frame and eccentrically pivoted to the gage board, the bar M pivoted to the gage board at one end and movably engaging a pin on the frame at the other end, and the bar M¹ pivoted to the frame at one end and movably engaging a pin on the gage board at the other end, said bars pivotally engaged together at their middle, all arranged and operating, substantially as shown and described. 4th. In a slicer, the combination, with the main frame A, table B, and sliding frame and knife, of the push board N pivotally engaged to the frame A and adapted to force the article to be sliced into position, substantially as described.

No. 36,696. Method of Ornamenting Circular Articles. (*Methode d'orner les articles de formes circulaires.*)

Frederick Ecanbert, Brooklyn, New York, U. S. A., 1st June, 1891; 5 years.

Claim.—1st. The method herein specified of ornamenting the interior surface of a die, consisting in pressing against such interior surface a roll having around its periphery the ornament to be transferred to the die, and giving to the respective parts a rotation or partial rotation first in one direction and then in the other, substantially as set forth. 2nd. The method herein specified of transferring a pattern or ornament from a die having ornaments upon the interior surface thereof, consisting in holding against such interior ornamented surface the article to be ornamented, and giving to the respective parts a rotation or partial rotation first in one direction and then in the other, the pressure being sufficient to cause a transfer of the ornamentation from the die to the article, substantially as set forth. 3rd. The method herein specified of ornamenting circular articles by means of a circular die having ornaments upon the interior portion thereof, consisting in pressing into contact with such circular die the article to be ornamented, giving to the respective parts a motion first in one direction and then in the other, and moving or rocking the one part upon the other to bring all parts of the article to be ornamented into contact with the ornamenting die, substantially as set forth. 4th. The method herein specified of ornamenting watch case centres and similar articles by a circular die, having the ornaments around the interior surface thereof, consisting in pressing the watch case centre into contact with the ornamented surface of the internal die, and giving to the respective parts a motion first in one direction and then in the other, to press the ornament progressively into the edge of the watch case centre or other article, substantially as set forth.

No. 36,697. Cork Screw. (*Tire bouchon.*)

Harry Judson Williams, Meriden, Connecticut, U.S.A., 1st June, 1891; 5 years.

Claim.—1st. In an appliance for drawing corks, the combination, with the reciprocating plunger, the cork screw carried thereby, of the fixed spiral guide for rotating the cork screw when the latter is projected or retracted, the sliding sleeve for bearing on the neck of the bottle and means substantially as described for moving said sleeve, for the purpose specified. 2nd. In an appliance for drawing corks, the combination, with the reciprocating plunger, the cork screw carried thereby, the fixed spiral guide for rotating the cork screw as the plunger is reciprocated, as described, the sliding slotted sleeve and the stud on the plunger co-operating with said sleeve, substantially as described. 3rd. In an appliance for drawing corks, the combination, of the reciprocating plunger, the cork screw carried thereby, the fixed spiral guide for rotating the cork screw as the plunger is reciprocated, the sliding sleeve for receiving the neck of the bottle and the handle for reciprocating the plunger and depressing the sliding sleeve, substantially as described. 4th. In an appliance for drawing corks, the combination of the plunger having the rack teeth, the cork screw carried by said plunger, the fixed spiral guide, the sliding sleeve for receiving the neck of the bottle, the toothed segment, and the operating handle provided with the cam or projection for depressing the sliding sleeve, substantially as described. 5th. In an appliance for drawing corks, the combination of the plunger having the rack teeth, the cork screw carried by said plunger, the fixed spiral guide, the slotted sliding sleeve, the pin or stud on the plunger entering the slot of the sleeve and the operating handle geared as described, to the plunger for the purpose specified. 6th. In an appliance for drawing corks, the combination of the plunger, the cork screw carried thereby, the fixed spiral guide for rotating the cork screw, the sliding sleeve provided with a wire or cord severing edge, the operating handle and the intermediate connections substantially as described, whereby upon the movement of the handle the cork screw is entered, the wire or cord holding the cork is cut and the cork is removed from the bottle, substantially as described. 7th. In an appliance for drawing corks, the combination of the plunger having the rack teeth, the cork screw carried by said plunger, the fixed spiral guide, the slotted sliding sleeve for re-

ceiving the neck of the bottle, the pin or screw stud projecting from the plunger into the slot of the sleeve, the toothed sector and the operating handle having the cam or projection for operating upon the sliding sleeve, substantially as described.

No. 36,698. Mat for Doors. (*Paillasson.*)

Henry Pattberg, Jersey City, New Jersey, U.S.A., 1st June, 1891; 5 years.

Claim.—1st. The combination, of a series of rods with a series of perforated scrapers placed upon the rods, and with a series of independent springs surrounding the rods and bearing with their ends against the scrapers, substantially as specified. 2nd. The combination, of a series of rods *a*, having reduced ends *a'*, and heads *a''*, with the end bars *d*, placed upon the reduced ends *a'*, and with the perforated scrapers *b*, and intervening springs *c*, substantially as specified.

No. 36,699. Hair Curler. (*Fer à friser.*)

Louis Capple Wegefarth, New York, State of New York, U.S.A., 1st June, 1891; 5 years.

Claim.—1st. In a hair curler, the combination, with the body or spindle A, of a separate semi-cylindrical spring cap B, adapted to sit over the spindle and to be applied squarely thereto, said cap being entirely detachable from said spindle, substantially as described. 2nd. In a hair crimper, the combination, with the body or spindle A, of a spring cap B, adapted to sit over the spindle A, and to be applied squarely thereto, and a flexible hood or covering C, adapted to sit over the cap and spindle, substantially as described.

No. 36,700. Roofing Fabric. (*Tissu à toiture.*)

Minor Clarke Kerbaugh, Philadelphia, Pennsylvania, U. S. A., 1st June, 1891; 5 years.

Claim.—1st. As a new article of manufacture, a roofing fabric composed of one or more tar or silica coated sheets of felt or paper, having a strip along the edge thereof free from tar or similar material, substantially as and for the purposes set forth. 2nd. As a new article of manufacture, a roofing fabric composed of two or more united tar coated and saturated sheets of felt or paper, with silica distributed over and embedded in the upper surface, and a strip along the edge of the fabric free from tar or similar material, substantially as and for the purposes set forth.

No. 36,701. Cleaner for Boiler Tubes.

(*Nettoyeur de tube de chaudière.*)

Frank Ruel Baldwin, New York, State of New York, U.S.A., 1st June, 1891; 5 years.

Claim.—1st. A vacuum boiler tube cleaner provided with an open continuous channel free from obstructions therein, placed and consisting at one end of a horizontal suction tube of practically uniform size throughout the remaining portion of the channel, consisting of a vertical combining and discharge chamber, in connection with a series of preferably annular steam passages of small diameter communicating therewith, whereby the hot gases and deposits in the flue are drawn through the flue cleaner, the steam forcing blast being wire drawn as it were, and thereby dried and the whole driven with great velocity from the discharge chamber without collecting upon the sides of the same, substantially as described. 2nd. A vacuum boiler tube cleaner, provided with an open continuous channel free from obstructions therein placed, and consisting at one end of a horizontal suction tube of practically uniform size throughout the remaining portion of the channel, consisting of a vertical combining and discharge chamber, in connection with a series of preferably annular steam passages of small diameter communicating therewith, whereby the hot gases and deposits in the flue are drawn through the flue cleaner, the steam forcing blast being wire drawn as it were, and thereby dried and the whole driven with great velocity from the discharge chamber, without collecting upon the sides of the same, substantially as described.

No. 36,702. Oven Door for Stoves.

(*Porte de fourneau pour poêles de cuisine.*)

William Henry Scott, Fredonia, New York, U.S.A., 1st June, 1891; 5 years.

Claim.—1st. The combination, in an oven door for cooking stoves, of a main frame part on, a depression 6, in the frame portion, a series of step shaped lugs projecting therefrom, a sheet of transparent material seated upon said lugs so as to be above the bottom of the depression 6, and away from the sides thereof, a frame piece 14, for securing the transparent material in place, having the projecting corners 19, and a supplementary door provided with a series of openings, substantially as and for the purposes described. 2nd. In an oven door for cooking stoves, the combination, of a frame portion 1, provided with a depression 6, a series of step shaped lugs projecting from the depressions 6, a sheet of transparent material seated upon the lugs and kept thereby away from the bottom of the depression and from the sides thereof, and a frame for securing the transparent material in place provided with reduced sides 19a, whereby an opening at the sides and ends of the frame and glass and under it is provided a passage for the air, substantially as described. 3rd. An oven door for cooking stoves, consisting of a main frame portion provided with a depression having a series of step shaped lugs, a sheet of transparent material seated upon said lugs and kept thereby away from the sides and bottom of the depressions, a frame for holding the transparent material in position having depressions to form openings around its sides when in place, and a supplementary door for protecting the transparent material, substantially as described.

No. 36,703. Bracket for Heaters.

(Porte ustensile.)

Angus Gabriel McDonald, New Westminster, British Columbia, Canada, 1st June, 1891; 5 years.

Claim.—In a heater bracket, the combination, of a grid A, having lugs A¹, and hinge ferrules A², the bars B, pivoted to said lugs and having eyes b, and b', the stays C, hinged to the front of said grid by the ferrules A², and adapted to engage eyes in said bars, and the bail D, pivotally secured to eyes in said bars and having a central loop d, substantially as set forth.

No. 36,704. Screw Propeller.

(Hélice de propulsion.)

John Henry Osborne, Auburn, New York, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. In a screw propeller wheel, a wheel hub arranged in line parallel or substantially parallel with the line of propulsion, in combination with one or more blades made elastic throughout their length and set in oblique relation to said hub, substantially as described. 2nd. In a screw propeller wheel, a propeller blade composed of thin elastic plates made flexible throughout their length, and secured to the hub of the wheel in oblique relation thereto, substantially as described. 3rd. A screw propeller blade composed of thin elastic plates or leaves of different lengths, each freely flexible throughout its length and united to form a single blade varying in flexibility at different points in its length, the shorter leaves being applied to the operative face only of the longer leaf, substantially as described. 4th. A screw propeller blade composed of thin elastic plates of varying lengths each freely flexible throughout its length, the shorter of which plates are pivoted to the longer plate through slots permitting movement or play of their outer ends relative to said longer plate, substantially as described. 5th. The combination, with the hub of a screw propeller wheel having the obliquely arranged wing for the attachment of the blade, of a propeller blade made elastic throughout its length and secured to said wing, and the keeper plate also secured to said wing outside of the elastic blade and projecting beyond the hub for stiffening said elastic blade, substantially as described. 6th. The combination, in a screw propeller wheel of the hub having the oblique wing slotted to permit the adjustment of the blade, and a propeller blade made elastic throughout its length and adjustably connected with said wing, substantially as described. 7th. The combination, in a screw propeller wheel, of a hub having obliquely arranged wings, elastic propeller blades adjustably secured to said wings and composed of thin plates or leaves freely flexible throughout their length, and keeper plates for said blades extended beyond the wings to which the blades are secured, substantially as described.

No. 36,705. Watch Case. (Boite de montre.)

James Edmund Searing, Mount Vernon, New York, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. The combination, with a main integral shell constituting the back, lid and center portion, of a blind center fitting within said main shell and carrying the front lid, substantially as described. 2nd. The combination, with a main integral shell constituting the back, lid and center portion, of a blind center hinged to said main shell and carrying the front lid, substantially as described. 3rd. The combination, with a main shell such as described, of a blind center hinged to said main shell and front lid hinged in turn to said blind center, substantially as described. 4th. The combination of a main shell, such as described, and a blind center provided with a seat for the movement and with snaps or risers for the front lid and glass bezel, with a front lid hinged to said blind center, substantially as described. 5th. The combination, with a main shell such as described, of a blind center provided with a movement seat and a peripheral flange and a front lid hinged to said blind center, substantially as described. 6th. The combination, with a main shell, such as described, of a blind center hinged to said main shell, and provided with a movement seat and a peripheral flange and a front lid hinged to said flange, substantially as described. 7th. The combination, of a main shell, such as described, a flanged blind center having its body of base metal and provided with a movement seat and having its flange portion and its face formed of precious metal, and a front lid hinged to said blind center, substantially as described. 8th. The combination, of the main shell, such as described, a blind center provided with a movement seat, a peripheral flange, and with snaps or risers, and a front lid hinged to said blind center, substantially as described. 9th. The combination of the main shell, such as described, a blind center hinged to said shell and provided with a movement seat, a peripheral flange, and with snaps or risers, and a front lid hinged to said blind center, substantially as described. 10th. The combination, of the main shell, such as described, the flanged blind center hinged to said main shell and carrying a stem winding movement, a front lid hinged to said blind center, and a stem winding arbor adapted to be engaged with or disengaged from the said stem-winding movement, substantially as described. 11th. The combination, of a main shell, such as described, a flanged blind center hinged thereto carrying the case arbor for actuating the catch spring, substantially as described. 12th. The combination, of a main shell, such as described, the flanged blind center hinged thereto, and the case springs carried radially through the body of said blind center, and the latter by screws passing through the body of said blind center, substantially as described. 13th. The combination, of a main shell, such as described, metal, and the screws passed radially through the blind center for securing said case springs, substantially as described.

No. 36,706. Rubber Overshoe. (Clagues.)

James Leggat, Montreal, Quebec, Canada, 2nd June, 1891; 5 years.

Claim.—1st. The combination, with the soles of rubber overshoes, of granular friction imparting material introduced into the rubber composition while in the plastic state, for the purpose set forth. 2nd. The combination, with the soles of rubber overshoes, of hard or vulcanized rubber granules introduced into the rubber composition while in a plastic state, for the purposes set forth.

No. 36,707. Flower Pot. (Pot à fleurs.)

Harrison H. McElhiney, Nebraska City, Nebraska, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. A flower pot, consisting of the base disk B, having in its side the angle grooves m, flange z, having a perforation and slot l, cushion s, attached to the periphery of flange z, and thumb screw t, fitting in the perforation l, pot A, having a funnel e, adapted to convey water into the disk B, lugs n, and perforations y, in the part d, of said pot, and perforated bottom C, having a wick p, passing through one of its perforations, substantially as shown and described. 2nd. In combination, with a pot A, having the lugs n, the base disk B, having the angled grooves m, to receive said lugs, flange z, attached to the base of said disk and cushion s, attached to the periphery of said flange, substantially as described. 3rd. In combination, with a base disk B, having the groove m, substantially as described, the pot A, having the lugs n, perforated bottom C, and wick p, substantially as described. 4th. In combination, with a flower pot, substantially as described, the hollow handle and funnel e, having the depressions e', terminating in a tube g, and adapted to convey water into a base disk B, substantially as described.

No. 36,708. Pole for Electric Railways.

(Poteau de chemin de fer électrique.)

Foster Milliken, New York, State of New York, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. In a pole for supporting wires, the combination, with a mast, and an arm attached to the mast and extending beyond opposite sides thereof, of horizontal bars secured to the mast and located at a right angle to the arms, and independent brace bars arranged in an essentially diamond shape around the mast, the said bars being secured at their ends to the arms and the bars projected from the mast, as and for the purpose specified. 2nd. In a pole for supporting wires, the combination, with a mast, and an arm secured to the mast and extending beyond opposite sides, the said arm being provided with angle irons attached to its side faces, of short bars secured to the mast and extending horizontally from opposite sides at a right angle to the arms, the said short bars being also provided with angle irons attached to their side faces, and a brace consisting of horizontal bars arranged in a diamond shape around the mast, the ends of the said bars being bolted to the angle irons of the arms and the bars projected from the mast, as and for the purpose specified.

No. 36,709. Tool for Shoemakers.

(Outil de cordonnier.)

Sivert Benson, Spring Valley, Minnesota, U.S.A., 2nd June, 1891; 5 years.

Claim. 1st. In a shoemaker's tool, the combination of the curved bars having corresponding jaws upon their outer ends, the said bars being connected by means of rivets passing through slots in one of the bars into the other bar, and handles upon the inner ends of the bars, substantially as set forth. 2nd. In a shoemaker's tool, the combination of the curved bars having corresponding jaws upon their outer ends, the said bars being connected by means of rivets or screws passing through slots in one of the bars into the other bar, and one of the bars being provided with a rigid handle and the other bar being suitably connected to a handle pivoted to the said rigid handle, whereby the opening and closing of the handles will cause the slotted curved bar to reciprocate along the length of the other curved bar, substantially as and for the purpose set forth. 3rd. In a shoemaker's tool, the combination of the section A, with the section B, and the leaf spring C, between the two, the said section A, consisting of the curved bar a, the handle a', and the ear a², intermediate the two, and the sections B, consisting of the curved bar b, the handle b', having upon its inner end the ear b², and the pivot b³, and the curved bar being attached to the curved bar a, by means of the rivets a³, passing through the slots b⁴, and the curved bar b, having the arc extension b⁵, and a lug b⁶, fitting in the depression b⁷, in the ear b², as set forth.

No. 36,710. Stopper for Bottles.

(Bouchon pour bouteilles.)

Franklin Webster Perry, Philadelphia, Pennsylvania, U.S.A., 2nd June, 1891; 5 years.

Claim.—The combination of the bottle, the cap secured thereto and having a projecting tubular portion, the disk secured by the cap and having a central slitted portion, the tubular nozzle supported by the slitted portion of the disk but guided in the tubular projection of the cap, and having beyond the same a projecting flange and projecting shoulders on the nozzle and cap for preventing the withdrawal of the nozzle, substantially as specified.

No. 36,711. Electro Magnetic Abdominal Support. (Suspensoir abdominal électro-magnétique.)

Mary E. Thomas, Cardington, Ohio, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. In an electro-therapeutical appliance, the combination of a galvanic pile consisting of plates of zinc and copper, and

an intermediate sheet of absorbent material, an outer covering of non-conducting material protecting one side and having the marginal portions bent over to receive the plates and sheet, and a stud extending from the outer element through the non-conducting material together with a conducting wire connected to said stud and adapted to be placed in electrical contact with the person of the wearer, substantially as set forth. 2nd. In an electro-therapeutical device, the combination of a galvanic pile consisting of zinc and copper elements, and interposed sheet of absorbent material, an outer covering of non-conducting material protecting one side and having its marginal portions bent over to secure the plates and sheet, and a stud connecting with one element and projecting through the covering, a pad E, and wire F, electrically connecting it with the stud together with adjusting devices, substantially as set forth.

No. 36,712. Car Coupler. (*Attelage de chars.*)

Alvis Edwin Lewis, William Robert Cosby, Thomas Jefferson Hughes, all of Evansville, and Alexander Hamilton Dunn, Forth Smith, both in Arkansas, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. A car coupler, consisting of the bulk-head A, band B, spring b, hook b², and plug a², substantially as shown and described and for the purposes set forth. 2nd. In a car coupler, the combination of the bulk-head A, band B, spring b, hook b², box C, lugs c, and c', brace c², and spring c², substantially as shown and described and for the purposes set forth. 3rd. The combination of the bulk head A, having in its throat the enlargements described and in its head the perforations a², and a⁴, and extending along its upper face, a slot a², ending in a depression d, shoulders e, e', and in its neck the perforation a², spring b, having the L-extension fitting in the depression d, and the hook b², working in the perforations a², and a⁴, and the eye b², band B, securing the rear end of springs b, formerly in the said slot a², and depression d, box C, secured to the bottom of the car having the lugs c, and c', against which latter rests, the plug a², and shoulders e', guide c², secured to said box and staple c², passing over said guide and having each end secured to the lower face of said bulk-head, all substantially as shown and described and for the purposes set forth.

No. 36,713. Seeding Machine. (*Semoir.*)

Isaac Allan Cowie and Charles R. Dunsford, both of Morden, Manitoba, Canada, 2nd June, 1891; 5 years.

Claim.—1st. The combination, with a drill seeding machine, of a series of frames each consisting of a short front axle and a longer rear axle, connected by a reach 2, said axles having arms 5, the front arms inclining forwardly and the rear arms inclining rearwardly, and rotary disk 7, sleeved on said arms the front disks converging forwardly and the rear disks converging rearwardly, said series of frames flexibly connected to the main frame of the seeding machine front and rear, whereby the front disks open a seed channel in the soil in advance of the seed tubes, and the rear disks return the soil to cover the seed in the seed channel, as set forth. 2nd. An attachment to drill seeding machines, of a wheeled frame or cultivator consisting of a short front axle 3, and a longer rear axle 4, connected by a reach 2, said axles having arms 5, the front arms inclining forwardly and the rear arms inclining rearwardly, and circular disks 7, rotating on said arms, said front disk converging forwardly and the rear disks rearwardly, and means for flexibly attaching said frame front and rear to the frame of a seeding machine, substantially as set forth. 3rd. The combination, with the reach 2, and circular rotating disks 7, mounted on axle arms of an axle of the bar 12, and attached fingers 13, for cleaning the front disks, as set forth.

No. 36,714. Separator for Liquids.

(*Séparateur pour liquides.*)

Alexander Parks, Jr., Martinsburg, West Virginia, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. The combination, with a float provided with an opening, of an adjustable bolt supported within this opening, and a depending hose pivotally connected to the said adjustable bolt, whereby the said hose will automatically accommodate itself to the constantly-varying positions of the float, substantially as described. 2nd. The combination, with a float provided with a central opening, of an adjustable bolt supported in this opening, and a depending flexible hose swivelly and pivotally connected to the said bolt, substantially as described.

No. 36,715. Combined Wash Stand and Dry Earth Commode. (*Lavabo et siège d'aisance à la terre sèche.*)

Oscar J. Mitchell, Ingersoll, Ontario, Canada, 2nd June, 1891; 5 years.

Claim.—The combination, with an attachment to the said stand, of the commode as described and shown by the manner in which end D, door E, and seat F, are made to serve as a commode and which may be used as a dry earth commode although attached to and forming part of the said stand, substantially as and for the purposes hereinbefore set forth.

No. 36,716. Signal for Railways.

(*Signal de chemin de fer.*)

Winfield Scott Gilmore, New York, State of New York, U.S.A., 2nd June, 1891; 5 years.

Claim.—A signaling device, consisting of a board or background provided with an opening in which the signal is displayed, in combination with a diaphragm located across said opening, a portion of said diaphragm being translucent and another portion transparent, and a lantern located to throw its rays through the transparent portion, as set forth.

No. 36,717. Foot Guard for Railway Frogs.

(*Garde-rail de croisement de chemin de fer.*)

William Driscoll, Brockville, Ontario, Canada, 2nd June, 1891; 5 years.

Claim.—1st. A guard bar for railway frogs, constructed of material which is possessed of that elasticity which enables it to spring back into its normal shape when the pressure is relieved, having a declivity at both ends, one end being fastened to the tie by an ordinary railroad spike or other means of securely fastening the same, and for the purpose set forth. 2nd. A guard bar for railroad frogs, made of elastic material, one end secured to the tie and the opposite end resting on the lower flanges and against the vertical web of the rails, having the downturned ends, one of the said downturned ends bifurcated to form the diverging arms H, the other downturned end to be fastened to the tie by the spike E, for the purpose set forth. 3rd. A guard bar for railway frogs, in combination, with a railway frog or with the converging rails of a track of a bar arranged between the same, one end secured to the tie the other or opposite end resting on the lower flanges of the rails, the body of the bar bent upward to the full height of the rails to longitudinally obstruct the space between the rails at the place of danger and for the purpose set forth.

No. 36,718. Painting Machine.

(*Machine à peindreur.*)

Seymour Wilson Peregrine, Grand Rapids, Michigan, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. A machine for staining or painting the ends of school seats or backs, consisting of a table and a staining device with a staining surface conforming in shape to the seat end arranged across said table in direct line with the seat end, and having its staining face approximately at right angles to the seat end and extending entirely across the same, whereby the seat and staining device abut squarely against each other and effect the staining of the seat end by said contact, substantially as described. 2nd. A machine for staining or painting the ends of slats of school seats or backs, consisting of a table, a series of staining devices arranged across the table at one point, each device of the series being in direct line with the slat end desired to be painted, the staining face of said device being in position to extend entirely across the slat end when in contact therewith, substantially as described. 3rd. In combination, a table adapted to receive the seat or back, a series of staining devices arranged across said table and in line with said slat ends, whereby they may be brought in contact therewith, and a guide on the table, substantially as described. 4th. In combination, the table, the tank, the staining devices arranged across said table and in line with the slats of the seats or backs, presenting surfaces to bear upon the entire end of the desired slats, the said staining devices being carried on supports having movement across the plane of the table, substantially as described. 5th. In combination, with the table, a shaft, a longitudinally-adjustable support thereon and independent staining devices on said support, substantially as described. 6th. In combination, the table, the series of staining devices arranged across the same and having staining surfaces approximately at right angles to the slat ends, and extending across the same, the said devices being on a movable support, whereby the slats are stained by forcing the series of staining surfaces into contact with the slat ends, substantially as described. 7th. In combination, the table, the staining devices carried by movable supports on said table, and the arms n, projecting forward from said supports beyond the staining pads adapted to bear on the school seat or back to guide the parts accurately as they are moved together, substantially as described. 8th. In combination, the table, the staining pad, the movable supports therefor having movement across the plane of the table, and a stop for limiting the movement of said supports, substantially as described. 9th. In combination, the table, the staining devices, the movable supports therefor, the arms n, the stop arm and the spring cushion all arranged and operating, substantially as described. 10th. In combination, a table, a set of staining devices at or near each end thereof arranged at right angles across the table to make contact with the slat ends located between them, said devices being adjustable, substantially as described. 11th. In combination, a supporting table, a series of staining devices arranged across said table and in line with the slat ends of the school seats, said staining devices having notches and projections on their sides, substantially as described.

No. 36,719. Machine for Tying Shingles.

(*Machine à attacher le bardeau.*)

John Wallace Jones and Daniel Joseph Noonan, both of Saint John, New Brunswick, Canada, 2nd June, 1891; 5 years.

Claim.—1st. A machine for tying shingles in bunches or bundles, consisting of a lever and a link, whereby the bunch of shingles may be compressed preparatory to tying them, a lever clutch for the purpose of adjusting the machine to the bunch of shingles to be tied so as to allow of the degree of compression required, and for keeping the machine so adjusted, a tie consisting of a piece of wire of sufficient length for the purpose required, a loop tie consisting of a loop or link of wire of sufficient length for the purpose required, a bit consisting of a lever, a tube containing a chisel point and a rod terminating in a triangular slot, whereby the ends of a tie may be twisted together, a bit having a hole drilled through the nib, and a concave steel spring fastened to the back of the nib, whereby the ends of a tie may be twisted together, and a bit terminating in a hook, whereby the upper part of a loop tie may be twisted for a sufficient distance to fasten the bunch or bundle of shingles in a compressed condition, all substantially as described. 2nd. The combination in a machine for tying shingles, of a lever, a link, a lever clutch, a bit consisting of a lever, a tube containing a chisel point and a rod terminating in a triangular slot, a bit having a hole drilled through the nib, and a concave steel spring fastened to the back of

the nib, and a tie consisting of a piece of wire having two ends for the purpose of tying or fastening shingles in bunches or bundles, substantially as described. 3rd. The combination in a machine for tying shingles, of a lever, a link, a lever clutch, a bit terminating in a hook, and a tie consisting of a loop or link of wire for the purpose of tying or fastening shingles in bunches, substantially as described. 4th. A machine for compressing shingles preparatory to tying them, consisting of a lever, a lever clutch, and a link, substantially as described. 5th. A tie for the purpose of fastening or tying shingles in bunches, consisting of a piece of wire having two ends, substantially as described. 6th. A tie for the purpose of fastening or tying shingles in bunches, consisting of a loop or link of wire, substantially as described.

No. 36,720. Frame for Bicycles, etc.

(*Chassis de bicyclette, etc.*)

John Boyd Dunlop, Belfast, Ireland, 2nd June, 1891; 5 years.

Claim.—1st. A frame for cycles, wherein the weight of the rider is supported directly in the crank axle bearing case by means of diagonal duplicated or bifurcated spring steel bars *a, a', b, b'*, substantially as set forth and shown and for the purposes specified. 2nd. In combination, with a cycle frame, wherein the weight of the rider is supported directly from the crank axle case by spring bars *a, a', and b, b'*, the employment of bent or curved spring steel bars *D, D'*, which connect the steering post and front fork together parallel to each other, all for the purpose of intercepting vibration, substantially as herein set forth and shown.

No. 36,721. Manufacture of Draw Bars.

(*Fabrication des barres d'attelage.*)

John Green, William L. Holman and John McCord, all of Renovo, Pennsylvania, U. S. A., 2nd June, 1891; 10 years.

Claim.—1st. The method of manufacturing draw bars, which consists in forming a blank with a thickened end upsetting said end and forming a head integral with the body portion, then forming lugs on the face of one end of said head, and then placing the blank in a die, and bending and shaping the head with its lugs into the form, substantially as described. 2nd. The method of manufacturing draw bars which consists in forming a blank with a thickened end, upsetting said end and forming a head thereon, then punching the link slot in the head, giving an initial bend to said head, forming lugs on the face of one end of the head, and then bending and shaping the head with its lugs in suitable dies into the form, substantially as described. 3rd. The improvement in dies for manufacturing draw bars, having a cavity to receive the body portion of the draw bar, and a slot crossing the die, the overlapping wedges for passing through the body portion of the draw bar and the die, substantially as described. 4th. Dies for manufacturing draw bars, consisting of a lower die having a cavity for the body portion of the draw bar, and a curved recess for shaping the rear surface of the head, in combination with an upper die having a shaping face for the outer surface of the head, and cavities for shaping the lugs thereon, substantially as described. 5th. Dies for manufacturing draw bars, consisting of a lower die provided with an oblique cavity for the body portion of the draw bar, and a recess for shaping the rear surface of the head, in combination with an upper die having a shaping face for the outer surface of the head, substantially as described. 6th. Dies for manufacturing draw bars, consisting of a lower die provided with an oblique cavity for the body of the draw bar, and a curved recess for shaping the rear surface of the head, in combination with an upper die having a guiding tongue to enter the link-slot in the head, a shaping face for the outer surface of the head, and cavities for shaping the lugs on said face, substantially as described. 7th. Dies for manufacturing draw bars, consisting of a lower die provided with a recess for the body portion of the draw bar, a cavity with a depression therein for shaping the rear surface of the head and forming a swell or bulge thereon, in combination with an upper die having a shaping face for the outer surface of the head, a tongue, a projection on one side of said tongue, and cavities on both sides of the projection for shaping lugs on the face of the head, substantially as described. 8th. A forged blank for draw bars, consisting of a body portion and a head formed integral therewith, and provided with projecting lugs on one end thereof, substantially as described. 9th. A forged blank for draw bars, consisting of a body portion, and a tapering head formed integral therewith and provided with projecting lugs on one end thereof, substantially as described.

No. 36,722. Car Coupler. (*Attelage de chars.*)

John Green, William L. Holman and John McCord, all of Renovo, Pennsylvania, U. S. A., 2nd June, 1891, 10 years.

Claim.—1st. A draw bar having an opening in the rear side of its head, in combination with a swinging hook having a tongue constructed to automatically remove foreign matter from the interior of the head through said opening in the rear side thereof, in the act of coupling. 2nd. A draw bar having an opening in the rear side of the head, and a rectangular slot in the upper side of the bar, an aperture in the lower side and a trip pin having a rectangular upper portion, and a projection around said pin to cut ice and form a sup-
porting seat for the pin on the lower side of the draw bar, in combination with a swinging hook constructed to punch ice out of the head having an opening in the rear side of its head and provided with a transverse swell or projection on said rear side between the upper and lower bars, in combination with a swinging hook having a tongue constructed to rest upon the inner surface of said swell and extending beyond the same to remove foreign matter from the interior of the head through the opening therein. 4th. A draw bar having an opening in the rear side of its head, in combination with a swinging hook having a tongue provided with a plain working or

contact surface, a rounded top and rear surface, and a flat bottom, the whole constructed to remove foreign matter from the interior of the head automatically, in the act of coupling. 5th. A draw bar having an opening in the rear side of the head, in combination with a swinging hook having a tongue provided with a plain working or contact surface, a rounded top and rear surface inclined upward at its end, for the purpose set forth.

No. 36,723. Jack for Waggons.

(*Chèvre de carrosserie.*)

Haward G. Thomas, assignee of Andrew J. Oliver and Robert M. Wren, all of Oakland, California, U. S. A., 2nd June, 1891; 5 years.

Claim.—1st. In a wagon jack, the combination, with a standard having three walls and two rows of hook shaped teeth formed on its front face, and a base piece, of a forked lever, a bracket frame adapted to have sliding engagement with the standard, a cross bar which can rest in the hooked teeth of the standard, two parallel links, and a dog pivoted to the foot-plate of the bracket-frame, substantially as set forth. 2nd. In a wagon jack, the combination, with a standard having three walls which are stiffened by web pieces, two rows of hook-shaped teeth which project from its front face in opposite pairs, and a base piece, of a bracket frame, sleeves attached to the bracket frame and adapted to slide on the standards, a forked lever, a cross bar, two pivoted parallel links loosely connected to the ends of the forked lever and a dog which can be made to mesh with two opposite teeth of the standard, substantially as set forth. 3rd. In a wagon jack, the combination, with a standard having three walls which are stiffened by transverse webs, two rows of hook-shaped teeth arranged vertically on the front of the standard and projecting therefrom in opposite pairs, and a base piece, of a bracket frame having attached sleeves which slide on the standard, a forked lever, a cross bar located transversely between the limbs of the forked lever and adapted to engage the hooked teeth of the standard, two links pivoted to the limbs of the forked lever and also to the bracket frame below its foot plate, these parts being so relatively connected as to cause the cross bar G to lock the bracket frame B from depression when the lever C is in lowered adjustment, substantially as set forth.

No. 36,724. Exhaust Mechanism for Locomotives, etc. (*Appareil d'émission de la vapeur pour locomotives.*)

Patrick F. White and William F. Mansfield, both of West Port, Maryland, and Andrew A. Carney, Wheeling, West Virginia, all in U. S. A., 2nd June, 1891; 5 years.

Claim.—1st. The casing having central partition, the rod mounted in said partition and screw threaded at its upper end, the tapered plug mounted on said rod and adjustable thereon, and the inverted funnel practically inclosing said plug and vertically adjustable with reference thereto. 2nd. The exhaust casing having a rod supported therefrom, the tapered plug adjustable on said rod and having notches in its sides, and the inverted funnel mounted above said plug and vertically adjustable, said funnel having inwardly extending lugs which register with the notches in the plug. 3rd. The casing having a rod mounted therein and the tapered plug adjustable on said rod, the inverted funnel practically surrounding said plug, and extending nearly to the base of the inverted funnel, substantially as described. 4th. The combination, with the mouth of the casing of an upwardly and outwardly flaring ring, adjustable on said casing, a set screw for retaining the same in adjusted position, and ring, substantially as described. 5th. The casing having plug near the mouth thereof, the tapered plug supported above said mouth, the inverted funnel practically surrounding said plug and vertically adjustable, and the lever connected to said funnel by which the same may be vertically adjusted, substantially as described. 6th. The casing and nozzle and the tapered plug above the nozzle, the inverted funnel connected to a guide ring surrounding the casing, means for adjusting said funnel vertically, and a perforated funnel supported on the guide ring, all combined and relatively arranged, substantially as described.

No. 36,725. Attachment for Oil Spray Lamps. (*Lampe à jet d'huile pulvérisée.*)

George Rose, Archibald Baird and Matthew Barr Baird, all of Glasgow, Lanark, Scotland, 2nd June, 1891; 5 years.

Claim.—1st. In self generating steam spray lamps for lighting and heating purposes, a stand pipe consisting of an outer enclosing tube of large diameter, and an inner tube of small diameter fitted at its ends in solid pieces secured in said outer tube, the one tube being for the passage of oil to the burner and the other for the passage of water to the steam generating chamber of the lamp, substantially as hereinbefore set forth. 2nd. In self generating steam spray lamps for lighting and heating purposes, a stand tube or pipe wherein is combined an outer oil tube of large diameter, and two inner tubes of smaller diameter enclosed in said outer tube, the one for the passage of water and the other for the passage of an air blast from the oil or water tank, substantially as hereinbefore described. 3rd. The burner I, consisting of a solid piece hollowed out at its upper end so as to form a steam chamber on which is fitted an oil well or cup having a spraying nipple secured therein, substantially as set forth. 4th. The burner I, having an open oil well at its upper end in which is cast a partition or rim Q', perforated with holes Q'', substantially as and for the purposes set forth. 5th. The combination, with the burner I, having an open oil cup or well at its upper end of an asbestos or other fibrous wick Q', fitted in said cup or well, substantially as and for the purpose set forth. 6th. The special construction of steam generating coil pipe, wherein the pipe is first coiled upwards, then passes downwards by a straight portion and is

again coiled upwards between the turns of the previous coil, substantially as set forth. 7th. The combination, with the oil tank A, and the water tank G, strapped to said oil tank of the three way controlling valve W, fitted on top of the water supply tank, the pipe J, leading from said valve to the stand tube B, of the lamp, the air connection W², and the water connection W³, substantially as and for the purposes set forth.

No. 36,726. Sower for Grass Seed. (Semoir.)

John Waddle, (assignee of James Marr), both of Port Dover, Ontario, Canada, 2nd June, 1891; 5 years.

Claim.—1st. In a grass seeder, the combination of the cam wheel C, friction rollers 6, 6, lever D, substantially as and for the purpose hereinbefore set forth. 2nd. In a grass seeder, the combination of the levers K, K, chains Y, Y, lever 9, substantially as and for the purpose hereinbefore set forth.

No. 36,727. Post and Switch for Electrical Lamps. (Poteau et aiguille de lampe électrique.)

Lewis B. Matson, (assignee of David Bartholomew Matson), both of Buffalo, New York, U.S.A., 2nd June, 1891; 5 years.

Claim.—1st. The stationary base provided with friction rollers, the partially turning post provided with a flange to catch down over the top edge of the base, and a locking lever pivoted upon and adapted to turn the post, substantially as shown. 2nd. The stationary base provided with friction rollers, the post having its lower end to extend down into the base and provided with a flange which rests upon the top of the base, and a pivoted lever connected to the post and which has its lower end to catch in a notch in the top of the base, substantially as described. 3rd. The combination of the lamp provided with extensions 10, 10, and an automatic switch which is operated by the projections, substantially as set forth. 4th. The combination of the pivoted switch levers provided with hangers, the projections extending from the top of the lamp guides through which the projections pass the lamp, and a mechanism for raising and lowering it, substantially as specified.

No. 36,728. Cooling Slab for Confectioners. (Tablette-réfrigérateur pour confiseurs.)

George S. Collum and Edward J. Hoadley, both of Hartford, Connecticut, U.S.A., 3rd June, 1891; 5 years.

Claim.—1st. A cooling slab, consisting of an interior chamber having an inlet opening and an exterior chamber having an outlet opening, with a plate of uniform thickness resting loosely upon the walls of the receptacle, substantially as described, and for the purpose specified. 2nd. A cooling slab, consisting of an interior chamber having an inlet opening, and an exterior chamber having an outlet opening, with a plate resting upon the uneven upper edge of the walls of the interior chamber, substantially as described, and for the purpose specified. 3rd. A cooling slab consisting of a receptacle formed of an interior chamber having an inlet opening and an exterior chamber having an outlet opening, and a plate provided with a groove in its under surface resting loosely upon the walls of the interior chamber of the receptacle, so that said walls project into the groove above the level of the lower surface of the plate, substantially as described, and for the purpose specified.

No. 36,729. Electric Type Writer. (Clavographe électrique.)

Edward Jennings Silkman, George D. Penniman, and Thomas K. Worthington, all of Baltimore, Maryland, U.S.A., 3rd June, 1891; 5 years.

Claim.—1st. The combination, substantially as hereinbefore set forth, of a main frame, a type wheel carriage traversing longitudinally guides therein, a type wheel movable endwise on, but turning with a shaft mounted in bearings in said carriage, a type wheel actuating frame traversing longitudinally guides on the carriage parallel therewith, racks on this actuating frame engaging with gears on the type wheel shaft, and electro-magnetic apparatus for reciprocating the actuating frame, and thereby turning the type wheel. 2nd. The combination, substantially as hereinbefore set forth, of a main frame, a carriage traversing longitudinally guides therein, a type wheel carried by a shaft mounted in said carriage, a type wheel actuating frame traversing longitudinally guides on this carriage, racks on this frame engaging gears on the type wheel shaft, a dog engaging the type wheel, at suitable intervals, to lock the carriage and actuating frame together, and electro-magnetic apparatus for reciprocating them, when thus interlocked. 3rd. The combination, substantially as hereinbefore set forth, of a main frame, a carriage traversing longitudinally guides therein, a type wheel carried by a shaft mounted in said carriage, a type wheel actuating frame traversing longitudinally guides in this carriage and parallel therewith, racks on this frame engaging gears on the type wheel shaft, a dog engaging the type wheel at suitable intervals to lock the carriage and actuating frame together, electro-magnetic apparatus for reciprocating both the carriage and frame together, when thus interlocked, and means for automatically unlocking them to allow the type wheel to turn by the forward movement of the actuating frame. 4th. The combination, substantially as hereinbefore set forth, of a main frame, a carriage traversing guides therein, a type wheel carried by a shaft mounted in said carriage, a type wheel actuating frame sliding longitudinally parallel with said carriage on guides therein, racks on this frame engaging gears on the type wheel shaft, solenoids mounted on the main frame, armature-cors therefor connected directly with the actuating frame, a stop plate also carried by this frame, a key lever, a stop

throwing thereby across the path of the stop plate, a locking dog engaging with the type wheel, and mechanism for releasing it. 5th. The combination, substantially as hereinbefore set forth, of a main frame, a carriage traversing longitudinally guides therein, a type wheel mounted therein, an actuating frame traversing longitudinally guides in said carriage, a stop plate on this frame, a key lever, a stop thrown across the path of this stop plate thereby, a dog engaging with the type wheel, and mechanism to unlock the dog. 6th. The combination, substantially as hereinbefore set forth, of a main frame, a carriage traversing guides therein, a type wheel mounted therein, an actuating frame traversing guides therein, means for rotating the type wheel by the differential movements of its carriage and actuating frame, a stop plate on this frame, a key lever, a stop thrown across the path of this stop plate thereby, a locking dog engaging with the type wheel, a shifter bar actuated by the stop, link connections between this bar and the locking dog, a spring latch or locking lever which holds the dog in position, and a cam which releases the latch at the proper moment. 7th. The combination, substantially as hereinbefore set forth, of a main frame, a carriage traversing therein, a type wheel mounted in the carriage, an actuating frame traversing guides in the carriage, gearing for rotating the type wheel by the differential movement of this carriage and frame, a locking dog engaging with the type wheel, a spring latch which holds this dog in its locked position, a releasing cam actuating the spring latch, and an arm on said latch positively actuated by the mechanism which locks the dog to insure the fastening of the spring latch. 8th. The combination, substantially as hereinbefore set forth, of a main frame, a carriage traversing guides therein, a type wheel mounted therein, an actuating frame traversing guides therein, a stop plate carried by this frame oblique to its line of movement, a series of key levers, a series of stops arranged transversely across the machine in the same vertical plane, each actuated by its respective key lever, and means for reciprocating the stop plate and for varying its range of movement according to the stop interposed. 9th. The combination, substantially as hereinbefore set forth, of a type wheel, a stop plate, gearing connecting the stop plate with the type wheel, a series of levers, and stops traversed thereby, athwart the line of movement of the stop plate. 10th. The combination, substantially as hereinbefore set forth, of a reciprocating carriage, a type wheel mounted therein, an actuating frame traversing said carriage, a stop plate on this frame, oblique to its line of movement, a series of key levers, stops traversable thereby athwart the line of movement of the stop plate, a shifter bar actuated by the stops, link connections actuated by this bar, a locking dog actuated thereby, and electro-magnetic devices also actuated by said link connections, regulating the movement of the type wheel carriage and actuating frame. 11th. The combination, substantially as hereinbefore set forth, of a reciprocating type wheel carriage or actuating frame, a stop plate carried thereby, a series of key levers, stops traversed thereby athwart the line of movement of the stop plate, electro-magnetic devices for reciprocating said actuating frame, and circuit controlling devices actuated by the key levers controlling said mechanism. 12th. The combination, substantially as hereinbefore set forth, of a guide way, stops movable therein, a notch or step on each stop, a spring tending to engage the notch with the guide way, when the stop is elevated, a stop piece which releases the stop from engagement with the guide way, and a type wheel rotated by the stop plate. 13th. The combination, substantially as hereinbefore set forth, of a type wheel movable laterally on its shaft, a feed screw shaft, a slide block thereon movable with the type wheel, a rock shaft, a screw arm thereon interlocking with the slide block and screw shaft, a crank arm on the rock shaft, a dog acting thereon to release the screw arm, electro-magnetic devices controlling link connections actuating the dog, and a spring to retract the type wheel when released from the screw shaft. 14th. The combination, substantially as hereinbefore set forth, of a type wheel, its reciprocating carriage, its separate reciprocating actuating frame, type wheel locking mechanism carried by an independent frame, and means for actuating the locking mechanism from the actuating frame. 15th. The combination, substantially as hereinbefore set forth, of a reciprocating stop plate, stops traversing its path, a shifter bar actuated by the pressure of the stop plate on the stops, a type wheel, a dog interlocking therewith, and link connections between said shifter bar and dog. 16th. The combination, substantially as hereinbefore set forth, of a type wheel, its carriage, its actuating frame, a stop plate carried thereby, yielding spring stops intercepting the path of the stop plate, a shifter bar actuated by the stop plate and stops, a dog interlocking with the type wheel, link connections between the shifter bar and dog to lock the type wheel, and means for automatically releasing said dog. 17th. The combination, substantially as hereinbefore set forth, of a type wheel, a feed screw shaft, mechanism connecting the wheel and shaft to feed the latter laterally, a laterally moving locking dog, link connections actuating it, and a cam on the feed screw shaft to release the dog. 18th. The combination, substantially as hereinbefore set forth, of a type wheel, a racking locking dog engaging therewith, a vibrating arm actuating said dog, a pin or stop carried by the arm, a spring actuated notched locking lever engaging therewith to hold the dog in the proper position, and a cam on the feed screw shaft to release the dog. 19th. The combination, substantially as hereinbefore set forth, of a reciprocating type wheel carriage, a type wheel mounted therein, a feed screw shaft for moving the type wheel laterally, connections between the type wheel and screw shaft, a stop on the latter, and a detent on the carriage, abutting against the stop to lock the type wheel positively at the proper moment. 20th. The combination, substantially as hereinbefore set forth, of a main frame, a carriage reciprocating in guides therein, a type wheel in this carriage, a type wheel actuating frame reciprocating in guides on the carriage, gearing connecting the carriage and frame, means for reciprocating the actuating frame, and thereby rotating the type wheel, separate means for actuating the carriage, and means for locking the type wheel and actuating frame so as to print a letter by actuating the type wheel carriage. 21st. The combination, substantially as hereinbefore set forth, of a type wheel, its carriage, its actuating frame, a feed screw shaft, connections between it and the type wheel, ratchet gearing for rotating said shaft intermittently, and links connecting such gearing and carriage so as to feed the

type wheel laterally after each reciprocation of the type wheel 22nd. The combination, substantially as hereinbefore set forth, of a type wheel having capital and small letters arranged alternately on its periphery, a reciprocating type wheel carriage, a key lever, and a stop connected therewith, to limit the range of movement of the type wheel, when capitals are to be printed. 23rd. The combination, substantially as hereinbefore set forth, of a type wheel, its carriage, a feed screw shaft, a ratchet feed, and link connections between the feed screw shaft and carriage, a rock shaft, a laterally sliding frame connecting the type wheel, screw shaft, and rock shaft, a pivoted spring arm carried by the rock shaft, and carrying a screw engaging with the screw shaft, a crank arm on the rock shaft, a dog acting thereon, and link connections for rocking the shaft to release the actuating arm from the screw shaft, when the type wheel is to be retracted to commence a new line. 24th. The combination, substantially as hereinbefore set forth, of a type wheel, its carriage, a feed screw shaft, a ratchet feed, and link connections between said screw shaft and carriage, a rock shaft, a laterally sliding frame connecting the type wheel, screw shaft and rock shaft, a pivoted spring arm carried by the rock shaft, and carrying a screw engaging with the screw shaft, a crank arm on the rock shaft, an impression cylinder, its paper feeding pawl, and link connections for simultaneously actuating the pawl and turning the rock shaft so as simultaneously to release the actuating arm from the screw shaft, when the type wheel is to be retracted, and simultaneously to feed the paper by actuating the pawl. 25th. The combination, substantially as hereinbefore set forth, of a type wheel, its reciprocating carriage, a type wheel actuating frame, mechanism carried thereby for feeding the type wheel laterally therein, a generator of electric currents, circuit connections, key levers controlling them to reciprocate the type wheel actuating frame, a stop plate on said frame, and stops actuated by the key levers which control other circuit connections, and mechanism actuated by said circuit connections which prints a character and actuates the type wheel feeding mechanism. 26th. The combination, substantially as hereinbefore set forth, of a type wheel, its reciprocating carriage, a reciprocating type wheel actuating frame, gearing for reciprocating the type wheel from the actuating frame, a source of electric energy, mechanism actuated therefrom to reciprocate the actuating frame, and automatic circuit shifting devices operated by the actuating frame to reverse its movements at the proper time. 27th. The combination, substantially as hereinbefore set forth, of a main frame, a type wheel, its carriage reciprocating in guides in the main frame, a type wheel actuating frame reciprocating in guides on the carriage, solenoids arranged end to end in pairs, on opposite sides of the main frame (the solenoids of each pair being oppositely wound) their armature cores connected directly with the actuating frame, and circuit connections by which the current is alternately shifted from one set of solenoids to the other, to rotate the type wheel. 28th. The combination, substantially as hereinbefore set forth, of a type wheel, its carriage reciprocating in guides on the main frame, a vibrating armature connected directly with this carriage, electro-magnets on opposite sides of said armature, and circuit connections automatically controlled by the reciprocation of the frame, alternately to shift the current through the magnets to print a character, and to retract the type wheel from the impression cylinder. 29th. The combination, substantially as hereinbefore set forth, of a main frame, a type wheel, its carriage, a type wheel actuating frame reciprocating in guides therein, solenoids arranged end to end in pairs on the main frame, (the solenoids of each pair being oppositely wound) their armature cores connected with the actuating frame, key levers, a contact bar or rocking frame resting thereon, and circuit controlling devices carried by the contact bar so as to shift the current from one set of solenoids to the other, on the depression of a key. 30th. The combination, substantially as hereinbefore set forth, of a type wheel, its reciprocating carriage, electro-magnetic devices actuating the latter a reciprocating type wheel actuating frame, electro-magnetic devices operating it, a stop plate carried by this frame, a yielding stop intersecting the path of the stop plate, a shifter bar or frame actuated by the stop plate and interposed stop, circuit connections, and circuit controlling devices actuated by the reciprocation of the type wheel carriage and actuating frame and of the shifter bar to shift the current through both sets of actuating magnets.

No. 36,730. Fire Kindler. (*Allumoir.*)

Benjamin B. Jenkins and Sydney James Sanford, both of Barrie, Ontario, Canada, 3rd June, 1891; 5 years.

Claim.—As a new article of manufacture, a fire kindler composed of a block formed of asbestos, clay, borax, and glue, in the manner shown, in combination with the ring the stem of which extends partly through the kindler, as and for the purpose specified.

No. 36,731. Attachment for Quilting Frames and Curtain Stretchers. (*Attache pour métier à piquer et métier à rideau.*)

William Hackley Church and Archibald Wilson, both of Fenelon Falls, Ontario, Canada, 3rd June, 1891; 5 years.

Claim.—1st. The combination, with a quilting frame having eyes D, on the inner face, of the side bars A, A, of the yokes T, T, having an angularly bent arm U at one end and a flexible hook V at the other end to engage said side bars and eyes respectively, and a flat bar R provided with holes S, and inserted through said yokes, as set forth. 2nd. An attachment to quilting frames, &c., consisting of the perforated bar R, and the yokes T, T, having an angularly bent arm U, at one end and a flexible hook V, at the other end, as set forth.

No. 36,732. Die for Slotting Screw Heads. (*Filière pour faire les rainures sur les têtes de vis.*)

The American Screw Company, assignees of Charles D. Rogers, all of Providence, Rhode Island, U.S.A., 3rd June, 1891; 15 years.

Claim.—1st. A die for forging slotted screw heads, having in the surface surrounding the cavity in which the screw heads are to be formed slots or channels extending from such cavity in line with the slots to be formed in the screw heads, to receive the ends of a slot-forming tongue on the face of a heading hammer and permit the escape of surplus metal displaced by the tongue in forming the slot. 2nd. A die for forming slotted screw heads, having the surface surrounding the cavity in which screw heads are to be formed slots or channels extending from such cavity in line with the slot to be formed in a screw head, in combination with a heading hammer having across its face a tongue to form the slot in the screw head and to enter the slots in the die in line therewith to remove from the screw head surplus metal displaced in forging the slot. 3rd. The method herein described for forging slots across the heads of screws and open at the ends, by forcing into the metal of a screw head in the cavity of a die and into slots or channels formed in the surface surrounding such cavity and extending therefrom in line with the slots to be formed in the screw heads, a tongue formed on the face of a heading hammer the counterpart in cross section of the slot to be produced in the screw head.

No. 36,733. Brick Machine. (*Machine à brique.*)

The Rugg and Barton Manufacturing Company, Chicago, Illinois, assignees of Robert F. Robinson, Kansas City, Kansas, U.S.A., 3rd June, 1891; 5 years.

Claim.—1st. In a brick making machine, a molding compartment having an open top and a feed hopper above said compartment, communicating therewith, in combination with a horizontally reciprocating presser moving in said compartment and beneath said hopper, said presser constituting one end of said compartment and controlling the communication between said compartment and hopper, a vertically reciprocating cover which opens and closes the open top of said compartment, a vertically reciprocating follower which reciprocates crosswise of the compartment beneath said cover and which lifts the finished brick out from said compartment, and a horizontally reciprocating counter presser, said counter presser constituting one end of said compartment, all of these four features, the presser, the counter presser, the top cover, and the follower exerting simultaneously pressure forces against the brick to be formed within said compartment, substantially as herein set forth. 2nd. In a brick making machine, the brick forming mechanism thereof, in combination with a shaft N¹, having eccentrics O, P, P, and R, R, keyed thereto, which actuate said mechanism, a spur wheel N, on said shaft, a rotating drive shaft I, a pinion J, thereon, and an intermediate shaft J¹, with pinion M, and spur wheel L, fastened thereto, said pinion M meshing with spur wheel N, and pinion J, meshing with spur wheel L, substantially as set forth. 3rd. In a brick making machine, the brick forming mechanism thereof, an eccentric shaft N¹, with eccentrics O, P, P, and R, R, thereon, which actuate said mechanism, a spur wheel N, on said shaft, a pinion M gearing therewith, and keyed to the intermediate shaft J¹, having a spur wheel L fastened to the same, which gears with a pinion J, provided with clutch mechanism K, in order to bring the entire mechanism into or out of connection with the rotating drive shaft I, respectively, as and for the purpose herein described. 4th. In a brick making machine, a molding compartment, a horizontally reciprocating presser, a reciprocating counter presser, a vertically reciprocating follower moving crosswise of said compartment, and a reciprocating top cover, in combination with a rotating eccentric shaft carrying a series of eccentrics with eccentric rods connecting the eccentrics with said presser and counter presser, and oscillating segment gear meshing into a gear wheel, which latter actuates by means of a cam lever, the follower and a connecting rod pivoted to said gear wheel and connected at its other end with the top cover in order to raise and lower the same, substantially as set forth. 5th. In a brick making machine, a molding compartment having an open top, a reciprocating presser moving in said compartment, a counter presser and top cover, in combination with a follower operated by means of a cam lever U, having a projection 2, which when acting against the end E, of follower G, will bring the top of follower G on a level with the bottom of the presser and counter presser, and thereby subjecting the brick within the molding compartment to a vertical pressure, as and for the purpose herein set forth. 6th. In a brick machine, and in combination with each other, a molding compartment having an open top, a presser, a counter presser, a follower, the latter actuated by means of a cam lever V, and so arranged that after the completion of the pressure force exerted vertically by the projection 2, of said cam, the return movement of cam U will elevate the follower with the finished brick resting thereon to the level of the receiving table, by means of the cam segment 1, to 3, and then holding the brick in suspended stationary position by reason of cam segment 3, to 4, acting against the point K, of follower G, substantially as set forth. 7th. In a brick making machine, a molding compartment having an open top, a vertically reciprocating cover, a follower, a horizontally reciprocating presser and counter presser, each one of these pressure exerting agencies provided with a dovetailed slot at their respective ends for the purpose of receiving end plates of flat or molded form so as to be made interchangeable at these points, so as to enable the operator to make flat or molded bricks at his will, substantially as shown and described.

No. 36,734. Method of Washing or Scouring Cotton Waste and Fabrics. (*Mode de laver et dégraisser les bourres de coton et tissus.*)

Sir William George Montague Call, Pall Mall, London, Middlesex, England, 3rd June, 1891; 5 years.

Claim.—1st. The process herein described for cleaning cotton waste and other dirty materials or fabrics, and consisting in moving the material (if cotton waste after the excess of oil has been removed) slowly through a first bath composed of soap, common soda or potash, ammonia, and turpentine, with water in or about the pro-

portions given, and maintained at a suitable temperature, treating in a second bath composed of soap, common soda or potash and water, in or about the proportions given, and maintained at a temperature of not less than 100° Fahr., afterwards rinsing in cold water (the moisture taken up in each bath being removed by pressure) and finally drying and carding the material if capable of being carded, as set forth. 2nd. A compound or mixture for use in the washing or scouring of wool, cotton waste, and other dirty materials or fabrics, composed as herein described, of soap, ammonia, and turpentine, with or without the addition of common soda or potash, in or about the proportions given. 3rd. The operation of washing or scouring wool, as herein described, and consisting of soaking the wool for from 10 to 20 minutes subject to slight agitation in a bath composed of soap, ammonia, and turpentine, with hot water in or about the proportions given, and maintained at a suitable temperature not exceeding 140° Fahr., rinsing in cold water, (removing the excess of moisture after each bath) and afterwards drying and carding, as set forth. 4th. The operation of obtaining wool-fat or grease, as herein described, and consisting in soaking and slightly agitating wool for from 10 to 20 minutes in a bath composed of soap, ammonia and turpentine, with water in or about the proportions given and maintained at a suitable temperature not exceeding 140° Fahr., allowing the bath in which the wool has been treated to stand until cool, and then causing the wool-fat or grease contained in the bath to rise to the surface by gentle heat so that it may be removed therefrom for subsequent treatment, as set forth.

No. 36,735. Kiln for Bricks and Tiles.

(*Four à briques et à tuiles.*)

Robert W. Stewart, Mount Victory, Ohio, U.S.A., 3rd June, 1891; 5 years.

Claim.—In a tile kiln, the burning chamber having a thin smooth floor and provided with entrances for the heat at the top on both sides, and exits at the bottoms of both ends, the furnaces L, L', passages M, and the flues P, T, beneath the floor alternately opening into the flues C, as and for the purpose set forth.

No. 36,736. Sheet Metal Rivets.

(*Rivet de métal en feuille.*)

Judson Levator Thomson, Syracuse, New York, U.S.A., 3rd June, 1891; 5 years.

Claim.—1st. The herein described sheet metal rivet, the same consisting of a head *a*, widthwisely tapering prongs *b*, and the intervening spaces *b'*, substantially as and for the purpose specified. 2nd. The herein described sheet metal rivet, the same consisting of a head *a*, widthwisely tapering prongs *b*, cutting edges *b'*, and the intervening spaces *b''*, substantially as and for the purpose set forth. 3rd. The herein described sheet metal rivet, the same consisting of a head *a*, rounding projecting prongs *b*, and the intervening spaces *b'*, substantially as specified. 4th. The herein described sheet metal rivet, the same consisting of a head *a*, the lapped head portion *a'*, projecting prongs *b*, and the intervening spaces *b'*, substantially as and for the purpose specified.

No. 36,737. Can Heading Machine.

(*Machine pour fonder les boîtes métalliques.*)

Joseph M. Ruddock, Chatham, New Brunswick, Canada, 3rd June, 1891; 5 years.

Claim.—1st. The combination with the main frame, consisting of the base 1, post 2, and arm 3, of the upwardly springing lever 14, the plug rod 12, pendant therefrom the hollow stem 5, surrounding said rod and having a disk 6 at its lower end, the jaws 8, pivoted peripherally to said disk, the collar 10, surrounding the stem and connected to said rod 12, by a pin 11, passing through a slot in said stem and links 9, connecting said collar and jaws as set forth. 2nd. The combination, with the lever 14, pivoted to the main frame of the hollow stem 5, and disk 6, and provided with a set ring 13, to limit the depression the spring 18, to hold said stem stationary when depressed the plug rod 12, pendant from the lever and entering the hollow stem, the collar 10, surrounding said stem and connected to the plug rod by a pin 11, passing through a slot in said stem, and the tilting jaws 8, hinged to said disk 6, and connected to said collar by links 9, as set forth.

No. 36,738. Swinging Chair. (*Chaise tournante.*)

Charles A. Jones and Charles L. Bothwell, both of La Grange, Indiana, U.S.A., 3rd June, 1891; 5 years.

Claim.—The combination, with the chair frame, of the seat section, the adjustable arms secured thereto, the cross bar bearing in said arms, the foot section and the fabric having one end secured to the top of the back passing around said cross bar, and its opposite end secured to the foot section, whereby the tension of the fabric is adjusted.

No. 36,739. Washing Machine.

(*Machine à blanchir.*)

Horatio Rose, Glen Cove, Texas, U.S.A., 3rd June, 1891; 5 years.

Claim.—The herein described washing machine, the same comprising in combination a boiler, a cylinder journaled therein, and being closed ends, its outer periphery composed of a series of open troughs arranged in pairs, the troughs in each pair opening toward each other, a series of open ended funnel shaped tubes arranged in a line drawn centrally around the periphery of the cylinder, the said tubes extending inwardly from the outer face of the cylinder and having their contracted discharge ends near the centre of the

cylinder, a strip of sheet metal extending centrally around the interior of the cylinder and secured to the tubes, and an operating crank attached to the cylinder, substantially as and for the purpose specified.

No. 36,740. Car Coupling. (*Attelage de chars.*)

Thomas R. Gardner, Brooklyn, Nova Scotia, Canada, 3rd June, 1891; 5 years.

Claim.—1st. The combination of the draw head A, with link socket, as shown in figure 3, with lips *a*, opening *b*, pin D, with bolt *c*, shield *c*, and stop C. 2nd. The combination of pin D, with rod F, cross bar E, lifting arm *e*, and rod H. 3rd. The combination of cross rod G, with double or catch *g*, springs K, and L, and rod J. 4th. The combination of the draw head, link, and pin, with the lifting holding and dropping gear, as shown in the said drawings and herein described, and substantially as and for the purpose hereinbefore set forth.

No. 36,741. Adding Machine.

(*Machine à additionner.*)

George Benedick Fowler, Brooklyn, New York, U.S.A., 3rd June, 1891; 5 years.

Claim.—1st. An adding machine formed of a bed or frame provided with grooves having a series of numbers placed between said grooves, sliding bars arranged to move in the grooves, and a locking mechanism for securing the sliding bars at any point, on the bed or frame, substantially as and for the purpose hereinbefore set forth. 2nd. The herein described adding machine, consisting of a grooved frame, sliding bars provided with perforations arranged to move in said grooves, and a clamping plate having a series of pins to engage with the perforations, and means for forcing said clamping plate in and out of engagement therewith, substantially as and for the purpose hereinbefore set forth. 3rd. In an adding machine, a grooved frame and sliding bars provided with perforations, in combination with a spring controlled clamping plate hinged to said frame and having pins or studs to engage with the perforations in the sliding bars, substantially as and for the purpose hereinbefore set forth. 4th. In an adding machine having a grooved frame and sliding bars provided with perforations, an end plate having a series of perforations coincident with the perforations in the said bars, a hinged plate provided with pins to pass into the perforations in the sliding bars, and a pin arranged to work through an outer slotted casing and pass through a slot in the hinged plate to force down the clamping plate, with a spring for holding the said plate out of engagement with the sliding bars, substantially as and for the purpose hereinbefore set forth.

No. 36,742. Machine for Polishing Sheet Metal, etc. (*Machine à polir le métal en feuille.*)

Franklin Webster Perry, Philadelphia, Pennsylvania, U.S.A., 3rd June, 1891; 5 years.

Claim.—1st. The combination of an endless belt having a series of independent work holding chucks, means for traversing said belt and rotating brushes for acting on the articles on the chucks, as the latter are carried past the brushes by the belt, substantially as specified. 2nd. The combination of the rotating brushes, the endless belt having a series of chucks with rotatable work holding heads and means for traversing said belt, substantially as specified. 3rd. The combination of the endless belt, the drums therefor, the chucks having spring holding pins, a rod having an expander for said pins, and a presser for operating the said rod as it passes around the opposite belt drums, substantially as specified. 4th. The combination of the endless belt and its work holding chucks, with the vertical and horizontal rotary brushes and adjustable bearings for the shafts of said brushes, substantially as specified. 5th. The combination of the two sets of rotating brushes, with the endless belt carrying the work holding chucks, means for traversing the belt and a frame having guides for vertically supporting and laterally confining said belt, substantially as specified.

No. 36,743. Apparatus for Taming Horses.

(*Appareil à dompter les chevaux.*)

Hamilton Sample, Brighton, Sussex, England, 3rd June, 1891; 5 years.

Claim.—1st. An apparatus for treating or taming horses, consisting of a pivoted stall in which the animal is placed, and in which he is rotated at a greater or less velocity until he becomes passive in the operator's hands, substantially as described. 2nd. In apparatus for treating or taming horses, the combination with the stationary platform or base A, of the pivoted stall B, with uprights D, and supporting with G. 3rd. In apparatus for treating or taming horses, the combination, with the stationary platform A, shaft *a'*, and wheels K, and L, of the pivoted stall B, with wheel K, uprights D, girth G, and straps J, substantially as and for the purposes described. 4th. In apparatus for treating or taming horses, the combination, with the pivoted stall B, of the uprights D, and pulley blocks O, substantially as and for the purposes described. 5th. In apparatus for treating or taming horses, the combination of the stationary platform A, the pivoted stall B, the uprights D, the supports E, the girth G, the straps J, and straps I, substantially as and for the purposes described.

No. 36,744. Brake for Baby Carriages.

(*Frein de voiture d'enfant.*)

Kent Whipple, Hamilton, Ontario, Canada, 4th June, 1891; 5 years.

Claim.—1st. The combination, forming a lock or brake for two wheels of baby carriages, consisting of a frame provided with the

recesses, one to receive a brake lever, and the other an axle to which it is affixed by a thumb screw or analogous device, a brake lever formed at its lower end with a slot through which a pivot pin or rivet passes, and through the frame so that it can retain an upright or a horizontal position, substantially as and for the purpose specified. 2nd. The combination, forming a lock or brake for the wheels of baby carriages consisting of the frame A, recesses B, C, opening d, brake lever F, with slot a, rivet G, thumb screw E, all constructed, substantially as and for the purpose specified.

No. 36,745. Folding Holder for Books.

(*Pince-livre pliant.*)

Wilbur Fisk Holloway, Cuyahoga Falls, Ohio, U.S.A., 4th June, 1891; 5 years.

Claim.—1st. The combination, with a book case and a book rest, of one or more bars pivotally supported at one end on the case and having pivotal connection at the opposite ends with the book rest and adapted to carry the book rest into or out of the book case. 2nd. The combination, with a book case and a book rest having arms thereon for holding the book open, of one or more bars pivotally connected at one end with the case and having pivotal connection at the opposite end with the book rest and adapted to carry the book rest into and out of the book case, substantially as set forth. 3rd. The combination, with a book case and a book rest, of bar or bars pivotally connected at one end with the book rest, rocking rod or rods to which the opposite ends of the bar or bars are connected, and springs on the rod or rods for facilitating the movement of the books, substantially as set forth.

No. 36,746. Method of Advertising.

(*Mode de publicité.*)

Harry Ernest Page, Westminster, England, 4th June, 1891; 5 years.

Claim.—1st. The combination of advertisements on a paper, linen or other bag of various shapes or designs, either lithographed or printed thereon, to be used by tradesmen and others for the better carrying of goods, substantially as herein described and for the purpose set forth. 2nd. To print more than one advertisement upon a paper or linen bag, any and every purpose whatever, either direct or upon paper to be stuck upon each or either, substantially as described.

No. 36,747. Fanning Mill and Grader for Grain.

(*Tarare-cribleur.*)

William McKenzie, Morrisburg, Ontario, Canada, 4th June, 1891; 5 years.

Claim.—1st. The combination of the wheel C, the belt D, and the wheel E, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the rack F, and the shoe B, and the screen H, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of thin projections on the end of a sieve G, with notches on the shoe sides H, substantially as and for the purpose hereinbefore set forth.

No. 36,748. Tubular Lantern.

(*Lanterne tubulaire.*)

Ernest Schultz, Hamilton, Ontario, Canada, 4th June, 1891; 5 years.

Claim.—1st. In a tubular lantern, the spring K, attached to the canopy G, and bent with a shoulder h, or catch to fit inside and hold the globe, the said spring bent upwards and made to pass through an opening in the canopy, and terminating in a thumb piece e, for operating said spring, substantially as specified. 2nd. In a tubular lantern, the combination of the spring K, with thumb piece e, semi-circular globe holder H, canopy G, and globe C, substantially as and for the purpose specified. 3rd. In a tubular lantern, the combination of the spring K, semi-circular globe holder H, canopy G, globe C, and thumb piece J, all constructed, substantially as and for the purpose specified.

No. 36,749. Seeder for Grain.

(*Semoir à grain*)

Robert Galloway, Macedon, New York, U.S.A., 4th June, 1891; 5 years.

Claim.—1st. In a grain seeding machine, the combination, with the vertically-movable teeth or shoes, the rock shaft connected thereto, and the operating handle connected to said shaft, of the crank mounted on the shaft, the pitman adjustably connected thereto so as to vary the length of the crank, and the spring engaging said pitman and adapted to turn the shaft in either direction from its center of oscillation, substantially as described. 2nd. In a grain seeding machine, the combination, with the vertically-movable teeth or shoes, the rock shaft having the crank arms connected to the shoes by links and the operating handle of the crank arm on the rock shaft, the pitman connected thereto, the spring bearing against said pitman and operating to turn the shaft to either side of the center of oscillation, and the adjustable stop for limiting the extent of such movement, as described. 3rd. In a grain seeding machine, the combination with the vertically-movable teeth or shoes, the rock shaft connected thereto for moving the same, and the operating handle of the crank on said shaft, the pitman adjustably connected thereto, means, substantially as described, for adjusting the length of the pitman and the spring engaging the pitman and operating to move the crank in either direction from its center of oscillation, whereby the teeth or shoes will be elevated or depressed, substantially as described. 4th. In a grain seeding machine, the combination, with the vertically-movable teeth or shoes, the rock shaft connected thereto moving the same, and the operating handle of the crank on said shaft having the central slot and screw bolt, the crank pin with which said bolt co-operates, the pitman having turn

buckle, as described, and the spring engaging said pitman to move the crank in either direction from its center of oscillation, and the adjustable stop for limiting the movement of the pitman, substantially as described. 5th. In a grain seeding machine, the combination, with the teeth or shoes, rock shaft connected thereto and operating handle of the crank on said shaft, the pitman connected thereto, the pivoted casing surrounding said pitman, and the spring within the casing and engaging the pitman, substantially as described. 6th. In a grain seeding machine, the combination, with the teeth or shoes, rock shaft connected thereto, and the operating handle of the crank on said shaft, the pitman connected thereto, and the casing surrounding the pitman and pivoted on adjustable centers of the spring within the casing engaging the pitman, substantially as described. 7th. In a grain seeding machine, the combination, with the vertically-movable teeth or shoes, the rock shaft having the crank arms connected to the shoes, and the operating handle of the crank on the rock shaft, the pitman connected thereto, the casing formed in halves surrounding said pitman, and having the trunnions at each side pivoted in the bearing blocks, the spring within the casing engaging a cross head or piston on the pitman, and the stop for limiting the outward movement of the pitman, substantially as described. 8th. In a grain seeding machine, the combination, with the vertically-movable teeth or shoes, the rock shaft connected thereto for moving the same, and the operating handle of the crank mounted on the rock shaft, having the central slot and the crank pin, and adapted to move in either direction from its center of oscillation, the pitman having the turn buckle, as described, connected thereto, the spring within the pivoted casing bearing against the said pitman and operating to turn the crank in either direction from its center of oscillation, and the adjusting stop for limiting the movement of the pitman, substantially as described. 9th. In a grain seeding machine, the combination, with the vertically-movable teeth or shoes, the rock shaft connected thereto for moving the same, and the operating handle of the crank mounted on the rock shaft having the central slot and the crank pin and adapted to move in either direction from its center of oscillation, the pitman having the turn buckle, as described, connected thereto and adapted to move in either direction from its center of oscillation, and the spring within the pivoted casing bearing against the said pitman and operating to turn the crank in either direction from its center of oscillation, whereby the teeth or shoes will be elevated or depressed, substantially as described.

No. 36,750. Wheel for Vehicles.

(*Roue de voiture.*)

Thomas C. Kirkham, Highland Creek, Ontario, Canada, 4th June, 1891; 5 years.

Claim.—1st. The combination, in a vehicle wheel, of the axle arm A, having the threaded part d, with the block or member E, having the set screw e, to hold it in position upon the threaded part of the axle arm, substantially as set forth. 2nd. The combination, in a vehicle, with the arm A, having the threaded part d, and the member E, of the part or member B, having the oiling attachment C, and the catch D, as set forth. 3rd. The combination, in a vehicle wheel, of the member B, with the member F, as set forth. 4th. The combination of the member F, with the member G, substantially as hereinbefore shown and described and as and for the purposes set forth. 5th. The combination, with the part or member B, of the oiler C, made up of the socket, the plate J, the spring K, the pin i, and the holes l, l, l, substantially as set forth. 6th. The combination, with the members B, and F, of the catch D, having the retaining point h, and the enforcing spring g, as set forth.

No. 36,751. Felly Plate for Vehicle Wheels.

(*Jante de roue de voiture.*)

Thomas C. Kirkham, Highland Creek, Ontario, Canada, 4th June, 1891; 5 years.

Claim.—In a felly plate for vehicle wheels, the combination of the plate B, with the socket f, whereby the junction of the fellyes may be made to act upon the end of a spoke, substantially as hereinbefore shown and described and as and for the purposes set forth.

No. 36,752. Freezer for Ice Cream.

(*Machine à congélation pour la crème à la glace*)

James Austin Burns, Atlanta, Georgia, U.S.A., 4th June, 1891; 5 years.

Claim.—1st. In an ice cream freezer, the combination of the freezing cylinder supported by hollow journals within the casing A, the pans C, C', arranged one within the other to receive the cream to be frozen by the cylinder passing through the same, the funnel for supplying the cream to said pans, and the scraper for removing the frozen cream from the cylinder, consisting of a piece of sheet metal bent up at its sides to form a trough, and provided with springs e' and bearing plates e'', substantially as shown and described. 2nd. In an ice cream freezer, the scraper E, formed of a piece of sheet metal bent up at its sides to form a trough and provided with the springs e', and bearing plate e'', substantially as shown and described.

No. 36,753. Drier for Clothes.

(*Séchoir à linge.*)

George W. Ansley, Medical Lake, Washington U.S.A., 4th June, 1891; 5 years.

Claim.—The clothes rack described, consisting of the back plate, the casing secured thereto, and provided with a bottom and a top provided with openings at its outer edges forming shoulders, the swinging bail, the lug therefor, and the supporting arms free to be moved within the casing, and at their outer ends provided with eyes or loops, substantially as and for the purpose specified.

No. 36,754. Machine for Making and Repairing Roads. (*Machine à faire et réparer les chemins.*)

Frederick C. Austin, assignee of Morton G. Bunnell, both of Chicago, Illinois, U. S. A., 4th June, 1891; 5 years.

Claim.—1st. The segment secured about a pivotally supported circle, and provided with downwardly bent arms to which the blade is attached. 2nd. The blade hinged to the lower portions of the downwardly bent segment arms, and at points above its hinged connections attached to the segment arms by adjustable connections. 3rd. The extensible hangers for raising and lowering the blade. 4th. The elevated T levers from which the hangers are suspended and hand levers connected with the T levers to operate the same. 5th. The double goose neck draft bar arranged for drawing the blade. 6th. The latch device for locking the circle against rotation. 7th. The draft bar having its rear portion extended over and under the circle. 8th. A gear of less radius than the circle arranged within and secured to the circle and a cog engaging said gear. 9th. The jointed rotary shaft gear connected with the circle. 10th. The body frame adjustable along the rear axle and a chain gearing for effecting such adjustment of the body frame. 11th. The cross bar 14, secured to the draft bar and suspended by hangers. 12th. The transversely arranged slide bar 11, supported by the body frame and a connection between said slide bar and the draft bar. 13th. The blade shifting mechanism provided with a lever which is pivoted upon a swinging fulcrum. 14th. A latch arranged for locking the blade shifting mechanism and connected with a foot treadle at the rear of the machine. 15th. The latch device for locking the extensible hangers in their adjustment. 16th. The universal joints from which the hangers are suspended. 17th. The rollers arranged upon the rear axle and supporting the rear portion of the body frame. 18th. A swinging draft bar pivoted at its forward end, the circle pivotally attached to the draft bar and the segment secured to the circle and carrying a blade. 19th. The combination, with the body frame arranged for adjustment along the rear axle, and a chain gearing for effecting such adjustment on the part of the body frame in its adjustment, substantially as set forth. 20th. The combination, with the blade carried by a rotary support, of a latch for locking said support and a jointed shaft for operating the latch extended to the rear platform, substantially as set forth.

No. 36,755. Screw Propeller. (*Helix de propulsion.*)

Munson G. Pool and John Erasmus Jones, both of Theresa, New York, U. S. A., 4th June, 1891; 5 years.

Claim.—1st. The herein described propeller wheel having the front and rear edges b^2, b^1 , of one of its blades in horizontal planes, substantially parallel with each other, with the inner extremity of said edges of said blade gradually curving forward and the free extremity of said edges, curving forward in a greater degree than said inner extremity, and the passage c^2 , formed within the outer edge c^1 , and extending backwardly from the front edge b^2 , to the rear edge b^1 , for discharging the water backwardly without permitting its escape from the extremity of the blades, substantially as and for the purpose set forth. 2nd. The herein described propeller wheel, having a blade formed with its front and rear edges b^2, b^1 , curving forwardly in substantially the same plane, said edges being formed with a gradual curve at the inner extremity c^2 , and a greater curve at the outer extremity c^1 , said outer extremity c^1 , of the blade having substantially its entire outer edge in the same oblique plane, and being formed of greater horizontal width between its front and rear edges b^2, b^1 , than the inner extremity c^2 , whereby the escape of water from the extremity of the blade is substantially obviated, substantially as and for the purpose specified.

No. 36,756. Furnace for Plumbers or Jewellers. (*Fournaise pour plombiers et bijoutiers.*)

Bernard Rein, Ypsilanti, Mich., and Thomas Patrick Tuite, Detroit, Mich., assignee of Asa William Straight, of Ypsilanti, aforesaid, 4th June, 1891; 5 years.

Claim.—1st. A reservoir having an air inlet tube and an oil tube leading from near its bottom, in combination, with the burner flexibly mounted on the oil tube, and the detachable support (the hood) for soldering iron or other articles, located above the burner, substantially as herein shown and described. 2nd. The combination, with the tank of the burner B, flexibly mounted thereon, substantially as described.

No. 36,757. Hub. (*Moyeu.*)

Martin E. Thomas, Fred Rohreheib and John Burhop, all of Batesville, Arkansas, U. S. A., 4th June, 1891; 5 years.

Claim.—The combination, with the spindle, of the hub provided with an enlarged axle box, the anti-friction rollers arranged within the axle box and entirely surrounding the spindle, the end bands or collars fitted on the hub and moving therewith and forming a part thereof and projecting beyond the same and forming collars, the anti-friction balls arranged within the end bands and bearing against the ends of the hub, and the nut, substantially as described.

No. 36,758. Apparatus for Shipping Boat Rudders. (*Appareil pour expédier les gouvernails de bateau.*)

John Dampier Hickman, Portsmouth Road, Surrey, England, 5th June, 1891; 5 years.

Claim.—The combination of grooved guide, adapted in virtue of its being circular in cross section to receive the rod on the back of

the rudder to allow the same to be turned therein, and a locking piece between the rudder and its rod adapted by engaging with either side of the grooved guide when the rudder is turned on its side to lock the rudder, as set forth.

No. 36,759. Voltaic Battery. (*Pile voltaïque.*)

Henry Inkson Harris, Old Kent Road, Surrey, England, 5th June, 1891; 5 years.

Claim.—1st. In a voltaic battery, the combination of carbon elements C, having studs C', passing through the bottoms of the cells, with metal rods D, for attachment of the zinc elements, also passing through the bottoms of the cells, so that the connections between the elements can be arranged under the bottom of the battery and completely enclosed and insulated from one another and from the contents of the cells, substantially as set forth. 2nd. In a voltaic battery, the combination of carbon elements C, having studs C', passing through and cemented into the bottom of the battery, zinc elements Z, suspended upon metal rods D, also passing through and cemented into the bottom of the battery, and connections formed by wires E, all enclosed in cement L, and encased by the frame K, and plate M, substantially as set forth. 3rd. In a voltaic battery, the metal rod D, formed with a hook D', enclosed in an insulating tube D'', and passing through and cemented into the bottom of the battery, for suspending the zinc element, substantially as set forth. 4th. In a voltaic battery, a zinc element consisting of a plate Z, provided with a slot Z', for the purpose, substantially as set forth. 5th. In a voltaic battery, the combination of a metal rod D, formed with a hook D', enclosed in an insulating tube D'', and passing through and cemented into the bottom of the battery, with a zinc plate Z, provided with a slot Z', for suspension upon the hook D', substantially as set forth.

No. 36,760. Freezer for Ice Cream. (*Machine à congélation pour la crème à la glace.*)

Amasa Feathers, Montreal, Quebec, Canada, 5th June, 1891; 5 years.

Claim.—1st. The combination of the casing a, double incline pan e, and revolving drum d, having scraper m, the whole, substantially as described. 2nd. The combination of the drum d, having double walls g, heat non-conducting material h, diaphragm k, with casing a, double incline pan e, scraper m, tin dish l, the whole substantially as described. 3rd. The combination of the casing a, cover r, revolving drum d, double incline pan e, tin dish l, scraper m, the whole, substantially as described. 4th. The combination of the casing a, having projections s, and t, drum d, double incline pan e, tin dish l, scraper m, and cover r, the whole, substantially as described and for the purposes set forth.

No. 36,761. Prepayment Attachment for Vending Gas and Water. (*Appareil actionné par une pièce de monnaie pour la vente du gaz et de l'eau.*)

Rowland William Brownhill, Aston, near Birmingham, England, 5th June, 1891; 5 years.

Claim.—1st. The combination, with an automatic vending gas meter attachment, whose mechanism is located between the gas meter, and gas supply, of a coin lever i, consisting of counterpoised end i^2 , and engaging tooth i³, which is placed in its operating position, by the gravitating effect of a coin, coming upon one end of it, and so neutralizing the weighted end, on the said coin being placed within the apparatus, or the enclosing casing of it, as set forth. 2nd. The combination, with an automatic vending gas meter attachment, located between the gas meter, and gas supply, of a coin lever i, having disposed at its front end a counterpoised weight i^2 , for taking the said coin lever out of tooth and into a stop position, after the return of the cognate parts of the mechanism to their normal positions, after the releasing and passing of a coin, as set forth. 3rd. The combination, with an automatic vending gas meter attachment, of a coin lever i, with weighted fore end i^2 , tooth i^3 , stud i^4 , and tail end and forked formations i^5, i^6, i^7 , as set forth. 4th. The combination, with an automatic vending gas meter attachment, of a cam shaped projection j, with guide j^2 , lip j^4 , locking shoulder j^5 , and returning and curved top j^6 , as set forth. 5th. In a gas vending prepayment attachment, the combination with a coin lever i, having a tooth i^3 , and a stud i^4 , and a tail part i^5 , of an out-standing cam shaped yielding projection j, with guide j^2 , releasing lip j^4 , blocking stop j^5 , and curved back j^6 , for respectively guiding and keeping in tooth, releasing, blocking, and taking back the lever to its normal position, as set forth. 6th. In a gas vending prepayment attachment, the combination, with the stud i^4 , of a coin lever, of a blocking shoulder j^5 , for preventing fraud in the event of the attachment being operated by the non-placing of a coin within its casing, as set forth. 7th. In a gas vending prepayment attachment, the combination, with a coin lever i, having tail i^5 , terminated by forks i^6 , and also a coin and coin slot, i^7, i^8 , of a cleft formation i^9 , of the said coin lever, whereby fraud is prevented, or the advancement of the coin lever prevented, by the jamming of the coin against the inside of its conducting slot, as set forth. 8th. The combination, with an automatic vending gas meter attachment, for controlling the gas delivery and registration, of a stop arm e, mounted upon an axis, and located within the path of a radial arm or arms, carried by a drum axis, or an axis in communication with the drum of a meter, substantially as described and set forth. 9th. The combination, with an automatic vending gas meter attachment, of an arm or arms, carried by an axis in connection with the drum of the meter, and whose path is, or are directed within that of a stop arm, and is adapted for stopping the drum on the gas paid for being consumed, as set forth. 10th. The combination, with an automatic vending gas meter attachment, of a supplementary stop O, which falls and

blocks the meter drum or its axis, on the pusher or operating expedient being pushed or driven home, substantially as set forth. 11th. In a gas vending prepayment attachment, the combination, with the stop arm *e*, of the arms *n*², of the drum axis *n*, as set forth. 12th. In a gas vending prepayment attachment, the combination with a drum axis, or an axis in connection with it, having arms *n*², of a stop *O*, having an attachment part *O*³, as set forth. 13th. In a gas vending prepayment attachment, the combination, with a coin lever, of a lever *o*, having long and short arms *o*², *o*³, and having connected with one or other of the said arms a pusher *h*. 14th. The combination, with an automatic vending gas meter attachment, of a quantity wheel *d*, worm or toothed wheel *g*, and clutch *r*, disposed between them, and stop arm *e*, made fast and strung upon an axis common to them, substantially as set forth. 15th. The combination, with an automatic vending gas meter attachment, of a coin lever *i*, *i*², *i*³, *i*⁴, *i*⁵, operating arm *o*, *o*², *o*³, pusher *h*, *h*², and spring *p*, as set forth. 16th. The combination, with an automatic vending gas meter attachment, of a coin lever *i*, *i*², *i*³, *i*⁴, *i*⁵, projection *j*, *j*², *j*³, *j*⁴, *j*⁵, operating arm *o*, *o*², *o*³, pusher *h*, *h*², spring *p*, axis *c*, with stop arm *e*, quantity wheel *d*, toothed wheel *g*, interposed spring clutch *r*, drum axis *n*, having worm *n*³, and radial arms *n*², and supplementary stop *O*, *O*², as set forth. 17th. The combination, with the throat of the coin slot, of an automatic gas meter prepayment attachment, of a jointed fraud prevention arm *m*, with turned end *m*², as set forth. 18th. The combination, with the entrance or passage of the coin slot, of an automatic gas meter prepayment attachment, of a jointed lever *s*, worked from a stud *d*¹, of the quantity wheel *d*, whereby no more coin than gas can be supplied for, can be inserted within the enclosing casing, as set forth. 19th. The combination, with the throat or slot of an automatic gas meter prepayment attachment, of an inverted entrance *l*, as set forth.

No. 36,762. Wrench for Pipes. (*Clé à tuyau*.)

Philo. C. Blaisdell, Carrollton, New York, assignee of Andrew J. Curtis, Monroe, Maine. U.S.A., 5th June, 1891; 5 years.

Claim.—1st. A pipe wrench having a rigid jaw provided with a flaring slot or aperture, in combination with a sliding jaw having a similar slot, a lever pivoted in the slot of the sliding jaw and passing through the slot of the rigid jaw, and a nut for adjustably securing the same, substantially as specified. 2nd. The pipe wrench described, consisting essentially of the rigid jaw having a tapering slot, and a conical seat at the reduced end of said slot, the movable jaw having an eye to receive the rigid jaw, and also having a slot the pivoted connecting lever having one end pivoted in the slot of the movable jaw, and its opposite threaded end passing through the slot of a rigid jaw, the convex nut for adjustably securing the jaws to a lever, and the spring expanding the jaws, substantially as specified.

No. 36,763. Machinery for the Manufacture of Twine, etc. (*Machine pour la fabrication du cordonnet*, etc.)

The Dovercourt Twine Mills Company, of Toronto, assignees of Walter Herbert Avis, all of Dovercourt, Ontario, Canada, 5th June, 1891; 5 years.

Claim.—1st. In a twisting and laying machine for forming twine rope, &c., a vertical stationary twisting frame having a series of whirl hooks in tiers so arranged and operated that alternate hooks are adapted to rotate in opposite directions, the speed of the whirl hooks being regulated by cone pulleys vertical rotary posts with adjustable arms having grooves formed therein to receive and keep separate sets of strands after they have passed from a movable guide or parting frame which is adapted to move suspended from a vertical track, and on an under guide track, and has arms carrying a parting frame to receive the strands before and after being twisted, in combination with a movable laying frame suspended from an overhead track and moving on an under track, with or without a drag to regulate the tension on the cord during the process of formation, and having arms carrying whirl hooks to which the strands of the cord to be formed are attached, and adapted to rotate in a direction opposite to that of the whirl hooks from which the cord is formed on the twisting frame, and at a less rate of speed, the whirl hooks on the laying frame deriving motion from an endless rope driven from the end of the walk where the vertical twisting frame is located, the whole being arranged and operated to form twine, cord, rope, &c., substantially as specified. 2nd. The vertical stationary twisting frame *A*, having the series 15, 16, and 17, of cone pulleys arranged in the frame on spindles in "echelon" to receive the cord *x*, *y*, *z*, in combination with the coned wheel *X*, the friction or contact wheels 33, and 22*a*, whirl hooks *h*, and means for taking up the slack of the endless cord, the whole being arranged and the whirl hooks *h* actuated, substantially as described and specified. 3rd. The rotary post *E*, having arms *E*¹, vertically adjustable, and having pivots at each end adapted to work in suitable holes formed therefor, and having grooves *m*, formed on said adjustable arms to receive the yarn attached to the whirl hooks, substantially as specified. 4th. The vertical parting frame *C*, adapted to move on the upper track *J*, the wheels *c*¹, brackets *o*², the lower track *B*, coned wheels *o*³, arms *C*¹, and *C*², and parting hooks *n*, fixed to said arms *C*¹, arranged and operated, substantially as described and for the purpose specified. 5th. The vertical parting frame *C*, adapted to move on the upper track *J*, and lower track *B*, in combination with arms *C*¹, parting hooks *n*, arm *C*², and grooved top 20, the whole being arranged and operated, substantially as described and for the purpose specified. 6th. The vertical parting frame *C*, adapted to move on the upper track *J*, and lower track *B*, in combination with arms *C*¹, parting hooks *n*, and arm *C*², core head *g*, and spool *p*, the whole being arranged and operated, substantially as described and for the purpose specified. 7th. The core head *g*, fixed to the arm *C*², in parting frame *C*, having central opening *g*², through which the core from the spool is threaded, and having grooves formed thereon to receive the twisted strand to be twisted round the core, substantially as described and specified. 8th. The combination of the vertical movable

laying frame *D*, adapted to move on the grooved upper track *J*, and lower track *B*, with or without drag *M*, wheels 13, and brackets 35, attaching them to the laying frame wheels 14, wheel *L* journaled on said frame endless cord *i*, pulley *L*¹, cord *s*, guide pulleys 1, and whirl hooks *d*, driven by cone pulleys *K*¹, substantially as described and for the purpose specified. 9th. The combination in a vertical twisting frame *A*, of coned wheel *X*, coned pulleys 15, 16, and 17, arranged in "echelon" on said frame, contact pulleys 33, and 22*a*, and idler pulleys 31, whirl hooks *h*, springs 26, endless cord *x*, *y*, *z*, pulley 18, and vertically adjustable pulley 19, journaled on said frame, substantially as described and specified.

No. 36,764. Seal. (*Cachet*.)

Samuel Harry Thompson and Thomas James Cain, both of Cleveland, Ohio, U. S. A., 6th June, 1891; 5 years.

Claim.—In a sealing device, a disc or bolt having a central stud provided with a groove, a spring disc having a central hole and radial slits with cross slits and a slightly concave-convex surface combined and adapted to fasten envelopes and packages or lock nuts, substantially as and for the purpose specified.

No. 36,765. Stove Pipe. (*Tuyau de poêle*.)

William A. Kemp, Toronto, Ontario, Canada, 6th June, 1891; 5 years.

Claim.—A stove pipe section having a joint or locking member along each of its meeting edges, and having the said edges notched or cut away at one end, the said notches being in the form of a re-entering angle, whereby the said edges of the section are permitted to cross each other at or near the end of the said section, substantially as and for the purpose specified.

No. 36,766. Spike, Screw and Nail.

(*Crampons, vis et clous*.)

Albert H. Russell, Mount Washington, Hærbrouck O. Palen and William Edward Everest, both of Kansas City, all in Missouri, 6th June, 1891; 5 years.

Claim.—1st. A spike having two or more teeth which are an integral part of the same, said teeth extending at right angles with the body of the spike, substantially as set forth. 2nd. A spike having teeth extending at right angles with its body, said teeth terminating in a point, substantially as set forth. 3rd. A spike having teeth thereon, said teeth being in the form of a crescent their length extending laterally on said spike, substantially as set forth. 4th. A spike having teeth thereon, said teeth being thickest at their centre where they join the body of the spike and tapering to their points, substantially as set forth. 5th. A spike having teeth thereon, said teeth being thickest at the point where they join the body and tapering above and below to a point, substantially as set forth. 6th. A spike having teeth thereon, said teeth being in the form of a crescent where they join the body, their points being in the form of a segment, said teeth being beveled above and below in equal degree from the centre of the inside of the crescent to the point or outer portion of the segment, substantially as set forth. 7th. A spike having the teeth 1, head 12, having projections 17, and a point with the four beveled portions 9, substantially as set forth. 8th. A nail having a body, a head, a point, and teeth near the point extending outwardly from the body, substantially as set forth. 9th. A nail having a body, a head, a point, and beveled teeth extending outwardly from said body, substantially as set forth. 10th. A nail having a body, a head, a point, teeth on the body near the point and spiral wings on the body near the head, substantially as set forth. 11th. A screw having a body, a head, a point, and teeth extending outwardly from said body, substantially as set forth. 12th. A screw having a body, a beveled head 15, slot 16, in the head, and beveled teeth located near the lower end of said screw, substantially as set forth.

No. 36,767. Indicator for Offices.

(*Indicateur pour bureaux*.)

Rupert E. Kingsford, Toronto, Ontario, Canada, 8th June, 1891; 5 years.

Claim.—1st. An office indicator, comprising a cabinet, one end of which is closed by a single door adapted to be locked, and having in its opposite end a vertical row of apertures, the said cabinet having vertical rows of transparent spaces being headed by a number, in combination with removable rollers having indices on their periphery, said name plates and rollers being arranged to display the indices at the transparent spaces, substantially as and for the purpose specified. 2nd. In office indicators, the combination, with a casing provided on its front plate with numbers arranged in a vertical row, a door for closing one end of the cabinet, a lock for locking the same, an aperture for each number formed in the opposite end of the cabinet of a removable plate, and a removable roller arranged in line with the numbers, said plates and rollers having indices adapted to be viewed through transparent portions of the front plate, substantially as and for the purpose specified. 3rd. The combination, with the cabinet *A*, having apertures *a*¹, in one end thereof, adapted to be closed, and a door *A*², at the opposite end of the cabinet, the slotted uprights *C*, *C*¹, and the bearing plate *C*², arranged in the cabinet as described, said upright *C*¹, having bearings *c*¹, formed at the ends *c*², of the plates *B*, adapted to slide freely in *c*¹, and bearing plate *C*², one of the journals *D* of said rollers extending into one of the apertures *a*¹, substantially as and for the purpose specified. 4th. An office indicator, comprising a cabinet, one end of which is closed by a single door adapted to be locked, and having in its opposite end a vertical row of apertures, the said cabinet having in its opposite rows of transparent spaces in its front plate, each of said

rows of transparent spaces being headed by a number, in combination with removable rollers having indices on their periphery, said name plates and rollers being arranged to display the indices at the transparent spaces, and the said rollers being fitted to receive the key, substantially as and for the purpose specified. 5th. An office indicator, comprising a cabinet, one end of which is closed by a single door adapted to be locked and having on its opposite end a vertical row of apertures, the said cabinet having vertical rows of transparent spaces in its front plate, each of said row of spaces being headed by a number, in combination with removable rollers having indices on their periphery, said name plates and rollers being arranged to display the indices at the transparent spaces, the said roller having formed thereon a tongue to receive the barrel of a key, and a lug to engage with the ward on said key, substantially as and for the purpose specified. 6th. An office indicator, comprising a cabinet, one end of which is closed by a single door adapted to be locked and having in its opposite end a vertical row of apertures, the said cabinet having vertical rows of transparent spaces in its front plate, each of said row of spaces being headed by a number, in combination with removable rollers having indices on their periphery, said name plates and rollers being arranged to display the indices at the transparent spaces, the journals *d'* of the rollers *D*, projecting beyond the casing of the cabinet and having their outer ends formed for the application of a key, said journal being provided with a circular flange from the flat surface of which projects a small shoulder *u*, to engage with the ward on the key, substantially as and for the purpose specified. 7th. An office indicator, comprising a cabinet, one end of which is closed by a single door adapted to be locked and having in its opposite end a vertical row of apertures, the said cabinet having a row of transparent spaces in its front plate, each of said rows of spaces being headed by a number, the removable rollers having indices on the periphery, said name plates and rollers being arranged to display the indices at the transparent spaces, in combination with the journal *d'*, projecting beyond the casing of the cabinet, and having its outer end *d'*, formed for the application of a key *A*, shoulder *u* formed on the flat outer surface of the circular flange of the journal *d'*, and the key *y*, having a barrel *d'*, and *w* wards *e*, bent or curved so that the key for each roller shall be different and guard plates *e'*, fixed on the outside of the cabinet, having slots or wards *e'*, cut to fit the wards of the respective keys, substantially as and for the purpose specified.

No. 36,768. Fanning Mill. (*Tarare-cribleur.*)

John L. Owns, Minneapolis, Minnesota, U. S. A., 8th June, 1891; 5 years.

Claim.—1st. In a grain separator, the combination, with a screen having a curvature decreasing from the head toward the foot or tail of a revolving endless apron arranged with its lower side in rubbing contact therewith, and adapted to engage outs and carry them onward, substantially as and for the purpose set forth. 2nd. In a grain separator and cleaning machine, a feed hopper having a contracted discharge, a vibrating shoe supported beneath said hopper, and with screens *D*, and feed slide attached to said shoe beneath said discharge, and having one side adjustable, whereby the flow of the material from said hopper to said screens may be regulated and controlled, substantially as set forth. 3rd. In a grain separator and cleaner, a frame work carrying a screen and set at an angle, an endless belt supported by drums within said frame work adjacent to said screen, and adjustable slatted carriers supporting the bearings of one or both of said drums, whereby the tension of said endless belt may be regulated, substantially as set forth.

No. 36,769. Machine for Cutting Hubs.

(*Machine à couper les moyeux.*)

John Coleman, Trenton, Ontario, Canada, 8th June, 1891; 5 years.

Claim.—1st. In a hub lathe, the feeding eccentrics *N*, *N*, substantially as shown and described for the purpose set forth. 2nd. In a hub lathe, the eccentric handled tail piece *R*, operating on the sliding mandrel *Q*, substantially as shown and described for the purpose set forth. 3rd. In a hub lathe, the ring *V*, lever *Y*, and eccentric handle *R*, substantially as shown and described for the purpose set forth. 4th. In a hub lathe, the combination of the eccentrics *N*, *N*, eccentric handle *R*, sliding mandrel *Q*, ring *V*, and lever *Y*, in connection with a hub lathe, substantially as shown and described for the purpose set forth.

No. 36,770. Cultivator for Gardens.

(*Scarificateur pour jardins.*)

James A. Everitt, Indianapolis, Indiana, U. S. A., 8th June, 1891; 5 years.

Claim.—1st. In a garden cultivator propelled by a push bar, a two wheeled machine having two independent pivotably connected plow beams for cultivating both sides of a row at one passage, and adapted to be converted into a one wheeled machine for cultivating between the rows by the omission of one wheel, and one beam, and the transposition of the remaining wheel and beam, substantially as described. 2nd. In a garden cultivator propelled by a push bar, a two wheeled machine having two independent pivotably connected plow beams, and attachments for cultivating both sides of a row at one passage, and adapted by the omission or by the rearrangement of some of its parts to be converted into a machine adapted to cultivate between the rows. 3rd. In a garden cultivator propelled by a push bar, a two wheeled machine having two independent pivotably connected plow beams with implements fixed thereto for cultivating both sides of a row at one passage, and adapted by the rearrangement or by the omission and rearrangement of some of its parts to be converted into a machine adapted to cultivate between the rows. 4th. In a garden cultivator propelled by a push bar, a two wheeled machine having two independent pivotably connected plow beams

with implements fixed thereto for cultivating both sides of the row at one time, and adapted by the omission and rearrangement of some of its parts to be converted into a machine to cultivate between the rows. 5th. In a garden cultivator, having two driving wheels and two independent pivotably connected plow beams, and adapted to be converted into a single wheeled machine, with but one plow beam, the combination therewith of a bifurcated push bar adapted to straddle the wheel in the one wheeled modification, substantially as and for the purpose set forth. 6th. In a garden cultivator, the bars *E*, *E'*, connected at their outer ends by a bolt to which the plow beams are pivotally attached, as described. 7th. In a combined machine for cultivating on both sides or between the row, the bars *E*, *E'*, extending beyond the circumference of the wheel, and connected at their outer ends by a bar to which the plow beams are fastened, for the purposes described. 8th. In a cultivator propelled by a push bar, the bars *E*, *E'*, and connecting rod *i*, in connection with the bars *I*, having a series of holes in their upper ends, the push bar *C*, and the bolt to fasten the braces to the push bar, substantially as and for the purpose described. 9th. In a garden cultivator, the combination, with the plow beam, of a sleeve adapted to be fastened thereon by the set screw having the vertical joint *L*, and the plate *K*, arranged, substantially as described for the purposes specified. 10th. In a garden cultivator, the driving and supporting wheel *B*, axle *A*, propelling bar *C*, and beams carrying the implement to operate on the soil, said beams having free vertical adjustment, and also adjustment in a horizontal direction and having the horizontal adjustment at a point sufficiently remote from the periphery of the wheels to prevent contact with the wheels.

No. 36,771. Egg Carrier. (*Boîte à oeufs.*)

Theodore Elson Perkins, Tunkhannock, Pennsylvania, U. S. A., 8th June, 1891; 5 years.

Claim.—1st. The combination, in an egg carrier, of a series of egg-carrying cells box sides surrounding the said cells and projecting above and below their level, and a top and bottom, each provided with a flange and adapted to fit within the said sides and to be secured thereto flange outward, substantially as described. 2nd. The combination, in an egg carrier, of a series of cells adapted to closely enclose one egg each, a top and a bottom therefor, and sides surrounding the said cells top and bottom, and projecting above the body of the top and below the bottom, and fastened to both, substantially as described.

No. 36,772. Catch for Brooms. (*Porte-balai.*)

Mary Lamont, Lincoln, Kansas, U.S.A., 8th June, 1891; 5 years.

Claim.—1st. A catch, substantially as described, consisting of a block having a catch formed thereon, said block having means for attaching it to the handles of implements for the purpose of supporting the same. 2nd. An elastic block having a catch thereon, and an aperture therein for the reception of a handle. 3rd. A catch block having a ledge formed thereon, and an aperture therein, for the reception of a handle.

No. 36,773. Weighing Scales. (*Balances.*)

Gustave Lundberg, Logan, Utah, U.S.A., 8th June, 1891; 5 years.

Claim.—1st. The combination, in a weighing scale, of a main beam, a support pivoted to one end thereof, a sliding weight *W*, and a bar *O*, for adjusting the sliding weight, said weight having attached thereto a slotted tube carrying an indicator which moves over a scale-plate attached to the beam, substantially as set forth. 2nd. The combination, in a weighing scale, of the pivoted beam *C*, having a slotted scale plate, a movable weight carrying a slotted tube, and a locking bar *O*, and a transverse guide or wall having an opening through which the slotted tube and locking bar pass, said locking bar having notches, substantially as set forth. 3rd. In a weighing scale, the combination of a main beam, consisting of parallel side pieces suitably fulcrumed, and a pan-carrying frame through which the tube *C*, and locking bar pass, said pan-carrying frame being pivotally attached to the side pieces of the beam, and provided with a link or bar *d*, connecting the same with the base frame, substantially as set forth. 4th. The combination, in a weighing scale, of the pivoted beam *C*, having a movable sliding weight, and means for adjusting and holding the same, a slotted scale-plate over which the indicator passes, a pan-supporting frame hung upon the side pieces of the beam and connected to the base by a bar *d*, and a basket hung upon the opposite end of the beam, said basket being located beneath a series of vertically-movable weights and provided with a slotted bar with which the arm of an oscillating pointer engages, substantially as set forth. 5th. In combination, with a main beam *C*, and attachments therefor, of vertical supports *F*, and *F'*, having slots for supporting a series of vertically-moving weights, and a basket or frame located beneath said weights and pivotally attached to the end of the main beam, said basket being adapted to operate an indicator, substantially as set forth. 6th. In combination, with the main beam *C*, of a weighing scale, a vertically moving basket or frame *J*, a bar *d'*, for connecting the same to the base, a frame *L*, attached to the beam *C*, *C*, at the opposite end to which the frame *J*, is secured, and bar *d*, connecting the lower end of the frame *L*, to the base, substantially as set forth. 7th. In combination, with a weighing scale constructed, substantially as shown, standards attached to the same base and carrying a graduated plate, a pivoted pointer adapted to move in proximity thereto, and means for connecting the same to a movable basket suspended from the scale beam, substantially as set forth. 8th. In a weighing scale, the combination, with the scale beams *C*, carrying at one end a basket, said basket having a horizontal slot, of an indicator or pointer *G*, carried by a weighted arm *H*, said arm being pivotally secured to a support, and provided with a projecting pin which engages with the slot in the basket together with a scale plate *F*, over which the in-

dicator travels, substantially as set forth. 9th. In combination, with a series of weights K, supports therefor having V-shaped slots within which the pins carrying the weights lie, and a vertically movable basket or frame attached to the scale beam, substantially as set forth. 10th. The combination, with a scale beam constructed, substantially as set forth, and provided with an adjustable weight, of a slotted tube C', and spring locking bar O, having notches o, said bar being twisted so that the portion in which the notches are located is vertical and its spring tendency downward, as set forth. 11th. In combination, with a weighing scale, a beam C, pan-supporting frame L, bars d, and d', pivoted as shown, and a basket or frame J, attached to the main beam and bar d', said basket being adapted to engage with a series of vertically moving weights and operating an oscillating pointer which moves over the faces of the scale-plate F, substantially as set forth.

No. 36,774. Hay Press. (*Presse à foin.*)

Alphonse Dansereau, Verchères, Quebec, Canada, 8th June, 1891; 5 years.

Claim.—1st. In a hay press, the piston B, piston rod C, wheel F, standards G, quadrant J, connecting rods E, and H, crank I, shaft J, clutch O, composed of the two pieces N, and K, and lever M, substantially as described and for the purposes set forth. 2nd. In a hay press, the combination of the frames A, and L, with the piston B, piston rod C, wheel F, standards G, quadrant D, connecting rods E, and H, crank I, shaft J, clutch O, and lever M, substantially as described and for the purposes set forth.

No. 36,775. Bicycle. (*Bicycle.*)

Walter Eugene Coburn, Toronto, Ontario, Canada, 8th June, 1891; 5 years.

Claim.—1st. A tandem single runner sled attachment for bicycles, consisting of the front and rear runners A, and B, which are propelled by the wheels J, deriving motion from the treadle P, by the sprocket wheel and chain connections, as specified. 2nd. The front and rear runners A, and B, propelled by the wheels J, in combination with a brake wheel Q, supported on one end of the pivoted lever R, which is connected at the other end by the chain S, running over the pulley s, to the lower end of the bent rod T, pivoted on the end of the brake shoe U, which is operated, as and for the purpose specified. 3rd. The front runner A, formed of the standards C, and braces D, secured in the bearings of the front wheel a, of the bicycle, in combination with the rear runner B, formed of the standards G, and braces F, secured in the bearings of the rear wheel, and propelled by the wheel J, operated as specified. 4th. The rear runner B, having lugs a, by which it is pivoted on the lug b, secured at the bottom of the bar E, the spring z, located between the runner proper B, and the bar E, in combination with the bar E, braces F, and H, and standards G, the top of which is secured in the bearing of the rear bicycle wheel, as specified. 5th. The rear runner B, having propelling wheels J, the axle of which is journaled in the bearing box K, in combination with the standards G, and spiral springs g, arranged on the said standards, as and for the purpose specified. 6th. The rear runner B, having propelling wheels J, the axle of which is journaled in the bearing box K, in combination with the standards G, spiral springs g, chain L, connected to the top of the bearing box K, running over the pulley L, and connected by the rod M, to the lever N, which is held in any desired position by the teeth of the rack n, as and for the purpose specified. 7th. The rear runner B, provided with standards G, having guards f, following the curve of the said standards and partially encircling the same, as specified. 8th. The front runner A, having a brake wheel Q, pivoted in one end of the lever R, and having a spiral spring r, connecting this end of the lever to the top of the standard, in combination with the chain S, rod T, and their connections, arranged as and for the purpose specified.

No. 36,776. Clothes Pin. (*Épingle à linge.*)

Harvey Tirrell, Pittsburg, and Percival Delmar Heath Colesbrook, New Hampshire, and Whitcomb Tirrell, Pittsburg, New Hampshire, all in U.S.A., 8th June, 1891; 5 years.

Claim.—1st. In a metallic clothes pin, the combination of a wire doubled to form diverging arms, formed with offsets near their free ends and with outwardly-bulged clamping-jaws at said ends, and having the upper doubled end bent to form an eye at a right angle to said arms, with a wire having its upper end formed into an eye or ring-sliding in the eye of said doubled wire, and formed with a ring or slide at its lower end which slides upon the arms of said wire and engages the offsets upon the same, substantially as described. 2nd. In a metallic clothes pin, the combination of the wire J, doubled to form the arms 2, having the offsets 4, and jaws 5, bent to form the eye 3, and having the loop 6', formed upon one of said jaws, with the wire 7, having the eye or ring 8, at its upper end, and the ring or slide 9, at its lower end which slides upon said arms 2, substantially as described. 3rd. In a metallic clothes pin, the combination of the wire I, doubled to form the arms 2, bent to form the eye 3, and the shoulder 10, and having the bulges 4, and the jaws 5, one of which is doubled at its end and returned to form the guide-loop 6', with the wire 7, sliding in the eye 3, having the ring 8, at its upper end, and the ring or slide 9, at its lower end, which slides upon and clamps said arms 2, substantially as described.

No. 36,777. Sharpener for Pencils.

(*Taille-crayon.*)

Edwin S. Drake, Cambridge, Massachusetts, U.S.A., 9th June, 1891; 5 years.

Claim.—1st. In a pencil sharpener, the combination of a shaft, a rocking carrier travelling thereon, and carrying a pencil holder, and a file arranged transversely to the length of the pencil, substantially

as described. 2nd. In a pencil sharpener, the combination of a rock shaft, a carrier travelling thereon and carrying a pencil holder, and a file arranged transversely to the length of the pencil, substantially as described. 3rd. In a pencil sharpener, the combination of a rock shaft, a carrier sliding to and fro thereon and carrying a pencil holder rotated by contact with said shaft, and a file arranged transversely to the length of the pencil, substantially as described. 4th. In a pencil sharpener, the combination of a rock shaft having a rack thereon, a carrier sliding to and fro on said shaft and carrying a pencil holder having teeth or cogs to engage the rack on the shaft, and a file arranged at right angles to the length of the pencil, substantially as described. 5th. A pencil sharpener, consisting of a back or stand, a rock shaft suitably mounted thereon, and having a rack, a carrier sliding to and fro on said rock shaft and carrying a pencil holder having a gear connection with the rack on the shaft, and a file arranged on said stand parallel with the rock shaft but in a position transverse to that of the pencil, substantially as described.

No. 36,778. Mechanical Motion.

(*Embrayage à friction.*)

Patrick Blackie, Redfern, and John Nisbet, Coolahab, both in New South Wales, Australia, 9th June, 1891; 5 years.

Claim.—1st. The improved mechanical motion, comprised in the combination and arrangement with a peculiarly recessed disc or femestiar, (adapted to revolve) of a tongue or male or diametang (adapted to reciprocate) gearing in and with the recesses of said femestiar, substantially as herein described and explained. 2nd. The improved mechanical motion having a disc or femestiar and male or diametang whose construction or configuration is determined, in the manner and for the purposes, substantially as herein described and explained and as illustrated in the drawing. 3rd. The improved mechanical motion constructed and arranged, substantially as herein described and explained and as illustrated in the drawing.

No. 36,779. Transplanter. (*Transplantoir.*)

John William McKay, Lynchburg, Virginia, U.S.A., 10th June, 1891; 5 years.

Claim.—1st. A transplanter, consisting of two upright supports bearing the side shovels and the actuating rods, and springs joined at the top by a movable cross-handle, and at the bottom by a forwardly-curving bar, having a plate, a cutter, and the front jaw of a plant-holder attached to it, and having midway between them, a lever attached to and moving on a rock-shaft and carrying at its lower end a cutter and the rear jaw of the plant-holder which is hinged to the front jaw at the top, said lever having a bottom forward-curve, a central backward-curve and its upper end bent forward at an angle and curved terminating in a hook, and having two shoulders which engage with a spring-actuated bolt attached to the cross-handle, substantially as shown and described. 2nd. The combination, with the supports cross-handle shovels, cutters, rock-shaft, and hopper of a transplanter, of a lever between the supports having its upper section bent forward at an angle and curved, and two shoulders on one side its next lower section straight, its next lower section curved backward, and its lowest section curved forward, substantially as shown and described. 3rd. A combined transplanter and seed planter, consisting of a seed dropper within and detachably fastened to the front and rear jaws of the plant holder, substantially as shown and described.

No. 36,780. Zinc for Batteries. (*Zinc de batterie.*)

Joseph Moseley, Manchester, Lancaster, England, 10th June, 1891; 5 years.

Claim.—1st. Flat, rectangular, and similar battery zincs, constructed from separate sheets or layers of wrought or rolled sheet zinc, secured together by means of zinc or of non-conducting fasteners, substantially as hereinbefore described, and as illustrated by the accompanying drawings. 2nd. Tubular and cylindrical battery zincs, constructed from separate tubes of rolled or wrought zinc, arranged concentrically with each other, substantially as hereinbefore described, and as illustrated by the accompanying drawings. 3rd. Flat, rectangular, and similar battery zincs, constructed from sheets or layers of wrought or rolled zinc, separately amalgamated, and secured together by means of zinc or of non-conducting fasteners, substantially as hereinbefore described, and as illustrated by the accompanying drawings. 4th. Tubular and cylindrical battery zincs, constructed from tubes of wrought or rolled zinc, separately amalgamated, and arranged concentrically with each other, substantially as hereinbefore described, and as illustrated by the accompanying drawings.

No. 36,781. Hay Ricker.

(*Appareil à mettre le foin en meule.*)

Charles Worcester Ham, Canaanville, Ohio, U.S.A., 10th June, 1891; 5 years.

Claim.—In a hay ricker, the combination, with a base, a transverse bolt therethrough, a pitcher, and an inclined brace pivotally mounted on said bolt, an upright rising from said base, and an operating rope leading over a pulley on the base, over a pulley at the top of the upright, over a pulley at the upper end of the brace, over a pulley on the pitcher, and connected to the end of the brace, of arms Q, projecting from the upright, pulleys I, in their outer ends, a cross bar on the upper end of the inclined brace, having pulleys in its ends, a rope connecting the upright and brace, a weight T, having pulleys S, and ropes R, leading from a point on the upright through the pulleys S, over the pulleys at the ends of the cross bar, and connected to the pitcher, the whole adapted to operate, substantially as described.

No. 36,782. Hand Power Beater for Carpets. (*Machine à battre les tapis.*)

John Clark, Pontiac, Michigan, U. S. A., 10th June, 1891, 5 years.

Claim.—In a hand power carpet beater, the combination of the handle A, A' slotted to receive the pulley G, and bifurcated to hold the wheels C, C, and the shaft B, the pulley G, the wheels C, C, revolving on their axles, independent of the shaft B, the shaft K, carrying the flexible beaters and revolving on its axle, the flexible beaters D, D, on the shaft B, the pulley E, in the center of the shaft B, and integral with it, the endless belt F, running over the pulleys G, and E, and the crank I, driving the pulley G, all substantially as described.

No. 36,783. Stone or Log Boat.(*Bateau pour billots ou pierre.*)

Warren Kimble and Nathaniel Schmid, both of Manchester, Michigan, U.S.A., 10th June, 1891; 5 years.

Claim.—A stone or log boat, consisting of a board bottom A, and side piece B, dressed off to an incline at their forward end, and the metal plate F, extending across the dressed end, in combination with the auxiliary cross-piece E, and the metallic straps G, bolted down through the cross pieces and the parts A, and B, substantially as described.

No. 36,784. Indicator for Electric Bells.(*Indicateur pour timbres électriques.*)

Katharine S. Benner, (assignee of George Francis Ransom), both of Minneapolis, Minnesota, U.S.A., 10th June, 1891; 5 years.

Claim.—1st. The combination, in a guest-call, of a clock, a revoluble dial arranged upon the hour-arbor of the clock, and provided with a series of movable pins and each adapted to close a circuit through an electric bell at any hour desired, substantially as described. 2nd. The combination, in an electric guest-call, with a call bell, of the revoluble dial 13, contact pins 17, mounted on said dial, an elastic band surrounding said pins, and the spring 33, with which said pins are adapted to make contact, substantially as described. 3rd. The combination, with the frame 2, having the spaces 9, of an electric bell, a clock, a revoluble dial arranged upon the hour-arbor of said clock and pins arranged upon said dial, adapted to close the electric circuit of said bell at any hour desired, substantially as described. 4th. The combination, in a guest-call, of a board 2, having arranged upon it the hooks 5, having checks representing the numbers of each room, the hooks 7, representing the hour-calls, a clock 3, dial 13, pins 17, electric call-bell 21, and springs 31, and 33, constructed and operated, substantially as described, for the purposes specified.

No. 36,785. Valve for Air Brakes.(*Soupage de frein automatique.*)

The New York Air Brake Co., New York City, (assignees of Albert Parsons Massey, Watertown), New York, U.S.A., 10th June, 1891; 5 years.

Claim.—In a triple valve, the main valve piston having one side open, the pressure from the auxiliary reservoir and the other side open to train pipe pressure, combined with a valve controlling a direct passage from the train pipe to the brake cylinder, a piston actuating said valve, a passage leading from the train pipe to said piston, and a valve controlling said passage and subject on one side to auxiliary reservoir pressure and on the other to train pipe pressure.

No. 36,786. Machine for Making Felted and Napped Fabrics. (*Machine pour faire les étoffes feutrées et à poil ras.*)

Elizabeth Kyle Broadhead, (assignee of Joseph Broadhead), both of Cornwall, New York, U.S.A., 10th June, 1891; 5 years.

Claim.—1st. The combination, in a machine for making felted and napped fabrics, of two sets of frames M, M', needles N, N', and the mechanism for reciprocating the respective frames in unison, and the mechanism for supplying the bat and woven foundation and drawing the same through the machine during the felting operation, substantially as set forth. 2nd. The combination, in a machine for making felted and napped fabrics, of two shafts P, P', sprocket wheels and chains for connecting the same, and driving them in unison, two frames M, M', and their respective needles N, N', and the mechanism for connecting the frames with the respective driving shafts for reciprocating such frames in unison, and felting the fabric as it is supplied and fed along progressively by mechanism, substantially as set forth. 3rd. The combination, in a machine for making felted fabric, of means for supplying the bat and the woven foundation, one set of needles for felting the bat to the foundation, and another set of needles for finishing the surface of the fabric, and mechanism for reciprocating the respective sets of needles in unison and for drawing along the fabric as it is felted, substantially as set forth.

No. 36,787. Buckle. (*Boucle.*)

David Bell, Rockton, (assignee of John Francis Ballard, Hamilton), both in Ontario, Canada, 10th June, 1891; 5 years.

Claim.—1st. The fastener B, with the slots b, b', for pivoting the buckle frame A, and the tongue C, respectively and eccentrically, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, of the buckle tongue C, with the fastener B, whereby it is adapted to be pivoted eccentrically in reference to the pivoting of the buckle frame A, substantially as shown and for the purpose hereinbefore set forth.

No. 36,788. Starter for Vehicles.(*Appareil de mise en marche des voitures.*)

Samuel Leendert Huizer, the Hague, Holland, 12th June 1891; 5 years.

Claim.—1st. In a starting apparatus for vehicles, the combination of a drum affixed to the axle, a ring working on same, a shoe pivoted to the ring to act on said drum, an unequal armed lever connected to the ring and adapted to operate the shoe, a draw bar connected to the other arm of the lever and means for retracting and for securing the draw bar, substantially as described. 2nd. In a starting apparatus the combination, of a drum affixed to the axle, a ring working on same, a lug carrying a shoe pivoted to the ring, a bell cranked lever F, having an arm L, adapted to operate the lug, links connecting the lever F, and the ring, a draw bar connected to the lever F, a spring for retracting said draw bar, and a latch pin operated by the driver for releasing and securing the draw bar, substantially as described.

No. 36,789. Wagon. (*Wagon.*)

Thomas Isaac Nowry, Sparta, Ontario, Canada, 12th June, 1891; 5 years.

Claim.—1st. The combination, in a wagon bottom, of dumping doors having self closing springs with automatic catches or locks, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, in a wagon bottom, of any number of hinged doors made to open downwards for the purpose of unloading any part of the load, substantially as described and for the purpose hereinbefore set forth. 3rd. The combination, in a wagon bottom or box, of any number of partitions and self locking dumping doors for unloading any or all the compartments, substantially as and for the purpose hereinbefore set forth. 4th. The combination, of self closing doors and automatic catches or locks for securely retaining the doors in place, substantially as and for the purpose hereinbefore set forth.

No. 36,790. Steam Air Pump.(*Pompe pneumatique à vapeur.*)

The New York Air Brake Company, New York, (assignees of Albert Parsons Massey, Watertown), both in New York State, U.S.A., 12th June, 1891; 5 years.

Claim.—In a duplex steam air pump, the cylinders 1, and 2, and pistons 22, and 21, each connected to a piston in an air cylinder, in combination with valve stems 7, and 8, tappets 20, and valves 5, and 6, with ports communicating with each end of the opposite cylinder, substantially as set forth.

No. 36,791. Spring for Vehicles.(*Ressort de voiture.*)

William Atkinson and Richard John Rolden, both of Granby, Quebec, Canada, 12th June, 1891; 5 years.

Claim.—1st. In a vehicle spring, the knuckle pieces D, rigidly secured to the slide plates of the spring and having the lugs E, the bolt G, passing through said lugs and pivoting them to the blocks F, the standing pins H, on said blocks, and the clips K, binder L, and nuts M, substantially as herein shown and described. 2nd. In a carriage spring, the top tension plate O, secured to the spring plates A, by the central bolt P, and clips R, and having its end portions set up from the spring plates so as to produce a spring tension and connected by shackles with the inner ends of the slide plates B, substantially as herein shown and described. 3rd. In a carriage spring, the rub plate Q, secured centrally by the bolt P, to the under side of the spring projecting from it on its outer side, and having its end portions which engage with the clips R, and cross bars S, set down from the spring plates so as to hold said clips down upon the spring plates A, substantially as herein shown and described.

No. 36,792. Machine for Washing Dishes.(*Machine à laver la vaisselle.*)

Elijah Smith and Herbert G. Rolfe, both of Ottawa, Ontario, Canada, 12th June, 1891; 5 years.

Claim.—1st. A machine for washing dishes, consisting of a tank for holding the water, a rotary brush, and an apron for carrying the dishes up out of the water and from under the brush, the apron bearing cleats surmounted by brushes to help out the washing and to cleanse the machine when necessary, and an operating mechanism all combined, substantially as set forth. 2nd. In a machine for washing dishes, the combination, with the rotary brush B, having the adjusting screw L, the pulley F, and the belt I, of the apron D, having the cleats N, the rollers E, and E', and the crank J, substantially as set forth. 3rd. In a machine for washing dishes, the combination, with the tank A, whose bottom is formed of convergent plates of the cleat N, the apron D, the brush B, the cover C, and the outlet H, substantially as set forth. 4th. The use in a machine for washing dishes, of brushes made of fibre instead of hair or bristles, substantially as set forth.

No. 36,793. Storage Receptacle for Cars.(*Réceptacle d'emmagasinage pour chars.*)

George W. Turner, South Omaha, Nebraska, U.S.A., 12th June, 1891; 5 years.

Claim.—1st. As an improved article of manufacture, a car register consisting of a cylindrical shell provided with an opening and a cover therefor, and a drum held to revolve within the shell and provided with peripheral under-cut ribs forming surface compartments,

and a longitudinal cavity formed between several of the ribs, constituting a chamber, which chamber is provided with a sliding cover, as and for the purpose specified. 2nd. A car register, consisting of a shell or jacket provided with an opening and a cover therefor, a drum held to rotate within the shell and provided with chambers and surface compartments, the chambers having sliding covers, and the surface compartments side grooves, and shafts journaled in the shell and connected with the drum, as and for the purpose specified. 3rd. In a car register, the combination, with a shell or jacket provided with a slot in one head and having a side opening and a cover therefor, of a drum held to revolve in the jacket or shell, provided with longitudinal chambers having sliding covers and surface compartments having grooved walls, shafts journaled in the shell and connected with the drum, a pivoted track, and hangers in which the shafts are journaled, provided with wheels adapted to travel upon said track, as and for the purpose set forth.

No. 36,794. Tie and Fastening Device for Railways. (*Traverse de chemin de fer.*)

Lewis Wallace, Crawfordville, Indiana, U. S. A., 12th June, 1891; 5 years.

Claim.—1st. A railway cross tie, consisting of wide bearings B, B, provided with jaws and a connecting bar A, narrower than the bearings to which the latter are secured, substantially as described. 2nd. The combination of the bearings B, B, provided with detachable jaws and securing devices, and a connecting bar A, narrower than the bearings, substantially as described. 3rd. The bearings B, having lugs receiving between them parts of vertically detachable jaws and securing pins A, in combination with a cross bar A, substantially as described. 4th. The combination, in a cross tie, of broad bearings B, B, narrower cross bar A, and anchors H, H, substantially as described. 5th. The combination, with the bearings B, B, provided with clamping jaws, of a cross bar A, connected to the bearings and bent downward at the ends to form anchors H, H, substantially as described.

No. 36,795. Compressor for Air. (*Machine de compression.*)

Owen Adolphus Clark, Fife Lake, Michigan, U. S. A., 12th June, 1891; 5 years.

Claim.—1st. In an air compressor, the combination, with a hollow revolving shaft, of two or more compressing cylinders engaged with said shaft and communicating therewith, inlet and outlet valves governing the communication between the shaft and cylinders, pistons working in said cylinders, and means for causing a motion to be given to the pistons, substantially as described. 2nd. In an air compressor, the combination, with the hollow revolving shaft, of two or more compressing cylinders engaged with said shaft and communicating therewith, inlet and outlet valves governing the communication between the shaft and cylinders, pistons working in said cylinders, and means on the exterior of the cylinders for giving motion to the pistons, substantially as described. 3rd. In an air compressor, the combination, with a hollow revolving shaft, of two or more compressing cylinders engaged with said shaft and communicating therewith, inlet and outlet valves governing the communication between the shaft and cylinders, and pistons working in said cylinders, the piston of one cylinder rigidly engaged with the piston of the cylinder directly opposite, substantially as described. 4th. In an air compressor, the combination, with a suitable hollow revolving shaft, two or more cylinders engaged to and revolving with said shaft, and pistons working in said cylinders, said shaft divided into an inlet and outlet portion, of inlet and outlet valves governing the communication between the shaft and the cylinder, a conduit extending from the outer end of each cylinder to the shaft, and inlet and outlet valves governing the passage of air into the outer end of the cylinder and from the cylinder into the conduit, substantially as described. 5th. In an air compressor, the combination, with a suitable hollow revolving shaft, cylinders engaged thereon and communicating therewith, pistons working in said cylinders, and suitable valves for governing the current of air, of means for working the pistons, consisting of the frame L engaged to said pistons, said frame L revolving on a centre to one side of the centre of revolution of the cylinders, substantially as described. 6th. In an air compressor, the combination, with a suitable hollow revolving shaft, cylinders engaged thereon and communicating therewith, pistons working in said cylinders, and suitable valves for governing the current of air, of means for working the pistons, consisting of the frame L engaged to said pistons, in which rollers or wheels M, travel, the centre of said track or way being to one side of the shaft to which the cylinders are engaged, substantially as described. 7th. In an air compressor, the combination, with a suitable hollow revolving shaft, cylinders engaged thereon and communicating therewith, pistons working in said cylinders, suitable valves for governing the current of air, the frame L, engaged to said pistons, and track J around which it revolves, of cranks N, pivoted to the said frame L and to the cylinders, whereby the two are engaged together, substantially as described.

No. 36,796. Kiln. (*Four.*)

Luigi Trevisan, Villaverla, Italy, 12th June, 1891; 5 years.

Claim.—1st. In the operation of continuously acting kilns, the method of effecting the baking of the material, such as bricks, lime, cement, etc., by the combustion of gas generated by the distillation of coal stored in the kilns, substantially as set forth. 2nd. In continuously acting kilns in which horizontally arranged retorts are employed, the mode of preparing the kiln for operation, consisting in first charging the retorts, and afterward placing the material to be baked within the kiln in proper relation to the retorts, substantially as set forth. 3rd. In continuously acting kilns, the method

of operating the same, which consists in arranging within the compartments of the kiln vertical retorts made of the material to be baked, and charging said retorts with the coal fuel when the retorts are hot enough to ensure the generation and ignition of gas, by the combustion of which the baking is effected, substantially as set forth. 4th. The combination, with the compartments of a continuously acting kiln, of retorts placed in the mass of the material to be baked and charged with coal adapted to be distilled, substantially as and for the purpose set forth. 5th. The combination, with the compartments of a continuously acting kiln, of retorts placed horizontally on the bottom of the compartments, said retorts formed of walls of fire proof or other bricks and separated by free spaces or flues for the circulation of flame, substantially as set forth. 6th. The combination, with the compartments of a continuously acting kiln, of retorts constructed vertically on the plane of the kiln of the material to be baked, and having a circular, elliptic, or suitable prismatic section, substantially as set forth.

No. 36,797. Handle for Saws. (*Manche de scie.*)

John A. Corey, Hope Valley, Rhode Island, U. S. A., 12th June, 1891; 5 years.

Claim.—The combination of the handle D with the oval-headed stud a, and stud b, with the saw-blade C, having the openings f, and oval opening g, made therein, substantially as and for the purpose set forth.

No. 36,798. Lubricator for Wheels. (*Boîte à graisse*)

Tolbert J. Robison, Curnensville, Pennsylvania, U. S. A., 12th June, 1891; 5 years.

Claim.—1st. The combination, with a wheel hub having a transverse open-ended oil chamber C, provided with openings leading to the axle box, of a plug having a longitudinal bore, and externally threaded at its outer end, a valve, F, outside of the plug provided with a stem entering the bore at the inner end of the plug and closely fitting it, and a spring bearing against the inner face of the valve and pressing it away from the plug, substantially as set forth. 2nd. In a wheel lubricator, the combination, with an oil chamber or lubricant receiver provided in one end with an opening, of a plug having a central bore and screwed in the other end of the said chamber opposite the said opening, a valve stem fitted to slide in the said bore, and a spring pressed valve held on the said valve stem and adapted to be seated over the said opening, substantially as shown and described.

No. 36,799. Music Chart. (*Patron pour musique.*)

James Dodd, Boston, Massachusetts, U. S. A., 12th June, 1891; 5 years.

Claim.—1st. The music chart hereinbefore described, composed of a series of arbitrary vertical lines corresponding to the keys of a piano or other like instrument, or to the strings of a zither or other like instrument, notes written on said lines, and a continuous guiding line extending across the clear spaces between the arbitrary vertical lines and extending unbroken throughout the entire series of notes, connecting the same in the order in which they are to be played in order to produce a melody or tune, as set forth. 2nd. The music chart hereinbefore described, composed of a series of arbitrary vertical lines corresponding to the keys of a piano or other like instrument, or to the strings of a zither or other like instrument, notes written on said lines, letters designating said notes written beside the same, and a continuous guiding line extending unbroken throughout the entire series of notes, and connecting the same in the order in which they are to be struck in order to produce a melody or tune, the spaces between the arbitrary vertical lines being uninterrupted except where they are crossed by said guiding line, as set forth. 3rd. The music chart hereinbefore described, composed of a series of arbitrary vertical lines corresponding to the keys of a piano or other like instrument, or to the strings of a zither or other like instrument, notes written on said lines, numbers written beside said notes indicating their consecutive order, and a continuous guiding line extending unbroken throughout the entire series of notes, and connecting the same in the order in which they are to be struck in order to produce a melody or tune, the spaces between the arbitrary vertical lines being uninterrupted except where they are crossed by said guiding line, as set forth. 4th. The music chart hereinbefore described, composed of notes written at distances apart corresponding to the spaces between the strings of a zither or other like instrument, and a continuous guiding line extending throughout the entire series of notes, and connecting the same in the order in which they are to be struck, as set forth.

No. 36,800. Burglar Alarm.

(*Avertisseur à sonnerie.*)

Charles Cassat Davis, Los Angeles, California, U. S. A., 12th June, 1891; 5 years.

Claim.—1st. In a portable burglar alarm, the combination of the master blade alarm operating mechanism, the driving arbor journaled to the master blade and operatively connected with the alarm operating mechanism, the main spring operatively connecting the arbor with master blade, and the winding blade secured to the arbor. 2nd. In a portable burglar alarm, the combination of the master blade provided with the serrations alarm operating mechanism, the driving arbor journaled to the master blade and operatively connected with the alarm operating mechanism, the main spring secured to the sleeve, the sleeve provided with the serrations and means for holding the sleeve in operative contact with

the serrated portion of the master blade and for throwing the sleeve out of such contact. 3rd. The combination of the master blade, the main spring, the arbor provided with the rigid main spring holding arm, the winding blade journaled upon the arbor, and means for operatively connecting and disconnecting the main spring holding arm and the winding blade, substantially as and for the purpose set forth. 4th. In a burglar alarm, the combination of the master blade, the main spring, the arbor provided with the rigid main spring holding arm, and the flange, the winding blade journaled upon the arbor and provided with the flaring hole and with the lug arranged to engage the arm, and the blade spring arranged to press the free end of the winding blade away from the main spring holding arm.

No. 36,801. Cigarette Machine.

(Machine pour faire les cigarettes.)

Henry Clay Elliot, New York, assignee of Robert Hardie, Brooklyn, both in New York, U.S.A., 12th June, 1891, 5 years.

Claim.—1st. In a cigarette machine, the combination, with an intermittently moving feed apron, of the parting bars operating thereon and their operating mechanism, the pivoted gripper jaws and their tongue, and means for forwarding the stock from the parting bars to such gripper jaws, as described. 2nd. In combination, with an intermittently moving feed apron, the parting bars operating thereon and their operating mechanism, the pivoted gripper jaws and their tongue, means for forwarding the stock from the parting bars to such gripper jaws, and the receiving channel located below the gripper jaws, as and for the purpose described. 3rd. In a cigarette machine, the combination, with an intermittently moving feed apron, of the parting bars operating thereon and their operating mechanism, a forwarding and retaining device, means for forwarding the stock from the parting bars to the forwarding and retaining device, the pivoted gripper jaws and their tongue, as described. 4th. In a cigarette machine, the combination, with an intermittently moving feed apron, of the parting bars operating thereon and their operating mechanism, a forwarding and retaining device, means for forwarding the stock from the parting bars to the forwarding and retaining device, the pivoted gripper jaws and their tongue, and suitable cleaners or scrapers for cleaning the parting bars and operating mechanism for such scrapers, as described. 5th. The combination, with the intermittently moving feed apron, of the reciprocating forwarding and retaining device, the pivoted gripper jaws and their tongue, such jaws and tongue operating in connection with the forwarding and retaining device and the reciprocating receiving channel. 6th. The combination, with the intermittently moving feed apron, of mechanism for parting the stock into windrows thereon and forwarding the same, of the pivoted gripper jaws and their tongue and the reciprocating receiving channel. 7th. In combination, with the feed apron and the parting bars, the device 57, having a serrated upper edge, means for giving it a longitudinal vibrating motion and pushing it forward and back for the purpose of distributing and levelling the stock in a windrow as it is pushed forward, as described. 8th. In a cigarette machine, the forwarding device 57, having curved connecting rods 58, provided with downwardly extending shoes and side-pins, in combination with the mechanism for moving it forward and back, and trap guide, for the purpose described. 9th. The combination, with the forwarding device 57, having curved connecting rods, shoes, and side pins, as described, the trap guides 6, and 66, on each side of the feed table, as described. 10th. In combination, with the feed apron, the reciprocating forwarding and retaining device, and mechanism for raising it above a row of stock and then lowering it upon the apron behind such row of stock and carrying it forward thereon, and the pivoted gripper jaws and their tongue acting in connection with such device, for the purpose described. 11th. In combination, with the feed apron and mechanism for causing it to intermittently travel forward, means for parting a layer of stock on such apron into rows, means for moving the separate rows forward, the pivoted gripper jaws and their tongue, and the forwarding and retaining device for retaining and supporting each row of stock while it is being compressed into a rod, as described. 12th. In combination, with the intermittently moving feed apron and means for separating the stock into rows thereon, means for moving the separate rows forward, the forwarding and retaining device and its operating mechanism, and the pivoted gripper jaws and their tongue operating in connection with such forwarding and retaining device for compressing the rows of stock, as described. 13th. In combination, with the intermittently moving feed apron for carrying forward a loose row of stock, a reciprocating forwarding and retaining device, the separately pivoted gripper jaws and their tongue, and mechanism for opening and closing the jaws for compressing the stock, as described. 14th. In a cigarette machine, the swinging gripper jaws mounted at their ends by means of pivoted pins in suitable supports and pivotally connected one to the other, in combination with mechanism for opening and closing the jaws, the forwarding and retaining device operating beneath one of the jaws, an intermittently moving feed apron, and a reciprocating receiving channel, as described. 15th. In combination, with the separately pivoted gripper jaws and mechanism for opening and closing them, the pivoted latch pieces 91, and their operating mechanism for locking the jaws together while the stock is being compressed and for releasing them, and a suitable support for the stock. 16th. In combination, with the separately pivoted gripper jaws and mechanism for closing and turning them, thereby compressing the stock in one direction, a compressing and forming tongue arranged between such jaws, and mechanism for operating it for compressing the stock in the other direction to form a rod and for delivering such rod to the receiving channel, and a suitable support for the stock while being compressed, as described. 17th. The separately pivoted gripper jaws mounted on pivotal pins, as described, one of such jaws having guideways at its ends, in combination with a compressing and forming tongue having sliding portions at its ends working in the guideways of the jaw, mechanism for reciprocating the tongue up and down between the jaws, means for operating one jaw toward the

other and for turning both jaws, and suitable means for supporting the stock or rod, as and for the purpose described. 18th. The combination of the pivoted gripper jaws and their operating mechanism, the compressing and forming tongue between the jaws and its operating mechanism, and a suitable support for the stock while being compressed, with the reciprocating receiving channel placed below the jaws and tongue for receiving the compressed rod of stock. 19th. In combination, with the vertically operating compressing and forming tongue and the longitudinally reciprocating receiving channel, and mechanism for simultaneously giving longitudinal reciprocating motion to the tongue and the channel while such tongue is within the channel, as and for the purpose described. 20th. The combination of the receiving channel 27, having inwardly projecting upper edges m^{11} , for the purpose described, with the hooked shields N, N', composed of guides located along the outside of the channel, and means for securing the guides to the channel, and having inwardly turned flanges projecting down into the channel, as and for the purpose described. 21st. In a cigarette machine, a former for partially folding the paper ribbon and carrier-tape, having a tapering form from front to rear and having its under side slightly convex at the broad front end, and of increasing convexity to the rear small end, and pivotally mounted in a frame at the front end of the receiving channel, in combination with the filler-carrier tape, arranged to pass below such former, substantially as described. 22nd. In combination, with the reciprocating receiving channel, the tapering former pivotally mounted in a frame, and means for adjusting it, as described. 23rd. In combination, with the former 117, pivotally mounted in a frame, a supporting spring engaging with it, and an adjusting screw arranged to bear upon it, substantially as and for the purpose described. 24th. In combination, with the pivoted former 117, a tension roller 116, for the paper ribbon mounted in a bracket in the frame of the former, means for adjusting the bracket and former, and the reciprocating receiving channel, as set forth. 25th. In combination, with the receiving channel, the paper guide roller 112, a suitable tension device, the filler carrying tape, and the pivoted and loosely mounted former, whereby the paper ribbon and tape are both partly folded and passed through the channel together. 26th. The combination, of the folding channel 128, consisting of longitudinal sections, a bed piece 127, for holding such sections, and means in the bed piece for adjusting the sections to or from each other, for the purpose described. 27th. In combination, with the folding channel 128, consisting of two sections adjustably supported in a bed piece, an adjustable plate 131, arranged as described and shown, and having its inner edge or lip curved or concaved, and arranged slightly lower than the opposite side of the channel to provide for the passage of the paste wheel against the standing edge of the paper wrapper, and means for conveying the rod forward. 28th. The combination, with the folding channel 128, consisting of the two parts which are adjustable one in relation to the other, the top plate 134, having a concaved lip yieldingly supported on one side below the top of the channel, the paste wheel working above such plate, and means for conveying the rod forward. 29th. In combination, with a folding channel, a first inclined beveled roller operating therein on one side near the front end of the channel for turning down one edge of the paper, and the following vertically-arranged beveled roller working in the opposite side of said channel inside of the standing edge of the paper for rolling down fibres of tobacco before such standing edge of the paper is pasted, and means for carrying the rod forward. 30th. In combination, with a folding channel, the yieldingly-supported top plate, and a paste-wheel, the two inclined beveled rollers 132, and 133, located beyond the top plate and paste-wheel, for folding over the pasted edge of the paper and sealing the wrapper, and means for conveying the rod forward. 31st. In combination, with a folding channel, its beveled rollers 130, 131, 132, and 133, arranged as described, the upper and lower rollers 135, and 136, the yielding plate 134, a paste-wheel 137, and means for conveying the tobacco-rod forward. 32nd. In combination, with a reciprocating receiving channel and a compressing-tongue working therein, a folding channel provided with the rollers, arranged as described, a pasting device, and a filler and wrapper carrying tape arranged in the channels, as and for the purpose described. 33rd. The combination, with a reciprocating receiving channel, and a compressing and forming tongue reciprocating with such channel and vertically operating therein, means for supplying tobacco in rod form of suitable lengths to the receiving channel, a stationary folding channel provided with rollers operating to turn over the edges of the paper wrapper therein, a pasting device, and the travelling tape arranged in the channels, as and for the purpose described. 34th. The combination, of a reciprocating receiving channel 27, having inwardly projecting upper edges m^{11} , to form a recess for the travelling tape, flanges m^{11} , projecting down into the channel to protect the edges of the paper ribbon, a compressing and forming tongue reciprocating with such channel, means for supplying tobacco-stock in rod form of suitable lengths to the receiving channel, a stationary folding channel provided with rollers operating to turn over the edges of the paper wrapper therein, a pasting device, and the travelling tape arranged in the channels, as and for the purpose described. 35th. In combination, with a reciprocating receiving channel and a compressing tongue working therein, a folding channel composed of adjustable longitudinal sections suitably supported and provided with folding rollers, operating as described, a pasting device, and the filler and wrapper carrying tape arranged in the channels, as and for the purpose described. 36th. In combination, with a reciprocating receiving channel and a reciprocating compressing tongue working therein, a stationary folding channel provided with rollers operating to turn over the edges of the paper wrapper therein, a pasting device, the travelling tape arranged in the channels, and a reciprocating cutter frame carrying a revolving cutter, substantially as described. 37th. The combination, of a folding channel, consisting of two adjustable sections, a yieldingly supported top plate therefor, a pasting device, folding rollers working in the channel, and a travelling tape with a reciprocating cutter frame and a rotary cutter, substantially as described. 38th. The paste cylinder having a narrow opening in its head for the passage of the paste wheel, and having a piston working in it, and a downwardly extending piston rod, in combination with a notched pivoted lever, and an adjustable weight for

forcing the rod and piston upward in accordance with the varying pressure required to feed the paste in proper quantity to the paste wheel, as described. 39th. In combination, with the piston rod of the paste cylinder and the cylinder having narrow opening in its head, a separate rack bar sliding in a bracket support, a notched pivoted lever provided with a toothed pinion and spring pawl also pivoted to such support, and an adjustable weight, substantially as and for the purpose described. 40th. The reciprocating cutter frame having on one side a tongue or rib sliding in a guideway and supported on the other side by a reciprocating revolving shaft mounted in suitable bearings, and a tubular holder on the cutter frame, in combination with a cutter head and eccentric cutter blade mounted on said shaft, a sprocket or gear wheel engaging with the shaft by means of a feather, and mechanism for revolving the shaft and giving it and the frame reciprocating motion, substantially as described. 41st. The reciprocating cutter frame, supported as described, and having a holder for the cigarette rod, provided with sharp outer edges, also a soft rubber piece secured adjacent to the holder, in combination with a cutter head mounted on a reciprocating and rotating shaft and having a cutter blade clamped thereto with its curved edge eccentric to the head and shaft, and mechanism for operating the frame and cutter, substantially as described. 42nd. The combination of a feed table, a receptacle for a continuous filler, a pair of gripper jaws means co-operating therewith to form a mold and means for transferring successive portions of loose stock in rows from the table to the gripper jaws, and from the jaws to the receptacle, substantially as set forth. 43rd. In a cigarette machine, the combination of the feed table, a pair of gripper jaws, means co-operating therewith to form a mold, a wrapping ribbon travelling parallel thereto, means for transferring successively portions of the stock in rows to the jaws and from the jaws to the ribbon, substantially as set forth. 44th. The combination of a pair of gripper jaws and means for transferring portions of the stock thereto, of a tongue arranged to move between the jaws, and a suitable support between which and the tongue and jaws the loose stock is compressed to form a rod, substantially as set forth. 45th. The combination of a pair of gripper jaws, a tongue, and a suitable support between which and the tongue and jaws the stock is compressed to form a rod, and a travelling wrapper ribbon, and means for supporting the same in position to receive successive rods from the jaws, substantially as set forth. 46th. The combination, with devices for receiving and compressing successive rows of material to form rods, of a travelling U-shaped strip, and means for supporting and compressing together within said strip, the overlapping ends of successive rods to form a continuous filler, substantially as set forth. 47th. The combination of the separable jaws, a tongue and suitable support all co-operating to form a four part mold for compressing the stock to form a rod, substantially as described. 48th. The combination of a four part mold and means for supplying successive portions of loose stock thereto to be compressed into rods, of a travelling strip arranged to receive the compressed rods from the mold, substantially as set forth. 49th. The combination, with the gripping jaws and tongue, of a blade for forwarding and retaining the row of stock against the pressure of the tongue, all co-operating to form a four part mold, substantially as set forth. 50th. The combination, with devices for receiving and compressing successive rows of stock to form rods, of a travelling wrapper, and a receiving channel for receiving the wrapper and said rods, and means for depositing the rods in succession upon the travelling wrapper in the channel, substantially as set forth. 51st. The combination, with the devices for bending the paper wrapper strip, devices for compressing and feeding successive rows of stock to said bent strip, and devices for bending over and sealing the edges of the strip, of a continuous travelling belt moving in contact with the paper from the receiving to the sealing devices, substantially as set forth. 52nd. The combination, with the devices for compressing successive portions of stock into rods, of devices for feeding and bending up a strip of paper to a U-shape, and devices for delivering the rods in succession into said bent strip, and for then turning and securing the rods, substantially as described. 53rd. The combination, with the receiving channel, of a tapering former adjustably mounted in respect to said channel, substantially as described.

No. 36,802. Shoulder Brace. (*Bretelle.*)

Charles Cluthe, Toronto, Ontario, Canada, 15th June, 1891; 5 years.

Claim.—A shoulder brace having an elastic pressure plate inserted in the pad and shaped so as to exert pressure against the protruding shoulder blades of the wearer.

No. 36,803. Plate for Railway Rail Joints. (*Plaques pour joints de rail de chemin de fer.*)

John G. Hunlock, Wyoming, Pennsylvania, U.S.A., 15th June, 1891; 5 years.

Claim.—1st. In a plate or connector for railroad rail joints, two flat ends or arms connected by a spirally constructed middle part, all of steel. 2nd. In a plate for railroad rail joints, the combination of two flat ends jointed by a spirally constructed middle part, the spiral part having an enlarged section at its junction with the flat ends and gradually reduced in section equidistantly from such junction. 3rd. In a plate for railroad rail joints, two flat ends, in which are made "round" holes, through which pass the bolt *e*, a spirally constructed middle part *b*, and *c*, having an enlarged section at junction with *e*, and a gradually reduced section equidistant from *b*, *d*, *e*, in combination with the bolts *e*, *e*, *e*, and the rail end *f*.

No. 36,804. Threshing Machine. (*Machine à battre.*)

John Adam Beam, Waterloo, Ontario, Canada, 15th June, 1891; 5 years.

Claim.—1st. In a threshing machine, the combination, with the threshing cylinder, of a reciprocating perforated carrier, a return

chute below said carrier, and a reciprocating elevating screen beneath the return chute, substantially as described. 2nd. In a threshing machine, the combination, with the threshing cylinder, of a reciprocating perforated carrier, a reciprocating elevating screen beneath the carrier, and an oscillating return chute beneath the carrier and screen, substantially as described. 3rd. In a threshing machine, the combination, with the threshing cylinder, a reciprocating perforated carrier, a reciprocating elevating screen beneath the carrier, an oscillating return chute between the carrier and screen, imperforate collecting platforms, a separating screen, a hopper and a fan, substantially as described. 4th. In a threshing machine, a carrier consisting of two parts divided longitudinally, and means for alternately reciprocating each part, substantially as described. 5th. In a threshing machine, a carrier consisting of two parts divided longitudinally, of vertical guide flanges at their meeting edges, and means for alternately reciprocating each part, substantially as described. 6th. In a threshing machine, the combination, with the blast, the grain chute, an elevator leading from said chute to an auxiliary cleaning screen, and an auxiliary blast for said screen, substantially as described. 7th. In a threshing machine, the combination of the elevator *S*¹, the screen *S*², the fan *T*, the chute *U*, screen *V*, and discharge chute *V*¹, substantially as described.

No. 36,805. Method of Lining Digesters for Paper Pulp, etc. (*Mode de garnir les pourrissoirs de pâte à papier.*)

Carl Kellner, Vienna, Austria, 15th June, 1891; 5 years.

Claim.—The improvements in lining boilers or digesters used in the manufacture of paper pulp and for other similar purposes, consisting, in the combination with a preparatory layer formed principally of silicate of alumina of a cement composed of about one part of ground slate, two parts of ground glass and one part of Portland cement all ground to a fine powder, with the addition of a weak solution of silicate of soda, substantially as and for the purposes specified.

No. 36,806. Method of Lining Digesters for Paper Pulp, etc. (*Mode de garnir les pourrissoirs de pâte à papier.*)

Carl Keelner, of Vienna, Austria, 15th June, 1891; 5 years.

Claim.—The improvements in lining boilers or digesters used in the manufacture of paper pulp and for other similar purposes, consisting in the combination with the preparatory layer formed principally of silicate of alumina, (preferably ground slate mixed with silicate of soda) of blocks or slabs of acid resisting material, substantially as and for the purposes specified.

No. 36,807. Whistle for Low Water Alarms. (*Indicateur à sifflet du niveau d'eau.*)

Thomas J. Hampton and Robert Holden, both of Oconto, Ontario, Canada, 15th June, 1891; 5 years.

Claim.—1st. In a low water alarm for steam boilers, a pipe *C*, fitted into the shell of the boiler, having on its outer end a whistle, and on its inner end a valve operating by a lever to the end of which is connected a float, substantially as and for the purpose specified. 2nd. In a low water alarm for steam boilers, the combination of the pipe *3*, fitted into the shell of the boiler, a whistle *4*, on the outer end of the said pipe *3*, and the valve *5*, on the inner end of said valve, consisting of a casing *8*, in which is formed straightways *9*, and a plug *10*, having a slot *11*, a shank *12*, on the end of the plug, and lever *6*, connected to the said shank, a float *7*, connected to the outer end of the lever *6*, substantially as and for the purpose specified.

No. 36,808. Furnace for Steam Boilers. (*Foyer de chaudière à vapeur.*)

John Thomas Ellis, Toronto, Ontario, Canada, 15th June, 1891; 5 years.

Claim.—1st. An air pipe connected to a force pump and extending into the front of a furnace, substantially as and for the purpose specified. 2nd. An air pipe connected to a force pump and extending into the front of a furnace, in combination with a steam pipe connected to a steam boiler and extending into the furnace through the air pipe, substantially as and for the purpose specified. 3rd. An air pipe connected to a force pump and provided with a fish tail outlet extending into the front of a furnace, in combination with a steam pipe located within the air pipe, and connected at one end to the steam boiler and having on its other end a branched outlet, substantially as and for the purpose specified. 4th. One or more air pipes located within the bridge of a furnace, and communicating at one end with the ash-pit and at the other end with the furnace, substantially as and for the purpose specified. 5th. One or more air pipes located within the bridge of a furnace and communicating at one end with the ash-pit and at the other end with the furnace, in combination with a regulating valve located at the ash-pit end of each pipe or pipes. 6th. A furnace door provided with a pivoted latch having a small water tank fixed to it, one on either side of its pivot, and connected together at their bottoms, in combination with a catch having an inwardly-slanting slot to receive the latch.

No. 36,809. Cement for Joining Wood, Stone, and other Materials. (*Ciment pour le bois, la pierre, et autres.*)

Lawrence Wilson, Manchester, Lancaster, England, 15th June, 1891; 5 years.

Claim.—The hereinbefore described composition of matter to be used as a cement, and consisting of glue, water, cement, and rosin solution, with or without pigment combined, substantially in the proportions and in the manner hereinbefore set forth.

No. 36,810. Attachment for Check Reins.*(Attache pour Fausses-rènes.)*

Orlando Barrelle, South Hartford, New York, U.S.A., 16th June, 1891, 5 years.

Claim.—The combination, with an overdraw bridle having a short overdraw strap extending toward the rear, and provided at its end with a loop, of the reins and the supplemental strap having its ends attached to the reins to the rear of the harness, saddle passed through the terrets engaged with the said loop in front of the saddle and adapted to render therethrough, substantially as and for the purpose described.

No. 36,811. Railway Chair. (Fauteuil de chars.)

George Washington Rittersbach, Philadelphia, Pennsylvania, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. A railroad chair consisting of a bed-plate with ears, and cheek pieces horizontally entering said ears, said plate and pieces having openings and slots for securing devices, substantially as described. 2nd. A bed-plate with an ear, combined with a cheek piece adapted to be horizontally inserted in said ear, said bed-plate and cheek piece each having an opening for a securing device, substantially as described. 3rd. A bed-plate formed of wrought metal with ears pressed out of said plate to form apertures with the surface of the plate, in combination with cheek pieces adapted to be inserted horizontally through said ears, said plate and cheek pieces having openings for the reception of securing devices, substantially as described. 4th. A railroad chair consisting of a bed-plate having parallel separated ears with openings therein and adapted to embrace the flange of a rail, and cheek pieces adapted to be inserted horizontally through said ears and engage the flange of the rail, said bed-plate and cheek pieces having openings for the reception of securing devices, substantially as described.

No. 36,812. Spring for Vehicles.*(Ressort de voiture.)*

James Percy, Chicago, Illinois, U.S.A., 16th June, 1891; 5 years.

Claim.—The combination, with the front and rear axles, the perch and braces of a vehicle, of the U-shaped spring supports the torsion bars, the clips connecting these bars to the said U-shaped supports, the bed-clips and the C-springs connecting the supports to the axles all as specified.

No. 36,813. Gang, or Circular Saw.*(Scie verticale ou ronde.)*

George E. Elliott, Calais, Maine, U.S.A., 16th June, 1891, 5 years.

Claim.—1st. The combination, with a supporting revoluble shaft, of two or more circular-saw hangers composed of tubular sleeves formed to telescope at their approaching ends and circular saws secured to one end of the sections, substantially as and for the purpose hereinbefore set forth. 2nd. In a circular-saw gang-mill, the combination of the shaft A, the tubular sleeves B, and C, C, mounted on the shaft and formed to telescope at their approaching ends, and the saw secured to the end of each of the sleeves, substantially as and for the purpose hereinbefore set forth.

No. 36,814. Sulky. (Désobligeante.)

Homer Clark Hill, Clinton, Illinois, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. In a sulky, the combination of an axle having a bifurcated central portion forming front, and rear forks and rounded ends, shafts rotably attached to the ends thereof, and springs one end of each of the said springs being connected to the shafts and the other end to the forward fork of the axle, as and for the purposes described. 2nd. In a sulky, the combination of an axle having a bifurcated central portion forming front and rear forks and rounded ends, shafts rotably attached to the said rounded ends, springs, one end of each of the said springs being rotably attached to the forward fork of the axle and the other to the shafts, a seat, and springs mounted on the front and rear forks, and carrying the said seat, as and for the purposes described. 3rd. In a sulky, the combination of a bifurcated axle and two springs H and H', spanning the said bifurcation, and supporting the side springs F of the sulky, substantially as described. 4th. In a sulky, the combination of a bifurcated axle, two springs H and H' spanning the said bifurcation, and supporting blocks on which are strapped the side springs F of the sulky, substantially as described. 5th. In a sulky, the combination of the cross piece C between the shafts, the knuckles D and D', springs E and E', bifurcated axle A, and spring H, spanning the forks of the same, substantially as described. 6th. In a sulky, the combination of the cross piece C between the shafts, the knuckles D and D', springs E and E', bifurcated axle A, spring H, blocks K and springs F and F', substantially as described.

No. 36,815. Rack for Boots and Shoes.*(Porte-chaussure.)*

Samuel L. Saunders, Lynn, Massachusetts, U. S. A., 16th June, 1891, 5 years.

Claim.—1st. A rack for holding boots and shoes, consisting of an open frame work made up of a suitable base and end supports, a series of horizontal supporting bars and pins extending from said bars in pairs, convergingly with a space between the pins of each pair for receiving the upper of the shoe, each shoe being held separately, substantially as described. 2nd. A rack for holding boots and

shoes, composed of a suitable base as A, the vertical standards B, the bars H, H, and cross bars D, recessed to receive the bars H, H, and a series of pins f, extending from the bars H, H, in pairs convergingly, substantially as described.

No. 36,816. Ointment. (Onguent.)

Luella Miles, Lawrence, Massachusetts, U.S.A., 16th June, 1891; 5 years.

Claim.—The herein described composition of matter to be used as a salve or ointment for diseases of and accidents to the skin, consisting of rose water, alcohol, carbolic acid, corn starch, whites of eggs, glycerine, oil of citronella, iodoform, and lily white petrolatum, in substantially the proportions specified.

No. 36,817. Gear for Sleighs.*(Châssis de traineau.)*

William John Hamill, St. Catharines, Ontario, Canada, 16th June, 1891; 5 years.

Claim.—1st. In a sleigh gear, the combination of the runner A, bars B, arched trusses C, cross bars C', segmental brace D, struts E, braces E', having strut e', braces F, having clips f, and brace F' substantially as set forth. 2nd. In a sleigh gear, the combination, with the runners and top bars, of a combined knee and bench, consisting of an arched double strung truss C, having inner arch c, struts c', and c¹, cross bar C', and curved strut c¹¹, substantially as set forth. 3rd. In a sleigh gear, the combination, with the runners and longitudinal top bars, of a segmental brace D, strut E, brace E', with connecting strut e', and front cross bar C', substantially as set forth.

No. 36,818. Toy. (Jouet.)

Sadie F. Simpson, Saxonville, Massachusetts, U.S.A., 16th June, 1891; 5 years.

Claim.—The within described toy, consisting of separated teething rings, a hollow handle interposed between and uniting said rings, and a rattling device within the hollow handle, substantially as shown and described.

No. 36,819. Fence Post and Fence.*(Pieux de clôture et cloture.)*

Joseph R. Smith, Ottawa, Ontario, Canada, 16th June, 1891; 5 years.

Claim.—1st. A fence post made up of the parts B, C, D, E, F, G, and constructed, substantially as hereinbefore shown and described. 2nd. The method of setting the post M, by leading or dragging it into the ground from and by means of its forward pointed end, substantially as described. 3rd. The combination, with the parts or members H, and I, of the parts or members J, K, and the members 1, 2, 3, substantially as set forth. 4th. The combination, with an ornamental iron fence of the post A, substantially as set forth. 5th. The combination of an ornamental iron post, of the fence the sections of which are made up of the parts H, I, J, K, L, with the member M, having the parts N, O, P, substantially as described. 6th. In an iron fence or gate, the method of securing the rails and pickets together by means of the ring K, and the wedge J, substantially as described. 7th. In an iron fence, the use of the rest L, made up of the tube the plate L, and the socket L, substantially as described. 8th. In an iron fence, such as described, the combination, with the post M, of the part or member N, constructed substantially as and for the purposes set forth. 9th. In combination, with a gate, such as described, the hinge made up of the parts or members Q, R, adapted to clasp the relatively adjacent parts of the gate and the post, substantially as set forth.

No. 36,820. Blade for Knitting Wheels.*(Lame pour roues de metier à tricoter.)*

Robert W. Gormly, Troy, New York, U. S. A., 16th June, 1891; 5 years.

Claim.—As an improved article of manufacture, a blade for knitting wheels, having a presser-bit integral therewith cut and struck up from the body part of the blade, substantially as described.

No. 36,821. Steam Whistle. (Sifflet à vapeur.)

Ed. F. Quinlan and John G. Knebel, both of Pueblo, Colorado, U. S. A., 16th June, 1891; 5 years.

Claim.—1st. A steam whistle, consisting of a central tube or stem inclosed in a bowl or bell, and wings and diaphragms arranged, substantially as shown and described. 2nd. In a steam whistle, the vertical stem having the vertical wings radiating therefrom, and the horizontally arranged diaphragms secured between said vertical wings and extending outward, leaving a space between the outer edges thereof, and the inner periphery of the casing to allow the steam to pass therethrough, substantially as shown and described. 3rd. In a steam whistle, the central stem or tube secured in the casing by means of a standard extending therethrough, and having a nut on its lower end, said tube carrying a bell or bowl on its upper end, substantially as shown and described. 4th. In a steam whistle, the central tube or stem carrying the vertical wings and the horizontal diaphragms, the post or standard carrying the bell or bowl on its upper end and extending through a central passage or orifice in said stem to its lower end, where it is secured by means of a nut on one end thereof, fitting in a recess of the wings, substantially as shown and described.

No. 36,822. Seat for Chairs, etc.*(Siège de chaise.)*

John Tye, Hanover, Ontario, Canada, 16th June, 1891; 5 years.

Claim.—1st. As a new article of manufacture for chair and kindred articles of furniture seats, the fabric composed of a series of parallel continuous corrugated wires in which each member of the said series is composed of one or more strands, and is interlocked with the adjacent series, substantially as shown and described. 2nd. The combination, of the woven wire fabric hereinbefore specified and claimed with chair and kindred furniture seats, the marginal groove in said seats, the lacina of said fabric in said groove, and the gimp binding secured to cover and finish the margin of said woven fabric to the frame of the furniture, substantially as shown and described.

No. 36,823. Post for Fences. (Pieu de clôture.)

George Washington Bond, Adrian, Michigan, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. A metal fence post formed of metal V-shaped in cross section, having vertical strengthening flanges *a*, said post tapering from base to top, of lateral anchors at the base, and means for securing the wires to the post, substantially as described. 2nd. A metal fence post formed of metal and consisting of two flanged V-shaped tapered bars secured together by bolts passing through the flanges, and of means for securing the wires to said post, substantially as described. 3rd. The metal fence post *A*, formed V-shaped in cross section and provided with the vertical strengthening flanges *a*, and having its base split and the lower end of the V-shaped portion of the post bent to form supporting feet or flanges *b*, and the lower ends of the flanges *a*, bent to form feet or flanges *c*, located on the opposite side of the post from the flanges or feet *b*, said feet *b*, and *c*, being substantially all at right angles to the post and its strengthening flanges *a*, and having the notches *D*, for the reception of the wires, substantially as shown and described.

No. 36,824. Car Coupling. (Attelage de chars.)

Aaron Burr Allen, Pueblo, Colorado, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. In a car coupling, the coupling hook hung at its angle and having its inner end recessed, in combination with the coupling lever pivoted at one end in the slot of the coupling hook, substantially as shown and described. 2nd. In a car coupling, the coupling hook hung at its angle and having its inner end recessed, in combination with the coupling lever pivoted at one end in the recess of the coupling hook, and having a shoulder on its under side which engages a stop, substantially as shown and described. 3rd. In a car coupling, the coupling hook hung at its angle in a bifurcation in the draw-head, and having its inner end recessed, in combination with the coupling lever pivoted at one end in the recess of the coupling hook, and having a shoulder on its under side designed to engage a stop in a recess in the back of the draw-head, the lever, in continuation, being projected through an opening in the side of the draw-head which serves as a guide, substantially as shown and described. 4th. The car coupling having the swinging coupling-hook hung in the draw-head, and having the uncoupling lever provided with a shoulder engaging a stop on the draw-head, substantially as shown and described. 5th. The car coupling having the swinging coupling hook provided with the uncoupling lever knuckle-jointed or pivoted to said hook, and provided with a shoulder engaging a stop on the draw-head and projecting through the latter to permit its manipulation from the side of the cars, substantially as shown and described.

No. 36,825. Process and Apparatus for Disintegrating Vegetable Substance. (Procédé et appareil de désagrégation des substances végétales.)

Robert Whitehill and Daniel Smith Waring, both of Newburg, New York, assignees of Alexander Selkirk, Albany, New York, all of U.S.A., 16th June, 1891; 5 years.

Claim.—1st. In an apparatus for disintegrating vegetable substances, a digesting vessel which is provided with a digesting chamber, an annular, centrally located liquor chamber, and a liquor chamber within its lower end which chambers communicate through perforated plates, in combination with a pump, a pipe extending between and connecting the inlet of the pump with the annular liquor chamber, pipes extending between and connecting the outlet of said pump with the ends of the digesting vessel, and a heating mechanism that is located within the said pipe circuit, outside of said digesting vessel and is adapted to heat the digesting liquor during its passage from said annular chamber through same pipe circuit and into said vessel, substantially as and for the purpose specified. 2nd. In an apparatus for disintegrating vegetable substances, a digesting vessel which is provided at or near the longitudinal centre of its digesting chamber, with a liquor separating and discharging chamber that is formed by the wall of said vessel, and a cylindrical perforated plate which is arranged concentric with said wall and is secured thereto by solid end rings, and centrally arranged supporting rings that have communicating openings or ports, substantially as and for the purpose shown. 3rd. In an apparatus for disintegrating vegetable substances, a digesting vessel which at or near the longitudinal centre of its digesting chamber is provided with an annular liquor separating and discharging chamber that communicates with said digesting chamber through a perforated plate, and by means of annular plates having lateral openings or ports is divided into two or more communicating sections, substantially as and for the purpose set forth. 4th. In an apparatus for disintegrating vegetable substances, a digesting vessel which has a digesting chamber, and digesting liquor receiving and discharging

chambers separated therefrom by perforated plates, a pipe circuit that connects said liquor chamber, and a pump for producing a circulation of the digesting liquor, in combination with a heating mechanism that is arranged within the pipe circuit, and is composed of a cylindrical shell having within its ends liquor chambers which communicate by means of tubes that are contained within and pass through an intermediate steam chamber, substantially as and for the purpose shown and described. 5th. In an apparatus for disintegrating vegetable substances, a mechanism for heating a digesting liquor, consisting of a cylindrical casing containing two liquor chambers, and intermediate steam chamber and tubes which pass through the latter and furnish communication between said liquor chambers, in combination with a digesting vessel and with piping which extends between and connects said vessel with said heating mechanism, substantially as and for the purpose specified. 6th. In an apparatus for disintegrating vegetable substances, a mechanism for heating a digesting liquor, consisting of a casing containing two liquor chambers, an intermediate steam chamber, tubes that pass through the latter and furnish communication between the said liquor chambers and hollow thimbles which are placed within the ends of said tubes, and operate to reduce the area of the openings in the same, substantially as and for the purpose shown.

No. 36,826. Carrier for Lumber.*(Transport à bois)*

Alfred Turner Kelliher, Bethel, and Jacob A. Thurston, Newry, Maine, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. In a lumber carrier, the combination, with the carriage, of hangers carried by suitable supports and having grooves *g*, in the outer ends of their feet and vertical holes through said feet, the wire track rope *M*, resting in said grooves, and the fastenings inserted through said holes and engaging the strands of the track rope substantially as described. 2nd. In a lumber carrier, the combination, with the carriage, of hangers having eyes at their upper ends, connections between said eyes and the hanger supports, points at the lower ends of said hangers entering said supports, and a track rope *M*, carried by the feet of said hangers, as and for the purpose set forth. 3rd. In a lumber carrier, the combination, with the carriage, of hangers *B*, having eyes *b*, at their upper ends and points *a*, at their lower ends, grappling hooks *C*, having eyes *c*, in their butt ends, a bolt *J*, passing through all said eyes, said hooks embedding the sides and said pint, the face of suitable hanger supports, and a track rope *M*, carried by the feet of the hangers, as set forth. 4th. In a lumber carrier, the combination, with the carriage, of hangers carried by suitable supports and having grooves *g*, in the inner faces of the outer ends of their feet and holes *A*, through said feet, the wire track rope *M*, resting in said grooves, the fastening arms *m*, pivoted on pins *m'*, in said holes, having grooved upper ends *p'*, embracing certain strands of said rope opposite the grooves in the feet and having eyes *t*, in their lower ends, and the clips *Q*, adjustably connecting said eyes with the feet of the hangers, substantially as hereinbefore set forth.

No. 36,827. Garment Holder and Display Stand. (Porte et montre habillement)

Wilfred Alfred Moreau, assignee of Bazile Masse, all of St. Hyacinthe, Quebec, Canada, 16th June, 1891; 5 years.

Claim.—1st. A garment holder and display stand or rack, composed of a backing or frame and projecting spring bars, each with one end set in said backing having their outer ends free and forming racks, for the purpose set forth. 2nd. A garment holder and display stand or rack formed of end legs or standards connected at their bases by one or more longitudinal, a single longitudinal connecting the upper ends of said legs or standards at points a short distance below the top of same, transverse head sections carried in the upper ends of said standards, a top portion carried by said head sections, and spring bars set into said single longitudinal and forming racks beneath said top portion, for the purposes set forth. 3rd. A garment holder and display stand or rack formed of end legs or standards connected at their bases by one or more longitudinal, a single longitudinal connecting the upper ends of said legs or standards at points a short distance below the top of same, transverse head sections carried in the upper ends of said standards, a top portion having hinged outer side sections and carried by said head sections, and spring bars set into said single longitudinal and forming horizontal racks beneath said top portion, for the purposes set forth. 4th. A garment holder and display stand or rack formed of end legs or standards with foot sections connected by a central and two side longitudinals, a single longitudinal connecting the upper ends of said legs or standards at points a short distance below the top of same, transverse head sections carried in the upper ends of said standards, a top portion carried by said head sections, spring bars set into said single longitudinal and forming horizontal racks beneath said top portion, and nippers flexibly connected with and carried by said side longitudinals, for the purposes set forth.

No. 36,828. Generator for Steam.*(Générateur de vapeur.)*

Louis Nicholas Tonns, New Brighton, and George H. Allen and Edward H. Hall, both of New York, and in the State of New York, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. The combination, in a steam generator, of a furnace, a water chamber arranged above the furnace, a combustion chamber located above the water chamber, pipes extending from the furnace through the said water chamber to the combustion chamber, a water and steam chamber above the combustion chamber, large pipes extending from the said water chamber to the water and steam chamber, smaller pipes having funnel-shaped upper ends extending from the lower part of the water and steam chamber down through the large pipes that extend from this chamber to the water chamber,

and also down through these large pipes into the water chamber nearly to the bottom thereof, and bolts or rivets extending from the bottom of the steam and water chamber to the top or crown of the latter, substantially as specified. 2nd. The combination, in a steam generator, of a furnace, a water chamber arranged above the furnace, a combustion chamber located above the water chamber, pipes extending from the furnace through the said water chamber to the combustion chamber, large pipes extending from the said water chamber to the water and steam chamber, and smaller pipes having funnel-shaped upper ends extending from the lower part of the water and steam chamber and secured by brackets thereto down through the large pipes that extend from this chamber to the water chamber, and also down through these large pipes into the water chamber nearly to the bottom thereof, substantially as specified.

No. 36,829. Stacker for Hay. (*Meule à foin*.)

Miller Machin and David S. Adams, both of Bowen, Illinois, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. In a hay stacker, the combination, with a pivoted arm having a head of levers connected at their free ends by a transverse rod arranged at the under side of the said pivoted arm, a rope secured by one end to the said transverse rod, and adapted to pass over a pulley suspended from the said rod and also adapted to support the hay fork, a tripping lever fulcrumed on the said transverse rod, and a catch pivoted on the said arm and adapted to lock the said tripping lever in place, substantially as shown and described. 2nd. In a hay stacker, the combination, with a pivoted arm having a head of levers connected at their free ends by a transverse rod arranged at the under side of the said pivoted arm, a rope secured by one end to the said transverse rod and adapted to pass over a pulley suspended from the said rod, and also adapted to support the hay fork, a tripping lever fulcrumed on the said transverse rod and adapted to rest with its fulcrumed end against the head of the said arm, it being also provided with a curved slotted end adapted to be engaged by the hay fork and the catch pivoted on said arm, substantially as shown and described. 3rd. In a hay stacker, the combination, with connected levers, of a tripping lever fulcrumed in the free end of the said connected levers and provided with a curved forked arm, a pulley suspended from the pivot of the said tripping lever, a rope secured at one end to the pivot of the said tripping lever and adapted to support a hay fork and also passing over the said pulley, a pivoted arm resting with its under side on the pivot end of the said tripping lever, and an L-shaped catch pivoted on the said arm and adapted to lock the said tripping lever in place, substantially as shown and described.

No. 36,830. Car Coupling. (*Attelage de chars*.)

Mark J. McGowan, Francois B. Morrow, and John Hartnett, all of Toronto, Ontario, Canada, 16th June, 1891; 5 years.

Claim.—1st. A car coupler consisting of a draw head having a slot formed in its upper side large enough to permit the free working of the coupling pin, the coupling pin provided with a spindle journaled in bearings formed on either side of said slot, said coupling pin extending through said slot into the mouth of the draw head, the lower front edge of coupling pin butting against a shoulder formed in the lower face of said mouth, and the upper front edge of said pin butting against the metal at the front edge of said slot, and a link, the end of which bears against the rear edge of said pin, substantially as and for the purpose specified. 2nd. A car coupler consisting of a draw head having a slot formed in its upper edge large enough to permit the free working of the coupling pin, a coupling pin extending downward through said slot into the mouth of the draw head, provided with a spindle journaled in bearings formed one on each side of said slot, the lower edge of said pin bearing against the shoulder formed in the lower face of said mouth, and the upper front edge of said pin bearing against the metal at the front of said slot, a link bearing against the rear edge of said pin and for the purpose specified. 3rd. A car coupler consisting of a draw head having a slot formed in its upper side sufficiently large to allow of the free working of the coupling pin, said coupling pin provided with a spindle journaled in bearings formed one on each side of said slot, the coupling pin extending down through said slot to the lower face of the mouth of the draw head, and having an extension extending above said spindle to butt against the upper face of said draw head and prevent the coupling pin being turned out of its position, the lower edge of said coupling pin butting against the shoulder formed in the lower face of said mouth, the lower end of said coupling pin curved with an arc struck from the centre of the spindle and working in a groove curved to correspond, the link bearing against the rear edge of said coupling pin from top or side of car, substantially as and for the purpose specified. 4th. A car coupler consisting of a draw head having formed in its upper face a slot sufficiently large to allow of the free working of the coupling pin, a coupling pin rectangular in cross section provided with a spindle working in bearings placed one on each side of said slot, the lower edge of said coupling pin curved by an arc struck from the centre of said spindle and working in a groove in said draw head, curve to correspond a shoulder formed in the lower face of the mouth of said draw head in front of the front edge of said coupling pin, said mouth made as large as possible at its front edge and tapering rapidly inward to said coupling pin, where it extends rearward and inward with only sufficient space to allow of a free forward and rearward movements of the link, a link bar to pull against the rear face of said coupling pin, said pin provided with means for raising the same from the top and side of the car, substantially as and for the purpose specified.

No. 36,831. Wire Fabric. (*Tissu métallique*.)

Israel Kinney, Brantford, Ontario, Canada, 16th June, 1891; 5 years.

Claim.—1st. A wire fabric, containing the interwoven primary coils, and the locking wire or wires clamping in the exterior angles

formed by the intersections of the primary coils for preventing the collapsing of the primary coils, as explained. 2nd. A wire fabric, consisting of the interwoven spiral coils A, A, and intermediate spirals B, B, all running in substantially the same direction, said spirals B, B, engaging alternately in the exterior angles above and below the intersections of said coils A, A, whereby the several coils are rigidly locked together, as herein set forth. 3rd. In a wire fabric, the combination of the left hand spirally wound primary coils interwoven and running in substantially the same direction, with the right hand intermediate spirals engaging therewith, and running in the same direction, said intermediate spirals passing alternately above and below through the exterior angles formed by the intersections of the primary coils, as set forth. 4th. A wire fabric, consisting of the interwoven coils A, A, and intermediate wires B, B, in combination with the clips C and rods D, substantially as set forth.

No. 36,832. Switch for Railways.

(*Aiguille de chemin de fer*.)

John Adams Duggan, Quincy, Massachusetts, U.S.A., 16th June, 1891; 5 years.

Claim.—1st. A switch, having guard, and stock, or outside rail, supported upon solid bearings to which they are fixed so as to permit of no motion, in combination with a middle or switch rail, having neither ends nor points, the switching being accomplished by raising the central portion of the switch rail on one side, and lowering it on the other, substantially as and for the purpose above described. 2nd. In a railroad switch, a switch rail having the middle part adapted to be raised and lowered and connected with sections of the switch rail, which forms inclines when the middle portion is lowered, the inclined parts being jointed at one end to the fixed section of the rail, and at the other end to the vertically moving middle part, substantially as and for the purpose above described. 3rd. The horizontally moving operating rods *d*, having thereon the incline *d*¹, *d*², and the horizontal supporting faces *d*³, *d*⁴, in combination with the switch rails and straps *o*, *o*, substantially as and for the purpose above described. 4th. The operating rod, the switch rail having neither ends nor points, the central portion of which is capable of being elevated and depressed throughout its entire length, and the arms *f*, *f*, provided with the supporting pieces *f*¹, *f*², in combination, substantially as described. 5th. The operating rod *d*, the yoke *p*, the springs *s*, *s*, and the switch rails, in combination substantially as described. 6th. The yoke *p*, the spring *r*, bolt *s*, nut *t*, and washer *v*, in combination, substantially as and for the purpose above described. 7th. The double chair *V*, provided with outside braces, and having a central recess, in combination with the stock rails and guard rails, independently secured to said braces, respectively, substantially as and for the purpose above described. 8th. The incline *W*, in combination with the switch rail, the yoke *p*, and the spring *v*, substantially as and for the purpose above described. 9th. The stock rails supporting by the joint between *b*¹ and *b*², having its tops substantially level with the switch rail, and bolted through the guard rail, in combination with the guard rail, substantially as and for the purpose above described. 10th. The blocks *i* and *o*¹, in combination with the parts *b*¹ and *b*² of the middle rail, substantially as and for the purpose above described. 11th. The vertically sliding blocks *l*¹, *l*², in combination with the guard and switch rails, substantially as and for the purpose above described. 12th. The blocks *p*, *p*, in combination with the middle rail, substantially as and for the purpose above described. 13th. The pieces *k*¹, *k*², in combination with the piece *t* and the parts *b*², *b*³, substantially as and for the purpose above described.

No. 36,833. Spool Machine.

(*Machine pour fabriquer les bobines*.)

Emerson P. Brownell, Beebe Plain, Quebec, Canada, 16th June, 1891; 5 years.

Claim.—1st. In a spool machine, the combination, with a straight way and a continuous carrier moving intermittently thereon, having pockets in which the blanks are contained during the operations, of a series of co-operating pairs of tools operating successively upon the blanks, and each arranged to perform one step in the operation of spool making, the members of each pair being arranged on opposite sides of said way and engaging the same blank simultaneously, connections between all of said tools, and a suitable driving mechanism causing them to retreat and advance simultaneously, and between the carrier and driving mechanism for causing the feed while the tools are separated, substantially as described. 2nd. In a spool machine, the combination, with the straight way or guide, a continuous carrier moving intermittently thereon, having pockets in which the blanks are contained during the operations, of a series of co-operating pairs of tools operating successively upon the blanks, and each arranged to perform one step in the operation of spool making, the members of each pair being arranged on opposite sides of the way and operating simultaneously upon the same blank, devices, such as cams, for causing the simultaneous approach and permitting the separation of the tools, a presser for holding the blanks rigidly upon the carrier while being operated upon by the series of pairs of tools, and connections between the carrier and driving mechanism, the tool operating devices and the presser whereby the blanks will be fed only while the tools are retracted, substantially as described. 3rd. The combination, with the straight way or guide and a continuous blank carrier having pockets in which the blanks are contained during the operations, of a series of co-operating pairs of tools, each pair constructed to perform a single step in the operation of making spools, and the members of each pair arranged on opposite sides of the way to operate simultaneously on the ends of the blanks between them, devices, such as cams, for causing the simultaneous approach of the members of all the pairs and permitting their operation, a presser for holding all the blanks being operated on by said pairs of tools stationary upon the carrier, intermittently operating mechanism for moving the carrier forward, and connections between the last mentioned

VICES, the presser and the tool-projecting mechanism whereby the carrier will be moved forward while the tools are retracted and the presser removed, substantially as described.

4th. In a spool machine, the combination, with the blank carrier, of the series of pairs of co-operating tools for successively operating upon the ends of the blanks, the members of each pair being located on opposite sides of the carrier, said series comprising a pair of boring bits a pair of reciprocating circumferential cutting dies for shaping the ends of the blanks circumferentially and a pair of blank holding centers devices, such as cams for causing the simultaneous approach and permitting the separation of the tools, intermittently operating mechanism for feeding the carrier forward past the tools in the order named and while they are separated, a presser operating upon the blanks located between the boring bits and cutting dies for holding the blank stationary while being acted upon, the connections between the carrier operating mechanism, the presser and the tool projecting devices, whereby the presser will be operated and the tools caused to approach and operate upon the blanks between them while the carrier is stationary and the presser in engagement with the blanks, substantially as described.

5th. In a spool machine, the combination of the straight way or guide, the continuous flexible carrier moving thereon, the series of pairs of co-operating tools for operating upon the ends of the blanks, the members of each pair being located on opposite sides of the carrier, said series comprising a pair of boring bits, a pair of cutting and circumferential embossing dies for shaping the ends of the blank circumferentially and embossing it, and a pair of blank holding centers having a centering pin and suitable characters in relief for entering the blank and rotating it, devices, such as cams, for causing the approach and permitting separation of the tools and in intermittently operating mechanism for feeding the carrier forward past the tools in the order named, substantially as described.

6th. In a spool machine, the combination of the straight guide or way, the continuous flexible blank carrier moving therein, the series of co-operating tools for operating upon the ends of the blanks on the carrier, the members of each pair being located on opposite sides of the carrier, said series comprising a pair of blank boring bits, a pair of circumferential cutting dies for shaping the ends of the spools circumferentially, and a pair of blank holding center devices, such as cams, for causing the approach and permitting the separation of the tools, a presser operating upon the blank located between the boring bits and cutting dies, a carriage supporting a turning tool and movable toward and from the blank held between the blank holding centers, and a connection between the various parts, whereby the members of the pairs of tools are caused to approach to operate upon the blanks on the carrier between them, the presser holds, its blank and the turning tool is brought forward to operate upon the blank between the centers while the carrier is stationary, and all said tools are in retracted position while the carrier moves forward, substantially as described.

7th. The combination, of the straight way or guide, the continuous blank carrier moving therein, the series of pairs of co-operating tools for operating upon the ends of the blanks, the members of each pair being located on opposite sides of the carrier, said series comprising a pair of boring bits, a pair of blank facing tools, a pair of circumferential cutting and embossing dies, and a pair of blank holding centers connections for rotating the bits, facing tools and holding centers devices, such as cams, for causing the approach and permitting the separation of the tools, intermittently operating mechanism for feeding the carrier forward past the tools in the order named, a carriage carrying a turning tool, a presser operating upon the blanks located between the bits, facing tools and the turning tool, and connections between the parts, whereby when the carrier is stationary the presser will hold the blanks, the tools of the series will be caused to approach and operate upon the blanks between them, the turning tool moved forward to operate on the blank between the centers, and all said parts will return to normal position when the carrier will move forward and present a new blank to be operated upon by each of the tools, substantially as described.

8th. In a spool machine, the combination, with a blank carrier, of a series of tools operating upon blanks carried by said carrier in succession, comprising a pair of boring bits entering the blanks from opposite ends, a pair of cutting dies arranged to shape the spool ends, a pair of turning centers, two shafts at right angles to the spindles having the series of cams thereon operating on opposite spindles for causing the simultaneous approach, set screws regulating the extent of such approach and a reciprocating turning tool, substantially as described.

9th. In a spool machine, the combination, with the horizontally moving blank carrier, of the series of pairs of co-operating tools arranged with the members of each pair on opposite sides of the carrier, mechanism, substantially as described, for causing the feed of the carrier intermittently, and a plate moving on vertical ways above the carrier carrying one or more adjustable presser feet adapted to rest upon one or more blanks on the carrier and hold them while being operated upon a cam for causing its operation, and a spring for returning said plate to normal position, substantially as described.

10th. In a spool machine, the combination, with a pair of annular cutters for operating on opposite ends of the blank to give the proper circumferential shape thereto, of embossing dies within said cutters for embossing the ends of the spool while being cut, substantially as described.

11th. In a spool machine, the combination, with the pair of annular cutters operating to shape the ends of the spool blank, of the dies contained within them, their operating faces being substantially parallel with and below the plane of their cutting edges, and the cams for causing the gradual approach of the cutters and dies, the cams being provided with the projections thereon for causing the sudden forward movement of the sides, substantially as described.

12th. The combination, of the spindle, the centering pin, the removable embossing die, removable annular outer extending beyond the

die, and the screw or similar device passing through both center and die for holding the die and cutter in position on the spindle, substantially as described.

14th. In a spool machine, the combination, of the main frame, a longitudinally movable blank carrier, and mechanism for moving it intermittently of a series of pairs of operating tools located on the main frame and on opposite sides of the carrier, a stationary way or support on which the carrier runs, a presser for holding the blanks on a carrier connected to the way, means, substantially as described, for operating it when the carrier is stationary, and means, substantially as described, for adjusting the way on the frame toward the tools, substantially as described.

15th. In a spool machine, the combination, with a series of pairs of co-operating tools for operating upon the blanks in succession and shaping their ends, of a continuous carrier arranged between the tools having pockets with the inclined sides, the bisector of the angles formed by the sides intersecting at right angles the tool-centers and means for adjusting said carrier at right angles with said centers, whereby blanks of different sizes may be operated upon by adjusting said carrier, substantially as described.

No. 36,834. Trap for Animals. (*Pige.*)

Ethel Angus Ray, Florence, South Carolina, U. S. A., 16th June, 1891; 5 years.

Claim.—1st. In an animal trap, the combination, with the jaws, the operating mechanism adapted to be entirely enclosed within the jaws when the latter are set, substantially as and for the purpose set forth. 2nd. In an animal trap, the combination, with the jaws, of the pivoted bait pan and trigger, releasing means located above said pan, substantially as and for the purpose set forth. 3rd. In an animal trap, the combination, with the spring-actuated jaws, of actuating mechanism entirely enclosed within the latter when the same are set, and comprising a bait pan, an arm carrying the pan and extending the latter, and a pivoted trigger or catch having one end adapted to engage the upper end of said arm and the other end the adjacent jaw, the latter end of trigger being offset at its under side, substantially as and for the purpose set forth. 4th. An animal trap having bowed jaws provided with broad impinging surfaces, and the shanks of the jaws beveled in opposite directions on their adjacent faces to form cutting edges and space for debris, substantially as described. 5th. An animal trap, having bowed jaws provided with broad impinging surfaces and rounded upper edges, and shanks beveled in opposite directions on their adjacent faces between the impinging surfaces, and the ends of the shanks to form cutting edges and space for debris, substantially as described. 6th. An animal trap, having jaws provided with broad impinging surfaces and cutting edges on the shanks of the jaws between the impinging surfaces, and the ends of the shanks, in combination with posts having side flanges between which the jaws rest, said jaws being pivotally secured therein to bear upon each other at their ends to form fulcrum, and relieve the pins of strain in forcibly opening the trap, substantially as described.

No. 36,835. Chisel for Mortising Machines.

(*Ciseau pour machines à mortaiser.*)

Léon Viger and François Eusebe Viger, both of Longueuil, Quebec, Canada, 16th June, 1891; 5 years.

Claim.—In a chisel for mortising machines, the dovetail recess J, formed by the projections A, and B, and the bevel edge K, substantially as described and for the purposes set forth.

No. 36,836. Brace for Railway Rails.

(*Lien de rail de chemin de fer.*)

William Howard Shumaker and David Laurence, both of Bay Horse, Idaho, U.S.A., 17th June, 1891; 5 years.

Claim.—The rail-braces C, constructed with the grooves c, c, undercut at c', and provided with the top opening c', in combination with the wedge keys B, having flanges e, e, and projection c', substantially as and for the purpose set forth.

No. 36,837. Sewing Machine Attachments for Facilitating the Stitching of Button Holes and for Other Purposes. (*Appareil à une machine à coudre faisant les boutonnières et autres objets.*)

Richard Todd, Manchester, Lancaster, England, 17th June, 1891; 5 years.

Claim.—1st. As means for temporarily converting an ordinary look stitch sewing machine into a machine capable of sewing button holes or edging or stitching material or overcasting seams, as hereinbefore indicated the employment of a vibrating arm g, connected to and operated from a cam plate n, the said cam plate sliding in or being pivoted to a fixed frame or bracket, and slotted so as to be worked from a reciprocating finger or bar attached to the needle bar, and acting in conjunction with an attached shunting plate o, for moving the cam plate n, past the dead centre at each down stroke of the finger or bar, the whole acting in conjunction with two needles carried by the ordinary needle bar and constructed and operating, substantially as hereinbefore described and as illustrated. 2nd. In an attachment of the indicated nature causing the vibrating arm g, to dwell at the end of each vibration so as to allow the needles to assume the requisite position before the next vibration, the said dwell being effected either by the form of the slots in the cam plate or by the shape of the revolving cam or by cogwheel means employed to actuate the arm g, substantially as hereinbefore described and shown.

No. 36,838. Farm Gate. (Barrière.)

John C. Merrill and Luther Merrill, both of Westpalia, Kansas, U.S.A., 17th June, 1891; 5 years.

Claim.—1st. The combination, with the supporting post H, provided with a horizontally-swinging socket F, the tilting bar B, fulcrumed in said socket, and the guide bar G, pivotally connected at its upper end to the bar B, having a swiveling connection at its lower end with the post H, and having a roller 3, journaled thereon, of the gate A, operating between of said bar G, and supported at its forward end on the roller 3, said gate provided with upwardly extending bearings carrying rollers 1, 2, adapted to engage the upper face of the bar B, all arranged, substantially as and for the purpose described. 2nd. The combination, with the post H, the socket F, the tilting bar B, fulcrumed therein, the guide-bar G, connected to the bar B, the brace I, the roller 3, and the horizontally-swinging keeper A, of the gate A, supported at its lower end on the roller 3, and the keeper h, and the rollers 1, and 2, secured to the gate and engaging the upper face of the bar B, substantially as shown and described. 3rd. The combination, with the post H, the gate A, the supporting rollers 1, 2, the guide G, and the roller 3, journaled in the lower end thereof and adapted to support the lower front end of the gate, of the bracket J, having a lip portion j, and a bolt portion j², adapted to pass through the post H, and held therein, the socket F, pivotally held on the outer end of the bracket, and the bar B, pivotally supported in the socket F, and adapted to form the upper support for the gate, all arranged, substantially as and for the purpose described. 4th. The hereinafter described improvements in gates, consisting of the post H, the keeper h, guide bar G, the supporting-roller N, the roller 3, the gate A, supported at its lower end on said roller 3, and the keeper h, the bracket or support F, J, the tilting bar B, fulcrumed in said support, the rollers 2, 3, secured to the gate and adapted to engage the upper face of the bar B, the rocking bar E, the wing e, the latch-post L, and the gravity latch M, all arranged, substantially as and for the purpose specified.

No. 36,839. Flour for Baking Purposes.

(Farine prête à lever.)

Alexander R. Watt, Amherst, Nova Scotia, Canada, 17th June, 1891; 5 years.

Claim.—A compound composed of the ingredients substantially in the proportion and for the purposes set forth.

No. 36,840. Electric Clock. (Horloge électrique.)

Edward Payson Cramm, Boston, assignee of William Soule Seales, Everett, both in Massachusetts, U.S.A., 17th June, 1891; 5 years.

Claim.—1st. In an electric clock, a step-by-step train, a driving pawl, and an electro-magnet and its armature that moves said driving pawl, a pendulum or equivalent and driving pawl moved by it, a propeller, and a circuit-closer, substantially as described. 2nd. In an electric clock, a train, a driving pawl, and electro-magnet and its armature that moves said driving pawl, a pendulum, a propeller therefor located in juxtaposition to the armature and pendulum to be moved by the former to accumulate a force which is given to the latter, and a circuit-closer for the circuit of said electro-magnet, one of the members of which is carried by the pendulum and the other by the propeller, and the driving-pawl also moved by said pendulum, substantially as described. 3rd. In an electric clock, a train, a step-by-step driving mechanism therefor, and an electro-magnet and its armature that controls the operation of said driving mechanism, combined with a regulating member for the clock that also controls the operation of said driving mechanism independent of the electro-magnet, substantially as described. 4th. In an electric clock, a train, a step-by-step driving mechanism therefor, and an electro-magnet and its armature that actuates said driving mechanism, combined with a regulating member for the train which causes or effects the operation of said driving mechanism in case the armature of the electro-magnet fails, substantially as described. 5th. In an electric clock, a train, a step-by-step driving mechanism therefor, an electro-magnet and its armature that actuates said driving mechanism, and a regulating member for the train which causes or effects the operation of said driving mechanism in case the armature fails, combined with a propeller for said regulating member, and a circuit-closer for the electro-magnet moved in one direction by the regulating member and in the other direction by the armature, substantially as described.

No. 36,841. Combined Chemical and Hand Fire Engine. (Machine chimique et machine à incendie à main combinées.)

Howe Pump and Engine Company, assignees of Benjamin Johnson Cowles Howe, all of Indianapolis, U.S.A., 17th June, 1891; 5 years.

Claim.—1st. In a portable hand fire engine, the combination comprising a reservoir b, cylinders c, two way valve c¹, serving as means for instantly changing the supply for the pumps from said reservoir to local water supply, or vice-versa, and a mounting provided with folding anchor braces, as and for the purposes set forth. 2nd. In a portable hand fire engine, a cylinder, a piston provided with an annular groove, a pliable packing ring e¹, with joint shaped as shown, an elastic packing spring placed betwixt the bottom of said groove and said ring, all combined to operate, substantially as and for the purposes set forth. 3rd. In a portable hand fire engine, the combination embracing a reservoir, cylinders c, means for placing said cylinders either in direct communication with said reservoir or local water supply as desired, and hinged folding anchor braces adapted to anchor and brace the engine during operating, as specified. 4th. In a fire engine, the combina-

tion embracing a carriage upon which are mounted a hose reel tank, and the pump mechanism, folding hinged anchor braces h², hinged to carriage at f, i, f¹, and i¹, and provided with hinges at g, h, g¹, and h¹, said anchor braces being adapted to thoroughly anchor and brace said carriage during service of engine slightly relieving said carriage, of its weight on their being brought into service, which is done instantly, and by virtue of the proportions of their elements to remain folded when thrown out of service, substantially as set forth. 5th. In a portable hand fire engine, jointed folding hand levers combined with hooks d², and springs d¹, retaining said hooks in proper position, substantially as set forth.

No. 36,842. Cutter for Plugs and Sockets.

(Découpoir pour chevilles et douilles.)

Warren A. Richmond, assignee of Nathan Page Stevens, both of Concord, New Hampshire, U.S.A., 17th June, 1891; 5 years.

Claim.—1st. The combination of a chuck, comprising two diametrically divided jaws, an exterior ring or collar rigidly fixed to one of said jaws, and reversible cutters stamped by a die from sheet metal, the diameter of which equals the interior of said collar, and a set screw threaded to said collar for clamping said cutter between the jaws. 2nd. The pieces D, E, stamped from sheet metal, provided with two or more cutters arranged diametrically opposite, combined with a chuck divided diametrically and provided with an exterior collar and set screw threaded therein for clamping the cutter between said jaws. 3rd. The pieces D, E, stamped from sheet metal, provided with two or more cutters arranged diametrically opposite, combined with a chuck divided diametrically and provided with an exterior collar, and set screw threaded therein for clamping the cutter between said jaws, and a vertically-adjustable guide-rest having a V-groove therein formed horizontally and in line with the lathe-spindle for supporting and centering the carbons.

No. 36,843. Pin for Hinges of Stove Doors.

(Cheville pour pentures de porte de poêle.)

Russell and Erwin Manufacturing Company, assignees of Henry Emmanuel Russell, jr., all of New Britain, Connecticut, U.S.A., 17th June, 1891; 5 years.

Claim.—1st. The herein described hinge-pin for stove doors, consisting of the plain cylindrical portion for the lower knuckle and a ribbed and shouldered portion for the upper knuckle, having its ribs arranged on non-parallel lines to the axis of the pin to occupy the complete circle of the pin-hole, substantially as described and for the purpose specified. 2nd. The combination of the upper and lower knuckles of the door-hinge, each having a plain hole, with the hinge-pin C, having the plain cylindrical portion for the lower knuckle, and a ribbed and shouldered portion for the upper knuckle, the ribs of which are on non-parallel lines with the axis of the pin, whereby said ribbed portion bears upon every point in the circle forming the pin-hole of the upper knuckle, substantially as described and for the purpose specified.

No. 36,844. Milk Cooler. (Garde-lait.)

Wm. W. Conder, Hebo, Oregon, U.S.A., 18th June, 1891; 5 years.

Claim.—1st. In a milk cooler, a milk pan or receptacle consisting of a main vessel and upwardly-projecting vessels connected therewith, the said upwardly-extending vessels being in free communication with the main vessel through their open lower ends, substantially as described. 2nd. In a milk cooler, the combination, with a water tank, of a milk receptacle, consisting of a lower vessel and upwardly-extending vessels communicating with the lower vessel through their lower open ends, and a cover for the water tank provided with downwardly-projecting flanges fitting on the upper ends of the vessels, substantially as herein shown and described. 3rd. In a milk cooler, the combination, with a tank carrying milk holding vessels, and a cover hinged thereto, and provided with depending flanges adapted to enclose the tops of the vessels, of a pipe projecting through the cover and having its lower end provided with branch pipes connecting with said flanges and having its upper end provided with a suitable cap, substantially as described. 4th. In a milk cooler, the combination, with a tank carrying milk holding vessels, and a cover hinged thereto, and provided with depending flanges adapted to enclose the tops of the vessels, of a pipe projecting through the cover, and having its lower end provided with branch pipes connecting with said flanges, and having its upper end provided with a suitable cap, substantially as described. 5th. In a milk cooler, the combination, with the tank A, and cover B, of a rod a, pivoted on the tank, and provided with arms a¹, having eyes a², thereon, which are fixed to the sides of the cover, and the member a³, depending from the cover B, and formed into a terminal eye a⁴, and the rod d, having an eye d¹, which engages the eye a⁴, an eye d², pivoted to the side of the tank, and a suitable crank d³, by means of which the rods a and d, and the cover B may be operated, substantially as described.

No. 36,845. Water Purifier for Locomotive Boilers. (Epurateur pour chaudières de locomotive.)

Joshua Bartlet Barnes, Springfield, Illinois, U.S.A., 18th June, 1891; 5 years.

Claim.—1st. In a locomotive boiler, the combination, with the outer shell of the cylindrical part thereof, of an inner shell concentrically secured in position within the outer one, extending upward on each side a little above the normal water-line and made water-tight at each end, so as to form an annular feed-water heater having communication with the main part of the interior of the boiler only over the upper edges of said inner shell, substantially as and for the purpose herein set forth. 2nd. In a locomotive boiler having, in

combination with the waist or cylindrical part thereof, an inner shell concentrically secured within the outer one, as described, a supporting frame provided with openings *r, r, &c.*, and having an opening in the shell of the boiler for an outlet valve near the central part of said supporting frame, all constructed and adapted to operate, substantially as and for the purpose set forth. 3rd. In a locomotive boiler having, in combination with the waist or cylindrical part thereof, an inner shell concentrically secured to the outer one, as described, the bar *p*, provided with a small outlet-opening *q, q*, and segmental partition-bars *b', b'*, all constructed and adapted to operate, substantially as and for the purpose set forth.

No. 36,846. Extensible Brace for Excavations. (*Lien à rallonge pour excavations.*)

William J. Dunn, Allegheny, Pennsylvania, U.S.A., 18th June, 1891; 5 years.

Claim.—1st. In a brace of the character described, the combination of shoes having sockets provided with recesses, of two adjustable parts or sections having their outer ends fitting in said sockets and having lugs to engage the recesses thereof, to prevent rotation of the movable or adjustable parts, substantially as described. 2nd. In a brace of the character described, the combination of the shoes having the sockets and recesses, the sleeve and screw carrying the balls having the lugs and the nut engaging the screw. 3rd. In a brace of the character described, the combination of the shoes having sockets provided with recesses, the two adjustable parts or members having balls at their outer ends fitting the sockets of the shoes, and having lugs to engage the recesses thereof, and caps for securing the balls in the sockets of the shoes, substantially as described. 4th. In a brace of the character described, the combination of the shoes having the recesses the screw carrying a ball provided with lugs engaging the recesses of one of the shoes, the sleeve in which the screw travels, the ball secured to the sleeve having lugs engaging the recesses of the other shoe, the caps for retaining the balls in the shoes, and the nut engaging the screw.

No. 36,847. Grinding Apparatus for Ores, etc. (*Appareil à triturer les minerais, etc.*)

Middleton Crawford, Hatton Garden, London, England, 18th June, 1891; 5 years.

Claim.—1st. In apparatus for grinding, free or loose balls which can come into contact with each other, and which bear only on a lower circular concave grinding surface, consisting of an outer stationary part and an inner rotating part, substantially as hereinbefore described. 2nd. In apparatus for grinding ores or materials for the separation of precious metals therefrom, the combination, with free or loose balls, of a concave grinding track or surface made in two parts, one part being stationary and the other part moveable, a space being provided between the two parts for the passage of the separated precious metal into a trough or recess below containing mercury, substantially as hereinbefore described and illustrated by the accompanying drawings. 3rd. The combination, with free or loose balls, a concave grinding track or surface made in two parts, one part being stationary, and the other part moveable, and a space provided between the two parts for the passage of the separated precious metal into a trough or recess below containing mercury, of a cavity or chamber beneath the casing containing the said grinding surfaces, for steam or other heating agent to heat the mercury and the water used for separating the refuse, substantially as hereinbefore described and illustrated. 4th. In apparatus for grinding ores for the purpose of separating precious metals therefrom, the combination of stationary and revolving grinding surfaces and balls running freely thereon with conductors for supplying air or water or other fluid between the grinding surfaces, and balls and discharge passages for the refuse material provided with the hereinbefore described partitions or bafflers to prevent the escape of precious metals with the refuse, substantially as hereinbefore described with reference to the accompanying drawings. 5th. In apparatus for grinding ores or materials containing precious metals, the combination of a grinding surface and grinding balls with an inlet for air or liquid from below, and a mercury trough or container between the air or liquid inlet and the grinding surfaces, substantially as and for the purposes hereinbefore described.

No. 36,848. Apparatus for Separating Metals from Ores. (*Séparateur des minerais.*)

Middleton Crawford, of Hatton Garden, London, England, 18th June, 1891; 5 years.

Claim.—1st. In machines or apparatus for separating materials of different specific gravities, the employment of a trough or troughs of or about the dimensions hereinbefore named, and with an incline or inclines at bottom, and having in combination therewith means for imparting sideway movement thereto to an extent of or about one-third of the width of the trough or troughs, substantially as hereinbefore described. 2nd. In machines or apparatus for separating materials of different specific gravities, a trough or troughs with sides, and an end or ends, and with an incline or inclines at bottom, in combination with means for causing a flow of water in a direction, the reverse of that of the downward inclination of the incline or inclines and with means for imparting a sideway movement to the said troughs, substantially as hereinbefore described. 3rd. The combination of parts constituting the machine or apparatus, substantially as hereinbefore described and illustrated in the accompanying drawings.

No. 36,849. Paper Bag. (*Sac de papier.*)

Frederick Osgoode Paige, Detroit, Michigan, U.S.A., 18th June, 1891; 5 years.

Claim.—1st. A satchel bottom paper bag having one end folded to

form a satchel bottom without the use of paste on any of its folded portions, and provided with a reinforcing sole-piece co-extensive in dimensions with the satchel bottom, and pasted throughout, its entire extent over the exterior thereof to secure and hold down the folded flaps, entirely cover the folding seams, provide a smooth surface, and prevent the egress of pulverulent material, substantially as described. 2nd. A satchel bottom paper bag having the folded flaps C, C, and D, D, to form a completely closed satchel bottom without paste on any of such folded portions, and provided with a reinforcing sole-piece composed of an approximately square sheet of paper co-extensive in dimensions with the satchel bottom, and pasted throughout its entire surface upon the satchel bottom from edge to edge thereof, for the purpose of holding the folded flaps from flying out of place and preventing egress of pulverulent material contained in the bag, substantially as described.

No. 36,850. Nut Lock. (*Arrêlé écrou.*)

Charles Mathie and Esten Asprey Fletcher, both of Toronto, Ontario, Canada, 18th June, 1891, 5 years.

Claim.—1st. As an improved nut lock, a block adjustably held in position by means of a pin passed through a slot made in the said block, arranged, substantially as and for the purpose specified. 2nd. As an improved nut lock, a block E, having a hole *a*, made through it and a slot *b*, extending from the said hole, in combination with a conically shaped pin F, arranged, substantially as and for the purpose specified.

No. 36,851. Car for Railways.

(*Char de chemin de fer.*)

Jacob Neff Barr, Milwaukee, Wisconsin, U.S.A., 18th June, 1891; 5 years.

Claim.—1st. In a railway car, an extensible vestibule extension comprising a top and side walls, and a Ω -shaped face-plate, forming the outer end of the extension, in combination with means, substantially such as shown, connecting the respective sides of the face-plate to the car, whereby each side is allowed to move to and from the car independently of the other and the face-plate maintained in a vertical position and prevented from tipping forward or backward. 2nd. The car and its vestibule extension provided with a face-plate adapted to be lengthened and shortened, in combination with connected toggles or their equivalents independently holding the respective sides of the face-plate in a vertical position, whereby the tipping of said plate to or from the car is prevented, but the plate permitted to turn horizontally as the train passes around curves. 3rd. In a railway car, and in combination with a face-plate at the open end of a vestibule extension, two or more toggle-joints and a connecting bar on each side of said extension, whereby the face-plate is maintained in an upright position, but permitted to move to and from the car at each side independently of the other. 4th. In combination with the face plate, forming the open end of a vestibule extension, two toggle-joints at each side of said plate connecting the same with the car and adjustable rods connecting the toggles at each side, whereby the relation of the face-plate to a vertical line may be regulated and maintained. 5th. The combination of the vestibule extension adapted to be horizontally elongated and shortened, the toggle-joints connecting its outer end with the car, and springs or weights tending constantly to elongate the extension.

No. 36,852. Car Coupler. (*Attelage de chars.*)

Oliver Perry Hix, Rockland, Maine, U. S. A., 18th June, 1891; 5 years.

Claim.—1st. In a car coupler with draw bar or head provided with the grooves *d*, and hole *f*, combined with the knuckle pivoted in a vertical plane in the head, the pivot pin extending into said grooves, as set forth. 2nd. In a car coupler, the draw bar and its head, combined with a knuckle pivoted in a vertical plane in the head and having a limited sliding movement therein, and provided with a heel carrying an inclined surface on its rearward extremity and a pivoted latch provided with an inclined surface on its forward extremity, as set forth. 3rd. In a car coupler, the draw bar and its head combined with a knuckle pivoted in the head, and having a limited sliding movement therein, a sliding bar adapted to operate against the rear of the knuckle to press the same outward or forward, and a pivoted latch independent of said bar to latch the knuckle in coupled position, as set forth. 4th. In a car coupler, the draw bar and its head, combined with a knuckle pivoted in the head and having a limited sliding movement therein, said knuckle being provided with a heel having an inclined surface on its rearward extremity, a pivoted latch provided with a lug extending below the draw bar and having an inclined surface on its forward extremity, and a sliding bar and its arm adapted to operate against the rear of the knuckle to press the same outward or forward, as set forth.

No. 36,853. Game. (*Jeu.*)

Norbury Willet Thornton, Geneseo, Illinois, U.S.A., 18th June 1891; 5 years.

Claim.—1st. The herein described game-board having several concentrically arranged series of pins, the playing surface of the board within the central and other spaces being unbroken or uninterrupted, substantially as set forth. 2nd. The herein described game-board having a series of concentric rectangular spaces, a series of pins around the outer margin of each space, the playing-surface of the board within the central, and other spaces being unbroken or uninterrupted, and the pins being in alignment in any direction across the board, substantially as set forth.

No. 36,854. Machine for Rossing Bark.*(Machine à decortiquer les billots.)*

Frank A. Stearns and Albie E. Stearns, both of Eden, Vermont, U.S.A., 19th June, 1891; 5 years.

Claim.—1st. In a machine for rossing bark, the combination, with a rotary cutter-head, of a set of feed-rolls arranged on a plane below the cutter-head at one side thereof and geared together to rotate in the same direction one of the rolls of the set being of less diameter than the other roll, and rotated at a greater speed than the other roll, for the purpose described, substantially as set forth. 2nd. In a machine for rossing bark, the combination, with a cutter-head, of a set of feed-rolls on which the work is supported, and a gage arranged with respect to the cutter-head, and feed-rolls to engage the work and normally hold the same out of contact with the cutter-head, substantially as described for the purpose set forth. 3rd. In a machine for rossing bark, the combination, of a cutter-head, a set of toothed feed-rolls arranged at one side of and below the plane of said cutter-head to support and turn the work, and a counter-balanced gage supported above the cutter-head and free to move laterally with respect to the feed-rolls, all arranged and combined for the purpose specified, substantially as described. 4th. In a machine for rossing bark, the combination, of a cutter-head, a set of feed-rolls arranged at one side of and below the cutter-head, and driven positively in the same direction, and a counter-balanced gage which is free to move laterally with respect to said feed-rolls, and is arranged above the cutter-head, substantially as and for the purpose described. 5th. In a machine for rossing bark, the combination, of a cutter-head, a set of feed-rolls, the upright stationary guides, and a sliding counterbalanced gage supported on said guides above the cutter-head, substantially as and for the purpose described. 6th. In a machine for rossing bark, the combination, of a cutter-head, a set of feed rolls, the vertical stationary guides having the horizontal longitudinal slots above the plane of the cutter-head, a sliding gage fitted in the slots of the guides and weighted depending cords connected to said gage, substantially as and for the purpose described. 7th. In a machine for rossing bark, the combination, of a positively-rotated cutter-head, a set of toothed feed-rolls which are geared together and located below the cutter-head, a counter-shaft driven from the cutter-head through intermediate gearing and geared directly with the set of feed-rolls, and a counter-balanced gage supported above the plane of the cutter-head and free to slide laterally of the set of feed-rolls, substantially as described.

No. 36,855. Combined Ventilator and Centrepiece for Ceilings.*(Ventilateur et centre de plafond combinés.)*

Dennis O'Leary, San Bernadine, California, U.S.A., 19th June, 1891; 5 years.

Claim.—1st. The combination, with a base-plate having a central circular perforation and L-shaped slots adjacent to the same, of a detachable center-piece comprising an outer shell, an inner plate having radial slots or ventilating openings, and a register adapted to close the said openings, substantially as set forth. 2nd. The combination, with a base-plate secured to the ceiling of a room and having a central circular opening, of the combined center-piece and ventilator secured detachably to the same, and consisting of an outer dished shell, an inner plate having radial slots, a central tube connecting the said shells and plate, a tubular shaft extending through the said central tube and carrying a register at its upper end, and an operating disk at the lower end of the said tubular shaft, the said outer shell and inner plate being provided with ventilating openings and radial slots, respectively substantially as set forth. 3rd. The combination, of the outer dished shell, the inner horizontal plate, the central tube connecting the same, the central tubular shaft, the register at the upper end of the latter, and the operating disk mounted at the lower end of said tubular shaft and provided with operating handles and with perforations corresponding to the openings in the register, substantially as and for the purpose set forth. 4th. The combination, with the base-plate having a central circular opening, L-shaped slots adjacent to said opening, and wedge-shaped projections extending upwardly adjacent to the shanks or longitudinal portions of said slots, of the detachable combined ventilator and center-piece having upwardly extending inverted L-shaped projections, substantially as herein described, and for the purpose set forth.

No. 36,856. Pan for Baking. (Casserole.)

Leonard E. Willey, Barre, Vermont, U.S.A., 19th June, 1891; 5 years.

Claim.—1st. In a baking-dish, the removable bottom A, in combination with the four horizontally-hinged sides B, substantially as shown, and for the purposes described. 2nd. A baking-dish composed of the bottom A, sides B, wires C, and D, loop a, and hooks b, b, all arranged as shown, and for the purposes described and set forth.

No. 36,857. Plaster. (Plâtre.)

International Rock Plaster Company, Jersey City, New Jersey, assignees of DeLagnel Haigh, St. Louis, Missouri, both in U.S.A., 19th June, 1891; 5 years.

Claim.—1st. As an improved compound for admixture with lime etc., in the formation of plaster, fine silicious material having its particles coated with soluble sulphates, substantially as and for the purposes specified. 2nd. As an improved dry compound for admixture with lime or its equivalent to develop insoluble sulphates in plaster, finely pulverized silicious material, such as furnace-slag, coated with a soluble sulphate, and bichlorate of sodium, substantially as and for the purposes specified. 3rd. As an improved dry

compound for admixture with lime or its equivalent to slowly develop insoluble sulphates in plaster, finely pulverized silicious material coated with a soluble sulphate and bichlorate of sodium, and a retarder such as dextrine, substantially as and for the purposes specified. 4th. The method herein described for preparing a dry compound to be added to plaster compounds, containing lime to form insoluble sulphates, which consists in forming a solution which contains a soluble sulphate, saturating finely, divided silicious material with said solution, and evaporating the moisture at a low heat to produce a dry silicious mass, having its particles coated with soluble sulphates etc., substantially as and for the purposes specified.

No. 36,858. Method of Outer Soling Boots and Shoes. (Mode de poser les semelles de chaussure.)

Myron Lee Keith, Campello, (Brookton), Massachusetts, U.S.A., 20th June, 1891; 5 years.

Claim.—1st. In the manufacture of welted boots or shoes, the improved method hereinbefore described of outer-soling said boots and shoes, the same consisting, first, in temporarily securing the outer sole to the inner sole and welt, secondly, fitting said sole on a line parallel with the inner seam which unites the welt to the inner sole, thirdly, channeling the outer surface of the outer sole on a line which is parallel with the fitted edge of said outer sole, and then stitching the outer sole to the welt, as set forth. 2nd. In the manufacture of welted boots or shoes, the improved method hereinbefore described of outer-soling said boots and shoes, the same consisting, first, in temporarily securing the outer sole to the inner sole and welt, secondly, fitting said sole on a line parallel with the inner seam which unites the welt to the inner sole, thirdly, channeling the outer surface of the outer sole on a line which is parallel with the fitted edge of said outer sole, fourthly, stitching the outer sole to the welt, and lastly, trimming the fitted edge of the sole, as set forth.

No. 36,859. High Grade Water Power Utilizer. (Appareil pour utiliser les moteurs hydrauliques à haut degré.)

Alexander Hamilton Quain, Allie Quain, and George Porter Warner, all of Allen, Oregon, U.S.A., 20th June, 1891; 5 years.

Claim.—1st. In a high grade water power utilizer, the cuts c, c, c, made in the bed of the river, and the bed of the river serving as canals or flumes, in combination with the walls d, d, d, built at the edges of the said cuts c, c, c, and the penstocks constructed in said walls, substantially as shown and described. 2nd. In a high grade water power utilizer, the cuts c, c, c, made in the bed or banks of the river, in combination with the river bed, said bed serving as canals or flumes, the walls d, d, d, built at the edge of the cuts c, c, c, penstocks constructed in said place, the gates m, m, m, at the upper ends of the cuts for the purpose of regulating the depth of water in the cuts and canals, substantially as and for the purpose specified. 3rd. In high grade water power utilizers the cuts c, c, c, made in the bed or banks of the river, serving as canals or flumes, the walls d, d, d, built at the edges of the cuts, the penstocks constructed in said place, the gates m, m, m, at the upper ends of the cuts for the purpose of regulating the depth of the water in the cuts or canals and the cut-off gates at the inlets of the penstocks, substantially as and for the purpose set forth. 4th. In a high grade water power utilizing system, comprising the cuts c, c, c, formed in the banks of a river below the falls, the walls d, d, d, located as shown, in connection with an artificial canal as a water supply from said river to said system, substantially as and for the purpose herein specified. 5th. A high grade water power utilizer, comprising cuts c, c, c, formed in the river bed, walls formed at the edges of said cuts and extended above the normal water line, whereby flumes or channels are formed between the said cuts c, c, c, penstocks formed in said walls and river bed, turbines located therein and inlets communicating with said penstocks and the flumes and the outlets connecting said penstocks with the cuts c, c, c, substantially as and for the purpose described. 6th. A high grade water power utilizing system comprising cuts c, c, c, formed in the river bed, walls d, d, d, located at each side of said cuts and extended above the normal water line power, houses located thereon and communicating with each other by the bridges f, f, penstocks formed in said walls and river bed turbines mounted thereon, inlets opening from the regular water course into the penstocks above the turbines, and outlets formed in said penstocks below the turbines opening into the cuts c, c, c, all arranged substantially as and for the purpose described.

No. 36,860. Meter for Liquids.*(Compteur à liquide.)*

Henry C. Ahrbecker, Waterloo Bridge Road, Surrey, England, 20th June, 1891; 5 years.

Claim.—1st. The combination, with the cylinder A, and reciprocating piston B, of a meter, of a telescopic piston rod 3 F, a tumbler N, connected to said rod, and a slide valve J, actuated by said tumbler, substantially as described. 2nd. The combination, with the cylinder A, and reciprocating piston B, of a meter, of a piston rod 3 F, a tumbler N, a slide valve J, having connection with said tumbler, and a link R, connecting the piston rod to the slide valve. 3rd. The combination, with the piston rod 3 F, of a meter, of a tumbler N, having a link-connection R, to said rod, and a spring lever actuator P, acting on the tumbler to shift the same independently of the final movement, as set forth. 4th. The combination, in a piston meter, of a cylinder A, a reciprocating piston B, a piston rod 3 F, and link R, connecting the same to a three armed tumbler N, a valve J, actuated by the tumbler, and a spring-pressed lever P, having a double incline 15, bearing on one arm n¹ of the tumbler, substantially as described. 5th. The combination of the cylinder A, piston B, shifting valve J, having a pawl k 3, engaging the recording train, a tumbler N, acting on the valve to shift the same, and a link

R, connecting the piston and tumbler, and a spring lever or actuator P, engaging the tumbler to move the same independently of the final piston movement, substantially as described. 6th. The combination of the cylinder A, piston B, telescopic piston rod 3 F, three armed tumbler N, and link R, connecting the same to the piston rod, with the slide valve J, engaging one arm of the tumbler, the ratchet wheel L, connecting the recording train, and a pawl 20, connected to the valve and acting on said ratchet, substantially as described. 7th. The combination of the cylinder A, piston B, and slide valve J, with a tumbler N, acting on the slide valve, and a spring lever or actuator P, engaging the tumbler to give final movement thereto, substantially as described.

No. 36,861. Method of Dyeing and Polishing Parts of Boots and Shoes. (*Mode de polir et teindre les parties de chaussure.*)

Electric Boot and Shoe Finishing Company, assignees of William Winslow Crooker, all of Lynn, Massachusetts, U. S. A., 20th June, 1891; 5 years.

Claim.—1st. The improvement in the art of finishing and polishing parts of boots and shoes, which consists in first dyeing the same with a suitable dye, containing gum or similar substance, and polishing the same by contact with a rapidly moving yielding surface, as set forth. 2nd. The improvement in the art of finishing and polishing parts of boots and shoes which consists in first dyeing the same with a suitable dye, treating the said surfaces with wax or other resinous or waterproof compound, and polishing the same by contact with a rapidly moving yielding surface, as set forth.

No. 36,862. Method of Burnishing Parts of Boots and Shoes. (*Mode de brunir les parties de chaussure.*)

Winslow Finney Sampson, of Sangus, Alonzo H. Whitten and George W. Lascell, both of Lynn, all in Massachusetts, U.S.A., 20th June, 1891; 5 years.

Claim.—1st. The improvement hereinbefore described in the art of burnishing boot and shoe heel and sole edges and other parts of boots and shoes, the same consisting in presenting the surface to be burnished to a rapidly moving, wax coated, abrasive surface of fine texture, such as emery cloth, said abrasive surface creating friction which melts the wax coating and permits the abrasive surface to exert a smoothing action on the leather and at the same time force the wax into the fibres thereof, as set forth. 2nd. That improvement in the art of finishing and burnishing heels and other parts of boots and shoes, which consists in first roughly scouring the part to be burnished, then inking or coloring said scoured surface, and finally presenting the inked scoured surface to a rapidly moving, wax coated abrasive surface of fine texture, such as emery cloth, as set forth.

No. 36,863. Station Indicator for Railway Cars. (*Indicateur de station pour chars de chemin de fer.*)

American Indicator and Improvement Company, assignees of John Kueffer, all of San Francisco, California, U. S. A., 20th June, 1891; 5 years.

Claim.—1st. In automatic mechanism for operating a station indicator in railway cars, a rotating time-cylinder having continuous rotation on its axis at a given rate of speed, which is proportioned to the rate of travel of the car, and is produced by or from the car-axle through the medium of suitable mechanism, and having stop pins on its periphery which are arranged circumferentially in separate rows or sets, a rocking lever with a toe-piece which is adapted to be set by longitudinal movement into position to be struck and moved by the stop pins composing any one row or set, a sliding rack or part to which is connected said rocking lever, and a wing or part on the rotating cylinder which is adapted to engage and move said rack or lever-carrying part a given distance in the rotations of the cylinder to shift the toe-piece from one set of pins to another, all combined for operation substantially as hereinbefore described. 2nd. In an automatic station indicator for railway cars, the combination of the continuously rotating time-cylinder deriving motion of rotation on its axle from the travel of the car, and provided with stop-pins arranged circumferentially in separate rows or sets, the sliding rack in a slotted rack-guide, a rocking lever connected to said rack having a toe-piece which is adapted to be set into line with any row or set of stop-pins on the cylinder by longitudinal movement of the lever, a wing or part on the cylinder engaging said rack to shift the lever from one set of pins to another set at intervals in the rotations of the cylinder, a locking catch to hold said rack, a coil-spring adapted to draw back the toe-piece and an operating rod connected to the indicator-box in the car and actuated by the movements of the toe-piece, or part which is struck by the stop-pins for operation, as hereinbefore set forth.

No. 36,864. Substitute for Leather.

(*Substitut pour le cuir.*)

Francis Asbury Cushman, Plymouth, Joseph H. Cochey and George P. Boynton, both of Lynn, Massachusetts, U.S.A., 20th June, 1891; 5 years.

Claim.—A composition of matter for use as a substitute for leather, consisting of the combination of sulphite and chemical wood pulp stocks in substantially equal proportions, as described.

No. 36,865. Insulating Hanger for Overhead Supply Conductors. (*Pendant isolant pour les conducteurs suspendus.*)

Reliance Electric Manufacturing Company, Waterford, Ontario, assignees of Frank Bankson Rae, Detroit, Michigan, U. S. A., 20th June, 1891; 5 years.

Claim.—1st. An insulating hanger, consisting of a bell-shaped insulator having a metal hanger secured to project to its under side and to support the conductor, and having suspended arms secured to the exterior of the insulator and extending upward, substantially as described. 2nd. The combination, with a suitable form of metal hanger secured to an insulator, of a bell-shaped insulator and means for suspending the latter from a cross-wire, consisting of two hooked arms attached to the insulator by a clamping ring and clamping screws, substantially as described. 3rd. The combination, with a metal hanger, bolt C, secured thereto, the bell-shaped insulator D, supporting said bolt C, and provided with a groove or neck b, the clamping ring E, made in two halves and removably secured in said groove or neck b, the suspending arms G, G', formed integral with the ring E, the jamb-nut for the bolt C, countersunk in the manner described, and the cap or plug g, fitting over the jamb-nut, substantially as described.

No. 36,866. Grate for Sewers. (*Grille d'égout.*)

Horace Alanson Palmer, Erie, Pennsylvania, U.S.A., 22nd June, 1891; 5 years.

Claim.—1st. A grate for sewers, consisting of a ring having a series of bars arranged within its interior and formed integrally with the ring, and provided upon its interior face with three or more radial, supporting bars, substantially as described. 2nd. A grate for sewers, consisting of a ring having a series of straight parallel bars filling its interior face and formed integrally with said ring, and provided upon its exterior face with short radial bars, or arms, and a ring support having a vertical flange provided with notches in its edge to receive the bars, the upper edges of the latter and of the ring and of the straight bars being provided with points, or nipples, substantially as described.

No. 36,867. Double Current Ventilator.

(*Ventilateur à double courant.*)

William Molesworth Watson, Toronto, Ontario, Canada, 22nd June, 1891; 5 years.

Claim.—1st. The combination of the updraught shaft A, with the downdraught shaft B, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the updraught shaft A, and the downdraught shaft B, with the troughs F, F, substantially as and for the purpose hereinbefore set forth.

No. 36,868. Piano. (*Piano.*)

Octavious Newcombe, Toronto, Ontario, Canada, 22nd June, 1891; 5 years.

Claim.—1st. In an upright piano, a scale having the wires securely held by means of an agraffe bar in one continuous piece throughout the whole scale, substantially as and for the purpose specified.

No. 36,869. Washing Machine.

(*Machine à blanchir.*)

James H. Sawyer, Troy, Pennsylvania, U.S.A., 22nd June, 1891; 5 years.

Claim.—In a washing machine, the combination, with the box A, mounted upon rockers C, of the slotted uprights F, links D, and rods c, d, as and for the purposes described.

No. 36,870. Hammock. (*Hamac.*)

Augustus Beals, North Weymouth, Massachusetts, U. S. A., 22nd June, 1891; 5 years.

Claim.—1st. A hammock of woven fabric having the warps entering into the formation of the body portion extending beyond the latter and collected into groups, the warp threads of each group being united at a point beyond the ends of the hammock, and formed into a cord beyond said point of uniting, as set forth. 2nd. A hammock of woven fabric, having the main body portion formed of open mesh, and the ends of comparatively close weaving the warps entering into the formation of the body and end portions extending beyond the latter and collected into groups, the warp threads of each group being united at a point beyond the ends of the hammock and formed into a cord beyond said point of uniting, as set forth.

No. 36,871. Meter for Grain. (*Compteur à grain.*)

Charles Sinclair Beggs, Ashland, Illinois, U.S.A., 22nd June, 1891; 5 years.

Claim.—1st. In an automatic grain-meter, the combination, with a right angled scale-beam pivoted at its apex, and a forked lever, as described, provided at its lower end with a balance-arm at right angles to the body of the lever, of buckets suspended from the ends of the balance-arm, and crank connection between the scale beam and the lever, whereby the buckets will be alternately raised and lowered by the tilting of the scale-beam, substantially as described.

porting posts having vertical bores in their lower ends to rest upon the lower posts, and having reduced upper ends, substantially as described. 9th. The combination, with a crate having an open side as shown, of a flexible floor closing the said side and having an encircling rib adapted to enter the open side of the crate, and provided with means for attachment to the side walls of the crate, substantially as described.

No. 36,878. Locking Guard for Hats, etc.

(Appareil de fermeture pour chapeaux, etc.)

William Henry Thompson, Winnipeg, Manitoba, Canada, 23rd June, 1891; 5 years.

Claim.—1st. In a lock guard for the purpose described, the combination, with the base-plate A, adapted to be secured to the hat, a hinged dart or guard finger arranged to project over the opening in the hat and a locking device secured to the base-plate, arranged to engage the dart and hold it in engagement with the body when in its operative position, substantially as and for the purpose described. 2nd. In a lock guard for hats, the combination of a base-plate arranged to be secured to the inside of a hat, a dart or guard finger hinged at its upper end to the base-plate and provided with projections, and a combination lock device formed on the said base-plate, with which the projections on the guard finger are adapted to engage when the said finger is in its operative position, substantially as and for the purpose described. 3rd. A lock guard for hats, consisting of a base-plate adapted to be secured to the inside of a hat, a guard finger hinged at its upper end to the plate, its body portion arranged to fold down against said plate, its lower end curved outward over the opening in the hat, and a combination lock formed on the base-plate, with which said guard finger is adapted to engage and be locked thereby when folded down against the body or base-plate, substantially as and for the purpose described. 4th. The combination, with the body portion A, adapted to be secured to the inside of a hat and a housing formed thereon, of the dart or finger C, hinged to the said housing, a holding chain or cord having a retaining bolt E, and a permutation locking device arranged to lock said bolt between the finger and the body portion, and the said finger C, to the body portion, substantially as and for the purpose described. 5th. A locking guard for hats, consisting of a base-plate adapted to be secured to the hat, a housing or cap-piece held therein, apertures formed in said plate and cap-piece, locking slides held for independent movement in said housing formed with recesses in their outer edges and a hinged guard finger or dart provided with depending lugs having inturnd prongs c, said lugs adapted to pass through said apertures in the cap-piece and base-plate, the prongs c, thereof adapted to project under the slides and be held locked thereby, the lower end of said finger projected inward, substantially as and for the purpose described. 6th. The combination, with the base-plate A, formed with the apertures a^1 , a^2 , and the spring tongues a^3 , the cap-piece B, having recesses b , b , registering with the apertures a^2 , the hinged guard finger or dart formed with inwardly projecting lugs having returned prongs c, of the locking slides D, held for independent movement in said housing, and formed with recesses d , d , in their outer edges or inner edges, as the case may require, and with a series of notches on their under faces adapted to be engaged by the tongues, substantially as and for the purpose described. 7th. In a device for the purpose described, the combination, with the base-plate A, adapted to be secured to the hat, a guard finger or dart hinged to the base-plate formed with loop portion C, of a holding chain formed with a headed bolt adapted to seat between said socket and the base-plate, when the dart is locked, and means for holding the hinged finger in locked position, substantially as shown and described.

No. 36,879. Car Coupler. (Attelage de chars.)

Thomas Ashley Bissell and Claes Bergman, both of Buffalo, New York, U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. The combination, with a draw-head provided at its front end with a horizontal recess having open sides, of a coupling hook pivoted in said recess, a horizontally swinging catch pivoted in said recess in rear of the coupling hook, a spring bolt arranged in an opening in the draw-head in rear of said recess and bearing against the rear side of the horizontally swinging catch, whereby the catch is held in engagement with the coupling hook and the latter held from turning on its pivot, and a safety lock arranged on the forward end of the swinging catch and engaging with the coupling hook, whereby the catch is held in engagement with the coupling hook independently of the spring-bolt, substantially as set forth. 2nd. The combination, with the draw-head, of a coupling hook pivoted to the draw-head and provided at its rear end with a shoulder, a horizontally swinging catch pivoted to the draw-head in rear of the pivoted coupling hook, and having on its front side a shoulder which engages with the shoulder of the coupling hook, and a locking pin arranged on the swinging catch, and engaging with the coupling hook, substantially as set forth. 3rd. The combination, with the draw-head and a coupling hook pivoted to the draw-head, of a movable catch or locking bar engaging with the hook, and a safety lock carried by said catch and engaging with the coupling hook, substantially as set forth. 4th. The combination, with the draw-head and a coupling hook pivoted to the draw-head, of a movable catch or locking bar engaging with the hook, and a locking pin or bolt arranged on the catch and interlocking with the coupling hook, substantially as set forth. 5th. The combination, with the draw-head and a coupling hook pivoted to the draw-head, of a movable catch or locking bar engaging with the hook, a locking pin also engaging with the hook and provided with a shoulder or projection, and a releasing link supported upon the catch and adapted to engage against the shoulder or projection of the locking pin, substantially as set forth. 6th. The combination, with the draw-head, of the pivoted coupling hook having a perforated ear, a horizontally swinging catch pivoted to the draw-head and interlocking with the coupling hook, a vertically movable safety pin arranged on the catch and adapted to en-

gage with the perforated ear, of the coupling hook and a releasing link supported at one end upon the catch and engaging against a shoulder or projection on the safety pin, substantially as set forth. 7th. The combination, with the draw-head, of the pivoted coupling hook having a perforated ear provided with an incline, a horizontally swinging catch pivoted to the draw-head and interlocking with the coupling hook, a vertically movable safety pin arranged on the catch and adapted to engage with the perforated ear of the coupling hook, and provided with a shoulder having reverse inclines, and a releasing link supported at its inner end in a recess or cavity in the catch and engaging against the shoulder of the pin, substantially as set forth.

No. 36,880. Bed Bottom. (Sommier à ressorts.)

George Sharp and Duncan N. Miller, Hamilton, Ontario, Canada, 23rd June, 1891; 5 years.

Claim.—In a cross spring bed-bottom, the two diagonal steel straps A, pivoted together at their centres B, the cross slats c, pivoted to said straps A, at E, and pivoted together at their inner ends D, the corner braces F, attached to said slats at H, and to the corner spiral springs S, of a series of springs provided with chains I, and the under straps J, pivoted to said cross straps c, all formed, arranged and combined, substantially as and for the purpose hereinbefore set forth.

No. 36,881. Fastener for Cows.

(Attache pour vaches.)

Oneida Community, Kenwood, New York, (assignee of Harry Eugene Kelley, Niagara Falls, New York, U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. In a cow tie, the combination, with two members or strands connected at their inner ends by a swivel of cross bars or snap hooks attached to the free outer ends of said members, one or more stationary rings arranged on one of said members, and a sliding ring arranged on the other member, substantially as set forth. 2nd. A cow tie, consisting of two strands or members of different length connected at their inner ends by a swivel and forming a continuous chain, the short member being provided with a ring, and at its free end with a toggle or snap hook, and the long member being provided at its free end with a toggle or snap hook and near the swivel with one or more rings or enlarged links forming part of the body of the chain, substantially as set forth.

No. 36,882. Recorder for Autographs.

(Registre pour autographes.)

Adam Cook, (assignee of Thomas Brown Dooley), both of Malden, Massachusetts, U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. An autograph recorder, consisting of a bed cut away or recessed at its forward end or edge, and a movable knife or straight-edge adapted to bear upon the bed at its forward end over the recessed point, as set forth. 2nd. An autograph recorder, consisting of a bed cut away or recessed at its forward end or edge, a movable knife or straight edge adapted to bear upon the bed at its forward end over the recessed point, and a spring to cause the said knife or straight edge to normally bear upon the bed, as set forth. 3rd. An autograph recorder, consisting of a bed cut away or recessed at its forward end or edge, a movable knife or straight edge adapted to bear upon a bed at its forward end over the recessed point, a spring to cause the said knife or straight edge to normally bear upon the bed, and a yielding holder to normally bear upon the bed and hold the paper in position while the straight-edge or knife is raised, as set forth. 4th. An autograph recorder consisting of a bed, a movable knife or straight edge adapted to bear upon the bed at its forward end with a yielding pressure, and a yielding holder to normally bear upon the bed and hold the paper in position while the straight-edge or knife is being moved to enable the user to grasp the edge of the paper, as set forth. 5th. The combination, with the frame and bed, of a plurality of paper roll supports, guides for the paper, a carbon sheet holder to maintain a sheet of carbon paper intermediate of the sheets of paper first mentioned, and a yielding straight edge or knife to bear upon the paper at the forward end of the bed, as set forth. 6th. The combination, with the frame and bed, of a plurality of paper roll supports, guides for the paper, a carbon sheet holder to maintain a sheet of carbon paper intermediate of the sheets of paper first mentioned, a yielding straight-edge or knife to bear upon the paper at the forward end of the bed, the latter being notched or recessed at its forward end or edges, as set forth. 7th. The combination, with the frame and bed, of a plurality of paper roll supports, guides for the paper, a carbon sheet holder to maintain a sheet of carbon paper intermediate of the sheets of paper first mentioned, a yielding straight-edge or knife to bear upon the paper at the forward end of the bed, the latter being notched or recessed at its forward end or edge, and a yielding holder to normally bear upon the bed in the rear of the knife or straight-edge to hold the sheets of paper in proper position upon the bed, as set forth.

No. 36,883. Basket for Shipping Fruit.

(Panier pour le transport des fruits.)

William Harvey Cadwell, Lansing, Michigan, U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. The flaring slat-work vessel having a bottom and a bottom hoop, and provided with a series of vertical slats clamped between said bottom and bottom hoop, and bound together near the top by hoop-wires D, D, intertwined between the individual slats, whereby the vessel is given a flaring form, the intermediate intertwined portion of said wires being stiff and rigid and serving to hold the slats separate and to retain the vessel in shape, substantially as

specified. 2nd. The combination, in a slat-work basket, of a cover adapted to fit on top of the vertical slats, said cover being furnished with a tie or slat on its under face adapted to fit within the basket, said tie being provided with staples at its ends to embrace two of the vertical slats, whereby the basket is adapted to resist collapse in every direction, and one basket is adapted to be piled on top of another, substantially as specified. 3rd. The combination, with bottom A, of vertical slats B, flat metal hoop C, and hoop-wires D, D, at the upper end of the vessel, said wires being intertwined between the slats, whereby the vessel is given a flaring form said flat metal hoop and bottom in connection with the rigid intertwined portions of said hoop-wires serving to prevent the collapsing or folding of said slats at the upper end of the vessel, and to retain the vessel in shape, substantially as specified. 4th. The combination, with bottom A, of vertical slats B, flat metal hoop C, hoop-wires D, D, at the upper end of the vessel, said wires being intertwined between the slats, whereby the vessel is given a flaring form, and cover F, having cross-slats H, on its under side furnished with staples h, h, embracing the ends of two opposite slats, substantially as specified.

No. 36,884. Car Coupler. (*Attelage de chars.*)

George Keeley, Vankleek Hill, Ontario, Canada, 23rd June 1891; 5 years.

Claim.—The combination, with the draw-head having at the mouth the inwardly converging slotted guide plate or frame B, of the latch-bar D, the rear end pivoted to the draw-head, and the forward end working in the slot of said guide plate or frame, and having hooks F, and G, the hook F, engaging the coupling link to effect coupling, and the point of the rear hook G, extending below the point of the front hook F, to receive the thrust of the entering link, and the front end of the latch-bar curving downwardly and inwardly to the point of hook F, to cause said latch-bar to be lifted automatically by the entrance of the coupling link, the spring J, depressing the latch-bar, and the rock shaft O, cam N, and lever M, to lift the latch-bar for uncoupling, as set forth.

No. 36,885. Car Coupler. (*Attelage de chars.*)

Adolphus Gustavus Canada, Horn Lake, Mississippi, U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. In a car coupling, a guide pivoted to the drawhead for the link, said guide having a heavy arm c', acting as a counterpoise, with a sloping guide-face c, and contracting guide-walls c', and C', with rounded edges c', and c', substantially as described. 2nd. In a car-coupling, the combination of a guide pivoted to a yielding drawhead for the link and normally kept in position by the force of gravity, with a bent lever pivoted to the said drawhead and having one of its arms terminating in a clutch for a collar on the coupling pin and the other bent backward to engage the face of the side timber when the drawhead is pressed back, substantially as described. 3rd. In a car-coupling, the combination of a guide pivoted to a yield drawhead for the link and normally held in position by the force of gravity, with a bent lever pivoted to the said drawhead and having one of its arms terminating in a clutch for a collar on the coupling pin and the other bent backward to engage the face of the side timber when the drawhead is pressed back, and the said coupling pin having a long upper arm, as a guide rod, engaging in suitable guides and being connected with a chain to a lifting rod, substantially as described. 4th. In a car coupling, the combination of a guide pivoted to a yielding drawhead for the link and normally kept in position by the force of gravity, with a bent metal lever having two legs, one on either side of the drawhead and pivoted to a suitable pivot thereon, with pivot holes through the rear upper portions of the said legs, the said legs being made tapering and curved to the rear, a steel clutch secured to the upper face of the said bent lever and protruding forward, engaging under a collar on the coupling pin, and a long coupling pin having a collar near its centre and having an upper arm, as a guide rod, engaging in suitable guides and being connected with a chain to a lifting rod, substantially as described. 5th. In a car-coupling, the combination of a guide pivoted to the drawhead for the link, said guide having a heavy arm c', acting as a counterpoise, with a sloping guide face c, and contracting guidewalls c', and C', with rounded edges c', and c', with a bent metal lever having two legs, one on either side of the drawhead and pivoted to a suitable pivot thereon with pivot holes through the rear upper portions of the said legs, the said legs being made tapering and curved to the rear, a steel clutch secured to the upper face of the said bent lever and protruding forward, engaging under a collar on the coupling pin, and a long coupling pin having a collar near its centre, and having an upper arm, as a guide rod, engaging in suitable guides and being connected with a chain to the lifting rod, substantially as described. 6th. In a car coupling, the combination of the counterpoise link-guide C, with the link E, lower face of the slot F, yielding drawhead B, trip lever K, and clutch h, pivoted thereto, face h, of side timber H, coupling pin d', having collar d, guide L, chain N, and lifting rod M, substantially as described.

No. 36,886. Burner for Lamps. (*Bec de lampe.*)

John Alexander McLeod, Boston, Massachusetts, (assignee of William B. Somers, Washington, District of Columbia), both in U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. In a lamp burner, the combination, with the divided chimney C, the perforated divided air-plate D, on the cylinder, the rearwardly extending arms D', on the plate, a hinged plate E, uniting the ends of the arms, of a divided cone arranged to receive and support a suitable divided chimney, parallel ears extending out from the respective portions of the cone directly over and pivoted to the arms on the plate, and a divided wick-tube, substantially as described. 2nd. In a lamp burner, the combination, with the wick-tube and perforated plate, of a divided chimney supporting cone having parallel rearwardly-extending arms and a hinged link connecting the arms, whereby the divided portions of the cone may be

moved back horizontally independent of each other, substantially as described. 3rd. The combination, with a divided chimney having a beaded lower edge, a cylinder and plate, of a divided cone having a struck-up outer rim bent to receive the beaded edge of the chimney, and vertical chimney guards inside the rim, substantially as described. 3th. A lamp-burner, consisting of a divided wick-tube plate and cone hinged together adjacent to their meeting edges and having their respective portions arranged to move horizontally, and independent of each other, substantially as described.

No. 36,887. Sheet Piling for Dams, etc.

(*Pilotis pour digues, etc.*)

James Archibald Wakefield, James Thomas Hall and Thomas Marshall Nelson, all of Chicago, Illinois, U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. In a sheet piling, comprising like piles A, a corner formed by bolting a tongue or groove-section to a plain face upon one of the abutting sections of the piling, adapted to engage with like pile of the adjoining section, substantially as described. 2nd. In a pier constructed of piles formed each of three thicknesses of planks, to provide a tongue and groove at the edges of each pile, the corner formed by a continuous tongue and groove connection, consisting of a tongue bolted to a plain face upon one of the abutting sections and entering a groove in the adjoining oblique or rectangular section, as and for the purposes described.

No. 36,888. Chair for Dental and Surgical Purposes. (*Chaise pour operation dentale et de chirurgie.*)

Frank Everett Case, Canton, Ohio, U.S.A., 23rd June, 1891; 5 years.

Claim.—1st. The combination of a base-frame, a vertically adjustable standard guided thereby, a rocking yoke-hub or frame pivoted to the standard, and having a screw nut, a seat-frame attached to and carrying a chair-back, and a screw-stem arranged in the yoke-hub or frame, supporting the seat frame and back, and serving to rotate and simultaneously raise and lower the chair back and seat, substantially as described. 2nd. The combination of a base frame, a vertically sliding standard guided thereby, a foot lever mechanism for elevating the standard, a yoke-hub or frame pivoted to the standard, oscillating on its pivots in a vertical plane and provided with a screw nut, a seat frame attached to and carrying a chair back and a rotary screw stem arranged in the yoke or frame, supporting the seat frame and back and serving to simultaneously raise and lower the seat and back, substantially as described. 3rd. The combination of a base frame, a vertically adjustable standard guided thereby, a yoke-hub comprising arms pivoted to the standard and a tubular neck containing a screw nut, a seat frame attached to and carrying a chair back, and a rotary screw stem engaging the nut, supporting the seat frame and back and serving to simultaneously raise and lower the seat back, substantially as described. 4th. The combination of a base frame, a vertically adjustable standard guided thereby, a yoke-hub or frame pivoted to the upper end of the standard and adapted to swing upward on its pivotal attachment, a screw nut arranged in the yoke-hub or frame, a seat frame attached to and carrying a pivoted, swinging back, a rotary screw stem engaging the nut, supporting the seat frame and back and serving to simultaneously raise and lower the seat back, substantially as described. 5th. The combination of a base frame, a vertically adjustable standard guided thereby, a yoke-hub or frame pivoted to the upper end of the standard and containing a nut, a seat frame attached to and carrying a pivoted chair back, a screw stem engaging the nut, solely supporting the seat frame and back and serving to simultaneously raise and lower the seat and back, whereby the seat and back can be rotated and also tilted or inclined side-wise, substantially as described. 6th. The combination of a base frame, a sliding standard guided thereby, a lifting mechanism for raising the standard, a lowering mechanism which is independent of the lifting mechanism for gradually depressing the standard, a rocking yoke-hub or frame pivoted to the standard and having a screw nut, a seat frame attached to and carrying and supporting a chair back, and a screw stem engaging the nut, supporting the seat frame and back and serving to simultaneously raise and lower the seat and back, substantially as described. 7th. The combination of a base frame, a vertically adjustable standard guided thereby, a rocking yoke-hub or frame pivoted to the standard and having a nut, a chair body, a rotary screw stem engaging the nut, supporting the chair body and serving to raise and lower the latter, and a locking device acting on the screw stem to hold it against rotation, substantially as described. 8th. The combination of a base frame, a vertically sliding standard guided thereby, a foot lever mechanism for elevating the standard, a lowering mechanism independent of the lifting mechanism for gradually lowering the standard, a rocking yoke-hub or frame pivoted to the standard and having a tubular neck containing a screw nut, a chair body, a rotary screw stem engaging the nut, supporting the entire chair body and serving to raise and lower the same, and means for locking the screw stem against axial rotation in the tubular neck, substantially as described. 9th. The combination of a hollow base frame, a vertically adjustable standard guided therein, a yoke-hub or frame located outside of and depending beside the base frame, pivoted to the upper end of the adjustable standard to oscillate on its pivotal attachment in a vertical plane outside the standard and base frame and having a screw nut, a chair body comprising a seat attached to and carrying and supporting a swinging, adjustable back, and a rotary screw stem engaging the nut and solely supporting the seat and back whereby the seat and back can be raised, lowered, and the back be inclined rearward and forward and with the seat tilted laterally or sidewise, substantially as described. 10th. The combination of a base frame, a vertically adjustable standard guided thereby, a rocking yoke-hub or frame pivoted to the standard and having a screw-nut, a rotary screw-stem engaging the screw nut, a seat frame rigidly attached to and raised and low-

ered by and rotating with the screw, and a chair back pivoted to the seat frame and adapted to be lowered to a horizontal position, substantially as described. 11th. The combination of a base frame, a vertically sliding standard guided thereby, a lever mechanism for lifting the standard, a sustaining and lowering mechanism independent of the lifting mechanism for sustaining the standard and gradually lowering the same, a yoke-hub or frame pivoted to the standard and having a screw nut, a seat frame attached to and carrying and supporting a chair back and a rotary screw stem, engaging the nut, supporting the seat frame and serving to simultaneously raise and lower the chair seat and back, substantially as described. 12th. The combination of a base frame, a vertically sliding standard guided thereby, a lever mechanism for lifting the standard, a sustaining and lowering mechanism independent of the lifting mechanism, a rocking yoke-hub, or frame pivoted to the standard and a chair body having a pivoted swinging back and a stem vertically adjustable and rotating in the yoke-hub or frame, substantially as described. 13th. The combination of a base frame, a vertically sliding standard having a yielding pawl, a lifting mechanism for elevating the standard, a rotary screw engaging the pawl to sustain and also gradually lower the standard independent of the lifting mechanism, a yoke-hub or frame carried by the standard and a chair body supported by the yoke-hub or frame, substantially as described. 14th. The combination of a base frame, a vertically sliding standard having a yielding pawl, a lifting mechanism for elevating the standard, a rotary screw having a balance wheel and engaging the pawl to sustain and also gradually lower the standard independent of the lifting mechanism, a rocking yoke-hub or frame carried by the standard and a chair body provided with a supporting stem rotating and rising and falling in the rocking yoke-hub or frame, substantially as described. 15th. The combination, with a chair body, of a base frame, a vertically sliding standard guided thereby and having a yielding sustaining pawl, a lifting mechanism for elevating the standard, a rotary screw engaging the pawl to sustain and also lower the standard, and over the threads of which screw the pawl slides in the ascent of the standard, and a brake mechanism for locking the screw stationary, substantially as described. 16th. The combination, with a chair body, of a base frame, a vertically sliding standard having a yielding pawl, a lifting mechanism for elevating the standard, a rotary screw engaging the pawl to sustain and also lower the standard, and having a balance wheel and a brake lever for engaging and locking the screw and wheel stationary, substantially as described. 17th. The combination, with a chair body, of a base frame, a vertically sliding standard having a yielding pawl, a lifting mechanism for elevating the standard, a rotary screw engaging the pawl to sustain and also lower the standard and having a notched or toothed balance-wheel, and a pivoted brake lever for engaging the balance wheel to hold the wheel and screw stationary, substantially as described. 18th. The combination, with a chair body, of a base frame, a vertically movable standard guided thereby and having a ratchet, a swinging lifting lever, a dog carried by the lifting lever to lift the standard, a rotary screw, a yielding pawl carried by the standard, adapted to ride over the screw thread in the ascent of the standard while the screw stands stationary and to engage and sustain the standard against descending, and a brake for holding the screw stationary, substantially as described. 19th. The combination, with a chair body, of a base frame, a vertically sliding standard guided thereby and provided with a pivoted spring pressed pawl having a tooth, a lifting mechanism for elevating the standard, a rotary screw engaging the pawl-tooth and over the thread of which the said pawl slides in the ascent of the standard while the screw is stationary, a balance wheel on the screw, and a brake mechanism for locking the balance wheel against rotation, substantially as described. 20th. The combination, with a chair body and a rotary screw for lowering the same, of an automatically operating speed governor thrown into action by centrifugal force for regulating the speed of the screw and the rapidity of descent of the chair body, substantially as described. 21st. The combination, with a chair body and a rotary screw for lowering the same, of an automatically operating speed governor to regulate the speed of the screw and the rapidity of descent of the chair body, substantially as described. 22nd. The combination, with a chair base, a chair body and means for lifting the chair body, of a rotary screw for sustaining the chair body in an elevated position, a balance wheel on the screw, a brake for holding the wheel and screw stationary and an automatic speed-governor for regulating the speed of the screw in lowering the chair body when the brake is released, substantially as described. 23rd. The combination, with a chair body, a base frame, and means for lifting the chair body, of a rotary screw for lowering the chair body, a balance wheel on the screw, brake shoes pivoted on the wheel and a stationary friction ring against which the brake shoes act to govern the speed of the screw in lowering the chair body, substantially as described. 24th. The combination, with a chair body, and a base frame of a vertically sliding standard guided by the base frame and having a ratchet therein, a lifting lever pivoted to the base frame, a lifting dog pivoted to the lifting lever having an arm extension to rest thereupon and provided with a tooth to engage the ratchet as the rear end of the lever descends, and a spring which raises the lever and also serves to throw the dog into engagement with the ratchet at the proper instant, substantially as described. 25th. The combination, in a chair, of a base frame, a seat, a back support, a back rising and falling on the back support, a step support, a step, and connections operated by the sliding movements of the back to raise and lower the step support and step, substantially as described. 26th. The combination, in a chair, of a base frame, a seat frame, a back support, a back rising and falling on the back support, levers pivoted on the seat frame and oscillated by the rising and falling back, and a step support suspended from the levers, carrying a step and moving up and down in an approximately right line as the levers are oscillated, substantially as described. 27th. The combination, in a chair, of a base frame, a seat, a swinging back support, a back which can rise and fall independent of any movement of the back support, a step, and suitable connections operated by the rising and falling movements of the back to adjust the step, substantially as described. 28th. The combination, in a chair, of a base frame, a seat frame, a back support, a back having a sliding connection with

the back support to rise and fall while the latter remains stationary, a step support carrying a step, and suitable connections operated by the rising and falling movements of the back on the back support to adjust the step support and step, substantially as described. 29th. In a chair having a seat and back susceptible of being raised or lowered, a rising and falling step, levers fulcrumed to the seat frame and pivotally connected at the front end to the step support, and at the rear end to an arm connected with a vertically sliding standard, and links pivoted to the step support and to the seat frame, substantially as described. 30th. The combination, in a chair, of a base frame, a seat frame, a back support, a standard sliding lengthwise on the back support and carrying a back, pivoted oscillating levers connected with the standard and a step support carrying a step and suspended from the levers, whereby the rising and falling movements of the back raise and lower the step support and step, substantially as described. 31st. The combination, in a chair, of a back capable of rising and falling independent of a swinging movement, and a step connected with and adjusted by the said rising and falling back, substantially as described. 32nd. The combination, in a chair, of a back susceptible of rising and falling independent of a swinging movement, levers fulcrumed between their extremities and connected at their rear ends with the back and a step connected with the front ends of the levers, whereby the step is manipulated through the medium of the back without swinging the latter, substantially as described. 33rd. The combination, in a chair, of a back susceptible of rising and falling independent of a swinging movement, levers fulcrumed intermediate their extremities and connected at their rear ends with the back, a step connected with the front ends of the levers and adjusted thereby as the back is raised or lowered, and a locking device for rigidly holding the back against its rising and falling movements, substantially as described. 34th. The combination, in a chair, of the suspended step support, the step having side flanges provided with rack bars, the foot rest having standards which underlay the flanges and form bearings for a rotary shaft, and pinions rigid on the shaft and engaging the rack bars, substantially as described. 35th. In a chair, the combination of a base frame, a rocking yoke or frame thereon, and a chair body carried by the yoke or frame and susceptible of being brought to a horizontal or reclining position, whereby the head of the patient may be placed below a horizontal plane, substantially as described. 36th. In a chair, the combination of a base frame, a rocking yoke or frame thereon, a locking device for holding the yoke or frame at any desired angle of adjustment and a chair body swiveled to the yoke or frame, the chair back being adapted to move from a vertical to a horizontal position, and by the movement of the yoke to be inclined for placing the patient's head below a horizontal plane, substantially as described. 37th. In a chair, the combination of a base frame, a rocking yoke or frame thereon and a vertical stem swiveled in the yoke or frame and supporting the entire chair body, substantially as described. 38th. The combination, in a chair, of a chair seat frame, a chair back connected to the frame, and side arms each composed of two sections pivotally supported at their rear ends, the lower section detachably connected at its front end with the frame to swing around beside the chair back, and the upper section capable of swinging on a pivot to a position at right angles to the lower section, substantially as described. 39th. The combination, in a chair, having a back, of a chair seat frame and a side arm having a rear pivotal support and a detachable pivotal connection at the front end and comprising two sections detachably connected at one end, both sections being capable of swinging on the rear pivotal support to a position beside the chair back, and the upper section movable on a pivot to a position at right angles to the lower section, substantially as described. 40th. The combination, in a chair, of a chair seat frame, a swinging back pivotally connected to the frame and a side arm composed of two pivoted sections, one having a stem, and the other a perforation through which the stem passes, and one of said sections being capable of swinging on a pivot to a position at an angle with the other section, substantially as described. 41st. The combination, in a chair, of a chair seat frame, a side arm composed of two sections pivoted together and one adapted to swing on said pivot to a position at right angles to the other section, and a back pivotally connected with the chair seat frame and adapted to be lowered to a horizontal position, substantially as described. 42nd. A chair having a back adapted to be brought to a horizontal position, and a side arm composed of two sections pivotally connected with each other, and so adapted that the upper section may be turned at right angles to the lower section and at right angles to the chair back when the latter is in the horizontal position, substantially as described. 43rd. In a chair, a side arm composed of two superposed sections connected by a vertical pivot adjacent to one end and the upper section adapted to swing in a horizontal plane at right angles to the lower section, and a support for the side arm on which the two superposed sections can be swung horizontally, substantially as described. 44th. A chair, having a side arm composed of two superposed sections adapted to swing together in a horizontal plane, and the upper section pivotally supported to swing in a horizontal plane on the lower section, substantially as described. 45th. A chair having a side arm composed of two superposed sections, one having a longitudinal slot, and the other a stem passing through the slot, and the upper section adapted to swing in a horizontal plane on the lower section, substantially as described. 46th. A chair having a side arm composed of two superposed sections of substantially equal length and width, both sections capable of swinging in a horizontal plane and the upper section capable of swinging horizontally independent of the lower section, substantially as described. 47th. The combination, with a support, such as a chair arm, having a curved toothed portion, of a toothed washer, a stirrup shank, and a support for the stirrup shank, whereby the washer can be engaged with and disengaged from the curved toothed portion for varying the elevation of the stirrup, substantially as described. 48th. The combination, with a support, such as a chair arm, having a toothed projection, of a toothed washer, a stirrup shank, a support for the washer and stirrup shank, and means whereby the washer can be released to fall by gravity away from the toothed projection, and be elevated into locking engagement with the said projection for varying the elevation of the stirrup, substantially as described. 49th. The combina-

tion with a support, such as a chair arm, having a toothed projection, of a block pivotally suspended from the projection, a toothed washer in the block, a stirrup shank supported by the block and means for raising and lowering the washer, substantially as described. 50th. The combination, with a support, such as a chair arm, having a toothed projection, of a block pivotally suspended from the projection, a toothed washer in the block, a stirrup shank supported by the block and an axially turning rod or bar for raising and lowering the toothed washer, substantially as described. 51st. The combination, with a support, such as a chair arm, having a rotating toothed projection, of a block pivotally suspended from and turning with the toothed projection, a toothed washer in the block, a stirrup shank carried by the block and an axially turning rod or bar for raising and lowering the washer, substantially as described. 52nd. The combination, with a support, such as a chair arm, having a toothed projection, of a block pivotally suspended from the toothed projection, a toothed washer in the block and a lengthwise sliding stirrup shank and a rod or bar supported by the block, said rod or bar adapted to axially turn for raising and lowering the washer, substantially as described. 53rd. The combination, with a back of a chair, of a head rest having pivoted side links, a shank having a slotted cross head, a pair of washers having sliding engagement with the slotted cross head, a bolt passing through the links, the washers and the cross head, and means for acting on the bolt to rigidly clamp the links and washers to the cross head, substantially as described.

No. 36,889. Farm Wagon. (*Wagon de ferme.*)

John Herby, Jamestown, New York, U.S.A., 24th June, 1891; 5 years.

Claim.—1st. In a farm wagon, the front gear thereof in combination with a pole slotted longitudinally and transversely at its rear end, and having a hook pivoted therein and adapted to engage a bolt on said front gear, a pole support, the draw clips and the pole braces having hooked ends adapted to engage the draw clips, substantially as herein described. 2nd. In a wagon, the front gear thereof, in combination with a pole slotted at its rear end and detachably fitted on a bolt on said gear, and a hook pivoted within said slotted end and engaging said bolt and pole support, substantially as herein described. 3rd. In a farm wagon, the front gear thereof and the reach, in combination with a pole having its rear end slotted longitudinally and transversely, a plate P, between the said board and axle, having its front end provided with lugs between which the rear end of the tongue is inserted, a bolt passing through said lugs, and the transverse slot in the pole, a hook pivoted in the longitudinal slot of the pole whereby the pole is detachably connected with said plate, and a ball and socket connection between the rear end of said plate and the front of the reach, substantially as herein described. 4th. In a wagon, the swivel on the reach, consisting of an inner and outer plate or ring, the outer plate or ring having a hinged section, and the braces extending from said outer plate or ring at points above and below the reach to the front gear, to the axle and sand board of which said braces are connected, substantially as herein described. 5th. In a farm wagon, the front gear and the reach, in combination with a swivel on the reach, consisting of an inner ring or plate secured by a flange to the reach, and having a central opening through which the reach passes, an outer ring fitted in a groove in the periphery of the inner ring and having a hinged section adapted to be swung outward, and the braces W, above and below the reach secured at one end in lugs or ears on the outer ring of the swivel, and having their forward ends secured to the sand board and axle respectively, substantially as herein described. 6th. In a farm wagon, the front gear thereof, and the reach coupled thereto by a ball and socket connection, in combination with two concentric plates on the reach, one of which is movable and fitted in a peripheral groove in the other, and provided with a hinged section adapted to be swung outward, said movable plate having ears or projections L, the braces W, secured at their rear ends to said ears at points above and below the reach, and plates on the axle, and sand board with which the front ends of said braces are connected, substantially as herein described. 7th. In a farm wagon, the rear gear with its bounds and adjunctive parts, in combination with the front gear, the reach uniting the front and rear gears, and plates on the hounds provided with clips surrounding the reach, and securing the same, substantially as herein described.

No. 36,890. Pulley. (*Poulie.*)

George Philion, Mishawaka, Indiana, U.S.A., 24th June, 1891; 5 years.

Claim.—1st. The rim A, and shouldered arms B, embedded at their ends in said rim, and having the transverse anchoring pin C, rigid with said arms and extended laterally into the material, substance of the rim substantially as set forth. 2nd. The rim A, and arms embedded in said rim, and each arm provided with one or more lateral pins or dowels integral with said arm, as set forth. 3rd. A pulley having a rim and shouldered arms, the latter embedded at their outer ends in said rim, and provided with integral transverse anchoring pins extended laterally into the material, substance of the rim. 4th. The rim A, and shouldered arms B, embedded at their ends in said rim and having the integral transverse anchoring pins C, extended laterally into the material, substance of the rim.

No. 36,891. Street Railway. (*Chemin à ornier.*)

James Martin Price, Philadelphia, Pennsylvania, U.S.A., 24th June, 1891; 5 years.

Claim.—1st. A street car rail or tramway rail with vertical ridges or flanges overlapping and embracing the heads of a metallic stringer, folded into alternate truncated pyramids, substantially as described. 2nd. A street car rail or tramway rail, in combination with a metallic stringer of continuous truncated pyramidal shape, and a metallic support, the rail resting upon the heads of the stringer and embracing its sides, and the stringer resting upon said

support, the rail and stringer, and the stringer and support being respectively bound together by metallic straps, substantially as described. 3rd. A street car rail with vertical flanges beneath in combination with a metallic undulating stringer, confined and embraced by the flanges, and with a metallic base or support upon which the stringer rests, the parts in contact with each other being interbound with metallic straps, substantially as described. 4th. A street car rail or tramway rail shouldered laterally, and ridged beneath, embracing a metallic stringer on which the rail is seated, and supported by a metallic stretcher or cross tie, in combination with a tie rod or clamp across the road bed, substantially as described. 5th. A street car rail flanged beneath to embrace a metallic stringer, folded into connected undulations of the shape of a truncated pyramid, in combination with the metallic stretchers or cross tie under its feet, and fastened thereto by metallic bars or belts with an occasional tie rod above, as at E, figures 1, and 2, to maintain gauge, substantially as described. 6th. A support for a street car rail, consisting of a metallic stringer of the form of truncated pyramids, and a base or cross tie on which said stringer rests, in combination with clamps passing through said base and embracing the bases or feet of said pyramids, substantially as described. 7th. The combination of a rail having depending flanges and shouldered sides, with an undulating stringer having its heads embraced by said flanges, bars passing through said flanges and beneath said heads, and having bent ends, the said shouldered ends of the rail being over and above said bent ends of the bars, substantially as described. 8th. The combination of a channeled stretcher with openings therein, and an undulating stringer on said stretcher, a clamp having its ends passing through said openings in the stretcher, and bent on the feet of said stringer, substantially as described. 9th. A street car rail or tramway rail with vertical ridges or flanges depending from or near each exterior edge on the under side, with a wide flat base between them, said ridges or flanges pierced at frequent intervals to permit the passage of lateral fastenings to the sub-structure, substantially as described. 10th. A street car rail or tramway with a vertical flange or ridge at each edge of the rail on its under side, said flanges or ridges combining lateral security, by embracing the top of the sub-structure, with vertical steadiness by straps or other fastenings traversing the structure through frequent oblong oval holes in said flanges, substantially as described.

No. 36,892. Artificial Leg. (*Jambe artificielle.*)

Charles Manley Eddy, Smith's Falls, and Elmer Earl Eddy, North Bay, both in Ontario, Canada, 24th June, 1891; 5 years.

Claim.—1st. The leg and foot sections connected by a T-hinge joint, and having rubber springs 8, 8, intervening said sections front and rear of the joint, as set forth. 2nd. The leg and ankle sections connected by a hinge at the sole, and having a rubber spring 11, intervening said sections above the hinge, as set forth. 3rd. The combination with the leg section, of the inserted removable section 12, to receive the stump of the leg below the knee, as set forth. 4th. The knee section composed of the two pieces 14, 15, connected by a tenon joint and pintle 16, and having a rubber tendon 17, at the rear of said joint, and terminating in cavities in said pieces, and bearing on a coiled spring 19, in the lower cavity, said tendon and spring resisting the bending of the knee and reacting the same to straighten the joint, as set forth.

No. 36,893. Process for Desiccating Blood etc. (*Procédé de dessiccation du sang, etc.*)

William Barnsdale, Richard Hellaby and William Hicks, all of Auckland, New Zealand, 24th June, 1891; 5 years.

Claim.—1st. The process of desiccating hereinbefore described, consisting of, first, boiling the matters to be desiccated until the same are coagulated, second, mastication of the resultant mass, third, expression of the fluids of said mass after mastication, and fourth, drying the solid part after the fluids have been pressed out, substantially as set forth. 2nd. The process of desiccating blood, animal matters and fish, consisting of first boiling the same until coagulated, and, after mastication of the resultant mass, expressing the fluids by rollers, afterwards reducing the solid matters to dryness in a suitable desiccator, substantially as herein described.

No. 36,894. Lamp. (*Lampe.*)

Edgar J. Bissell, Bartold, Missouri, U.S.A., 24th June, 1891; 5 years.

Claim. 1st. The combination, in a lamp having a central air tube, an outer tube L, an annular wick space being formed between said tubes, of a vertically removable chimney holder on the tube L, and having a deflector P, an upright perforated band O and a perforated cone shaped shell N, joining chimney holder and deflector to the sleeve M, a vertical central rod projecting above the air tube and having a shoulder or projection near its upper end, and a vertically removable single spreader disk having a central aperture for receiving said rod and an outer marginal series of apertures, said spreader disk being of greater diameter than the tube L, whereby when the chimney holder is removed it will also remove the same, substantially as described. 2nd. The combination, with a lamp having an annular wick chamber or space, and a vertically removable chimney holder provided with an inwardly inclined deflector P, and a perforated cone N, giving great air space in smallest vertical distance and also a firm support for chimney and deflector P, on a central rod L, having a pointed lower end, a shoulder or support E, and a centrally apertured spreader disk having its aperture flared, as at F, to readily receive the rod, and provided with a marginal series of apertures above the wick space, the spreader projecting at its margin into the upward path of the chimney holder, whereby the spreader will be removed and returned by the chimney holder, substantially as described. 3rd. The combination, with a lamp having a central air tube therein, of a vertically movable tube mounted on the air tube and carrying a wick as shown, said tube having parallel flanges at its lower end, the lower flange being cut away, a screw shaft mounted vertically in the lamp font, and a nut mounted on the screw shaft and provided with a laterally extending flange, of a

width to pass through the said cut away portion and into the annular space between the flanges of the wick tube, substantially as described. 4th. The combination, with the vertically movable wick tube having on its lower end parallel annular flanges, with the lower flange and a part of the tube broken away, as shown, of a screw shaft mounted in the lamp foot adjacent to the wick tube, and a nut mounted on the screw shaft and provided with a laterally extending flange to engage the flanges of the wick tube, said flange having its corners rounded, substantially as described.

No. 36,895. Hinge for Gates.
(*Penture de barrière.*)

Robinson Bulmer, Burlington, Iowa, U. S. A., 27th June, 1891; 5 years.

Claim.—The combination, with the plate provided with the arm having the convex surface and perforated, of the journal provided with the stud engaging said perforation, and the roller having the concave surface engaging the convex arm, substantially as described.

No. 36,896. Trap for Animals. (*Piège.*)

Joseph Blasi, Everest, Kansas, U.S.A., 27th June, 1891; 5 years.

Claim.—1st. The herein described improved animal trap, comprising the base board having an overhanging arm, the pivoted trip board, and the spring jaw and the connection between said spring jaw and said trip board, substantially as set forth. 2nd. The herein described improved animal trap, comprising the base board having an overhanging arm, and a forward loop or ring, the pivoted trip board located in said loop or ring, the spring jaw, the arm secured thereto, the bell crank lever engaging said arm, and the link connecting said bell crank lever and trip board, substantially as set forth. 3rd. The herein described improved animal trap, comprising the base board, the vertically disposed overhanging arm, the spring jaw having a forward circularly bent portion and parallel arms extending on either side of said overhanging arm to which they are pivotally secured, the trip board, the arm connected to said spring jaw and designed to rest on said overhanging arm, the stud or pin projecting from said arm, the bell crank lever engaging said stud or pin, and connected to said trip board, substantially as set forth.

No. 36,897. Rack for Hay. (*Râtelier à foin.*)

John C. Sellers, Husband, Pennsylvania, U.S.A., 27th June, 1891; 5 years.

Claim.—1st. A hay rack or ladder having a transverse arched portion near its front end, a fifth wheel in front of said arch, and cross bars in rear of the arch, said racks adapted to rest upon ordinary wagon trucks and form the connection between them, substantially as described. 2nd. A hay rack or ladder having a transverse arched portion near its front end, the fifth wheel 5, in front of said arch, supported by the bolster 4, and cross bar 6, the rear cross bar 9, and the intermediate apertured cross bar 10, all operating substantially as described.

No. 36,898. Press for Hay. (*Presse à foin.*)

Jean Baptiste Doré, Laprasirie, Quebec, Canada, 27th June, 1891; 5 years.

Claim.—1st. In a hay press, the piston B, piston rod C, pieces D, E, and d^2 , rod J, and piece F, substantially as described and for the purposes set forth. 2nd. In a hay press, the lever M, provided with the sleeve N, rod n, and spring n^1 , piece K, having portion k^1 , and shoulders k^2 , substantially as described and for the purposes set forth. 3rd. In a hay press, the adaptation of an alarm bell T, operated in any suitable manner, as a signal to notify the operators, when to insert a new friction block, substantially as described and for the purposes set forth. 4th. In a hay press, the combination of the bell I, frame A, piston B, piston rod C, pieces F, D, d^2 , and F, and rod J, with the connecting rod G, crank H, shaft I, pieces K, and S, and lever M, substantially as described.

No. 36,899. Square for Carpenters.
(*Équerre de charpentier.*)

Charles Leonard Bronk, Brooklyn, New York, U.S.A., 27th June 1891; 5 years.

Claim.—1st. The combination, with the arms, of a square, the one provided with an elongated shallow recess, and the other with an elongated thin plate corresponding to said recess, of a pivotal connection between the two arms at a considerable distance from the angle formed by the inner edges of the two arms, and a locking device near the opposite end of said corresponding recess and plate from the pivotal connection, substantially as set forth. 2nd. The herein described square, one of the arms being provided with an elongated wide shallow recess a , having a curved end, and the other with a plate corresponding in shape and thickness to said recess, a pivotal connection between the two arms at a point near the said curved ends, one of the arms being provided with a curved slot and the other with a set screw extending within the curved slot, a spring seated in the arm provided with a shallow recess, and having its nose projected within the recess to engage an opening in the opposite arm, the two arms being further provided the one with an elongated notch, and the other with an elongated lateral projection to correspond with the notch and located upon the opposite side of the square from the recess and plate hereinbefore referred to, substantially as set forth.

No. 36,900. Impreguator for Veterinary Use. (*Machine à impregner à l'usage des vétérinaires.*)

Charles C. Lyford, Minneapolis, Minnesota, U.S.A., 27th June, 1891; 5 years.

Claim.—1st. The herein described veterinary instrument, consisting of the tube 2, having a rounded end, and a contracted portion 4, and the disk portion 3, having the curved or funnel shaped opening communicating with the opening through the tube, as described. 2nd. A device of the class described, consisting of the tube 2, having the rounded end 5, the contracted portion 4, and the disk 3, having the curved outer portion 6, and the central curved or funnel shaped opening co-incident with the opening through the tube 2, as described. 3rd. A device of the class described, consisting of a rubber tube portion having a large rounded end 8, and a contracted portion 4, and the rounded disk portion formed on the outer end of the tube, and having the curved or funnel shaped opening communicating with the opening through the said tube, as described. 4th. The combination, in an insertion rod adapted for use with the impregnator of the rod 9, having a suitable handle with a pointed head or bulb 10, adapted to project beyond the end of the impregnator tube to form a slender point thereon, as described. 5th. The combination, in an insertion rod for use with the within described impregnator, of the rod 9, having a suitable handle with the bulb or head, and the disk 11, adapted to engage the disk of the impregnator, as and for the purpose described.

No. 36,901. Lamp. (*Lampe.*)

Georg Adolf Sinsel, Leipsic, Saxony, German Empire, 29th June, 1891; 5 years.

Claim.—1st. In a magnesium lightning lamp, the combination of a cylinder i , and piston p , operated by pneumatic pressure, the piston being arranged to be pressed against the end of an adjustable tube n , by means of a spring s , and the cylinder i , having an air bye-pass v , communicating with passages q , formed in grooved piston p , substantially as described. 2nd. In a magnesium lightning lamp, the construction and arrangement of a piston p , having groove and passages o , d , therein, and its combination and arrangement with the tube p^1 , substantially as described. 3rd. In a magnesium lightning lamp, the construction and arrangement of the cylinder i , having an air bye-pass v , adapted to form a communication between the hollow pipe p^1 , and the interior of cylinder i , substantially as described.

No. 36,902. Combined Plate and Nut for Railways, etc. (*Plaque et écrou combinées pour chemins de fer.*)

Thomas Barrett and Edmund Alfred Copp, both of Adelaide, South Australia, 29th June, 1891; 5 years.

Claim.—An improved combined plate and nut, consisting of a plate provided with a projecting piece or boss having preferably one or two transverse cuts or saw-gates, and provided throughout with a screw threaded hole preferably tapering, substantially as herein described and for the purpose indicated.

No. 36,903. Method and Apparatus for Making Seamless Rubber Lined Hose. (*Mode et appareil de fabrication des boyaux de caoutchouc sans couture.*)

Ernest Nathaniel Foote, Cleveland, Ohio, U. S. A., 30th June, 1891; 5 years.

Claim.—1st. In apparatus for making seamless rubber lined hose, the combination of a traveling support, a stop, and a mandrel or pole disconnected from said stop, but adapted to engage therewith, substantially as set forth. 2nd. In apparatus for making hose with seamless tubular rubber linings, the combination of a suitable tube forming die mechanism, a movable feeder located adjacent to the discharge pivot of said die mechanism, a stop operating in conjunction with said feeder, and a mandrel or pole held against longitudinal movement by said stop, substantially as set forth. 3rd. In apparatus for making hose with seamless tubular rubber lining, the combination of a suitable tube forming die mechanism, a number of feeding machines placed in alignment with each other and coincident with the discharge point of the tube lining, a pivotal stop mounted upon one of said feeding machines and operatively extending transversely to the line of feed thereof, and a mandrel or pole located upon the machine which carries said stop and resting endwise against the same, substantially as set forth. 4th. In apparatus for making hose with seamless tubular rubber lining, the combination of a suitable tube forming die mechanism, a number of endless feeding aprons or belts located adjacent to the discharge point of the forming die mechanism, a pivoted stop operating in conjunction with one of said feeding aprons, and a mandrel or pole held against longitudinal movement by said stop, all substantially as set forth. 5th. In apparatus for making hose with seamless tubular rubber lining, the combination of a suitable tube forming die mechanism, a number of supporting frames located in alignment with each other coincident with the direction of the discharge of the tube, a number of endless feeding belts carried by said frame and movable longitudinally of the latter, a pivoted stop mounted upon one of said frames, and a mandrel or pole supported upon the frame which carries the stop, and held by said stop against longitudinal movement, substantially as set forth. 6th. An improved method for lining hose, etc., with seamless tubular lining, the same comprising the formation of a seamless tubular lining, then closing one end of said lining, filling the closed lining with air, and inserting a pole or mandrel into the lining against the air confined therein, substantially as set forth. 7th. An improved method for forming tubular lining for hose, etc., the same comprising the closing of one end of the lining, filling the lining with air, and subsequently forcing a pole or mandrel into said closed lining against the air confined therein, substantially as set forth. 8th. An improved method for lining hose with seamless tubular lining, the same comprising the closing of one end of the lining, filling the lining with air, forcing a mandrel or pole into the closed lining against the air confined therein, and subsequently applying the external fibrous cover to the lining, substantially as set forth. 9th. A hose winder, provided with a series of winding rollers, and having a swinging spring pressed roller carrying arm, substantially as set

forth. 10th. A hose winder, having a swinging roller carrying arm, an adjustable spring engaging therewith and having its pressure exerting extremely freely movable, substantially as set forth. 11th. A winder provided with a series of winding rollers for the purpose of automatically winding the core on the seamless tube, substantially as set forth. 12th. An automatic hose tube winder provided with a spring pressed roller-holding winder arm, the spring of which has easy and free bearing against said arm, and a bed carrying two rollers which, together with the arm-held roller, automatically wind the tube, substantially as set forth. 13th. The combination of a winder arm formed in two sections and adjustable vertically, and provided with a winding roller, and a standard provided with anti-friction rollers on which rest winding rollers, and which, in conjunction with the winding roller secured to the winding arm, automatically wind the cover on the seamless tube, substantially as set forth. 14th. The combination of a vertical threaded support, one or more pivotal spring, adjustable winder arms holding a winding roller by means of adjustable grippers, and itself adjustable vertically, a series of anti-friction rollers supporting two or more winding rollers on which rest the tube to be wound, whereby an even automatic winding of the tube is effected, substantially as set forth. 15th. In a system of making seamless rubber lined hose, a winder provided with a yielding spring pressed arm carrying a winding roller, substantially as set forth.

No. 36,904. Buckle for Securing Straps.

(*Boucle pour courroies.*)

Thorwald Brandt, Bade, Grand Duchy of Bade, German Empire, 30th June, 1891; 5 years.

Claim.—The improved buckle for securing straps or belts, constructed, substantially as herein described, and having a fastening plate *g*, provided with a stud *h*, and a tongue *r*, as also a pivoted locking plate *l*, formed with a toe *m*, the plate *g* being raised or depressed by the plate *l*, accordingly as the toe of the latter engages beneath the tongue *r*, or against the back of the plate *g*.

No. 36,905. Fastenings for Sweat Pad.

(*Crochet de collier de cheval.*)

Ernest F. Pfuoger, Akron, Ohio, U.S.A., 30th June, 1891; 5 years.

Claim.—The sweat pad fastenings for horse collars, consisting of the clasp or band having struck up from its outer surface near one end two loops *f, f*, and the fastener having the loops *b²*, and the parallel arms *b*, formed with end portion extended inwardly toward each other and engaging the said loops on the band, substantially as described.

No. 36,906. Fastener for the Glasses of Spectacles, etc.

(*Attache pour verres de binocle, etc.*)

Eduard Carl Båse, Burg, near Magdeburg, Prussia, 30th June, 1891; 5 years.

Claim.—Securing the glasses of spectacles, eye glasses, and the like, by means of bowed arms or semi-rims such as *a*, carrying hollow threaded nuts such as *b*, and blocks or loops *d*, engaging with hooks *e*, the whole controlled by screwed pins *c*, substantially as described.

No. 36,907. Churn. (*Baratte.*)

Refus Gardner George, Lorne, Quebec, Canada, 30th June, 1891; 5 years.

Claim.—1st. In a churn, the combination of double dashers of semi-circular form operating vertically and alternately with means, as described, for operating them, substantially as set forth and shown. 2nd. In a churn, the combination of frame *A*, crank shaft and driving pulley *E*, belt *D*, pulley and double crank *F*, connecting rods *C*, tilting arms *B*, dashes *G*, and churn body *J*, as described and shown.

No. 36,908. Pipe Tongs. (*Pinces.*)

William Oliver Nightengale, Morrellville, and John C. Farran, Johnstown, both in Pennsylvania, U.S.A., 30th June, 1891; 5 years.

Claim.—The pipe tongs, consisting of the hand lever *B*, carrying at its outer end fixed oppositely beveled cam projections, a link or toggle pivoted to said hand lever at one end, jaws separately pivoted to said link at the other end and engaged by the cam projections, substantially as described, whereby a longitudinal reciprocating motion is imparted to said jaws by the oscillation of the handle.

No. 36,909. Insulator for Electric Conductors. (*Isoloir pour conducteurs électriques.*)

Charles Thelismar Snedekor, St. Louis, Missouri, U.S.A., 30th June, 1891; 15 years.

Claim.—1st. An insulating covering for electric conductors and other metallic substances, consisting of a coating of alum saturated fibre secured to the article to be insulated by shellac, a coat of varnish exterior to said fibre, a powdered non-inflammable coating upon said varnish, a fibrous coating filled with a paste compound of a mineral substance or substances, a coating of dry alum saturated fibrous material, an asbestos covering and an outer coating of varnish, substantially as described. 2nd. An insulating covering for electric conductors and other metallic substances, consisting of a coating of alum saturated fibrous material secured to the article to be insulated by shellac, a coat of varnish exterior to said fibrous material, a powdered non-inflammable coating upon said varnish, a fibrous coating filled with a paste compound of a mineral substance or substances of coating of dry alum saturated fibrous material, a coating of gum and oil, an asbestos covering and an outer coating of varnish,

substantially as described. 3rd. An insulating covering for electric conductors and other metallic substances, consisting of a coating of alum saturated fibrous material secured to the article to be insulated by shellac or its equivalent, a coating of glue, a coat of varnish upon the glue when hardened, a coating of non-inflammable substance upon said varnish, a fibrous coating filled with a paste compound of a mineral substance or substances, a coating of dry alum saturated fibrous material, a coating of a gum and oil, an asbestos covering and an outer coating of varnish, substantially as described. 4th. An insulating covering for electric conductors and other metallic substances, consisting of a coating of alum saturated fibrous material secured to the articles to be insulated by shellac or its equivalent, a coating of glue, a coat of varnish upon the glue when hardened, a non-inflammable coating, consisting of a composition of powdered or ground glass, powdered alum and ground asbestos, a fibrous coating filled with a paste compound of a mineral substance or substances, a coating of dry alum saturated fibrous material, a coating of gum and oil, an asbestos covering and an outer coating of varnish, substantially as described. 5th. An insulating covering for electric conductors and other metallic substances, consisting of a coating of alum saturated fibrous material secured to the article to be insulated by shellac or its equivalent, a coating of glue, a coat of varnish upon the glue, a coating of non-inflammable substance or substances, a fibrous coating filled with a paste compound composed of litharge, ground asbestos, alum, and oil, a coating of dry alum saturated fibrous material, a coating of gum and oil, an asbestos covering, and an outer coating of varnish, substantially as described.

No. 36,910. Nut Lock. (*Arrêlé-écrou.*)

David Crockett and William Teeple, both of Abilene, Texas, U.S.A., 30th June, 1891; 5 years.

Claim.—1st. An improved nut locking washer, having its main plate provided near its periphery with a forwardly projected annular flange, having its free edge waved and arranged and adapted for engagement by the corners of a nut turned thereagainst, substantially as described and for the purposes set forth. 2nd. The improved nut lock herein described, consisting of the main plate having a central opening for the bolt, provided on its inner side with spurs adapted to enter the part against which the lock is pressed and provided on its outer side near its periphery with a forwardly projected annular flange having its front or free edge waved and arranged and adapted for engagement by the corners of the nut turned thereagainst, all substantially as described and for the purposes specified. 3rd. The combination, substantially as herein described and shown, of the bolt held from turning the fish plate or the like through which such bolt is passed, the nut lock having its main plate formed with an opening to receive the bolt, and fitted on said bolt up against the fish plate or the like, and provided on its inner side with spurs to enter the same, and provided on its outer side near its periphery with an annular forwardly projected flange having its front or free edge waved, and the nut turned on the bolt up against the waved flange and having its corners seated in the hollows or troughs of the waves, all substantially as and for the purposes set forth. 4th. An improved nut locking plate having a central opening to fit on the bolt, and provided on its inner side with spurs arranged at the edge of the central opening, and having their inner sides arranged in line with the wall of such opening, and their outer sides formed with faces *g, G*, meeting in an edge *g*, all substantially as and for the purposes set forth.

No. 36,911. Adjuster for Tires.

(*Appareil pour poser les bandages des roues.*)

George Surratt, Horace B. Fletcher, Shelby L. Post, and Frank L. Galigher, all of Gainesville, Texas, U.S.A., 30th June, 1891; 5 years.

Claim.—1st. The combination, with the terminal tire lugs, having right and left screw threaded sockets, of a right and left screw stem, a turning block of substantially the same cross section as the rim of the wheel, connected to the screw stem so as to slide thereon but revolve rigidly together, and means substantially as described for locking the turning block to the terminal lugs. 2nd. The combination, with the terminal tire lugs having right and left screw threaded sockets, of a right and left screw stem, a turning block of substantially the same cross section as the rim of the wheel connected to the screw stem so as to slide thereon but revolve with it, the said block and lugs being channeled as described, and the clip plate *F*, with rib *a*, entering said channel, and bolts serving the clip plate, substantially as shown and described. 3rd. The combination, with the terminal tire lugs having right and left screw threaded sockets, of a right and left screw stem, a turning block mounted upon it to slide on but revolve with it, locking devices for the said block and filling plates interposed between the blocks and terminal lugs, substantially as and for the purpose described.

No. 36,912. Fastener for Rail-Joints.

(*Attache de joint de rail.*)

James R. Burgess and Peter Holmes, both of Port Huron, Michigan, U.S.A., 30th June, 1891; 5 years.

Claim.—1st. In a rail-joint fastening, the combination, with the abutting ends of the rails, each provided with two transverse bolt openings *d*, the fish plates *f*, and *h*, on opposite sides of and overlapping the ends of the rails, and provided with bolt openings, as described, coinciding with the bolt openings *d*, of the twin nut *j*, placed, as shown, outside of one of the fish plates and having in its end portions the threaded openings *k*, coinciding with the two adjacent openings in the ends of the rails and the fish plates, and the fastening bolts passed through the said openings in the rails and the fish plates, and having their threaded ends turned into the threaded opening in the twin nuts, substantially as set forth.

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

2197. CHRISTOPHER CLARKE, 2nd five years of No. 24,227, from the 7th day of June, 1891. Improvements on Fire Escape Towers, 1st June, 1891.
2198. GEORGE CUTTER, 3rd five years of No. 12,932, from the 10th day of June, 1891. Improvements on Sap Evaporators, 4th June, 1891.
2199. JAMES RUSSELL PARSONS, 2nd five years of No. 25,102, from the 11th day of October, 1891. Improvements in Wheels for Vehicles, Agricultural Machines and other purposes, 4th June, 1891.
2200. ROBERT ADAMS, 2nd five years of No. 24,234, from the 7th day of June, 1891. Improvements in Door Springs, 5th June, 1891.
2201. WILLIAM STANBURY FINCH and WALLACE FINCH, 2nd five years of No. 24,359, from the 19th day of June, 1891. Improvements in the Preservation of Lumber, 5th June, 1891.
2202. SAMUEL MARTIN, 2nd five years of No. 24,352, from the 19th day of June, 1891. Improvements on Tricycles, 12th June, 1891.
2203. DEWEES FABRIC TRIMMING COMPANY, (assignees), 2nd five years of No. 24,295, from the 14th day of June, 1891. Improvements on Trimming Attachments for Sewing Machines, 13th June, 1891.
2204. ARCHER WAKEMAN, 2nd five years of No. 24,301, from the 15th day of June, 1891. Improvements on Bait for Fishing, 15th June, 1891.
2205. JOHN POWELL HUNT, 2nd five years of No. 24,329, from the 16th day of June, 1891. Improvements on a Combined Washing and Wringing Machine, 15th June, 1891.
2206. GILLMAN and SPENCER, (assignees), 2nd five years of No. 24,356, from the 19th day of June, 1891. Improvements in the Process and Apparatus for Torrefying Grain, Cereals or Seeds, to adapt them for use in brewing, distilling, or vinegar making, or in feeding horses, cattle and live stock, 17th June, 1891.
2207. CANFIELD RUBBER COMPANY, (assignees), 2nd five years of No. 24,333, from the 17th day of June, 1891. Improvements in Diapers, 17th June, 1891.
2208. CANFIELD RUBBER COMPANY, (assignees), 2nd five years of No. 24,334, from the 17th day of June, 1891. Improvements in Stocking Supporters, 17th June, 1891.
2209. WESTINGHOUSE AIR BRAKE COMPANY, (assignees), 2nd five years of No. 26,580, from the 23th day of October, 1891. Improvements in Brakes for Locomotives, &c., 17th June, 1891.
2210. JAMES SHARON McCOY, 2nd five years of No. 24,418, from the 3rd day of July, 1891. Improvements in Pneumatic Machines, 22nd June, 1891.
2211. SAMUEL V. ESSICK, 2nd five years of No. 24,390, from the 23th day of June, 1891. Improvements in Printing Telegraphs, 23rd June, 1891.
2212. THOMAS WILLIAM WORSDELL, 2nd five years of No. 24,614, from the 31st day of July, 1891. Improvements on Compound Locomotive and other Steam Engines, 23rd June, 1891.
2213. JAMES HIGGINBOTTOM, 3rd five years of No. 13,032, from the 27th day of June, 1891. Improvements in Grinding Mills, more especially in the relation to the Dress thereof, 23rd June, 1891.
2214. NOXON BROS. MANUFACTURING COMPANY, (assignees), 3rd five years of No. 13,146, from the 21st day of July, 1891. Improvements on Grain Drill Distributors, 24th June, 1891.
2215. JOHN W. DOWD and STEPHEN B. FISHER, 2nd and 3rd five years of No. 24,465, from the 8th day of July, 1891. Improvements on Hot Air Furnaces, 25th June, 1891.
2216. JOHN SMEAD, 2nd and 3rd five years of No. 24,440, from the 6th day of July, 1891. Improvements on Furnace Grates, 25th June, 1891.
2217. MICHAEL ALBERT WIGLE and JOSEPH HENRY WIGLE, 2nd five years of No. 24,449, from the 7th day of July, 1891. Improvements in Spark Arresters, 26th June, 1891.
2218. CHARLES FRANCIS BRIGHAM, 2nd five years of No. 24,474, from the 9th day of July, 1891. Improvements in Journal Bearings, 30th June, 1891.
2219. FREDERICK LEADBEATER, 2nd five years of No. 24,473, from the 9th day of July, 1891. Improvements in Steam Boiler Furnaces, 30th June, 1891.
2220. WILLIS J. PERKINS, 2nd five years of No. 24,787, from the 23rd day of August, 1891. Improvements in Shingle Sawing Machine Carriages, 30th June, 1891.

JUNE LIST OF TRADE MARKS.

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4061. MUNDERLOH & CO., of Montreal, Que. Linen and Cotton Thread, 2nd June, 1891.
4062. } GEORGE ELIAS TUCKETT, of Hamilton, Ont.
4063. } Cigars, 5th June, 1891.
4064. CHEMISCHE FABRIK AUF ACTIEN. THE CHEMICAL MANUFACTURING COMPANY, of Berlin, Empire of Germany. Medical Preparations, 9th June, 1891.
4065. CHEMISCHE FABRIK AUF ACTIEN. THE CHEMICAL MANUFACTURING COMPANY, of Berlin, Empire of Germany. Chemical Compounds Derived from Chloral, 9th June, 1891.
4066. DUNCAN, ALDERDINE & CO., of 94 Hill Street, Newry, Ireland. Whisky, 9th June, 1891.
4067. HAMMEL, RIGLANDER & CO., of New York, N. Y., U.S.A. Springs for Watches and the like, 9th June, 1891.
4068. HENRY CLAY BRAGG, of Connersville, Co. Fayette, Indiana, U.S.A. Blood Purifying Medicines, 9th June, 1891.
4069. WARRE & CO., of Oporto, Portugal. Trading as C. H. NOBLE & MURAT. Port Wine, 9th June, 1891.
4070. MADAME A. RUPPERT & CO., of New York, N.Y., U.S.A. A Tonic for the Skin, 12th June, 1891.
4071. I. NEWMAN & SONS, of New Haven, Connecticut, U.S.A. Corsets, Corset Clasps and Corset Trimmings, 13th June, 1891.
4072. JOHN C. S. SCOTT, of Rochester, N.Y., U.S.A. A Paste for Family and Veterinary Use, 13th June, 1891.
4073. ROBERT BALLANTYNE, of Montreal, Que. Soap, 13th June, 1891.
4074. SOCIÉTÉ ANONYME DES CIMENTS DE SAINT ISMIER, Grenoble, France. Ciments, 16 Juin, 1891.
4075. LECARON ET FILS, de Paris, France. Produits de Parfumerie et Savonnerie, 16 Juin, 1891.
4076. LYMAN, SONS & CO., of Montreal, Que. Mineral Water, 17th June, 1891.
4077. THE WILKINSON PLOUGH COMPANY, L'd., of West Toronto Junction, Ont. Plough Shares, 19th June, 1891.
4078. LINE, McDONALD & CO., of London, Ont. Cigars, 23rd June, 1891.
4079. JOHN HENRY HOOKER, of Winslow, Co. Bucks, England. Fermented Liquors, 23rd June, 1891.
4080. WILLIAM JOHN BROWN, of Detroit, Michigan, U.S.A. A Vegetable Compound of Medicinal Properties Called "Alpha Wafers," 24th June, 1891.
4081. J. RATTRAY & CO., of Montreal, Que. Cigars, 25th June, 1891.
4082. THE ROCHESTER LAMP COMPANY, of New York, N. Y., U. S. A. Lamps and Lamp Burners, 26th June, 1891.
4083. MELLOR & PAGET, of 8 Savage Gardens, Tower Hill, London, England. Tea, 26th June, 1891.
4084. } THE NATIONAL STARCH MANUFACTURING CO., of Covington,
4085. } Kentucky, U.S.A. A Preparation of Corn Flour,
4086. } 26th June, 1891.
4087. FRANCIS CHARLES IRELAND, of Toronto, Ont. Milk. 26th June, 1891.

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5949. A LITTLE REBEL, by "The Duchess," (book). John Lovell & Son, Montreal, Que., 1st June, 1891.
5950. TEA: AND THE SCIENCE OF BLENDING, (book). Frederick Dane and R. S. McIndoe, Toronto, Ont., 2nd June, 1891.
5951. AN OLD MAID'S LOVE, by Maarten Maartens, (book). John Lovell & Son, Montreal, Que., 2nd June, 1891.
5952. THE HOUSEHOLD SAVINGS BANK PASS BOOK. Aemilius Jarvis, Toronto, Ont., 2nd June, 1891.
5953. DANCE'S VETERINARY TABLET: Being a Synopsis of the Diseases of Horses, Cattle and Dogs, with their Cause, Symptoms and Cure. Frederick F. Dance, Victoria, B. C., 3rd June, 1891.
5954. A DIGEST OF THE LAWS OF THE INDEPENDENT ORDER OF ODD-FELLOWS OF THE PROVINCE OF ONTARIO. Josiah Brown King, Grand Secretary of the Grand Lodge of Ontario of the Independent Order of Odd-Fellows, Toronto, Ont., 3rd June, 1891.
5955. A SYSTEMATIC COURSE OF EXERCISES AND QUESTIONS IN ENGLISH GRAMMAR, by M. F. Libby, B.A. The Copp, Clark Co., L'd., Toronto, Ont., 4th June, 1891.
5956. L'INDICATEUR DE QUEBEC ET LEVIS 1891-92. The Quebec and Levis Directory. Boulanger et Marcotte, Québec, Qué., 4 Juin, 1891.
5957. GRACE AND TRUTH, UNDER TWELVE DIFFERENT ASPECTS, by W. P. Mackay, M.A. The Toronto Willard Tract Depository, L'd., Toronto, Ont., 5th June, 1891.
5958. PRENTICE'S CHART FOR ASCERTAINING IRREGULARITIES OF THE OCULAR MUSCLES. Chalmer M. C. Prentice, Windsor, Ont., 5th June, 1891.
5959. CRADLE SONG. Piano Solo, by Frederick N. Löhr. Forsyth Brothers, London, England, 6th June, 1891.
5960. THE JURISPRUDENCE OF THE PRIVY COUNCIL, Containing a Digest of all the Decisions of the Privy Council; A Sketch of its History; Notes on the Constitution of the Judicial Committee; A Summary of its Procedure and also Three Appendices; by J. J. Beauchamp, B. C. L. Amedee Periard, Montreal, Que., 8th June, 1891.
5961. RIGHT HONOURABLE SIR JOHN A. MACDONALD'S FUNERAL MARCH, by Charles Bohner. Whaley, Royce & Co., Toronto, Ont., 11th June, 1891.
5962. ONAWAY (Awake), Waltz, by A. M. Patterson. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 11th June, 1891.
5963. THE TEMPLE AND THE SAGE, by V. C. HART, D. D. Wm. Briggs (Book Steward of the Methodist Book and Publishing House) Toronto, Ont., 11th June, 1891.
5964. THE KEEPER OF BIC LIGHT HOUSE, A Canadian Story of To-day, by Maud Ogilvy. E. M. Renouf, Montreal, Que., 13th June, 1891.
5965. POCAHONTAS. Libretto of Opera in Five Acts by Annie E. Robinson, Windsor, Ont., 13th June, 1891.
5966. THE STAR OF LIBERTY AND OTHER POEMS, by Annie E. Robinson, Windsor, Ont., 13th June, 1891.
5967. THE HEIR PRESUMPTIVE AND THE HEIR APPARENT, by Mrs. Oliphant. John Lovell & Son, Montreal, Que., 17th June, 1891.
5968. JACK WILL NOT FORGET YOU. Song. Words by F. O. Bynoe, Music by Frank L. Moir. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 17th June, 1891.
5969. TEACHERS LESSON CHECK. M. Drew Ingall, Ottawa, Ont., 17th June, 1891.
5970. THE OLD GUARD DINNER, (Photo). Wm. J. Topley, Ottawa, Ont., 17th June, 1891.
5971. THE QUEBEC LAW DIGEST, VOL. IV. A Complete Compilation of all the Reported Decisions in the Province of Quebec, from 1st January, 1885, to 1st January, 1890, by Chas. H. Stephen, B. C. L. Amedée Periard, Montreal, Que., 18th June, 1891.
5972. UP TO DATE. Song, by Frank Fagan, Arranged by Edward Forman, 19th June, 1891.
5973. HOMONYMES FRANÇAIS, }
5974. ENGLISH HOMONYMS, } By C. P. F. Baillairgé, Québec, Qué., 19 Juin, 1891.
5975. LE PANTHEON CANADIEN, CHOIX DE BIOGRAPHIES, par Maximilien Bibaud, Nouvelle Edition, Revue, Augmentée, etc., jusqu'à ce jour. Adèle et Victoria Bibaud, Montréal, Qué., 22 Juin, 1891.

5976. THE ENGLISH CATHEDRAL OF QUEBEC. A Monograph by Fred. C. Wurtele
Quebec, Que., 22nd June, 1891.
5977. ARCHITECTS AND THE LAW, by Robert W. Gambier-Bousfield, Toronto, Ont.,
23rd June, 1891.
5978. PLAN OF NEW WESTMINSTER CITY AND SUBURBAN LOTS. (Scale 6 chains
to 1 inch). W. S. Jennett, New Westminster, B.C., 23rd June,
1891.
5979. INSURANCE PLANS OF VICTORIA AND NEW WESTMINSTER. BRITISH
COLUMBIA. Charles Edward Goad, Montreal, Que., 23rd June,
1891.
5980. SOMETIME WHEN THE ROSES BLOOM AGAIN. Words and Music by J. D.
Fraser, Warwick, Co. Lambton, Ont., 24th June, 1891.
5981. ELLA STEWART WALTZES, by Alfred George Nedham, Hamilton, Ont., 24th
June, 1891.
5982. HOW TO TEACH WRITING IN THE PUBLIC SCHOOLS, (pamphlet), by John B'
McKay, Kingston, Ont., 24th June, 1891.
5983. THE LITTLE TYCOON POLKA. Arranged by Chas. Bohner. Whaley, Royce & Co.,
Toronto, Ont., 25th June, 1891.
5984. LOVE WERE ENOUGH. Song. Words by Frederic E. Weatherly. Music by Hope
Temple. The Anglo-Canadian Music Publishers' Association,
L'd., London, England, 25th June, 1891.
5985. MI VIDA, (My Sweetheart). Valse de Salon, by Clara Woodley, Quebec, Que.,
26th June, 1891.
5986. BIBLE STUDIES ON PRAYER. (book). Arranged by A. M. Reid, Toronto, Ont.,
26th June, 1891.
5987. IN LACHINE RAPIDS. (Photo). William Notman & Son, Montreal, Que., 27th
June, 1891.
5988. THE AYRES OF STUDLEIGH, by Annie S. Swan. William Briggs (Book-Steward
of the Methodist Book and Publishing House), Toronto, Ont.,
27th June, 1891.
5989. A BRITISH SUBJECT I WAS BORN, A BRITISH SUBJECT I WILL DIE.
(A Tribute to the Memory of the late Sir John A. Mac-
donald). Words and Music by Mr. S. T. Church, Harmonized
and Arranged by W. O. Forsyth.
5990. KATIE MOLLOY. Song. Words and Music by Arthur West, Arranged by
Charles Connolly.
5991. THE STORY OF THE BELLS. Words and Music by Arthur West.
5992. I'VE WORKED EIGHT HOURS THIS DAY. Words and Music by Felix Mc-
Glennon, Arranged by John S. Baker.
5993. THEY'RE ALL COMING DOWN TOMORROW MORNING. Words by H.
Leighton and H. Castling. Music by F. W. Venton.
5994. McCORMACK. Words and Music by John J. Stamford, Arranged by John S.
Baker.
5995. 'BLIGE A LADY. Words by John P. Harrington. Music by Orlando Powell.
The Anglo-Canadian Music Publishers' Association, L'd.,
London, England, 30th June, 1891.
5996. MY DANISH SWEETHEART. The Romance of a Month, by W. Clark Russell.
William Bryce, Toronto, Ont., 30th June, 1891.
5997. LATIMER & CO'S. MAP OF THE CITY OF WINNIPEG, Showing the Streets as
Renamed by the City Council, 1891. Herbert Latimer, Winni-
peg, Man., 30th June, 1891.

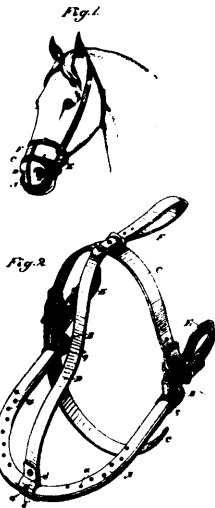
THE
CANADIAN PATENT OFFICE RECORD

ILLUSTRATIONS.

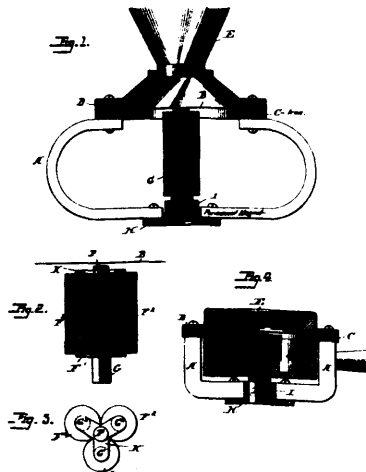
Vol. XIX.

JUNE, 1891.

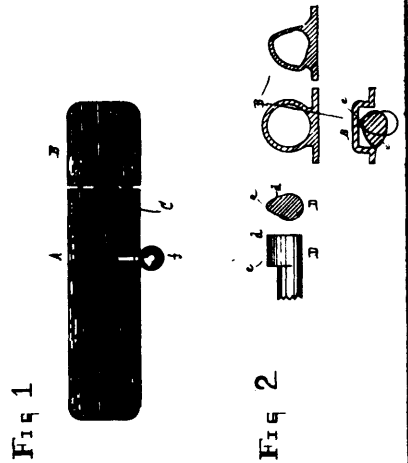
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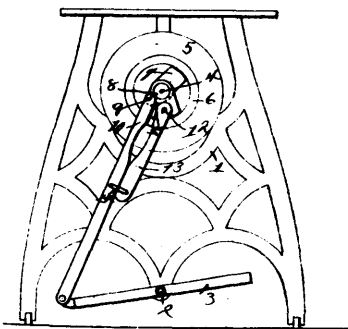
36688 Welch's Inhaler.



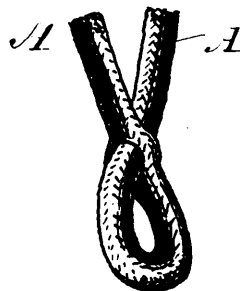
36689 Guiochio's Magneto Telephone.



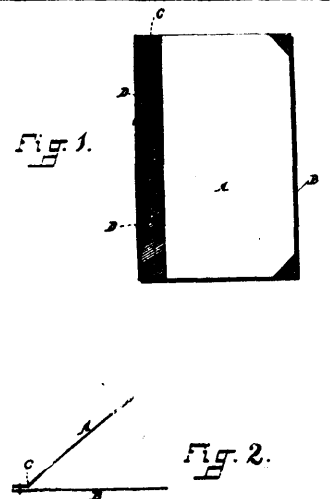
36690 McCargard's Bolt and Fastening.



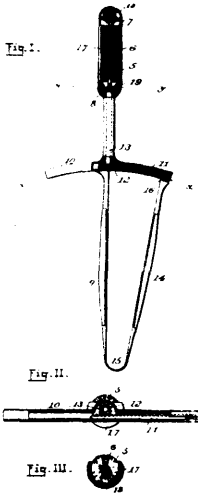
36691 Clark's Sewing Machine Motor.



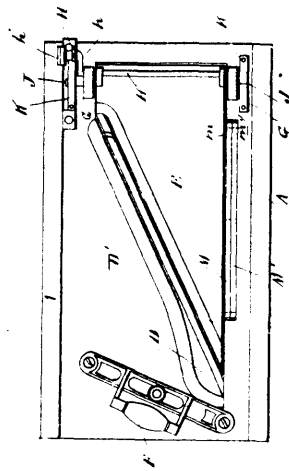
36692 Beaudry's Suspenders.



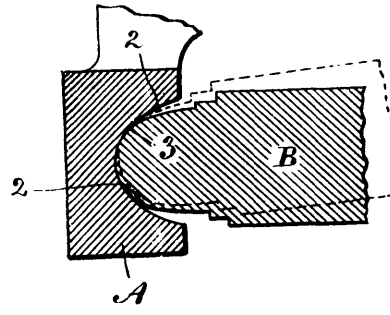
36693 Rogers' File Board.



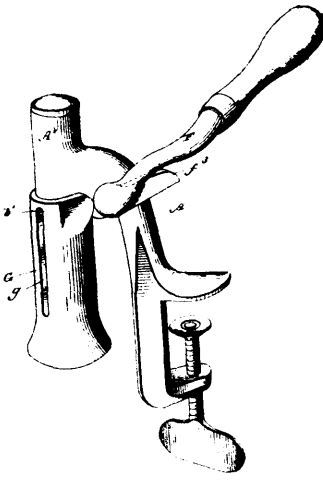
36694 Roy's Tooth Brush.



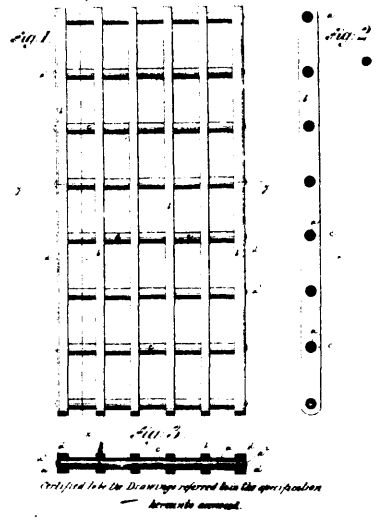
36695 Page's Slicer.



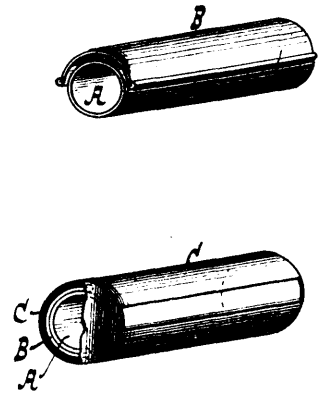
36696 Ecaubert's Method of Ornamenting Circular Dies and Articles.



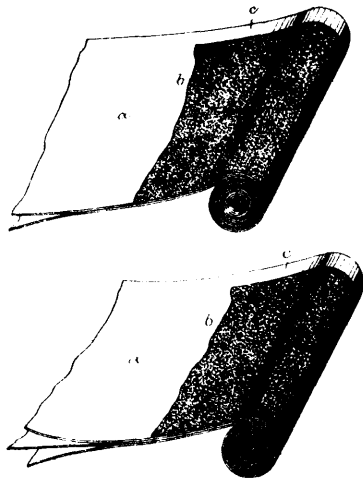
36697 Williams' Cork Screw.



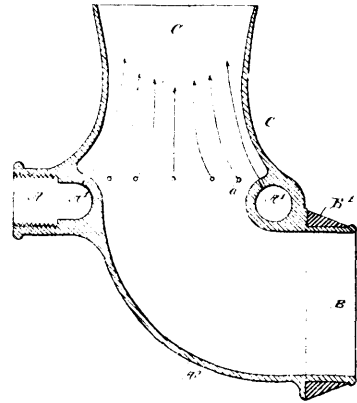
36698 Pattberg's Door Mat.



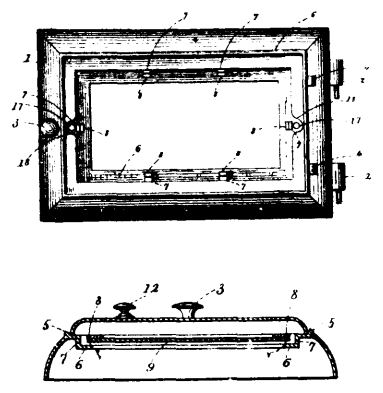
36699 Wagefarth's Hair Curler.



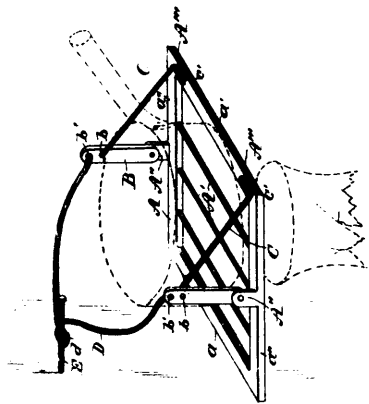
36700 Kerbaugh's Roofing Fabric.



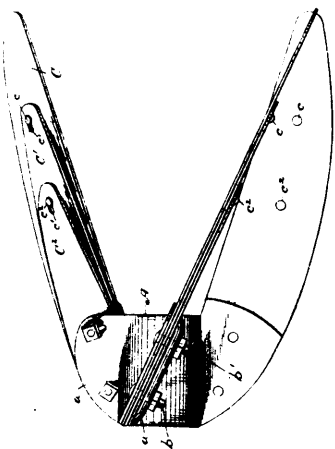
36701 Baldwin's Boiler Tube Cleaner.



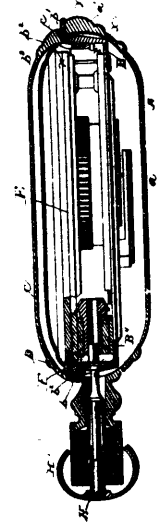
36702 Scott's Oven Door for Stoves.



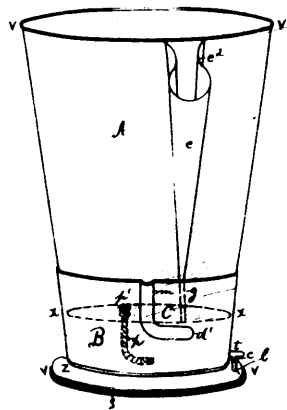
36703 McDonald's Heater Bracket.



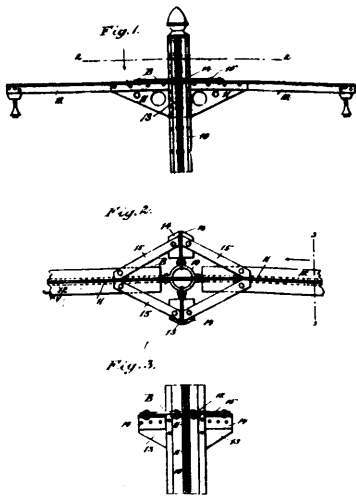
36704 Osborne's Screw Propeller.



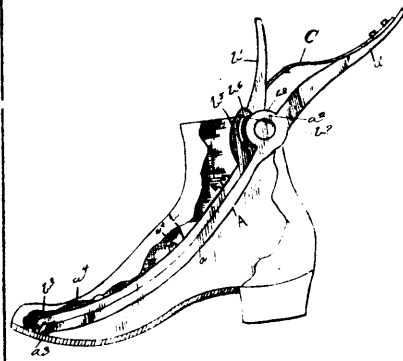
36705 Searing's Watch Case.



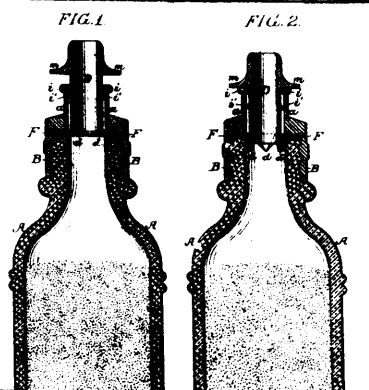
36707 McElhiney's Flour Pot.



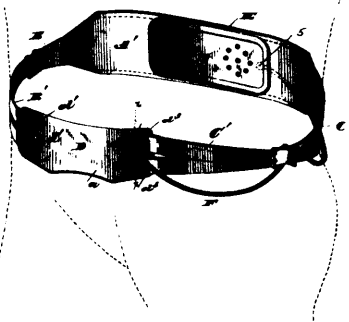
36708 Milliken's Electric Railway Pole.



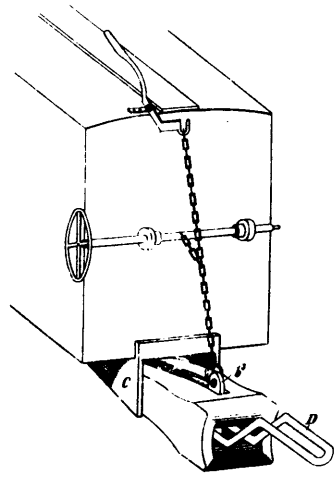
36709 Benson's Shoemakers' Tool.



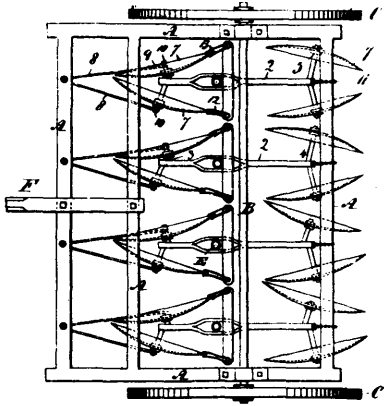
36710 Perry's Bottle Stopper.



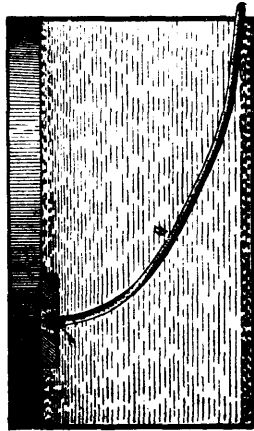
36711 Thomas' Electric Magnetic Abdominal Support.



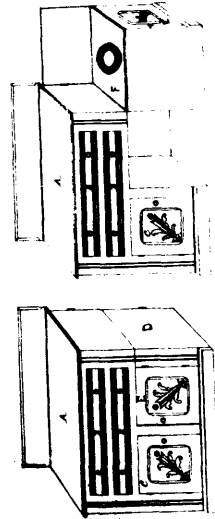
36712 Lewis, Cosby, Hughes, and Dunn's Car Coupling.



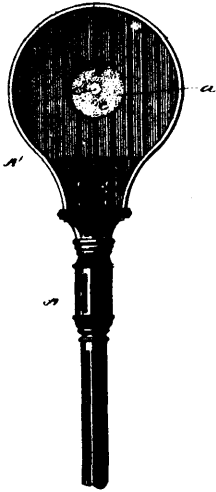
36713 Cowie's Seeding Machine.



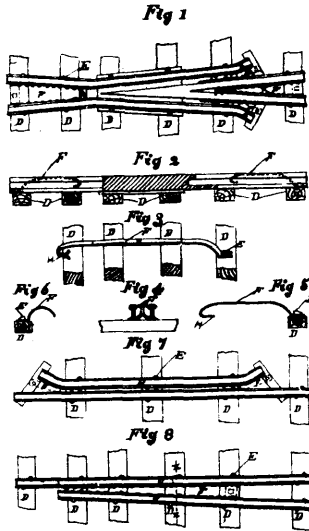
36714 Parks' Liquid Separator.



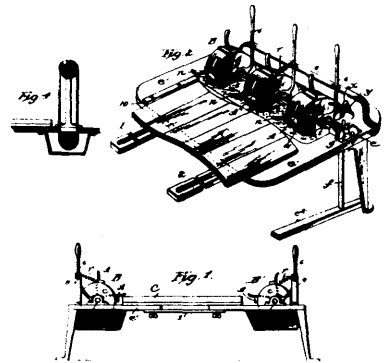
36715 Mitchell's Wash Stand and Dry Earth Commode.



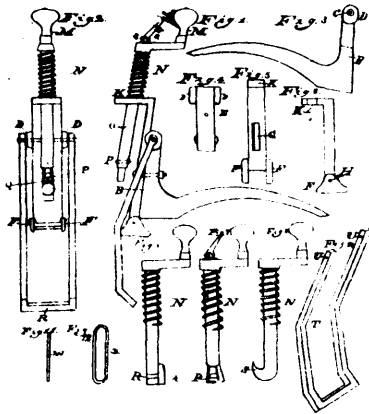
36716 Gilmore's Railway Signal.



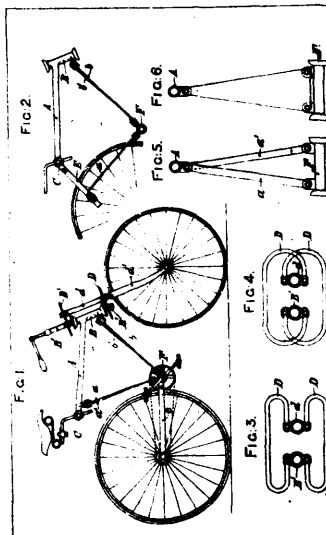
36717 Driscoll's Foot Guard for Railway Frogs.



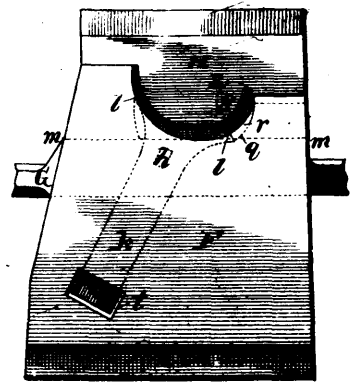
36718 Peregrine's Painting Machine.



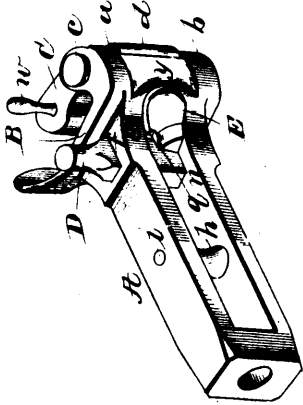
36719 Jones and Noonan's Machine for Tying Shingles



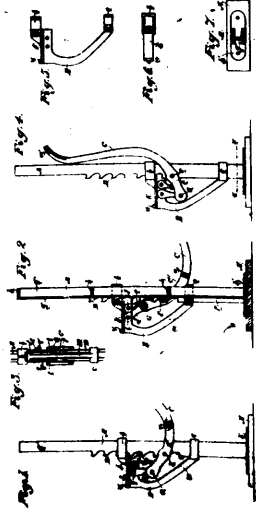
36720 Dunlop's Bicycle Frame.



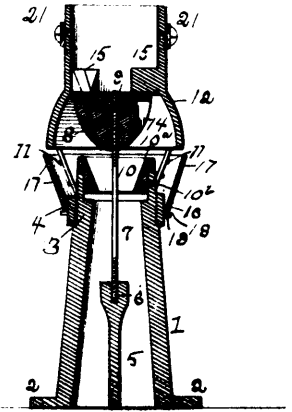
36721 Green's Draw Bar.



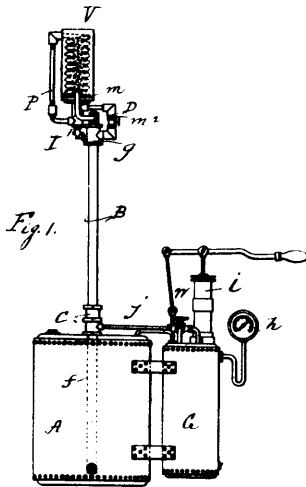
36722 Green's Automatic Car Coupling.



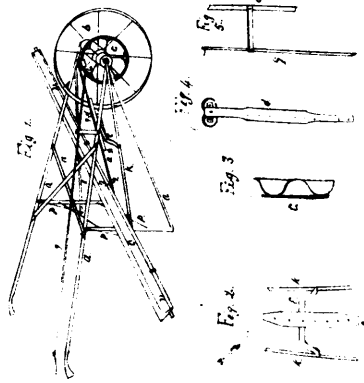
36723 Oliver and Wren's Waggon Jack.



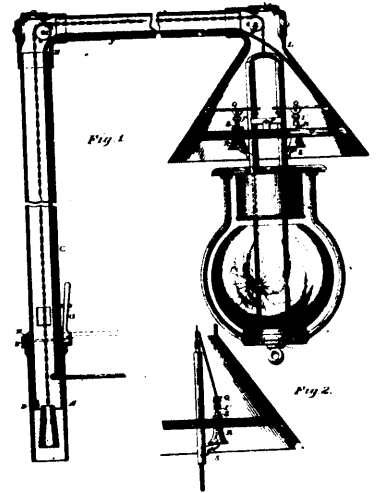
36724 White's Exhaust Mechanism for Locomotives, &c.



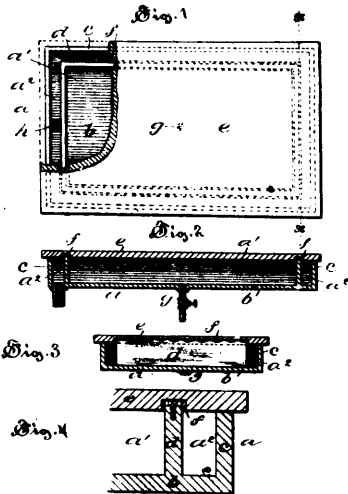
36725 Rose and Baird's Oil Spray Lamps.



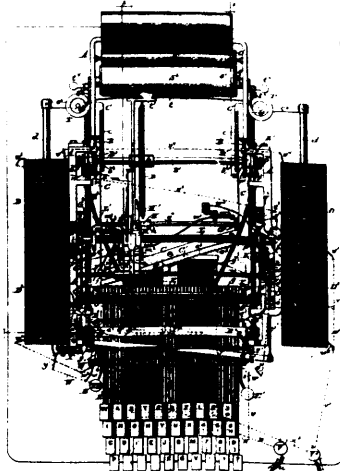
36726 Marr's Grass Seed Sower.



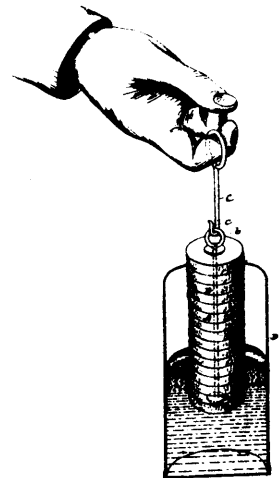
36727 Matsou's Post and Switch for Electric Lamps.



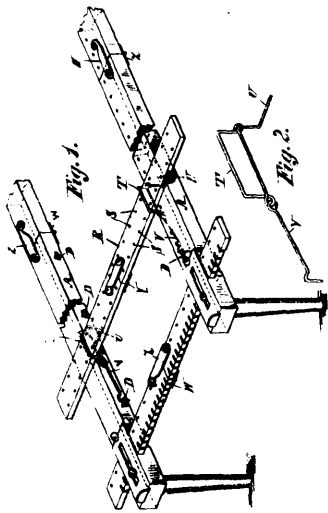
36728 Collum and Hoedley's Confectioners' Cooling Slab.



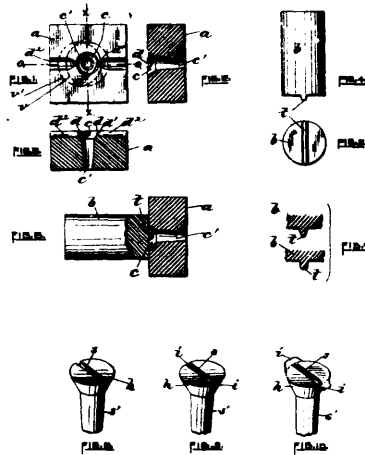
36729 Silkman's Electric Type Writer.



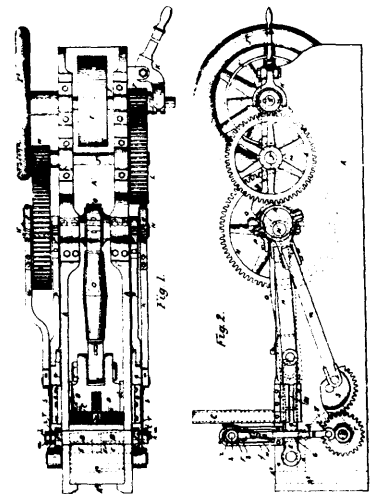
36730 Jenkins' Fire Kindler.



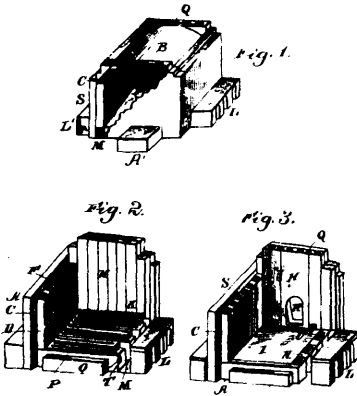
36731 Church's Quilting Frame and Curtain Stretcher.



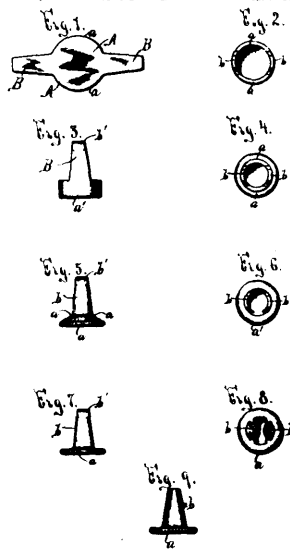
36732 Rogers' Die for Slotting Screw Heads.



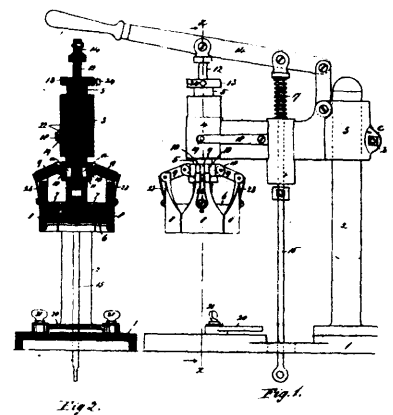
36733 Robinson's Machine for Making Bricks.



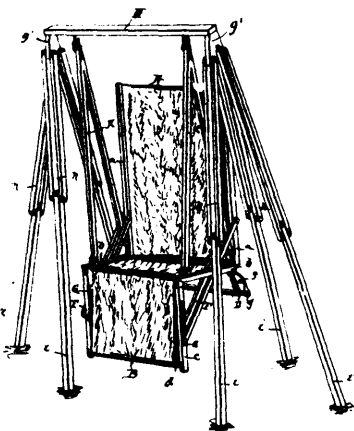
36735 Stewart's Brick and Tile Kiln.



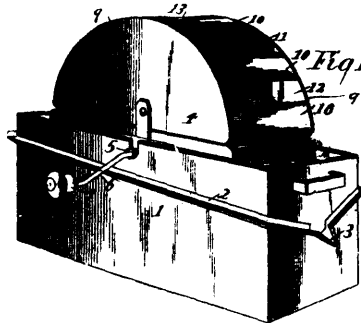
36736 Thomson's Sheet Metal Rivets.



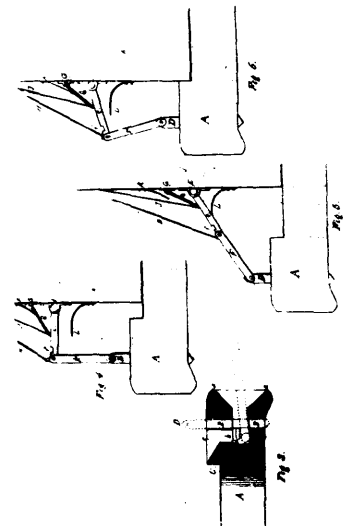
36737 Ruddock's Can Heading Machine.



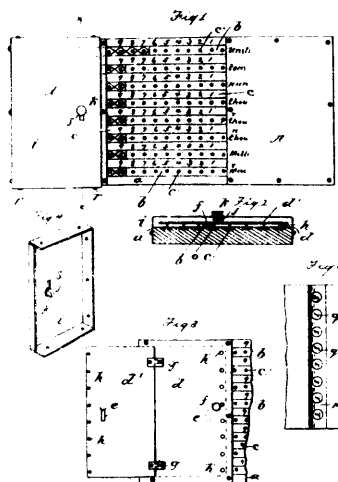
36738 Jones and Bothwell's Swinging Chair.



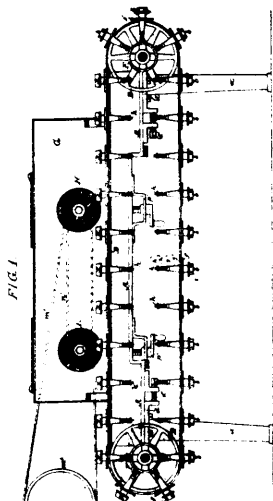
36739 Rose's Washing Machine.



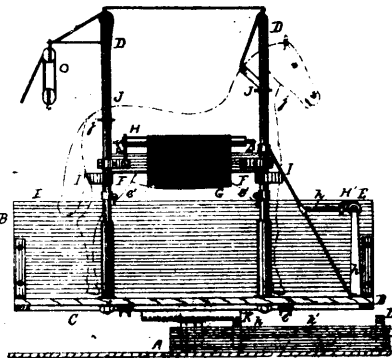
36740 Gardner's Car Coupling.



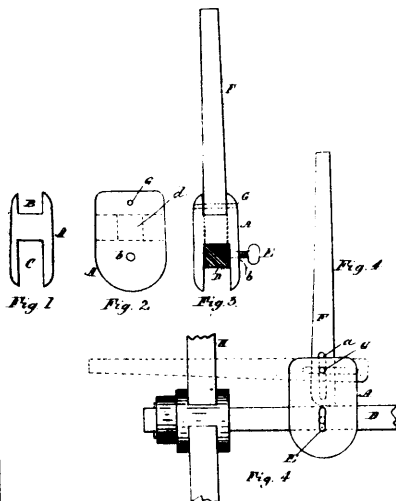
36741 Fowler's Adding Machine.



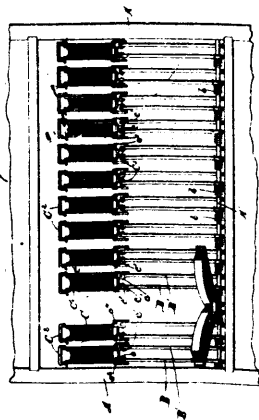
36742 Perry's Machine for Polishing Sheet Metal, &c.



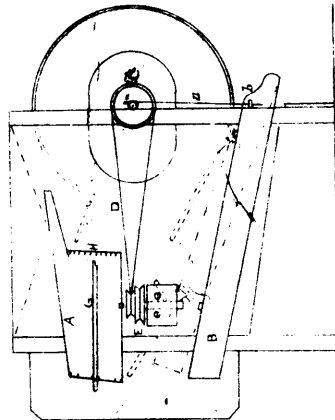
36743 Sample's Apparatus for Taming Horses.



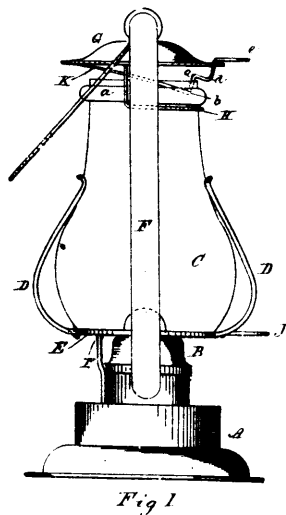
36744 Whipple's Baby Carriage Brake.



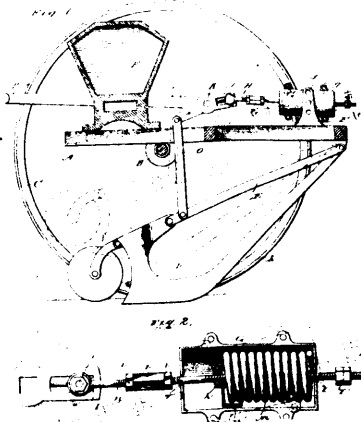
36745 Holloway's Folding Book Holder.



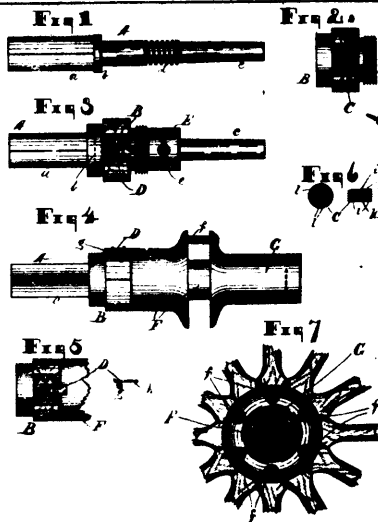
36746 McKenzie's Grain Cleaner.



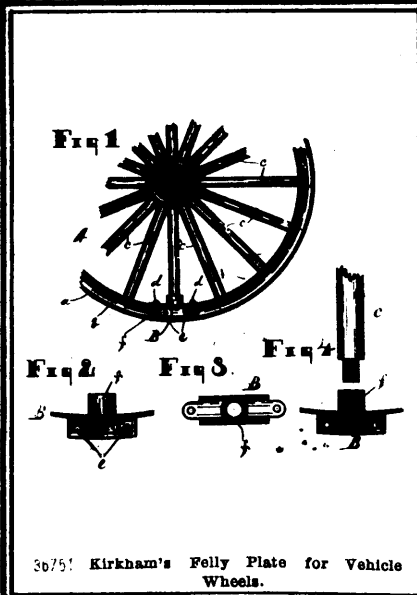
36748 Schultz's Tubular Lantern.



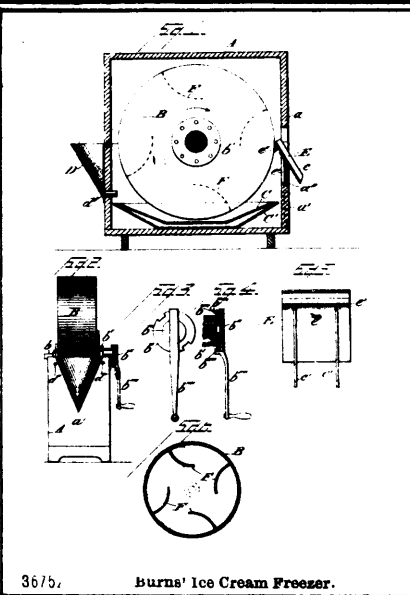
36749 Galloway's Grain Seeding Machine.



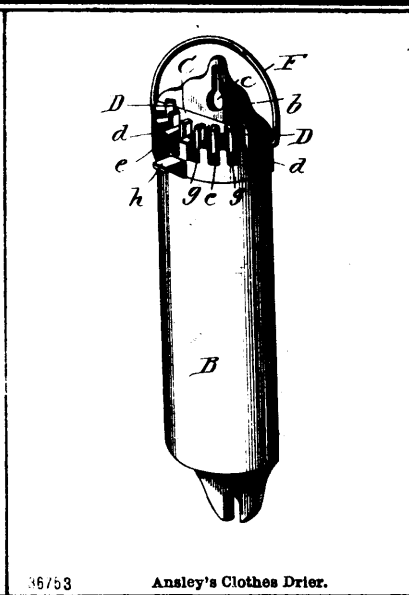
36750 Kirkham's Vehicle Wheel.



3675 Kirkham's Felly Plate for Vehicle Wheels.



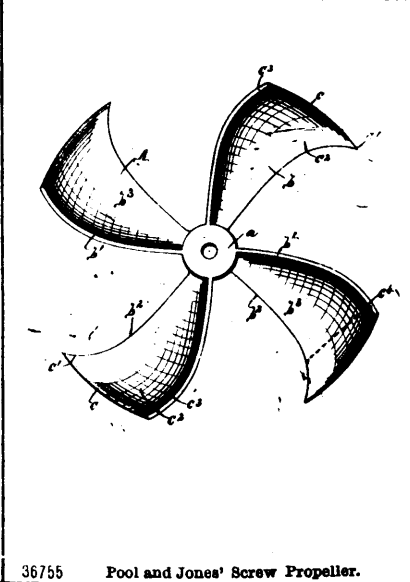
3676 Burns' Ice Cream Freezer.



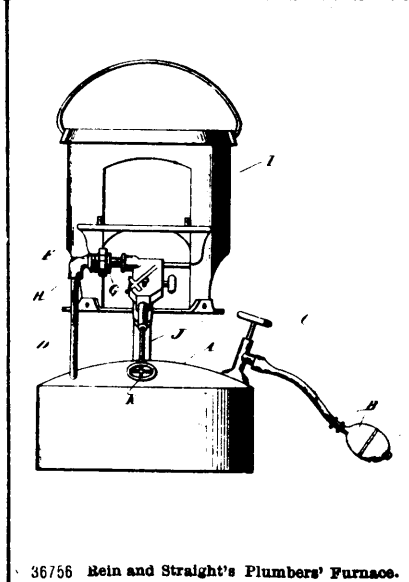
3678 Ansley's Clothes Drier.



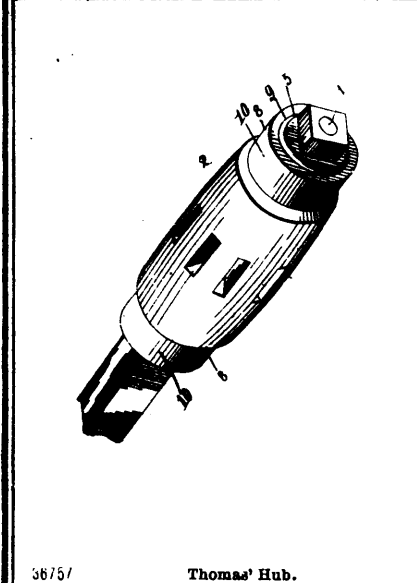
36754 Austin's Road Repairer.



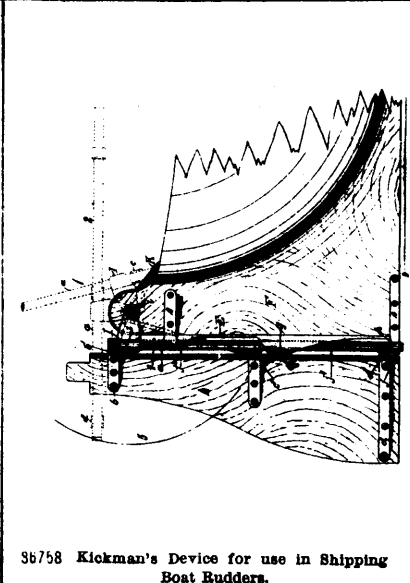
36755 Pool and Jones' Screw Propeller.



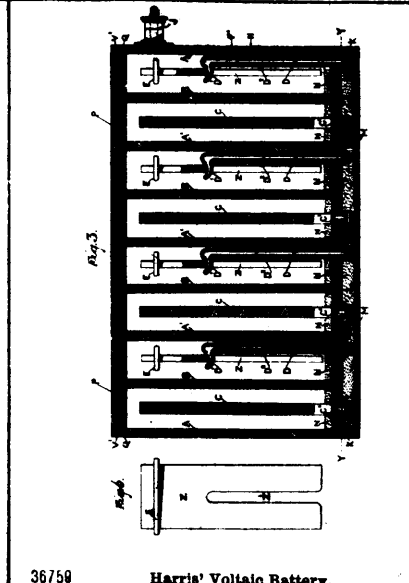
36756 Rein and Straight's Plumbers' Furnace.



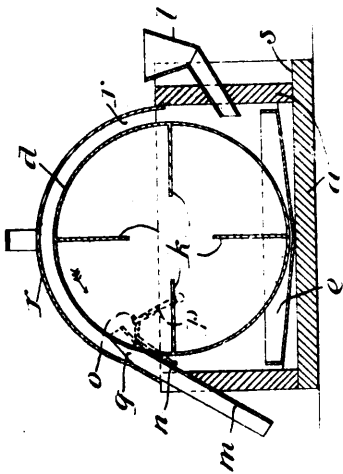
36757 Thomas' Hub.



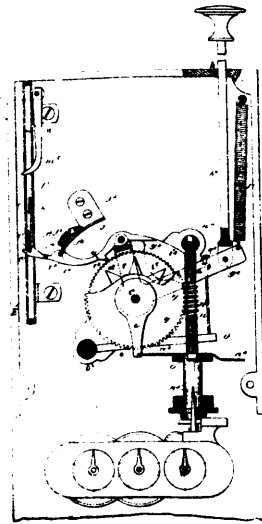
36758 Kickman's Device for use in Shipping Boat Rudders.



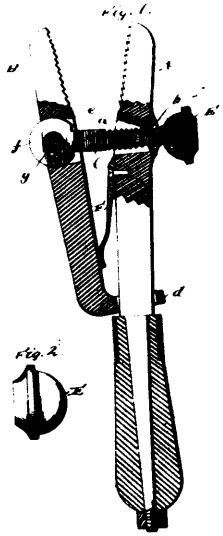
36759 Harris' Voltaic Battery.



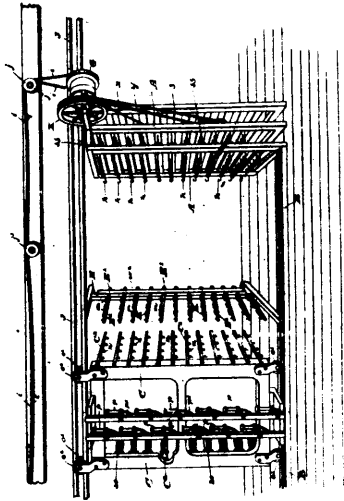
36760 Feathers' Ice Cream Freezer.



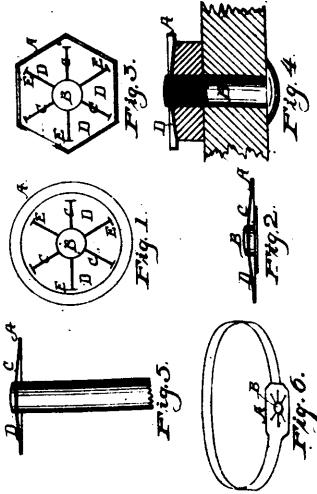
36761 Brownhill's Apparatus for Vending Gas and Water.



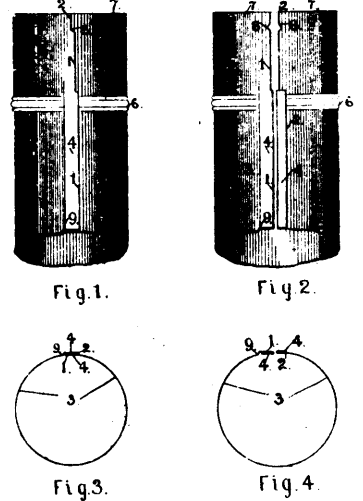
36762 Curtis' Pipe Wrench.



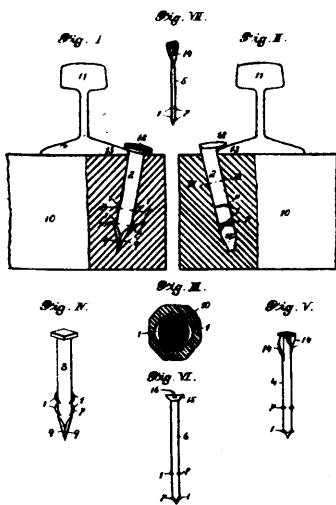
36763 Avis' Machine for Manufacturing Twine.



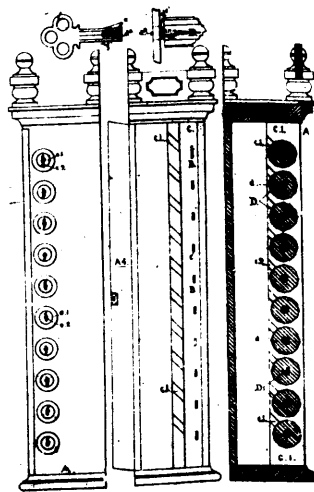
36764 Thompson and Cain's Seal.



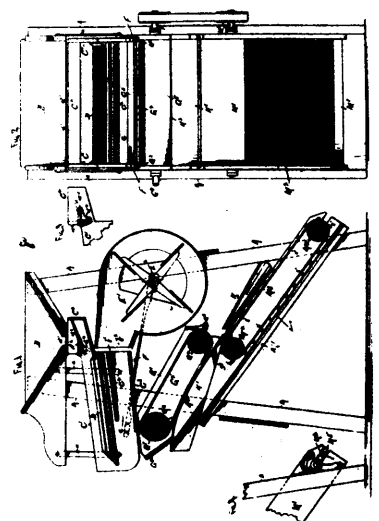
36765 Kemp's Stove Pipe.



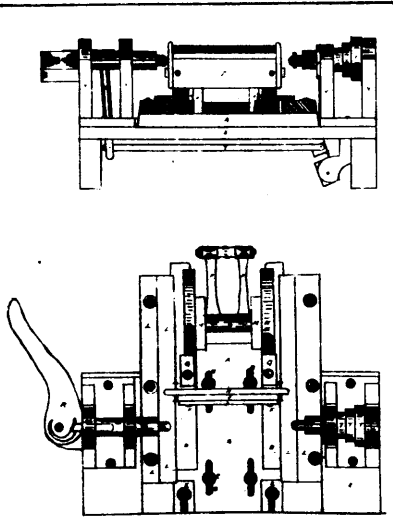
36766 Russell's Spike, Screw, and Nail.



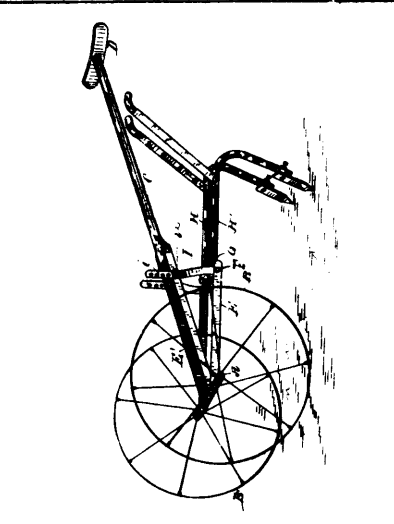
36767 Kingsford's Office Indicator.



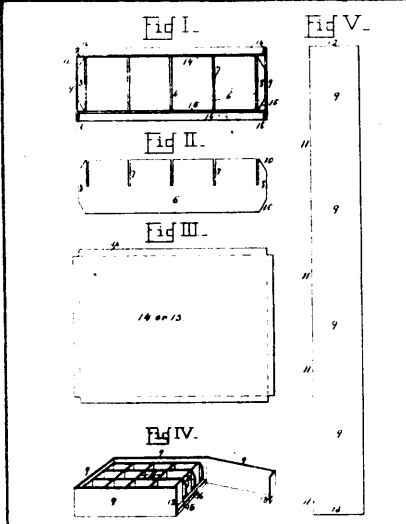
36768 Owens' Fanning Mill.



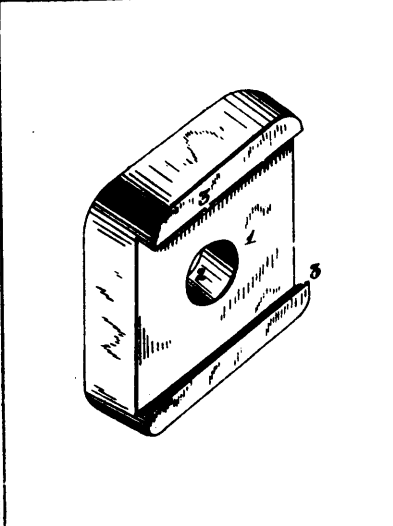
36769 Coleman's Hub Cutting Machine.



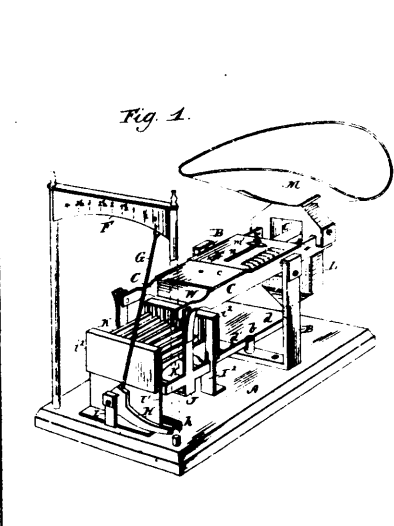
36770 Everett's Garden Cultivator.



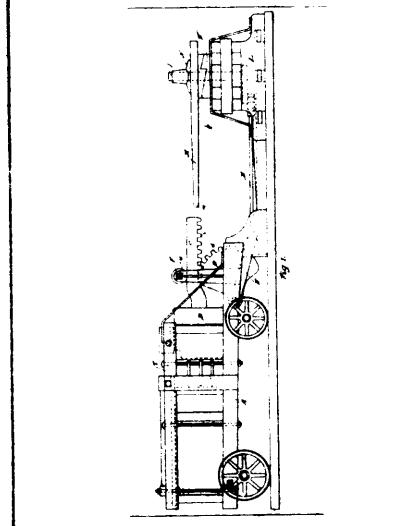
36771 Perkins' Egg Carrier.



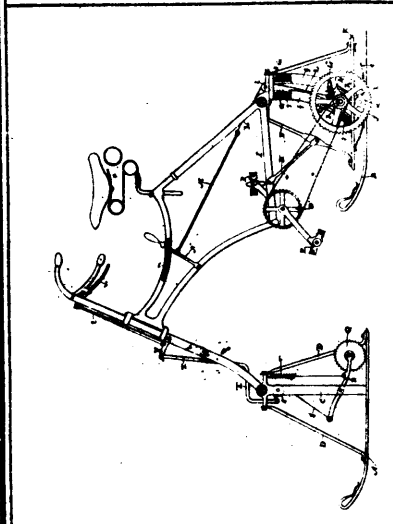
36772 Lamont's Broom Catch.



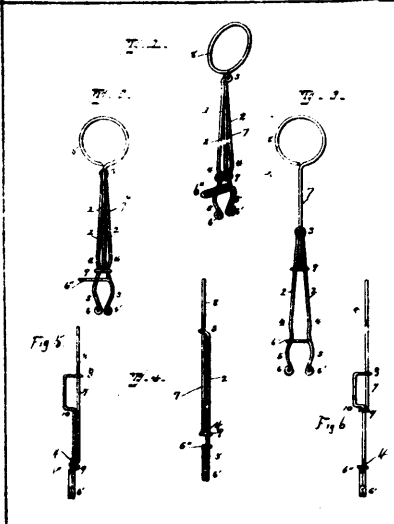
36775 Lundberg's Scales.



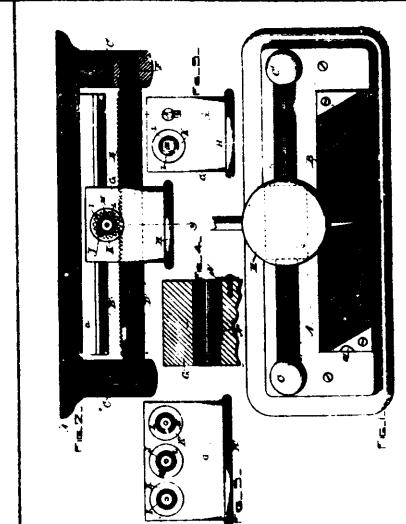
36774 Dansereau's Hay Press.



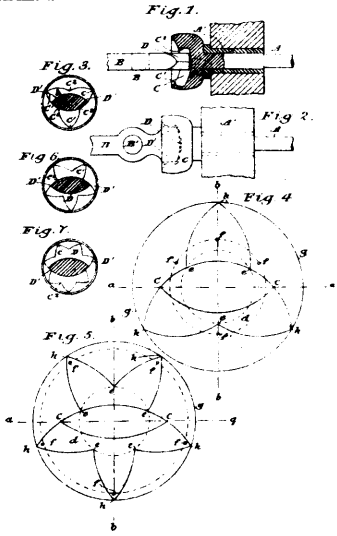
36775 Coburn's Bicycle.



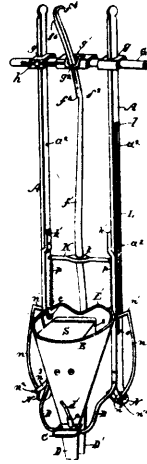
36776 Tirrell's Clothes Pin.



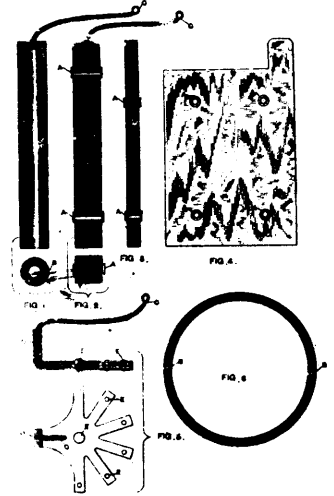
36777 Drake's Pencil Sharpener.



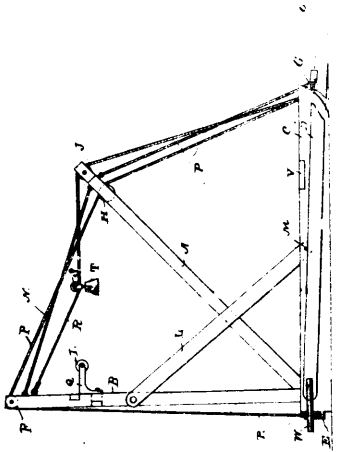
36778 Blackie & Nesbit's Mechanical Motion.



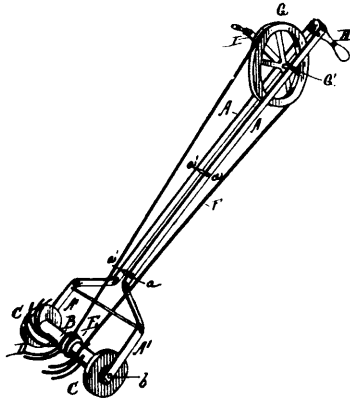
36779 McKay's Transplanter.



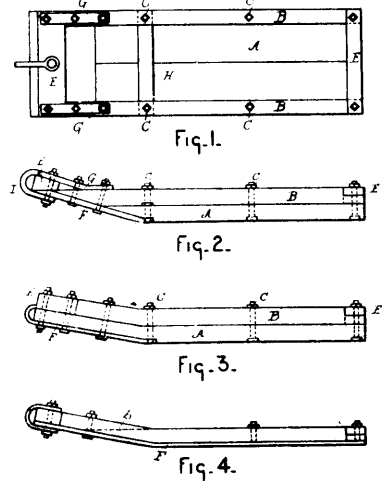
36780 Mosley's Battery Zinc.



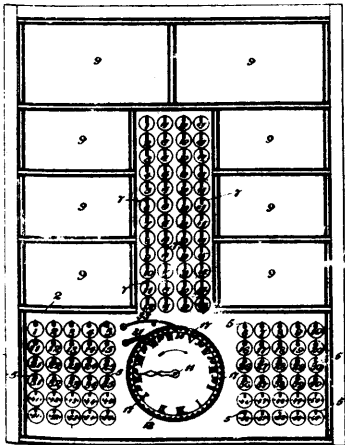
36781 Ham's Hay Ricker.



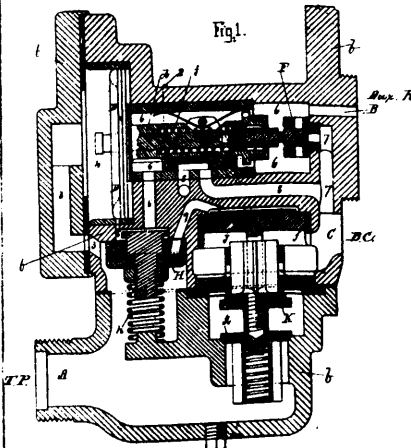
36782 Clark's Carpet Beater.



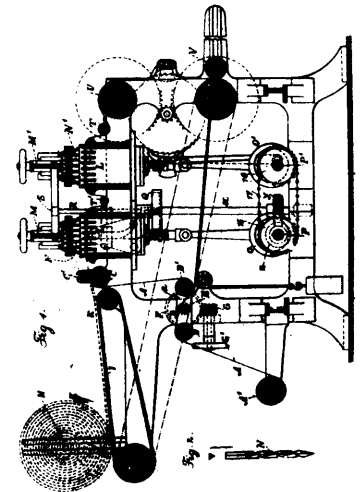
36783 Kimble's Stone Boat.



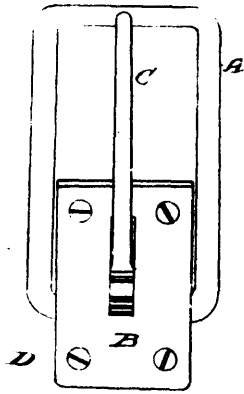
36784 Ransom's Electric Guest Call.



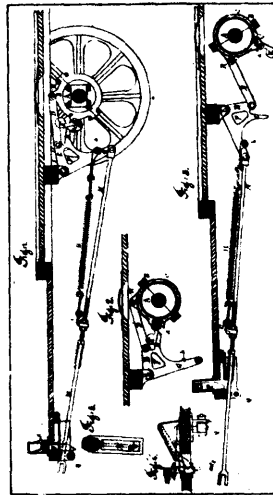
36785 Massey's Valve for Air Brakes.



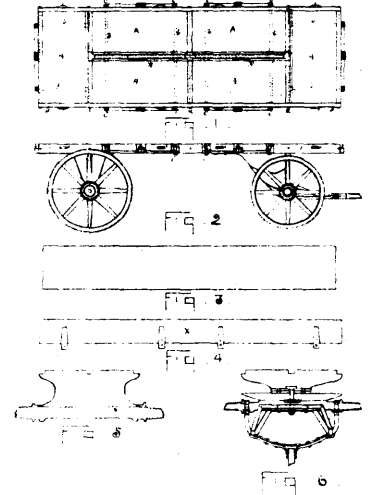
36786 Broadhead's Machine for Making Felted and Napped Fabrics.



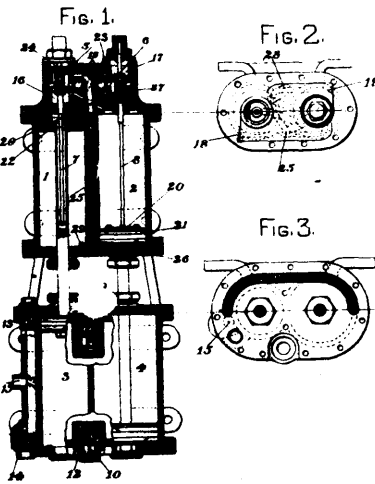
36787 Bell's Buckle.



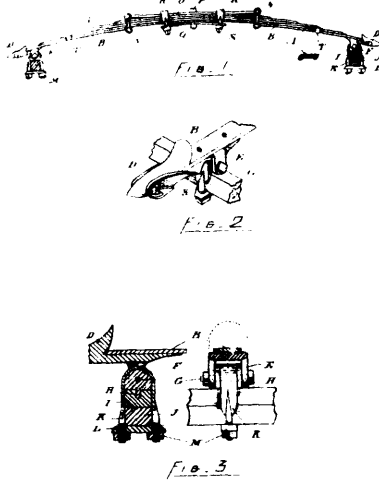
36788 Huizer's Vehicle Starter.



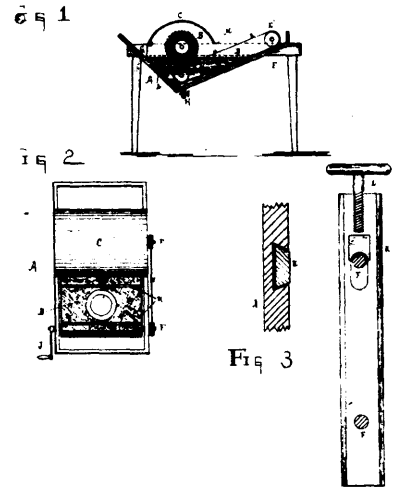
36789 Nowry's Waggon.



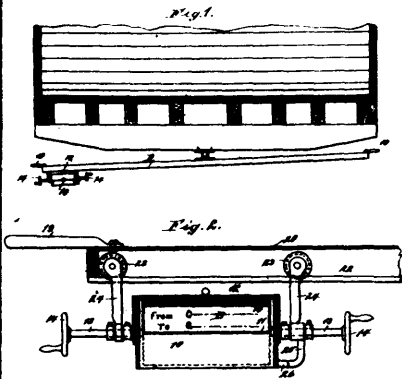
36790 Massey's Steam Air Pump.



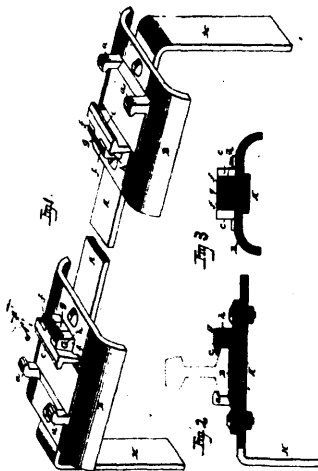
36791 Atkinson's Vehicle Spring.



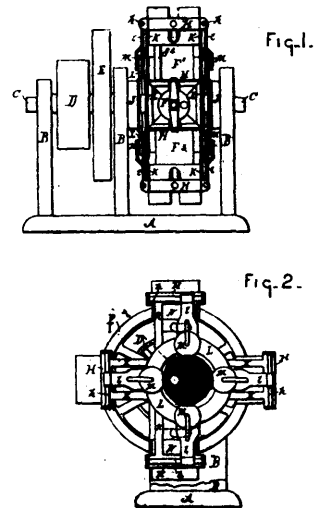
36792 Smith's Machine for Washing Dishes.



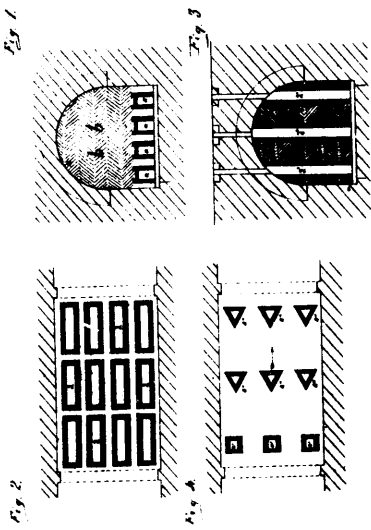
36793 Turner's Storage Receptacle for Cars.



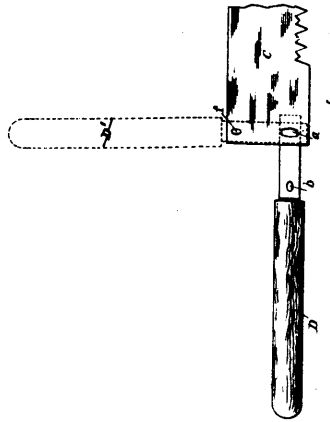
36794 Wallace's Railway Tie and Fastening Device



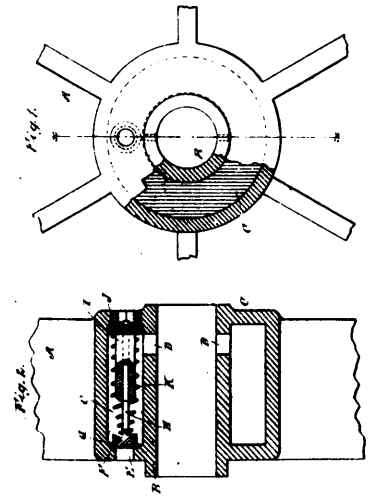
36795 Clark's Air Compressor.



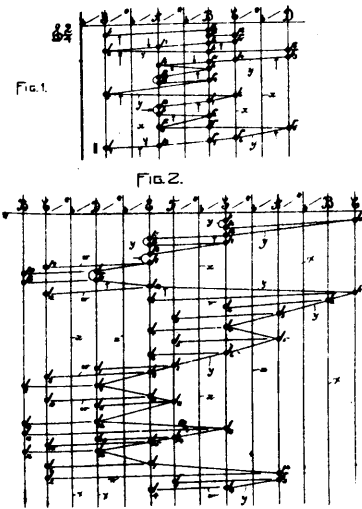
36796 Trevisan's Kiln.



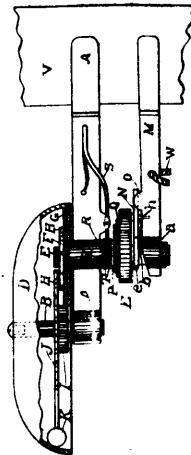
36797 Corey's Saw Handle.



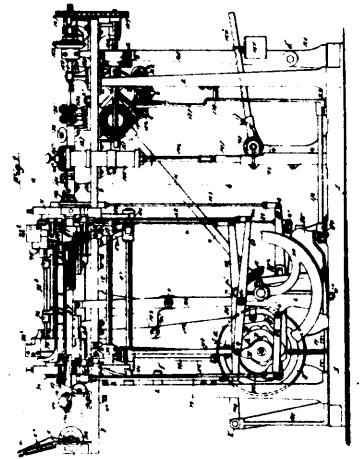
36798 Robinson's Wheel Lubricator.



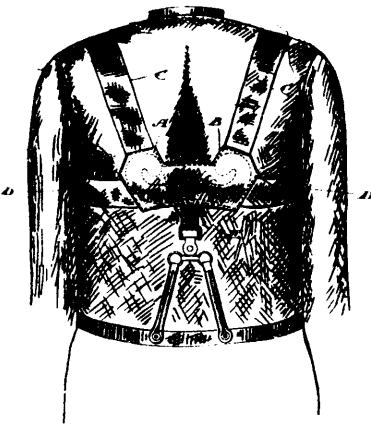
36799 Dodd's Music Chart.



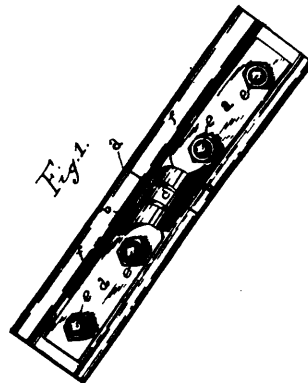
36800 Davis' Burglar Alarm.



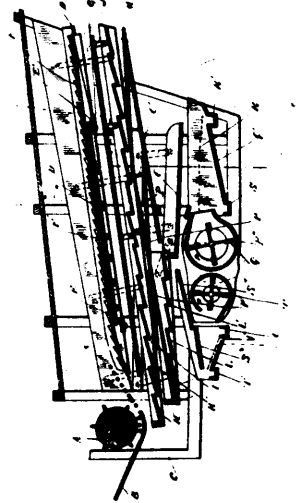
36801 Elliot's Machine for Making Cigarettes



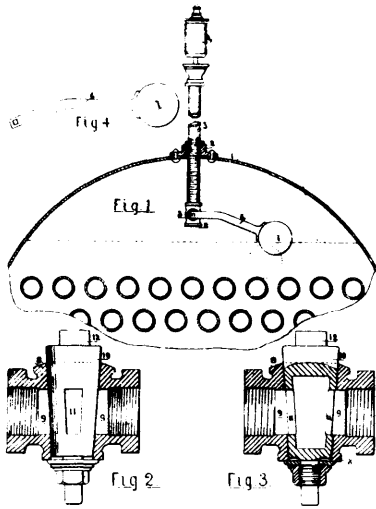
36802 Cluthe's Shoulder Brace.



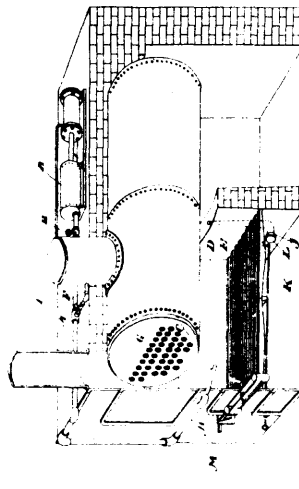
36803 Hunlock's Connector for Railway Joints.



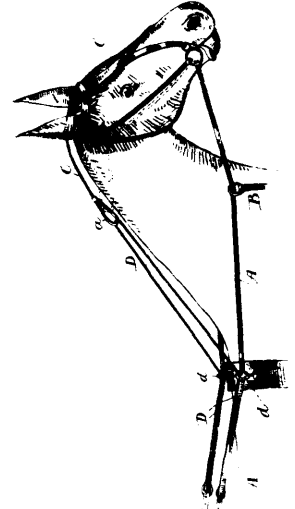
36804 Beam's Threshing Machine.



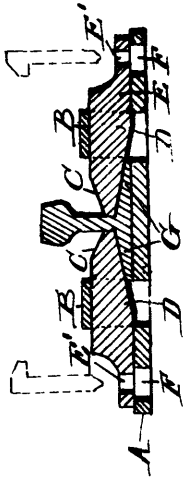
36807 Hampton and Holden's Low Water Alarm Whistle.



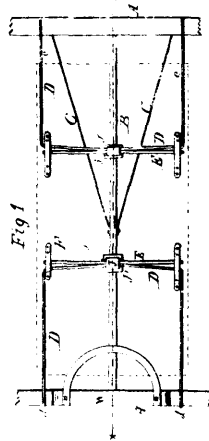
36808 Ellis' Steam Boiler Furnace.



36810 Barrelle's Check Rein Attachment.



36811 Rittersback's Railroad Chair.



36812 Percy's Vehicle Spring.

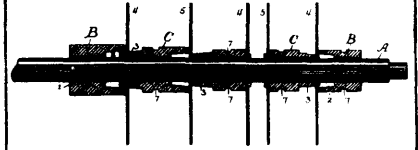


Fig. 1.

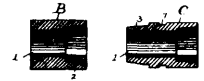
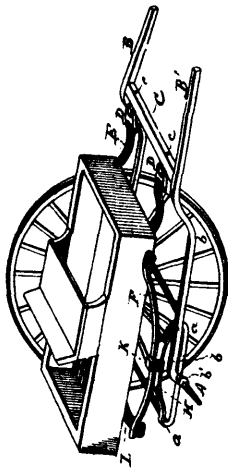
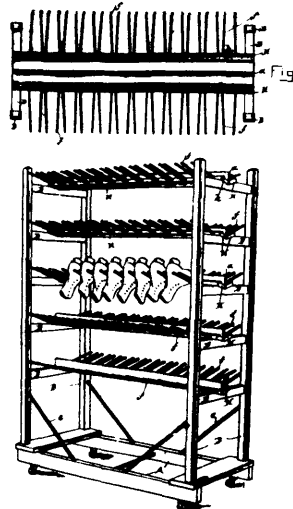


Fig. 2.

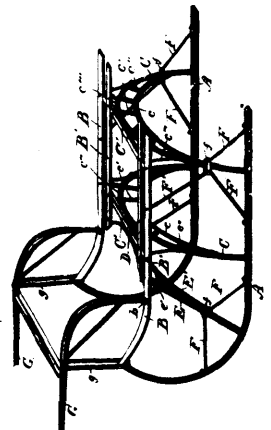
36813 Elliott's Gangs of Circular Saws.



36814 Hill's Sulky.



36815 Saunders' Rack for Holding Boots and Shoes.



36817 Hamill's Sleigh Gear.

Fig. 1.

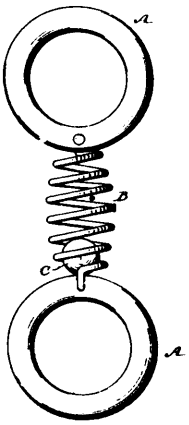
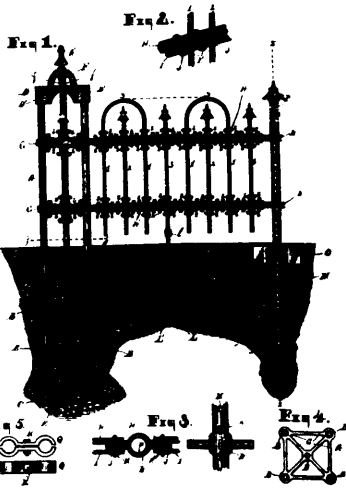


Fig. 2.



36818

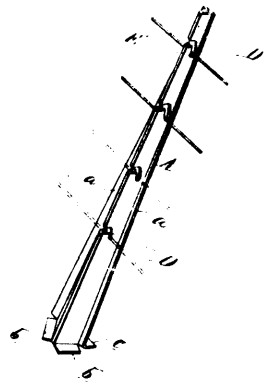
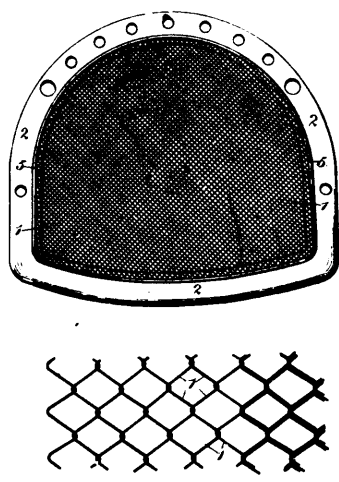
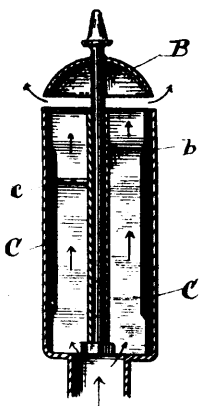
Simpson's Toy.

36819

Smith's Fence Post and Fence.

36820

Gormly's Blade for Knitting Wheels.



36821

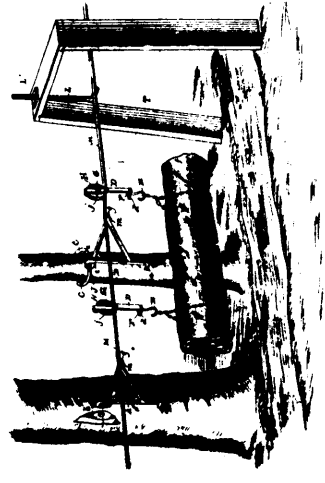
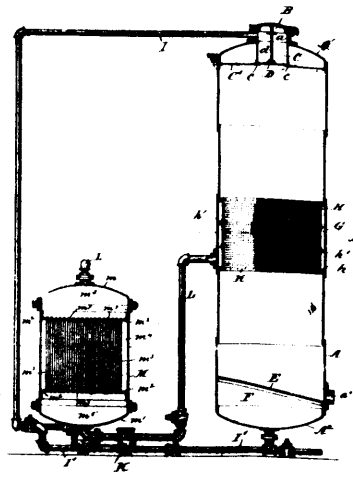
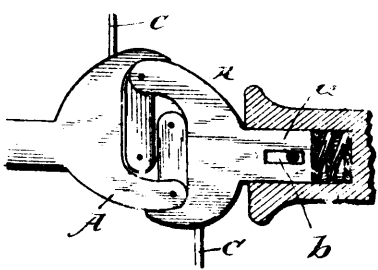
Quinlan and Knebel's Steam Whistle.

36822

Iye's Chair Seat.

36823

Bond's Fence Post.



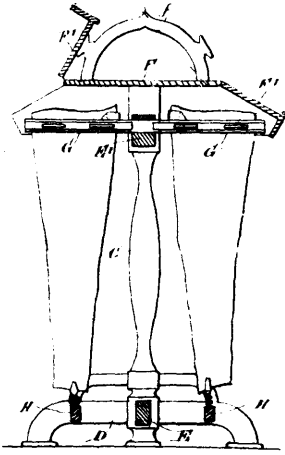
36824

Allen's Car Coupling.

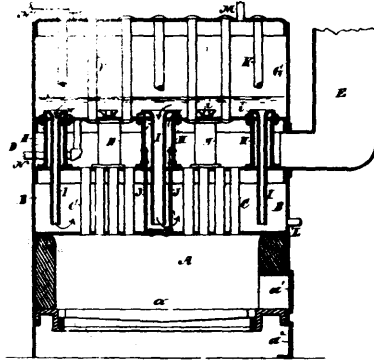
36825 Selkirk's Apparatus for Disintegrating Vegetable Substances to Produce Fibre.

36826

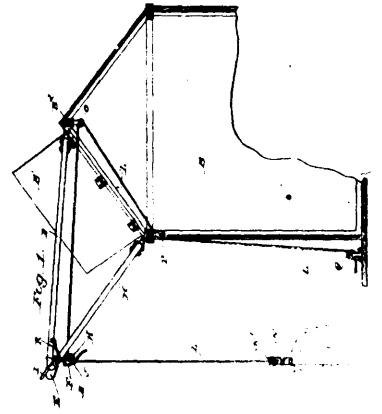
Kolliker's Lumber Carrier.



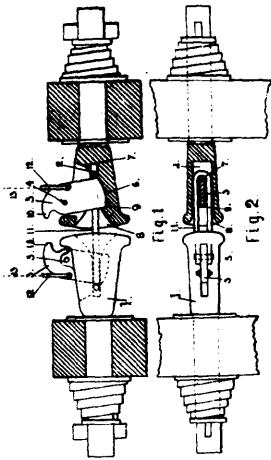
36827 Masse's Display Stand.



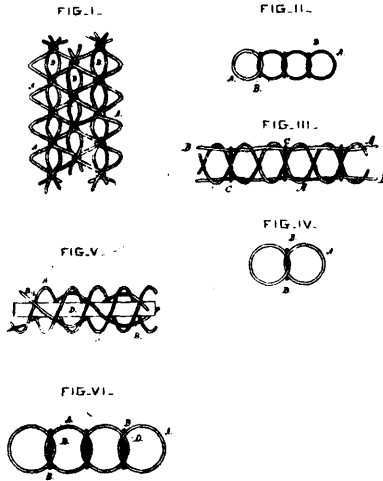
36828 Tonn's Steam Generator.



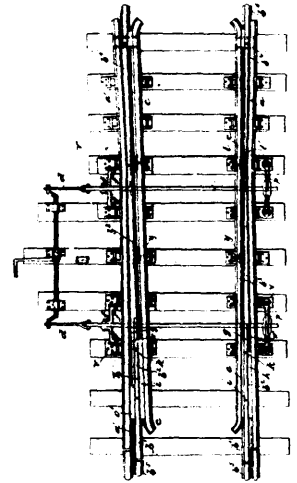
36829 Machin's Hay Stacker.



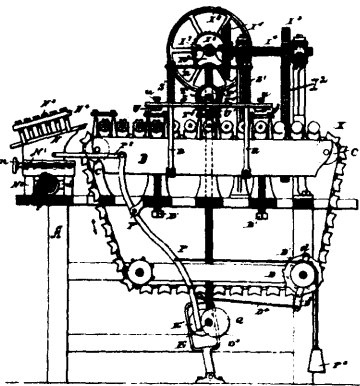
36830 McGowan's Car Coupler.



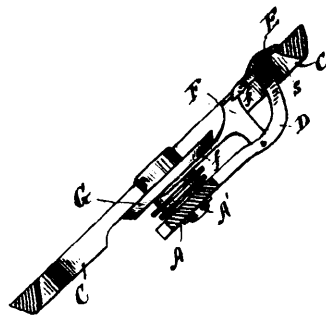
36831 Kinney's Wire Fabric.



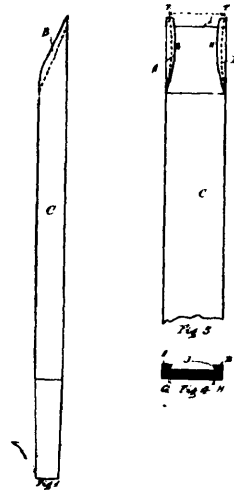
36832 Duggan's Railroad Switch.



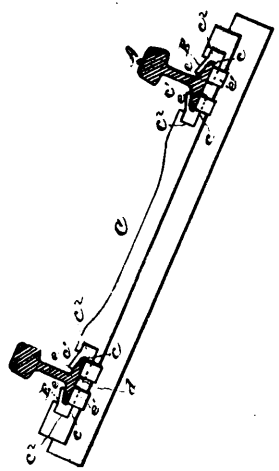
36833 Brownell's Machine for Making Spools.



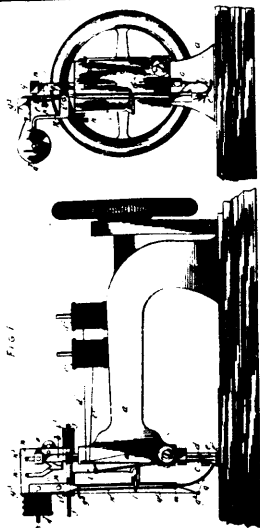
36834 Bay's Animal Trap.



36835 Viger's Chisel.



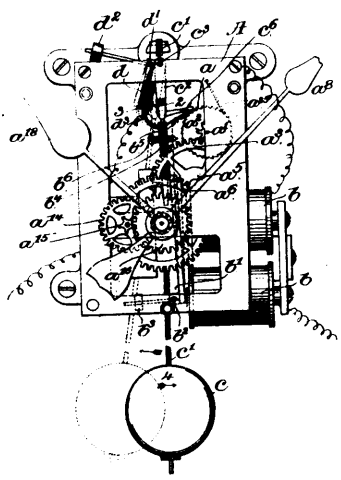
36836 Shumaker and Lawrence's Rail Brace.



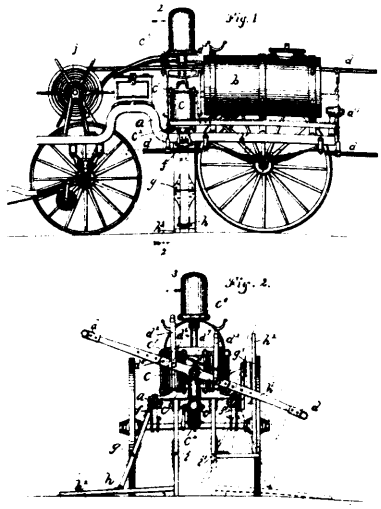
36837 Todd's Button Hole Stitcher.



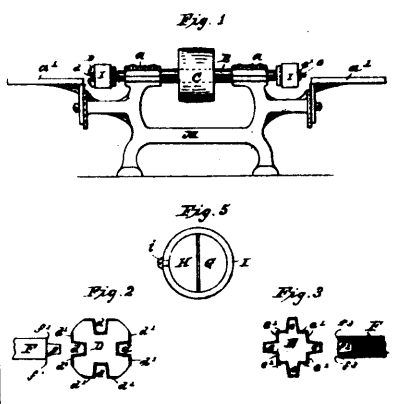
36838 Merril's Gate.



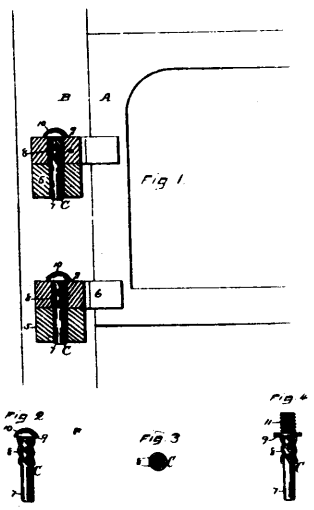
36840 Scales' Electric Clock.



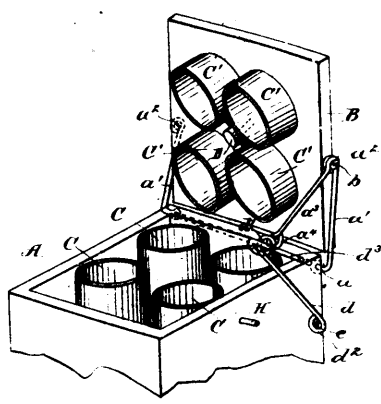
36841 Howe's Fire Engine.



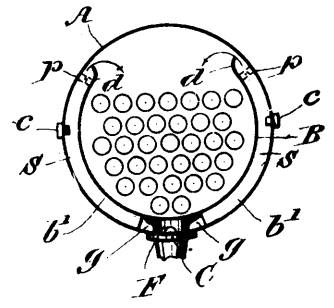
36842 Stevens' Plug and Socket Cutter.



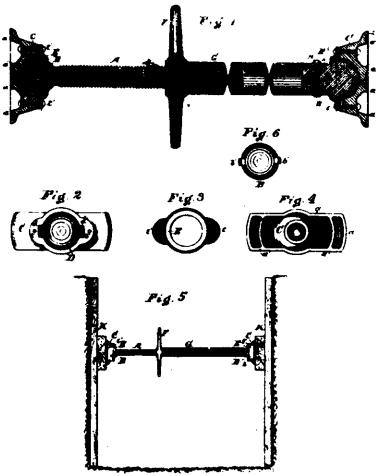
36843 Russell's Pin for the Hinges of Stove Doors.



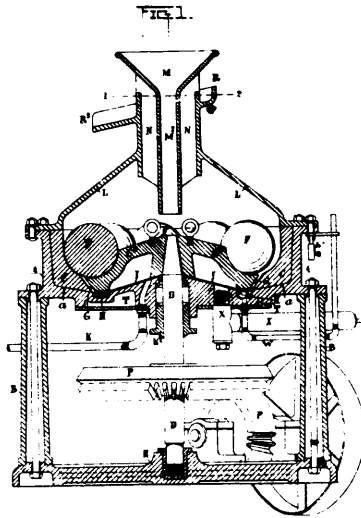
36844 Conder's Milk Cooler.



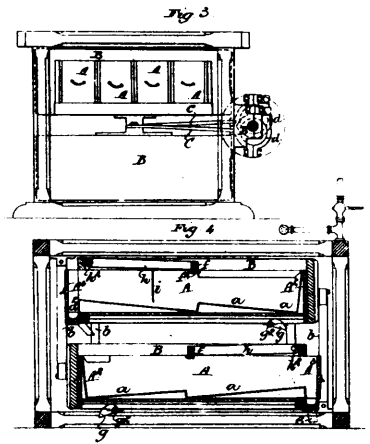
36845 Barnes' Water Purifier for Locomotive Boilers



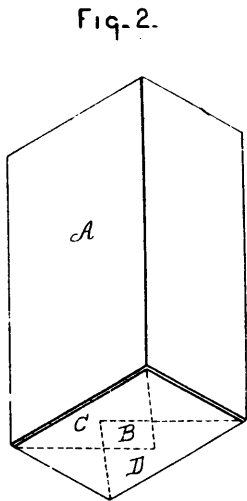
36846 Dunn's Extensible Brace.



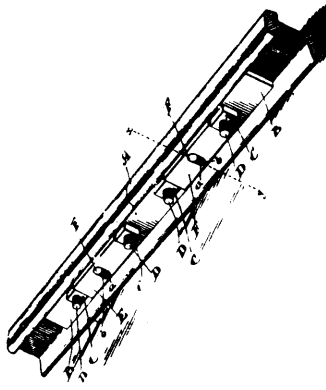
36847 Crawford's Ore Grinder.



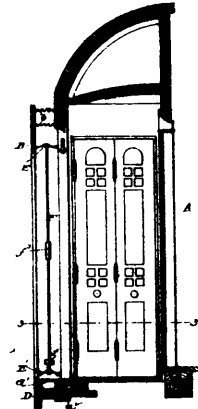
36848 Crawford's Ore Separator.



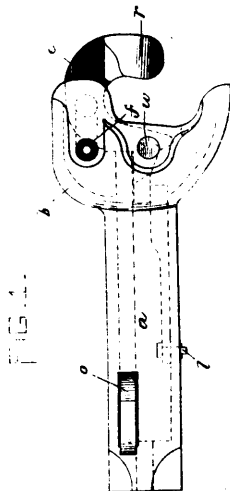
36849 Paige's Paper Bag.



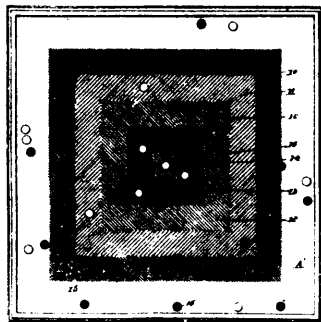
36850 Mathie and Fletcher's Nut Lock.



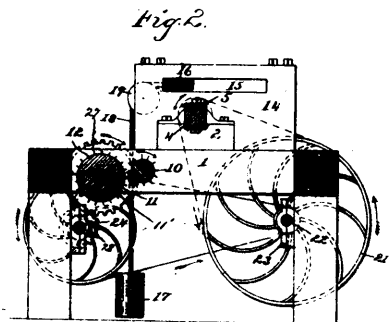
36851 Barr's Railway Car.



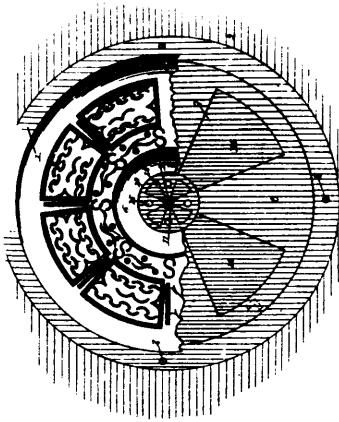
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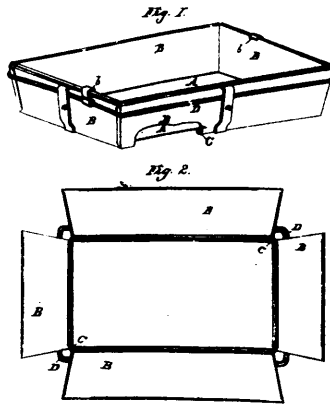
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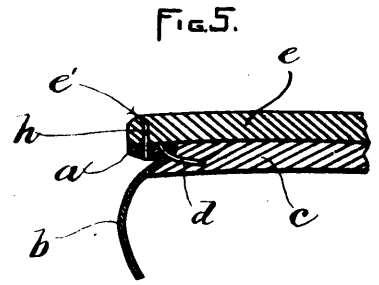
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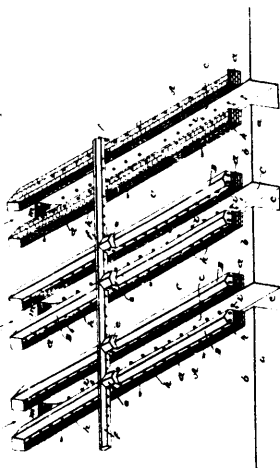
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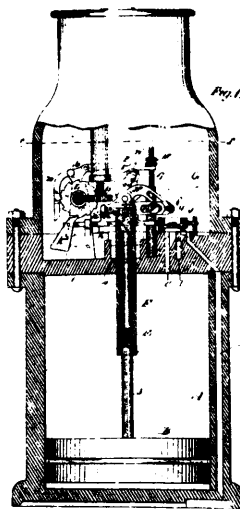
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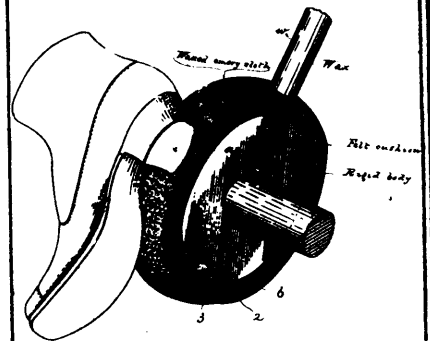
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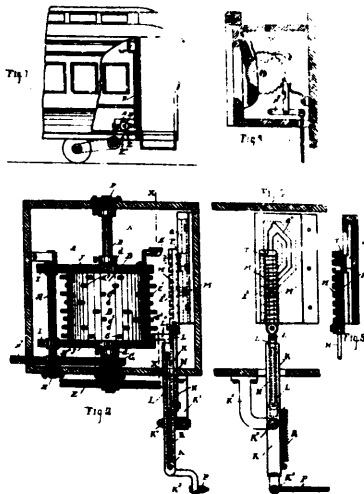
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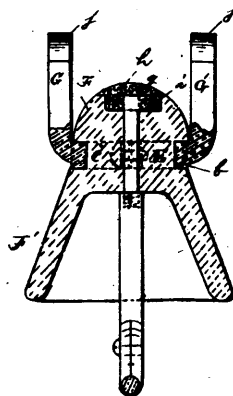
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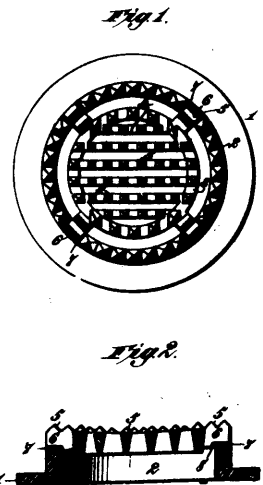
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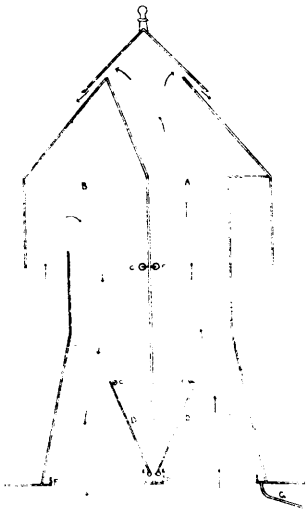
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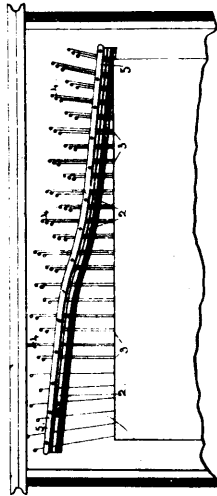
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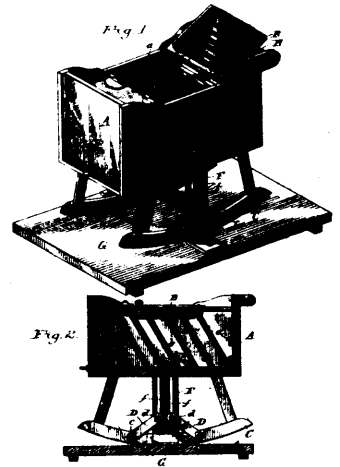
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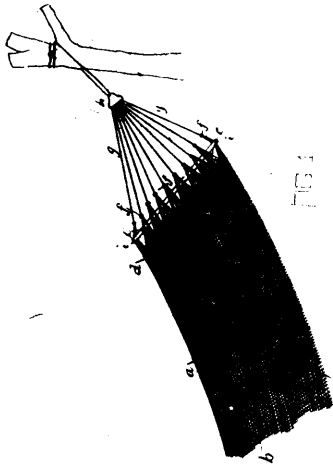
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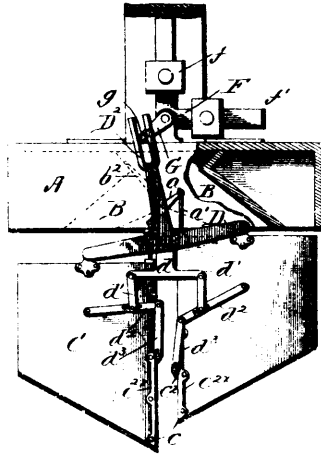
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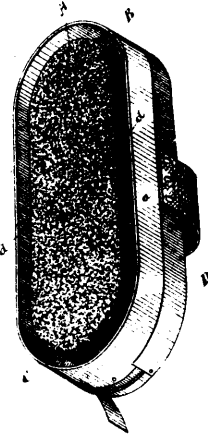
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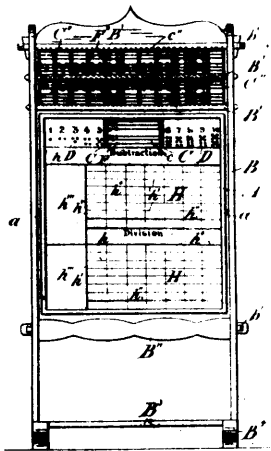
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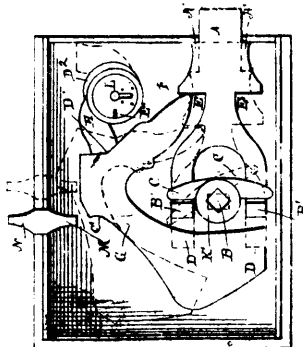
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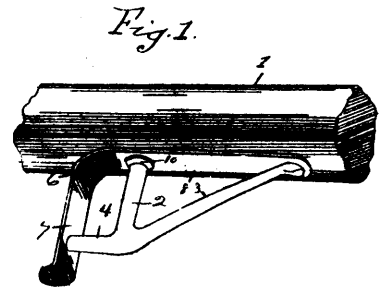
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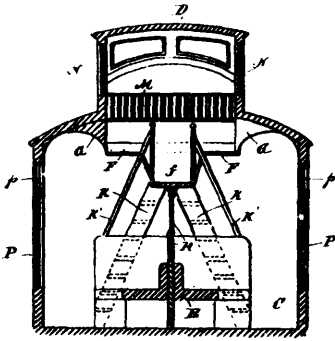
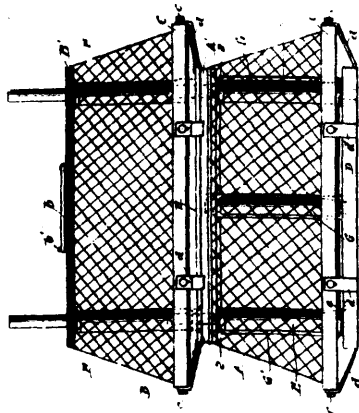
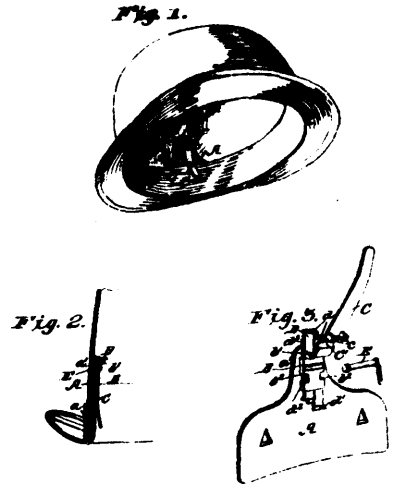


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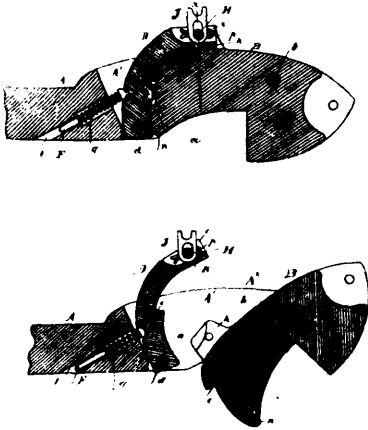
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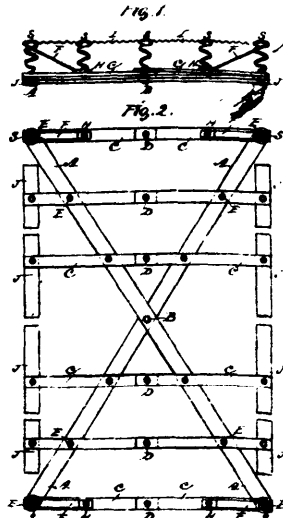
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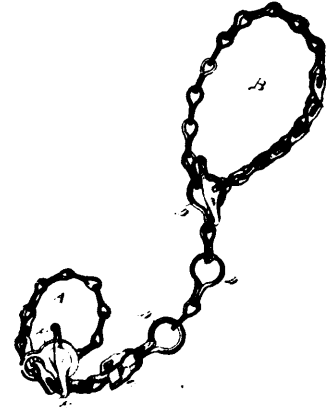
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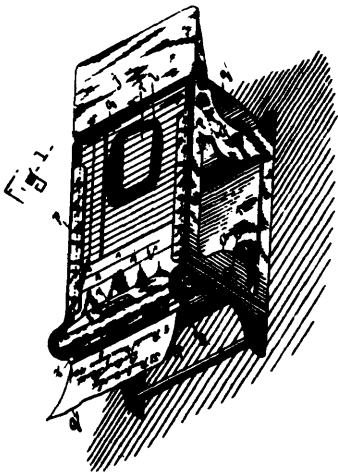
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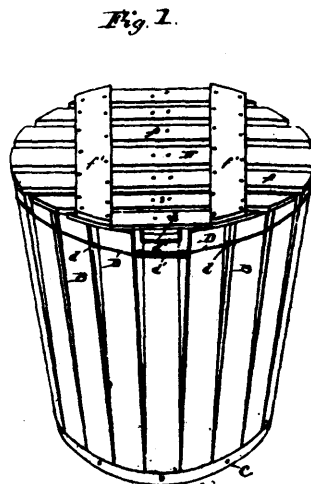
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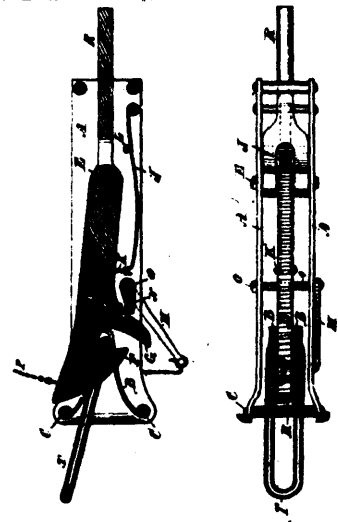
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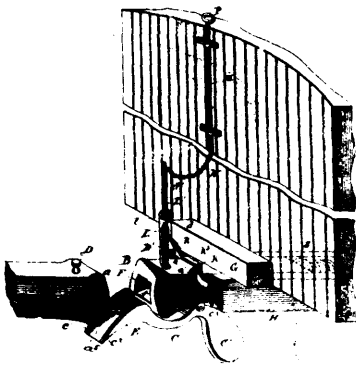
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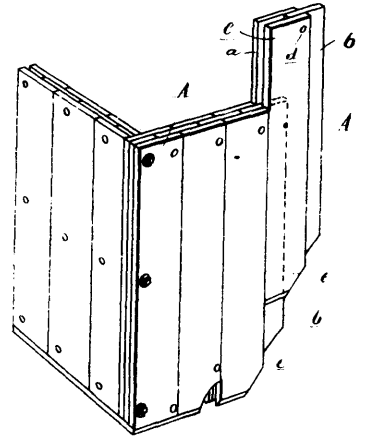
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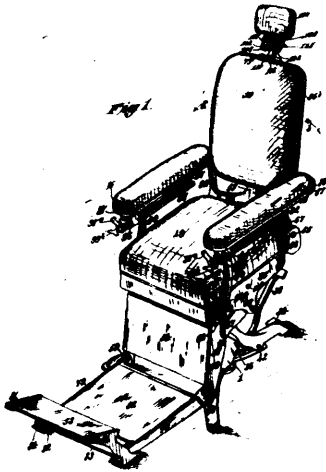
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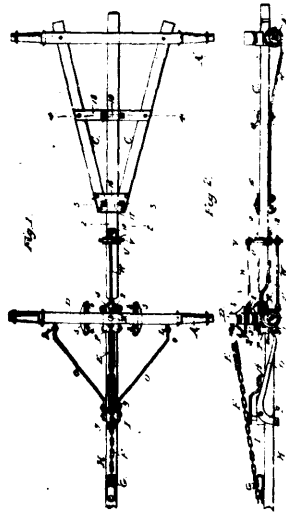
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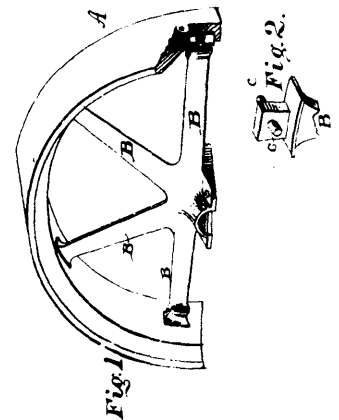
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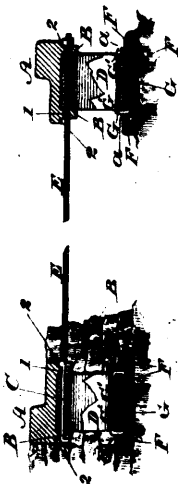
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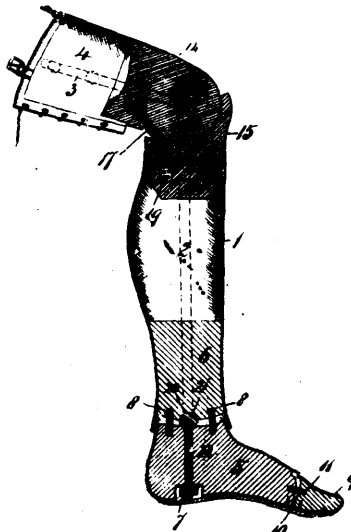
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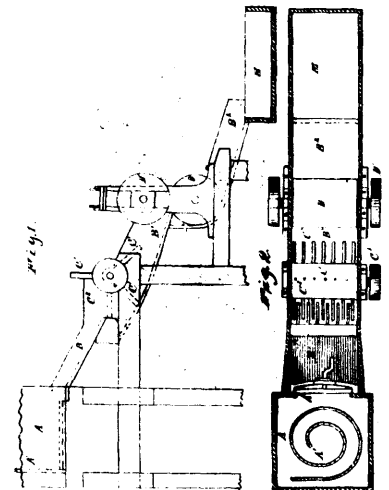
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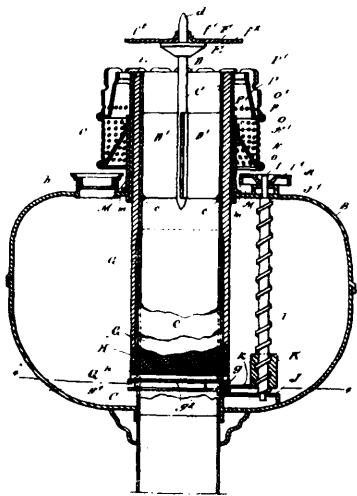
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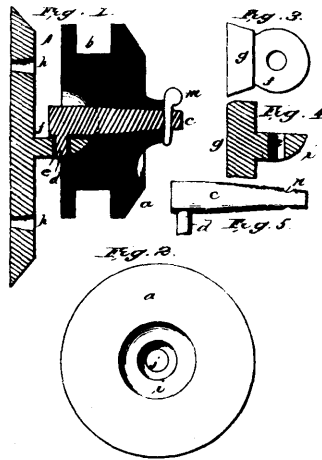
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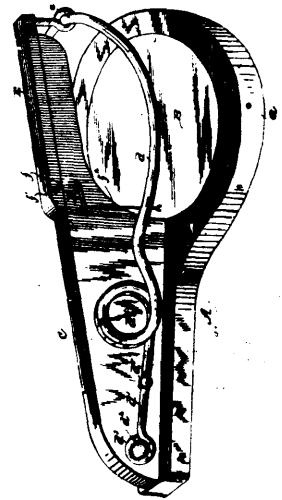
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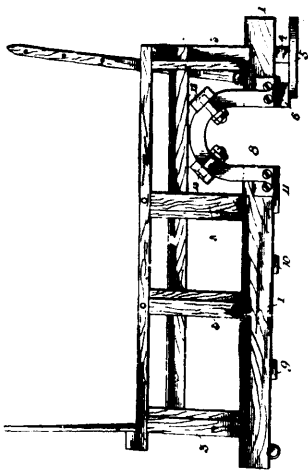
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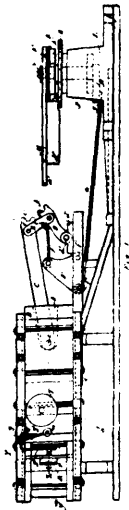
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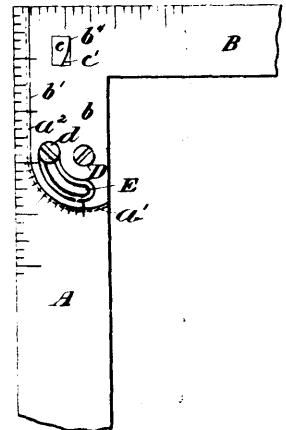
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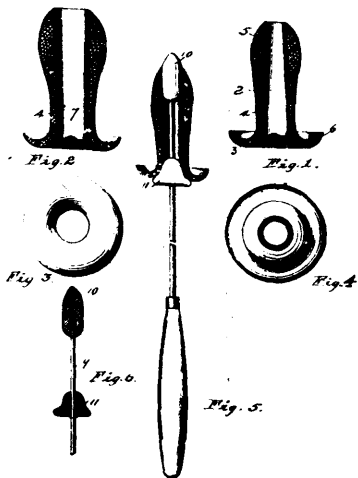
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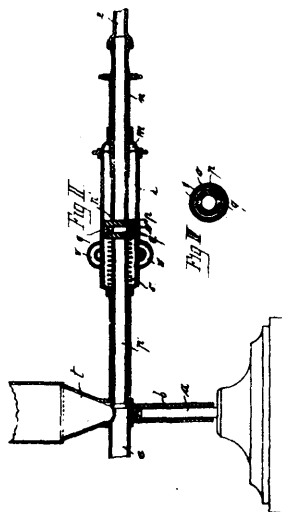
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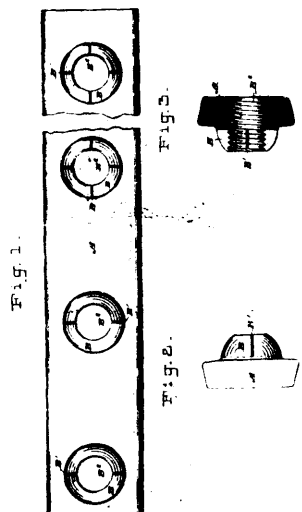
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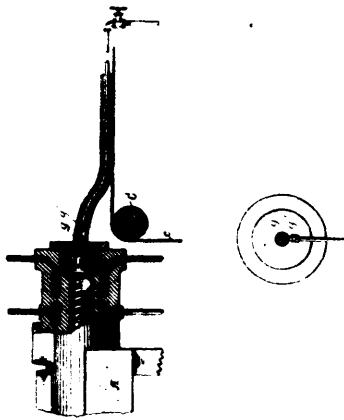
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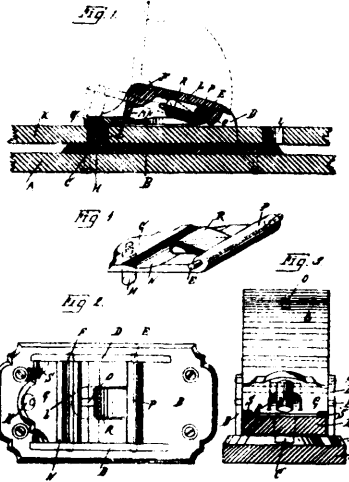
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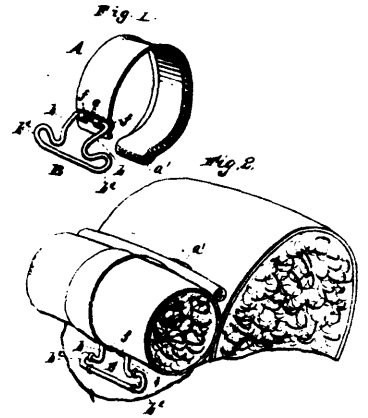
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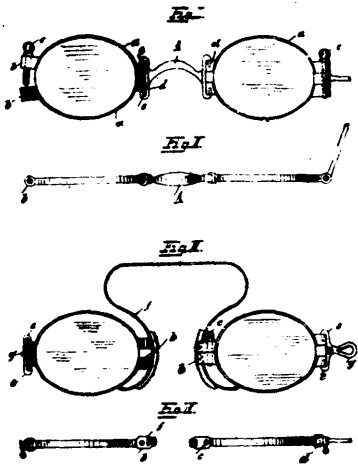
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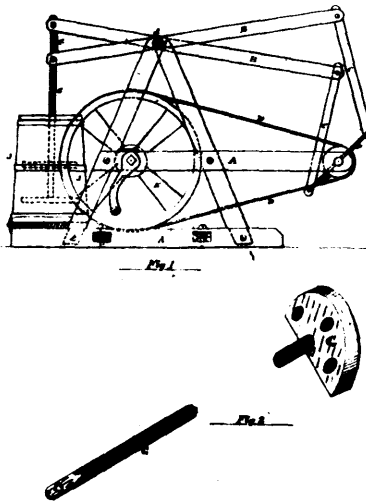
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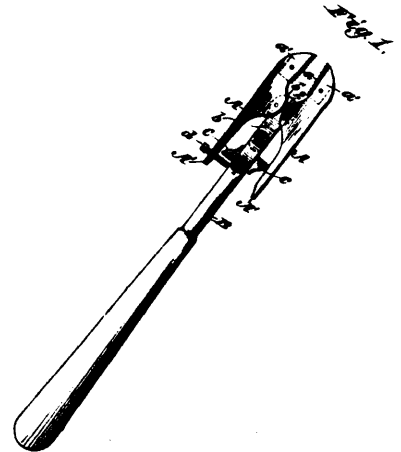
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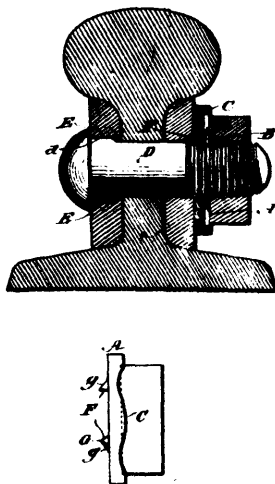
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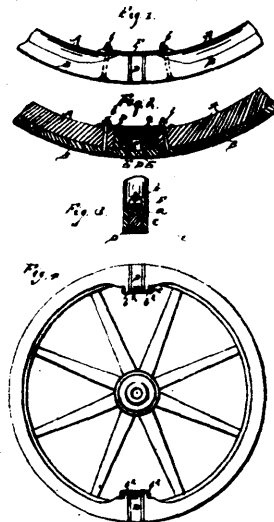
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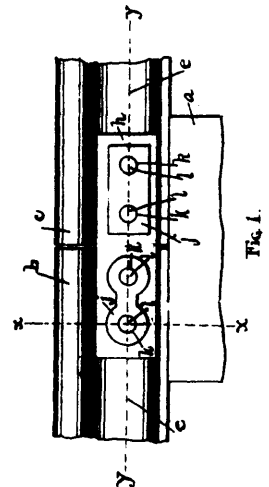
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