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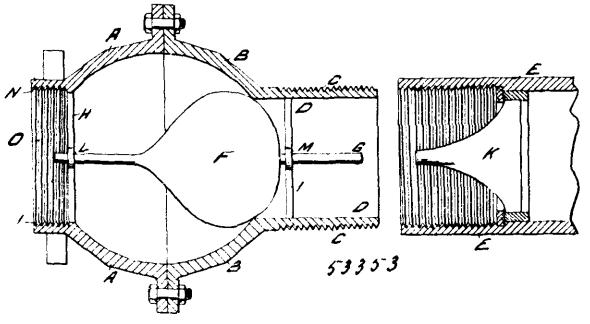
No. 53,353. Hose Coupler. (*Joint de boyaux.*)



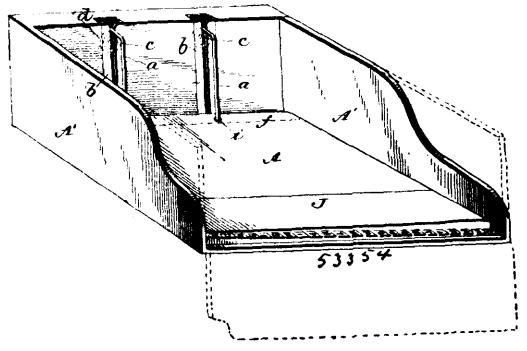
Jean Naud, jr., Montreal, Quebec, Canada, 1st September, 1896; 6 years. (Filed 7th August, 1896.)

Claim.—1st. In a hose coupling, the ram K in the part E E of the coupling, substantially as shown and for the purpose hereinbefore set forth. 2nd. In a hose and hydrant coupling the combination of the ram K with the valve F, actuated through its shaft O all substantially as described and for the purpose hereinbefore specified. 3rd. In a hose and hydrant coupling the combination of the cups A A and B B, and the supports H and I with the valve F, all substantially as described and for the purpose hereinbefore set forth.

No. 53,354. Filing Case. (*Serre-papier.*)

George Henry Richter, Boston, Massachusetts, U.S.A., 1st September, 1896; 6 years. (Filed 23rd July, 1896.)

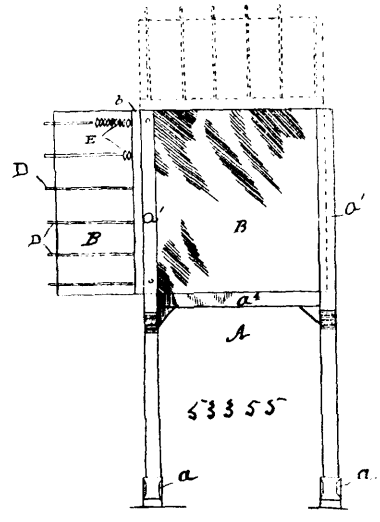
Claim.—1st. A filing case or drawer, and a slotted metalic frame inserted in one end thereof, combined with a wire bent at right angles near each of its ends, and then having its ends formed into loops to fit in the frame, and turned inwardly toward each other so as to be in a line with the main body of the wire, substantially as shown. 2nd. In a filing case or drawer, a covering sheet, combined with a removable weight secured to its outer edge, substantially as shown and described. 3rd. In a filing case or drawer, a covering sheet, combined with a removable weight applied to the edge thereof, the weight being formed of elastic metal which is doubled upon itself, so as to receive the edge of the sheet between its two edges, substantially as set forth. 4th. In a filing case or drawer, a covering sheet, provided with an eyelet or catch, combined with a removable U shaped weight which is applied to the outer edge of



the sheet, said weight being elastic, and provided with an opening to catch over the eyelet or catch, substantially as shown and described.

No. 53,355. Apparatus for Teaching Arithmetic.

(*Appareil pour enseigner l'arithmétique.*)



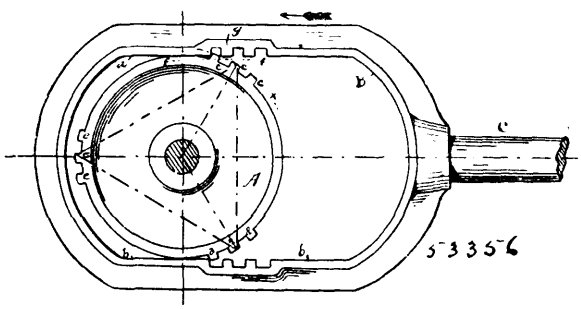
Herman Rodelsperger, Manchester, New Hampshire, U.S.A., 1st September, 1896; 6 years. (Filed 25th July, 1896.)

Claim.—An apparatus for the purpose described, consisting of slotted uprights, an oblong blackboard adapted to rest in said slots

in the uprights with its length either horizontal or vertical, the projecting end of said board being provided with cleats extending across its opposite sides, a series of wires secured to said cleats and running from one to the other around the projecting end of the board, beads or buttons loosely mounted upon the wires, and means for fastening the reversible board in the slotted uprights, substantially for the purpose set forth.

No. 53,356. Mechanical Movement.

(*Mouvement mécanique.*)

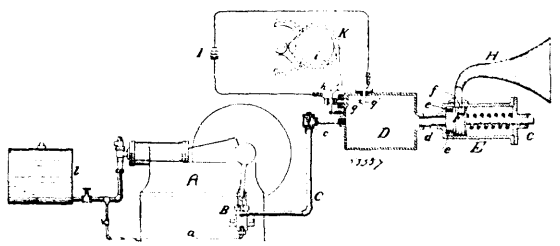


William H. Dolmetsch, Elmira, New York, U.S.A., 1st September, 1896; 6 years. (Filed 24th July, 1896.)

Claim.—In a mechanical movement for converting motion, a continuously revolving wheel provided with an uneven number of groups of teeth, each group consisting of one or more teeth, said groups being arranged symmetrically on the wheel and equi-distant from each other, combined with a yoke inside of which the wheel revolves, and which is provided with tooth recesses on each of its inner edges opposite each other, and corresponding in number and pitch to the number and pitch of the teeth in each of the aforesaid groups, said parts being so located with respect to each other that just as a tooth on the wheel is entering a recess on one side of the rack, another tooth is leaving the recess on the opposite side, substantially as shown.

No. 53,357. Signalling Apparatus.

(*Appareil de signal.*)



John Francis Barker, Springfield, Massachusetts, U.S.A., 1st September, 1896; 6 years. (Filed 27th July, 1896.)

Claim. 1st. In an apparatus for producing audible signals, the combination of an exploding chamber and means for admitting explosive material thereto, a source of electricity and electrodes connected therewith and projecting into such exploding chamber, means for automatically separating the electrodes, a cylinder connected with such exploding chamber, a spring actuated piston in such cylinder, an opening from such cylinder normally disconnected from the exploding chamber by said piston, and a sounding device connected with such opening, substantially as and for the purposes set forth. 2nd. In an apparatus for producing audible signals, the combination with an exploding chamber of a cylinder connected therewith, an opening in the cylinder leading to a sounding device, a piston head in the cylinder normally closing such opening from the exploding chamber and adapted to be driven backward past such opening by the force of an explosion in said chamber, and a spring operating to drive such piston head in its opposite direction, substantially as and for the purposes set forth. 3rd. In an apparatus for producing audible signals, the combination of a gasoline engine, a pump operated thereby, pipes connecting such pump with a gasoline supply tank and with an exploding chamber, a check valve in the pipe connecting the pump with such tank, and an opening from the pump barrel to the outer air provided with an outwardly closing valve, whereby liquid gasoline is drawn into the pump barrel and therein vaporized and mixed with atmospheric air and the gaseous product forced into the exploding chamber; means for igniting the vapour in the exploding chamber and a sounding device adapted to be opened to the exploding chamber by the force of the explosion therein, substantially as and for the purposes set forth.

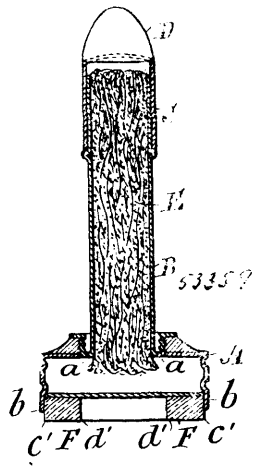
No. 53,358. Lubricant. (*Graisseur.*)

Franz Joseph Reinisch, Lemberg, Galica, Austria, 1st September, 1896; 6 years. (Filed 27th July, 1896.)

Claim. A new lubricating substance, and the process for manufacturing the same, consisting in dissolving colophany, or a mixture of colophany and resin oil with waste distillation products or residue of the petroleum refinery, under moderate heat, and decanting the peculiar mineral oil produced thereby, substantially as described.

No. 53,359. Dampening and Erasing Device.

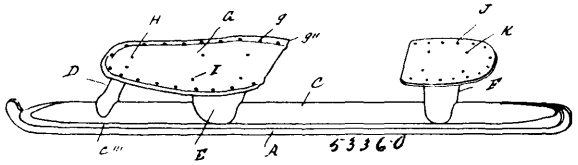
(*Grattoir et humecteur.*)



William Cotter Wilson, Brooklyn, New York, U.S.A., 1st September, 1896; 6 years. (Filed 27th July, 1896.)

Claim.- 1st. The combination with the cup A for containing liquid, and a rubber eraser F at the bottom of said cup, of a flange *b* for attaching said eraser to said cup, a detachable tube B extended from the top of the cup to form a means for manipulating the eraser, and a porous wick placed in the cup and tube and extended beyond the latter to provide a dampening brush capable of manipulation or application to use by means of the tube and a removable cap for preventing evaporation of liquid from the wick, all substantially as herein set forth. 2nd. The combination with the cup A for containing liquid, the tube B screwed into the top of said cup and roughened by raised reading matter upon its external surface, of a porous wick placed in said cup and tube and projected beyond the latter, a cap for preventing evaporation of liquid from said wick, and a rubber eraser attached to the bottom of the cup, all substantially as and for the purpose herein set forth. 3rd. The combination with the cup A for containing liquid, the tube B screwed into the top of said cup and roughened by raised reading matter upon its external surface, and a porous wick placed in said cup and tube and projected beyond the latter, of a cap for preventing evaporation from the wick, a rubber eraser F, and a circumferential flange *b* at the bottom of the cup to attach the rubber eraser to the cup, all substantially as and for the purpose herein set forth. 4th. The combination with the cup A for containing liquid, the tube B screwed into the top of said cup, a porous wick placed in said cup and tube and extended beyond the latter, and a scraper eraser D, of a detachable cap C for attaching said eraser to the tube and for preventing evaporation of liquid from the wick within the latter, and a rubber eraser F attached to the bottom of the cup, all substantially as and for the purpose herein set forth. 5th. The combination with the cup A for containing liquid, the tube B screwed into the top of said cup and roughened by raised reading matter upon its external surface, a porous wick placed in said cup and tube and extended beyond the latter, of a scraper eraser D, a detachable cap C for attaching said eraser to the tube and for preventing evaporation of liquid from the wick in said tube, and an annular rubber eraser F at the bottom of the cup, all substantially as and for the purpose herein set forth. 6th. The combination with the cup A for containing liquid, the tube B screwed into the top of said cup and roughed by raised reading matter upon its external surface, a porous wick placed in said cup and tube and projected beyond the latter, of a scraper eraser D, a detachable cap C for connecting said eraser to the tube and for preventing evaporation of moisture from the wick, an annular rubber eraser F, and a circumferential flange *b* at the bottom of the cup for attaching said eraser to said cup, all substantially as and for the purpose herein set forth.

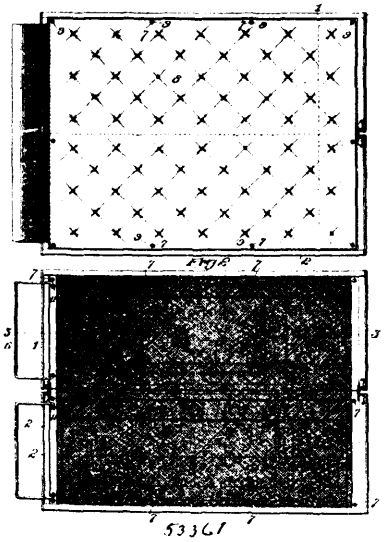
No. 53,360. Skate. (*Patin.*)



George Brinstin, Toronto, Ontario, Canada, 1st September, 1896; 6 years. (Filed 7th August, 1896.)

Claim.—1st. A skate, consisting of a plate comprised of a runner, a series of uprights formed integrally with the runner supporting plates securely fastened to the uprights, a protecting tube enclosing the plate and brazed thereto, the inner surface of the tube resting on the top of the runner, a cone enclosing each of the uprights, the lower end of each cone brazed to the protecting tube and the upper end to the supporting plate carried by its respective upright, substantially as specified. 2nd. A skate, consisting of a plate comprised of a runner the upper portion of which is perforated, a series of uprights formed integrally with the runner and arranged at suitable angles thereto, a protecting tube enclosing the upper portions of the runner and resting on the top thereof and provided with openings for the said uprights, a supporting plate secured to the top of each of the uprights, a cone for each upright brazed to the protecting tube and to the supporting plate, substantially as specified. 3rd. A skate, consisting of a plate comprised of a runner the upper portion of which is perforated, a series of uprights formed integrally with the runner arrranged at suitable angles thereto, a protecting tube enclosing the upper portions of the runner, each of the opposite edges of the tube provided with a downwardly extending flange, the said tube and flanges adapted to be brazed to the runner, supporting plates brazed to the top of the uprights, a cone enclosing each of the said uprights, each cone brazed to the supporting plate and its respective upright and to the protecting tube and sole plate, and heel plate brazed to the supporting plates, substantially as specified.

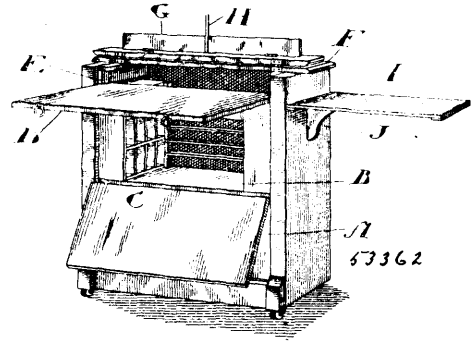
No. 53,361. Bed. (*Lit.*)



Harry Prufrock, St. Louis, Missouri, U.S.A., 1st September, 1896; 6 years. (Filed 8th August, 1896.)

Claim.—1st. A sofa bed whose frame is made of sections hinged together and adapted to be folded one on top of the other, the hinges being at the front of the folded frame, said bed having a bed bottom and a reversible detachably fastened mattress, whereby both, at once, are folded back and forth, all substantially as and for the purpose set forth. 2nd. A folded bed consisting of a frame made of a body section to the front of which the seat section is hinged and thereby adapted to be folded on top of the body section, a bed bottom fastened to said body and seat sections, and a reversible mattress detachably fastened to said sections, all arranged so that the mattress is folded back and forth with the seat section, substantially as set forth. 3rd. A folding bed consisting of a hinged sectional frame, a bed bottom fastened thereto and having the meeting rails of said sections lower than said bottom, and a reversible mattress removably fastened at its sides to said sections, all arranged so that the outer section may be folded over on top of the other section, and back carrying with it said mattress, substantially as described. 4th. A bed consisting of a hinged sectional frame, whose meeting-rails are lower than the side and end rails, a wire bed bottom fastened to the outer and end rails slightly below the tops thereof, buttons on the side and end rails above the said bed bottom, and a mattress provided in its edges with eyelets adapted to fit over said buttons, substantially as described. 5th. A bed consisting of a hinged sectional frame, whose meeting-rails are lower than the side and end rails, a wire bed bottom fastened to the outer and end rails slightly below the tops thereof, buttons on the side and end rails above the said bed bottom, a mattress provided with eyelets in its edges adapted to fit over said buttons, said buttons and eyelets being arranged symmetrically, substantially as and for the purpose set forth. 6th. A mattress provided near its edges with eyelets and having a pocket extending from its end adapted to fit over a pillow-frame, substantially as and for the purpose set forth. 7th. In a folding bed, the combination with a frame composed of a main body portion and a folding seat portion hinged thereto to fold thereon, of a bed bottom secured to the outer side of said folding portions, a detachable folding mattress arranged between the folding portions of the frame, and devices for detachably securing the folding mattress on the bed bottom, whereby the mattress will be automatically folded upon itself between the folding portions of the bed inclosing the same, and will be spread by opening the folding frame portions. 8th. In a folding bed, the combination with a frame having a main body portion and a folding seat portion hinged thereto to fold thereon, of a bed bottom secured to said sections below the plane thereof when open, a detachable mattress adapted to fold down between the main body and folding seat portion, and fastening device for the mattress above the plane of the bed bottom and below the plane of the main body and folding portions, substantially as and for the purpose specified. 9th. In a folding bed, the combination with a main body portion and a folding or seat portion hinged thereto to fold thereon, said portions provided with meeting-rails in a plane below the top of said folding portions when open, a bed bottom secured to said main section and to said folding section below the top plane of the open sections, a detachable mattress adapted to fold down between said main body and folding seat section, and devices for detachably fastening the mattress above the plane of the bed bottom and below the plane of the top of the open main body and folding portions, substantially as and for the purposes specified. 10th. In a folding bed, the combination with a frame having a main body portion and a folding or seat portion hinged thereto to fold thereon, of a bedbottom secured to said sections below the plane thereof when open, a detachable and reversible mattress adapted to fold down between the main body and folding seat section, and fastening devices for the mattress above the plane of the bed bottom and below the plane of the main body and folding portions, substantially as and for the purposes specified.

No. 53,362. Painting Cabinet. (*Cabinet de peinture.*)



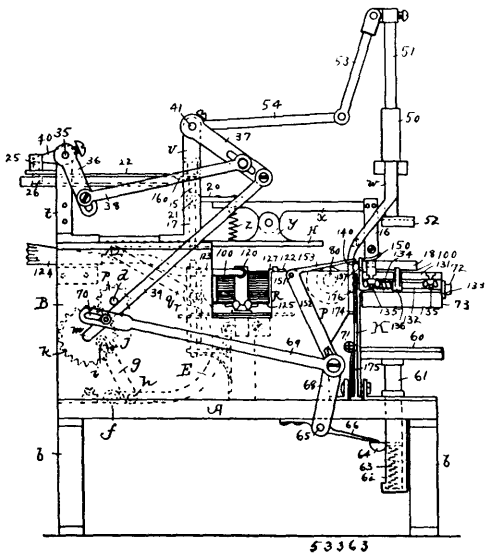
Alice N. Pringle, Preston, Ontario, Canada, 1st Septemcer, 1896; 6 years. (Filed 10th August, 1896.)

Claim.—1st. A cabinet for china painters, having a well formed therein and provided with a sliding table located above the said well, substantially as and for the purpose specified. 2nd. A cabinet for china painters, having a well formed therein and provided with a sliding table located above the said well, a hinged front for the said well and a hinged cover, substantially as and for the purpose specified. 3rd. A cabinet for china painters, having a drawer formed therein, and a well above the drawer, and provided with a sliding table located above the said well, substantially as and for the purpose specified. 4th. A cabinet for china painters, having a drawer formed therein and a well above the drawer, and provided with a sliding table located above the said well, a hinged front for the said well and a hinged cover, substantially as and for the purpose specified. 5th. A cabinet for china painters, having a well formed therein, and provided with a sliding table located above the said well, a hinged front for the said well and a hinged cover, a hinged leaf on the side of the cabinet and a hinged bracket to support the said leaf, substantially as and for the purpose specified. 6th. A cabinet for china painters, having a well formed therein and provided with a sliding table located above the said well, a hinged

front for said well and a hinged lid provided with a flap adapted to close the front space above the sliding table, substantially as and for the purpose specified.

No. 53,363. Bottle Labelling Machine.

(*Machine à étiqueter les bouteilles.*)

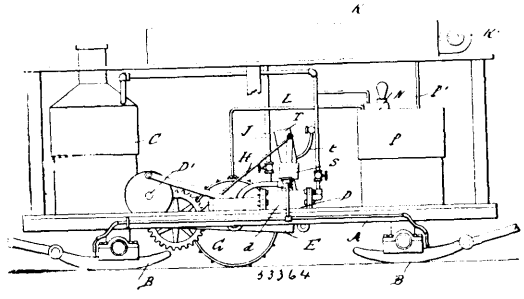


Andrew Seigel and Fred. Hausmann, both of Boston, Massachusetts, U.S.A., 1st September, 1896; 6 years. (Filed 22nd June, 1896.)

Claim.—1st. In a bottle labelling machine, the reciprocating carriage in combination with a label-carrying lever on said carriage bearing a shoe, laterally-spreading smoothing rolls, and devices for throwing said shoe into engagement with the rolls at a determined point in the passage of said carriage. 2nd. In a bottle labelling machine, laterally-spreading label smoothing rolls in combination with the reciprocating carriage bearing a label-carrying shoe, a paste roll, a label stack, and devices for consecutively engaging said shoe with the roll, label and smoothing rolls, substantially as specified. 3rd. In a bottle labelling machine, the separable smoothing rolls, the label-carrying shoe, the plunger, and mechanism for consecutively engaging said shoe with a paste roll, a label, and disposing the same in position for said plunger to force the article to be labelled into engagement with the paste face of said label. 4th. In a bottle labelling machine, a label-carrying shoe, two spring-tensioned smoothing rolls, a plunger, mechanism for consecutively engaging said shoe with a paste roll, a label and depositing the same in the path of said plunger, and mechanism for holding said label in said path when delivered by said shoe, all being arranged to operate substantially as described. 5th. In a bottle labelling machine, a label box provided with bristles projecting inwardly into engagement with the edges of the labels. 6th. In a bottle labelling machine, a label box having flexible projections on its inner face and a rigid guard adjacent the free ends of said projections, substantially as and for the purpose specified, 7th. In a bottle labelling machine, the label box provided with bristles, 121, and a rigid guard disposed in said bristles. 8th. In a bottle labelling machine, a label box in combination with devices actuated by the operating mechanism of said machine for discharging a blast of air into said box, substantially as and for the purpose set forth. 9th. In a bottle labelling machine, the label carrier and its actuating mechanism in combination with a label box and devices actuated by said mechanism for discharging a blast of air into said box when said carrier engages a label therein. 10th. In a bottle labelling machine, a plunger adapted to engage the bottle in combination with two laterally separable spring-tensioned rolls against which the bottle may be forced by said plunger, and devices carried by the supports of said rolls for clamping and intermittently holding the label. 11th. In a bottle labelling machine, two spring-tensioned label smoothing rolls, a label carrier, and mechanism for automatically clamping said label in position over said rolls after it has been delivered by said carrier. 12th. In a bottle labelling machine, two separable spring-tensioned rolls adapted to be spread by contact with the bottle in combination with mechanism for rotating said rolls to smooth the label outwardly or in opposition to the line of travel of said bottle. 13th. In a bottle labelling machine, the laterally spreading roll in combination with bed plates carried by the supports of said rolls, and automatic label-clamping mechanism carried by said beds and adjustable in relation to said rolls. 14th. In a bottle labelling machine, the reciprocating carriage and its actuating mechanism in combination with the lever, *x*, and the label shoe carried thereby, the plunger, the laterally, spreading rolls, mechanism for engaging said shoe with a paste roll a label, and disposing said label in the path of said plunger, and mechanism for retreating said shoe out of said path at determined intervals, substantially as specified. 15th. In a bottle labelling machine, a reciprocating carriage bearing a vertically swinging lever, a label-carrying shoe on said lever, a mechanism for consecutively engaging said shoe with a paste roll and a label and carrying it into the path of the object to which it is to be applied, substantially as shown.

No. 53,364. Logging Machine.

(*Machine pour manier les billots.*)



George Thompson Glover, Chicago, Illinois, U.S.A., 1st September, 1896; 6 years. (Filed 11th August, 1896.)

Claim.—1st. In a logging machine a hollow closed wheel, adapted for service as a condensing tank and reservoir, as set forth. 2nd. The combination, with a hollow wheel adapted for service as a tank and reservoir, of means for removing the contents of the wheel therefrom, as set forth. 3rd. The combination, with an exhausting engine, of a hollow wheel adapted for service as a condensing tank and reservoir, said wheel being connected to receive the exhaust from the engine, and means for removing the contents of exhaustion from the wheel, as set forth. 4th. In a logging machine, the traction wheel supported in a tilting frame, and a pressure device arranged to exert a downward pressure on the traction wheel, as set forth. 5th. The combination, with an exhausting engine, of a traction wheel adapted for service as a condensing tank and reservoir, said wheel being provided with an outlet for the products of condensation, and connected to receive the exhaust of the engine, whereby pressure of the exhaust may force the products of condensation from the wheel, as set forth. 6th. The combination, with an exhausting engine, of a wheel adapted for service as a condensing tank and reservoir, said wheel being provided with an outlet for the products of condensation, and connected to receive the exhaust from the engine, and a supplemental tank or reservoir connected with the wheel and arranged to receive the exhaust before condensation, the passage-way of said connection being capable of regulation whereby a portion or all of the exhaust may be diverted into the supplemental tank, as set forth. 7th. The combination, in a tractor, of the traction wheel supported in a tilting frame, and a pressure cylinder arranged to exert a downward pressure on the traction wheel, as set forth. 8th. The combination, in a tractor, of the traction wheel supported in a tilting frame, and a pressure cylinder having its piston secured to the body of the tractor, and arranged to exert a downward pressure upon the tilting frame by reason of the rigid connection of the piston, as set forth. 9th. The combination, in a tractor, of the traction wheel supported in a tilting frame, and a pressure device arranged to exert a downward pressure on the tilting frame, the point of connection of the wheel and tilting frame being between the points of attachment of the tilting frame with the body of the tractor and with the pressure device, as set forth. 10th. The combination, in a tractor, of the traction wheel supported in a tilting frame, and a pressure cylinder having its piston secured to the body of the tractor, and arranged to exert a downward pressure on the tilting frame by reason of the unyielding connection of the piston, the point of connection of the wheel and the tilting frame being between the points of attachment of the tilting frame with the body of the tractor and with the pressure device, as set forth.

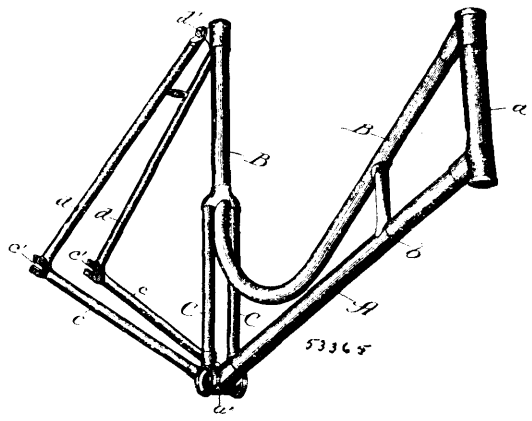
No. 53,365. Frame for Ladies' Bicycles.

(*Cadre pour bicycles de dames.*)

Frank Thomas Fowler, Chicago, Illinois, U.S.A., 1st September, 1896. (Filed 11th August, 1896.)

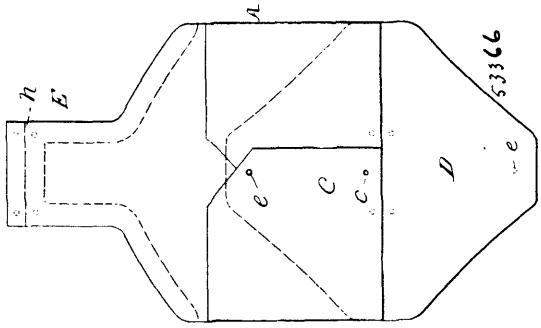
In a lady's bicycle frame, the combination of a head tube, a bearing bracket connected therewith by means of a lower tubular member, rear fork stays connected to the bearing bracket and to the pillar tube by means of the rear fork ends, a U-shaped continuous

tubular pillar portion connected with the head tube and the rear fork ends of the frame, and a bifurcated portion C, connecting the



bearing bracket with the pillar post above the bend thereof, substantially as described.

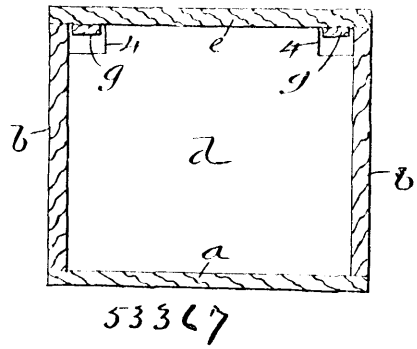
No. 53,366. Envelope. (*Enveloppe.*)



Daniel Conrad, Trenton, New Jersey, U.S.A., 1st September, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. An envelope having its end flaps C D formed with their lower edges on a line with the point at which the lower flap D is bent when folded down into position. 2nd. An envelope provided with a loose flap E of sufficient width to permit it to reach across the envelope and have its end folded over the edge of the envelope when closed, substantially as and for the purpose set forth. 3rd. The means herein described of securely fastening said envelopes, which consists in the insertion through the folded envelope and the flap thereof, of eyelets or hollow rivets more or less in number, substantially as shown and described.

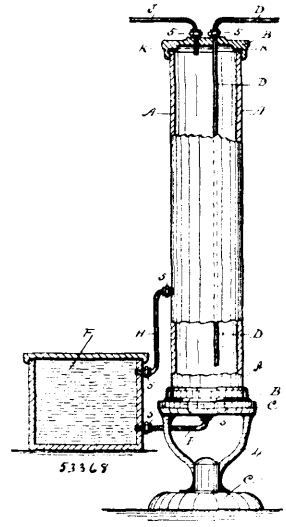
No. 53,367. Butter Box. (*Boîte à beurre.*)



William Rutherford, Montreal, Quebec, Canada, 1st September, 1896; 6 years. (Filed 25th April, 1896.)

Claim.—1st. A butter box having a removable cover adapted to interlock with the body of the box and a single retaining device, such as a screw, for locking the cover in place when interlocked with the body. 2nd. A butter box having a removable cover, the rear edge of the cover and the rear portion of the box adapted to interlock, and a single retaining device such as a screw locking the front edge of the cover and the body together, for the purpose set forth. 3rd. In a butter box the combination of the body having bottom *a*, ends *b b*, front side *c*, and the back side *d*, with bar d^1 bevelled on its inside face, the cover *e* also bevelled to take under said bar, and retaining screw *f* as and for the purpose set forth. 4th. In a butter box, the combination of the body having bottom *a*, ends *b b*, front side *c*, and back side *d*, with bar d^1 bevelled on its in side face, the cover *e* also bevelled to take under said bar, transverse bars *g, g*, and retaining screw *f*, as and for the purpose set forth. 5th. In a butter box, the combination of the body having bottom *a*, ends *b, b*, front side *c*, and back side *d*, with bar d^1 bevelled on its inside face, the cover *e*, also bevelled to take under said bar, transverse bars *g g*, projecting at their rear ends and the surface of the back side cut away as at 4 4, and retaining screw *f*, as and for the purpose set forth.

No. 53,368. Hot Water Boiler. (*Chaudière à eau chaude.*)

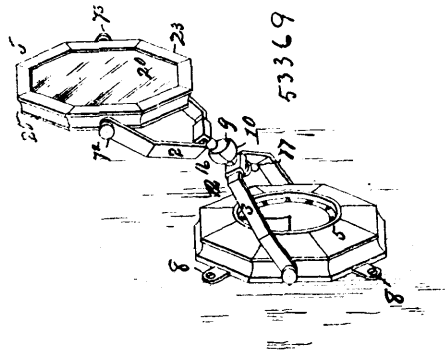


George C. Morrison, Hamilton, Ontario, Canada, 1st September, 1896; 6 years. (Filed 14th August, 1896.)

Claim.—1st. In a hot water boiler, a vertical boiler A, constructed of one seamless tubular piece having threaded or screwed ends 2, and faced in combination with the heads, threaded to conform to the said threaded ends 2, and having inner true face 6, to engage with end of said boiler when screwed in position, substantially as described and set forth. 2nd. In a hot water boiler, the combination of a vertical boiler A, constructed of one seamless tubular piece having threaded ends and faced, the heads B, having inner face and ring washer K, and threaded at 3 to engage with the thread 2, and ends of said boiler, and fasten thereto, substantially as described and set forth. 3rd. The combination in a hot water boiler, of a vertical boiler A, constructed of one piece, of tubular form and seamless, having threaded and faced ends, to receive the threaded and inner faced heads, a base stand capable of receiving lower said head, the water inlet and circulating tube or pipe D, a water heating reservoir connected to said boiler and its lower head by means of pipes E and H, and a hot water discharge pipe connected to the upper head, substantially as described and set forth.

No. 53,369. Movable Support for Mirrors, etc.

(*Support mobile pour miroirs, etc.*)

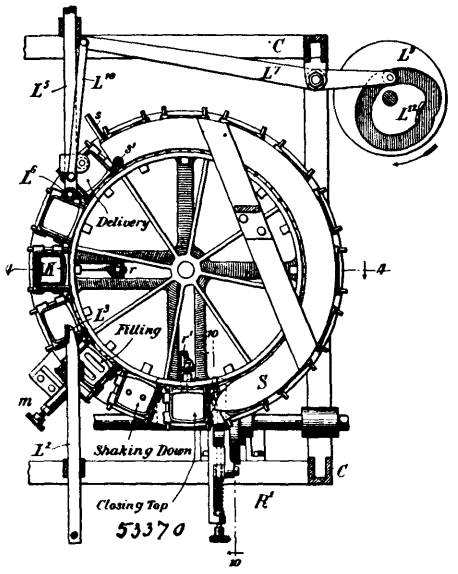


John F. Haulan, Concord, New Hampshire, U.S.A., 1st September, 1896; 6 years. (Filed 14th August, 1896.)

Claim.—1st. The combination with a base, a universally movable frame, twin yokes pivotally attached to said base and frame, and clamping screws in the extremities of the yokes of an interconnecting joint comprising a ball, a split socket having a sectional tubular stem, and a clamping device, adapted to cause the socket to clasp the ball on one yoke, and the stem to engage the opposite corresponding yoke, substantially as stated. 2nd. In combination with two similar yokes, a separable joint uniting the same, and comprising a ball secured to one yoke, a stud transversely on the corresponding yoke, a split socket having an exteriorly threaded stem, and a clamping nut which serves to cla-p the socket about the ball and socket stem about the stud, substantially as described.

No. 53,370. Package Making and Filling Machinery.

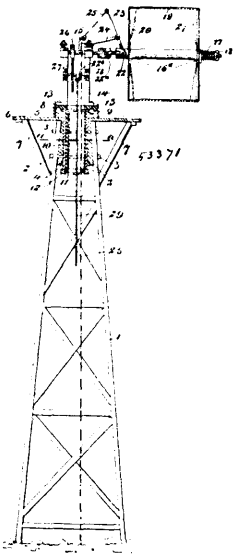
(*Machine à faire des paquets et les remplir.*)



Henry Eyster Smyser, Germantown, Philadelphia, Pennsylvania, U.S.A., 1st September, 1896; 6 years. (Filed 13th August, 1896.)

Claim.—1st. In a bag-forming mechanism, the combination, with a former and means for wrapping a sheet of paper around the former to form it into a tube, of the improved means for uniting the pasted seam, consisting of a roller and a cam for operating it, adapted to cause it to roll across the face of the former to form the seam and again back and forth across the face of the former and over the pasted seam without passing off the former, in substantially the manner specified, whereby the seam is more firmly united 2nd. In a bag-forming mechanism, a former, and a matrix for wrapping a sheet of papper around three sides of the former preparatory to its formation into a tube, the former being sufficiently shorter than the sheet of paper to leave sufficient of the paper tube projecting beneath it to be folded in to form the botom of the bag, combined with a movable wall constituting a temporary downward continuation of the former during the instant that the paper is being folded around the former, and means for displacing it preparatory to the folding in of the bottom. 3rd. The combination with a former K and matrix G, of a vertically moveable wall *t* adapted to slide up within the former, and mechanism for moving it adapted to hold it projected beneath the former during the time that the matrix is folding a sheet around the former, and subsequently to lift it within the former. 4th. The combination with a former K and matrix G, and plunger O^1 working within the former, of a wall *t* applied to said plunger, and a cam O^4 for operating the plunger, formed with a dwell t^1 for causing the plunger to rest beneath the former during the instant that the paper is being folded by the matrix around the former. 5th. In a packaging machine, the combination with one of a series of pockets having a movable wall q^1 guided by sliding pins q^2, of a tension device consisting of a spring *u* applied to said pocket and pressing against such pin, and means for adjusting the tension of said spring. 6th. In a packaging machine, the combination with a package-holding pocket having a movable wall, of a device for contracting the pocket, consisting of a movable part moving to push in said wall, and a spring interposed between said parts and said movable wall and through which the thrust is communicated in order that the pocket in contracting upon the package shall embrace it yieldingly, and thereby adapt itself to variations in the bulk of the packages. 7th. In a packaging machine, the combination with a pocket having a movable wall, of a device for contracting the pocket consisting of a lever r^1, link R^3, lever R^2 and cam R^1, and a spring *c* interposed between the lever R^2 and lever r^1, and through which spring the thrust is transmitted from the former to the latter, whereby the contractile thrust exerted by the latter lever against the pocket is rendered yielding.

No. 53,371. Windmill. (*Moulin à vent.*)



Jacob L. Rust and Franklin M. Rust, Grant Toup, all of Gladstone, Illinois, U.S.A., 2nd September, 1896; 6 years. (Filed 12th August, 1896.)

Claim.—1st. In a windmill, the combination of a base piece, a shaft mounted to turn thereon and adapted to swing in a horizontal plane, a wind wheel mounted on said shaft and provided with a clutch member at one end, a clutch member connected to the shaft, a spring arranged to hold the clutch member on the wind wheel normally engaged with the clutch member on the shaft, means for moving said clutch members out of engagement, and gearing connected to said shaft, substantially as set forth. 2nd. In a wind mill, the combination of a base piece, a shaft mounted to turn thereon, a wind wheel mounted on and capable of longitudinal movement on the shaft and provided at one end with a clutch member, a clutch member connected to the shaft and adapted to be engaged by the clutch member on the wind wheel, a spring coiled on the shaft and arranged to bear against the end of the wind wheel opposite to that end at which is arranged the clutch member, a nut screwing on said shaft and arranged to engage said spring to adjust the tension thereof, means for moving the clutch members out of engagement, and gearing connected to said shaft, substantially as set forth. 3rd. In a wind mill, the combination of a base ring adapted to turn in a horizontal plane, standards extending up from opposite sides thereof, a shaft journalled in the upper ends of said standards and having one end extending beyond one side of the base ring, a wind wheel mounted on the projecting end of the shaft and capable of longitudinal movement thereon, a spring coiled on the extremity of the shaft and arranged to engage the outer end of the wheel, a nut screwing on the end of the shaft and adapted to control said spring, a clutch member formed on the opposite end of the wind wheel, a clutch member secured to the shaft to be engaged by the clutch member on the wind wheel and adapted when operated, to move the same endwise on the shaft to disengage the clutch members, and gearing connected to said shaft, substantially as set forth.

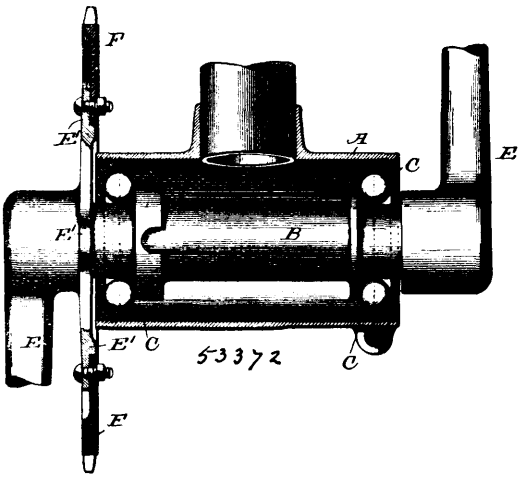
No. 53,372. Bicycle Crank Shaft.

(*Essieu pour bielles de bicycles.*)

The Lackawanna Wheel Company, assignee of Frank C. Holmes, all of Scranton, Pennsylvania, U.S.A., 2nd September, 1896; 6 years. (Filed 10th August, 1896.)

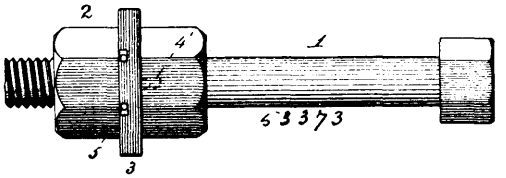
Claim.—1st. In a bicycle the combination of a crank and crank shaft, said crank shaft having a flattened tapered end, and a second crank, fitted detachably on the flat tapered end of the crank shaft, so that the end of shaft comes flush with face of crank, with a long sleeve closely fitted to and surrounding the crank shaft and having oppositely screw-threaded ends fitted into sockets on back of the cranks whereby the cranks are firmly held on the crank shaft, all substantially as and for the purpose described. 2nd. In a bicycle, the combination of the crank shaft having angular ends, and the detachable cranks having sockets in their bosses fitting the ends of the shaft; with a sleeve fitted on the shaft and having oppositely

threaded ends engaging corresponding threaded enlargements of the sockets in the bosses of the cranks, whereby the cranks are drawn



toward each other and bound on the shaft, substantially as and for the purpose described. 3rd. The combination of the barrel, the rotatable sleeve mounted therein, projecting beyond the ends thereof; oppositely threaded on its projecting ends, and the shaft fitted in the sleeve and projecting beyond the ends thereof; with the cranks fitted on the ends of the shaft but not rotatible thereon; having internally threaded sockets in their bosses engaging the ends of the sleeve whereby the cranks are bound together and upon the shaft, substantially as described.

No. 53,373. Nut-Lock. (*Arrête-écrou.*)



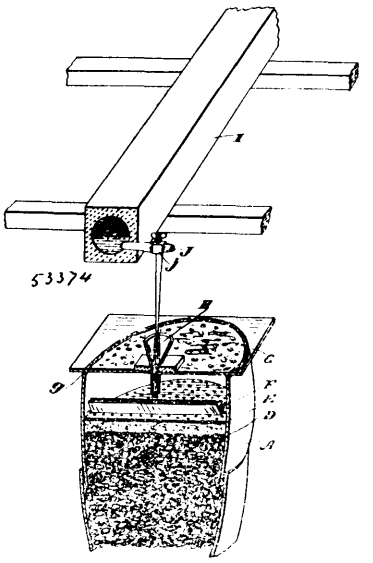
John E. Ward, Henry S. Butts, Waverly, New York, and Fred. W. Kelsey, Orange, New Jersey, all in the U.S.A., 2nd September, 1896; 6 years. (Filed 6th August, 1896.)

Claim.—1st. In a nut-lock, the combination with a bolt and nut of ordinary construction, of a washer having a horse-shoe shaped groove in its outer face, and a wire nail adapted to be driven into said groove and afterwards upset for the purpose of preventing the turning of said nut. 2nd. In a nut-lock, the combination with a bolt and nut of ordinary construction, of a washer having a groove in its outer face, whose outer ends are on the same edge of said washer and a trip of wire adapted to be driven into said groove and afterwards upset for the purpose of preventing the turning of said nut. 3rd. In a nut-lock, the combination with a bolt and nut of ordinary construction, of a washer having a horse-shoe shaped groove in its outer face whose ends lie at an angle to the outer edges of said nut forming wedge-shaped openings between the edge of said groove and the edge of said nut, and a strip of wire adapted to be driven into said groove and afterwards having its ends upset and forced into said wedge-shaped openings for preventing the turning of said nut.

No. 53,374. Art of and Apparatus for Making Vinegar. (*Art et appareil pour faire du vinaigre.*)

Anton Haaz, Kingston, Ontario, Canada, 2nd September, 1896; 6 years. (Filed 12th June, 1896.)

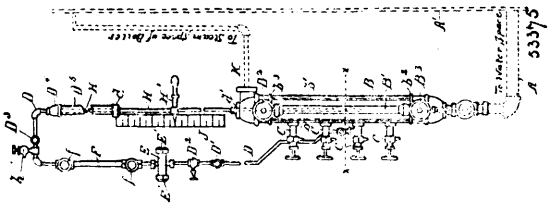
Claim.—1st. The method for preventing the escape of the vapour or gases when converting spirits or other fluids into vinegar, consisting, when heating such fluid within an enclosed vessel, of condensing the vapour arising from such fluid by a heat non-conducting and non-corrosive surface capable of shedding the drops as they accumulate on such surface, as and for the purpose specified. 2nd. In a vinegar-producing plant, the combination with the generator and heat-producing means in the same, of an imperforate top plate having the lower surface non-corrosive and practically a non-conductor of heat and capable of condensing the vapour as it arises in the generator and shedding such vapour, as and for the purpose specified. 3rd. In a vinegar-producing plant, the combination with the generator and heat-producing means in the same, of an imperforate top plate having the lower surface non-corrosive and practically a non-conductor of heat and capable of condensing the vapour as it arises in the generator and shedding such vapour, and a noncorrosive packing designed to be held on the top edge of the generator and form an even rest for the plate, as and for the purpose specified.



4th. In a vinegar-producing plant, the combination with the generator and heat-producing means in the same, of an imperforate top plate having the lower surface non-corrosive and practically a non-conductor of heat and capable of condensing the vapour as it arises in the generator and shedding such vapour, a funnel in the centre of such plate and a trough and lead into the funnel from such trough, as and for the purpose specified.

No. 53,375. Liquid Level Indicator.

(*Indicateur à niveau de liquide.*)



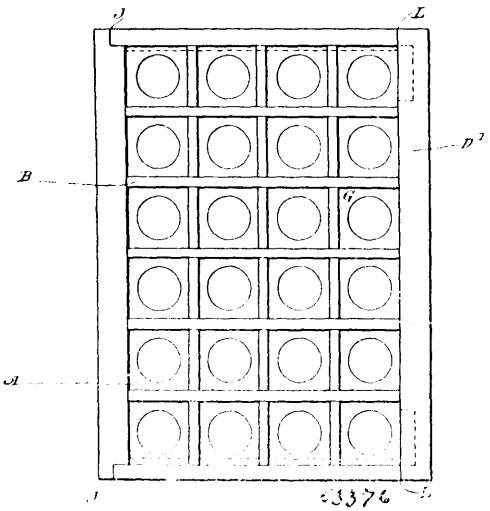
Henry A. McGrory, Detroit, Michigan, U.S.A., 2nd September, 1896; 6 years. (Filed 15th August, 1893.)

Claim.—1st. In an indicator system for steam boilers, etc., the combination, with a reservoir, of a pipe communicating therewith and led to a distance therefrom, and indicator in said pipe distant from the reservoir, said pipe having a return communication with the reservoir, and the extremities of said pipe normally communicating with said reservoir below the water line to provide for circulation through said pipe, substantially as described. 2nd. In a liquid level indicator, the combination with a reservoir of a pipe communicating therewith and led to a distance therefrom, an indicator in said pipe distant from said reservoir, said pipe having a return communication with said reservoir to provide for circulation therethrough. 3rd. In a liquid level indicator, the combination with a reservoir or boiler, of a pipe communicating therewith and led to a distance therefrom, of an indicator in said pipe distant from said boiler, said pipe having a return communication with said boiler, a movable section in said return pipe, and means for depressing the end of said movable section below the water level of the boiler. 4th. In a water indicator system for steam boilers, the combination, with a water pipe to communicate with the boiler, of a water column communicating with said pipe, a steam pipe communicating with the boiler and with the water column, a series of gauge cocks C, communicating with said column, and an additional water pipe provided with a water indicator and communicating with said column, said latter pipe having a return communication with the water column, the extremities of said additional pipe normally communicating with said column below the water line, substantially as described. 5th. In a water indicator system, for steam boilers, the combination with a water pipe leading from the boiler, of a water column communicating with said pipe, a steam pipe communicating with the boiler and water column, an additional water pipe leading from said column and having a return communication therewith, and a water indicator located in said latter pipe, the extremeties of said additional pipe normally communicating with the water

column below the water line therein, substantiallly as described. 6th. In a water indicator system for steam boilers, the combination, with a water pipe leading from the boiler, of a water column communicating with the boiler and water column, an additional water pipe leading from said column and provided with a water indicator, and a pipe H, having a movable connection with said additional pipe and with said column, substantially as described. 7th. In a water indicator system for steam boilers, the combination with a water pipe leading from the boiler, of a water column, a steam pipe communicating with the boiler and with the water column, an additional water pipe leading from said colum provided with a water indicator, a pipe H having a movable connection with said pipe and with said column, and means for moving said pipe H, substantially as described. 8th. In a water indicator system for steam boilers, the combination with a pipe leading from the boiler, of a water column connected with said pipe, an additional water pipe leading from said column provided with a water indicator, a pipe H having an adjustable connection with said additional pipe and with said column, and a scale to indicate the adjustment of said pipe H, substantially as described. 9th. In a water indicator system for steam boilers, the combination with a pipe leading from the boiler, of a water column connected with said pipe, an additional pipe leading from said column having a water indicator located therein, a pipe H, having telescopic connection with said additional pipe and with said column, means to adjust the pipe H, and a pipe leading from the upper end of said column to the boiler, substantially as described. 10th. In a water indicator system for steam boilers, the combination, with a water pipe leading from the boiler and having return communication therewith, of a water indicator located at a point distant from the boiler room, having communication with said water pipe, and cocks to control the communication of said gauge with said pipe located at each side of said gauge, the extremities of said pipe normally communicating with the boiler below the water line to provide for water circulation therethrough, substantially as described. 11th. The combination with a pipe, having normal communication with a boiler or reservoir below the water level therein to provide for circulation therethrough, of a gauge E, located therein, said gauge consisting of a horizontal tube provided with end fittings and observation glasses located at the extremities of said tube, and held in place by said fittings, substantially as described. 12th. The combination, with a pipe having communication with a boiler or reservoir, of a guage located in said pipe, said gauge consisting of a horizontal tube provided with end fittings, and observation glasses located at the extremities of said tube and held in place by said fittings.

No. 53,376. Box for Delivering Bottles.

(*Boîte pour le transport des bouteilles.*)

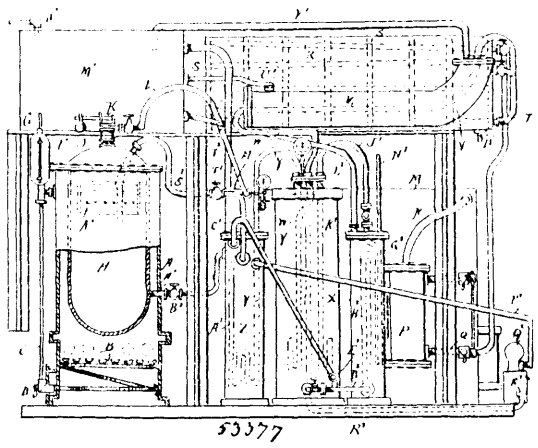


Didace Wenceslas Gagnon, Montreal, Quebec, Canada, 2nd September, 1896; 6 years. (Filed 15th May, 1896.)

Claim. In a box to deliver bottles, the combination of a removable cover, uncovering the full extent of the box with a fastening strip D^1 of exactly the same width as the thickness of the back H, having recesses *h* to receive the projecting ends C^1 of the cross bars C, substantially as described and for the purposes set forth.

No. 53,377. Ice Making Machine.

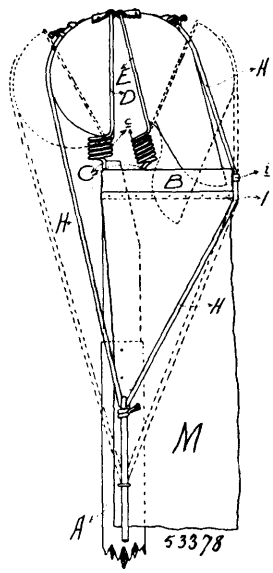
(*Machine à faire la glace.*)



Charles A. Kunzel, Chicago, Illinois, U.S.A., 2nd September, 1896; 6 years. (Filed 17th August, 1896.)

Claim. The combination of an absorption ice machine, of a still, a condenser, expansion coils and absorber, with a heat exchanger and weak water cooler, said exchanger having an overflow into the still for the strong liquor, and also having another overflow connected to the pipe leading from the still to the weak water cooler, and cocks in said overflows and pipe whereby the circulation of the weak water through the cooler and of the strong liquor back to the still may be cut-off and the strong liquor circulated through the cooler, whereby foaming is prevented when the same is finally introduced into the still, substantially as described.

No. 53,378. Fruit Picker. (*Appareil à cueillir les fruits.*)

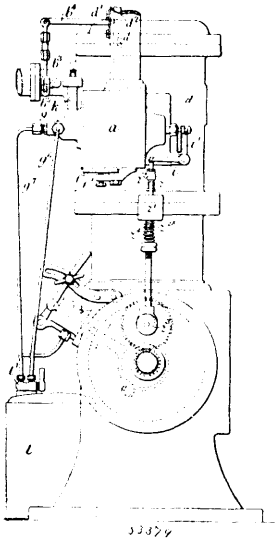


Robert Horneck, Toronto, Ontario, Canada, assignee of Benjamin F. Thompson, Fritts, Virginia, U.S.A., 3rd September, 1896; 6 years. (Filed 22nd August, 1896.)

Claim. 1st. A fruit picker having an extensible supporting pole, the ends of which are bevelled and overlapped, and staples upon each part into which the bevelled portion of the other part extends, substantially as described. 2nd. The combination with the rod or pole and the stationary jaw, of a movable jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, substantially as described. 3rd. The combination with the rod or pole and the stationary jaw, of a movable jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, said movable jaw being open upon its under side, substantially as described. 4th. The combination with the rod or pole and the stationary jaw, of a movable

jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, said movable jaw being open upon its under side and a sack having its mouth located beneath the open under side of said jaw, substantially as described. 5th. The combination with the rod or pole and the stationary jaw, of a movable jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, said movable jaw being open upon its under side, and a sack having its mouth located beneath the open under side of said jaw, and a spring wire ring above the upper end of the sack to form a stop for the movable jaw, substantially as described. 6th. The combination with the rod or pole and the stationary jaw, of a movable jaw having its supporting frame extended and coiled around pins projecting from opposite sides of the pole to constitute a spring pivot, said movable jaw being open upon its under side, and a sack having its mouth located beneath the open under side of said jaw, and a spring wire being above the upper end of the sack to form a stop for the movable jaw, and cords connecting said spring wire ring with the supporting ring of the sack, substantially as described.

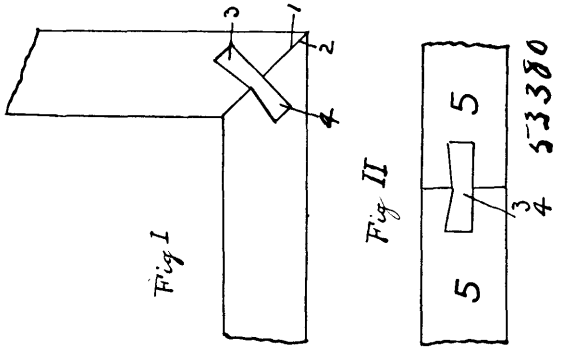
No. 53,379. Oil and Gas Engine. (*Machine à huile et gaz.*)



Henry Thomas Dawson, Clapham, Surrey, England, 3rd September, 1896; 6 years. (Filed 10th March, 1896.)

Claim. 1st. An engine adapted to be worked by the explosion of heated air and the vapour of petroleum or like vapour having in close proximity to the cylinder of the engine a retort the sides of which are surrounded by a chamber or casing through which the heated exhaust gases from the cylinder are made to pass, such retort having at one end an inlet valve for admitting to it oil and air under pressure and at the other end an outlet valve for allowing heated air and oil vapour to pass from the retort to the cylinder, such valve being under the control of the governor, so that if the required speed is exceeded the valve is not opened, one valve being also formed with a long stem which extends nearly to the other valve, so that when the governor allows the outlet valve to be opened at the proper time the inlet valve is opened also, but if the outlet valve remains closed the inlet valve remains closed also. 2nd. In combination with an engine having a reciprocating piston which is also rotated to open and close at the proper times inlet and outlet parts formed in the sides of the cylinder, a chamber or casing fixed at one side of and close to the cylinder, a retort passed through the casing, the chamber being open to an exhaust port from the cylinder so that the retort may be heated by the exhaust gases as they pass away, and the retort being open at one end through an inlet valve to an inlet port of the cylinder and supplied with oil and air at the outer end, substantially as described. 3rd. A hydrocarbon or oil engine in which the sides of the retort used for vapourising the oil are surrounded by a chamber communicating with the exhaust port or ports of the cylinder and with an outlet passage or chimney, and in which oil and air are admitted to the retort through an inlet valve situated at one end of the retort, whilst the heated vapour passes off to the cylinder through a valve at the opposite end, substantially as described. 4th. A hydrocarbon or oil engine in which the oil retort or vapourizer is heated by the hot exhaust gases passing from the cylinder and in which an automatic valve is provided which opens when the retort tends to become overheated and then allows more or less of the gases to escape without passing around the retort for the purpose of keeping the retort at a proper temperature, substantially as described. 5th. The valve mechanism for admitting oil and air to the retort consisting of the valve casing, the valve fitting into a corresponding seat formed in the casing, the groove around the sides of the valve or its seat to which oil under pressure is supplied whilst air under pressure is admitted to the casing above the valve, substantially as described. 6th. The combination of the retort, the perforated spraying tube passing within it, the valve for admitting oil and air to the spraying tube, fitting into a corresponding seat, and the groove around the valve or its seat, into which oil under pressure is supplied, whilst air under pressure is admitted to the outer end of the valve, substantially as described. 7th. The combination of the retort or vapourizer corrugated or furnished with ridges both on its interior and its exterior, the inlet valve and its seat at one end of the retort for admitting oil and air, and the perforated tube extending from the valve seat into the retort for spraying oil upon its heated internal surface, substantially as described. 8th. The combination of the retort fitted with an oil and air admission valve at one end and an outlet valve at the opposite end for the heated air and vapour, combined with an air inlet valve for the admission of a further supply of air to the inlet end of the retort, substantially as described. 9th. The combination of the retort, the inlet valve for oil and air at one end, the outlet valve at the other end, the perforated tube extending into the retort from the inlet valve, the long valve stem extending through the perforated tube from one valve nearly to the other, so that the outlet valve on being opened also opens the inlet valve, substantially as described. 10th. The combination of the retort having its sides and ends closed and its sides corrugated or furnished with ridges both on the exterior and interior, a valve for admitting oil and air at one end, an outlet valve at the opposite end and the long valve stem extending from one valve nearly to the other, substantially as described. 11th. The combination of the ignition tube, the chamber containing it open at its outer end, the nozzle from which a jet of oil vapour is directed into the chamber, the air injector tube through which the jet is passed on its way to the chamber to form a suitable burning mixture for heating the ignition tube, the coil to which oil is supplied and from which vapour passes to the burner nozzle, the coil surrounding the ignition tube or its holder at the open end of the chamber out of the direct line of flame from the burner, substantially as described. 12th. The combination of the ignition tube, the chamber containing it, the nozzle from which a flame is directed against the ignition tube, the coil of tube supplying oil vapour from one end to the nozzle and at the other end connected to a tube containing filtering material and the reservoir containing oil and in which a pressure of air is also maintained from which oil is supplied to the tube containing the filtering material. 13th. The cylinder, its piston, the retort heated by the exhaust gases, the reservoir containing oil and in which a pressure of air is also maintained, the pipes passing from the reservoir to the retort to convey oil and air to it, the cock on these pipes, the igniting tube, the burner for heating it, the pipe for conveying oil from the cock to the burner, the cock being formed as described in such a way that when a partial turn has been given to it, from its closed position it admits oil to the burner, when a further partial turn has been given to it, it allows air to pass to the retort, and when fully opened it allows both air and oil to pass to the retort. 14th. An oil or gas engine, the cylinder of which is provided not only with an ignition tube heated externally but also with a supplementary ignitor heated internally by the charges exploded in the cylinder, substantially as described. 15th. The supplementary ignitor composed of a cavity containing a perforated refractory tube surrounded by lumps of refractory material and open only to the combustion end of the cylinder, substantially as described.

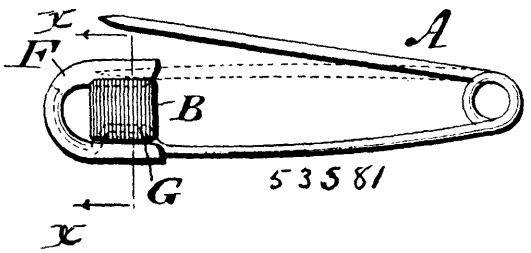
No. 53,380. Boite en bois. (*Wooden box.*)



Joseph Thibault, St. Thomas, Québec, Canada, 4 septembre 1896; 6 ans. (Déposé le 6 mai 1896.)

Résumé. 1° Dans la construction des boîtes en bois, l'emploi d'une rainure et baguette à section double conique placée dans les encoignures et les liant ensemble. 2° Dans la construction des boîtes en bois, l'emploi d'une rainure et baguette à section double conique placée dans les joints des planches formant les côtés des boîtes, et liant ces planches ensemble.

No. 53,381. Safety Pin. (*Epingle de sûreté.*)

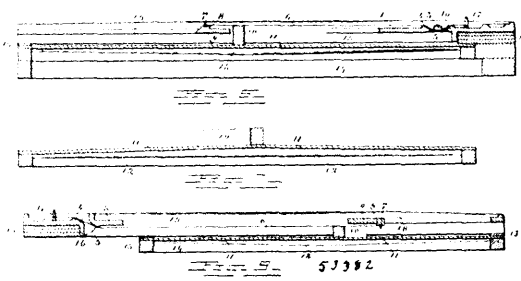


John Murray Guilbert, Philadelphia, Pennsylvania, U.S.A., 4th September, 1896; 6 years. (Filed 6th August, 1896.)

Claim.—1st. A safety pin provided with a seat in the bar member thereof, and a guide and guard on opposite sides of said seat, said guide and guard being formed of a yoke having a recess in the upper edge of the neck thereof, and means for attaching said yoke to said member, substantially as described. 2nd. A safety pin provided with a seat, on the bar member thereof, for the point on the pin member, and a guide and guard for said point consisting of a yoke on opposite sides of said seat formed with a recess in the edge of the neck of said yoke and a lip projecting from said yoke connected with the bar member opposite to said seat, substantially as described. 3rd. A safety pin provided with a seat for the point of the pin member thereof and a guide and guard for said point consisting of a yoke formed with a recess in the edge of the neck of said yoke, and means for fastening the yoke to the bar member opposite to said seat, substantially as described. 4th. A guard and guide for a safety pin, consisting of a bent piece of metal having a recess in one edge of the bend, and a lip on one limb of said piece, substantially as and for the purpose set forth.

No. 53,382. Piano Plate.

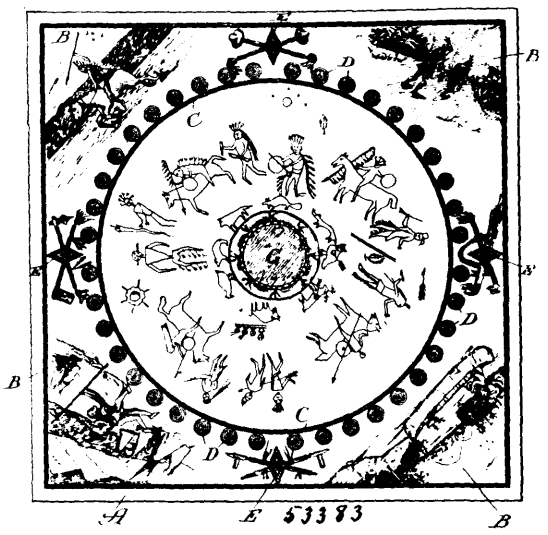
(*Plaques métalliques pour pianos.*)



Franz Ludwig Barthelmes, Toronto, Ontario, Canada, 4th September, 1896; 6 years. (Filed 4th August, 1896.)

Claim.—1st. In a piano, the metallic plate, having cast therein and as integral parts, a series of bridge walls supporting the agraffe bar, said bridge walls parallel with the strings and interspacing the same, substantially as shown and described. 2nd. In a piano, the metallic plate, having cast therein a series of bridge walls, connecting the capo d'astro bars, and supporting the same, said bridge walls parallel with the strings and interspacing the same substantially as shown and described. 3rd. In a piano, the combination of the capo d'astro and agraffe bars, as integral parts of the metallic plate, with a series of bridge walls, interspacing the strings, substantially as shown. 4th. In a piano, the sounding board formed convex on the outer surface by a series of curved ribs glued to the back and running transverse to the same, substantially as shown and for the purpose hereinbefore set forth. 5th. In a piano, the metallic plate having the braces or ribs protruding from both sides of the plate, and extending the full length of the same, substantially as shown and described. 6th. In a metallic piano plate the combination of the braces or ribs protruding from both sides of the plate and extending the full length, with a cross brace 16, protruding from the back, substantially as shown and described. 7th. In a metallic piano plate the combination of the braces or ribs protruding from both sides of the plate, and extending the full length, with a series of bridge walls interspacing the strings and connecting the agraffe and capo d'astro bars, substantially as shown and described. 8th. In a metallic piano plate the combination of braces or ribs protruding from both sides of the plate and extending the full length, with a sounding board formed convex on the outer surface by a series of curved ribs glued to the back and running transverse to the same, substantially as shown and described. 9th. In a metallic piano plate the elevated hitch-pin ridge having a countersunk upper surface in which the pins are secured, said ridge being removed to the rear edge of the portion of the plate supporting it, substantially as shown and described.

No. 53,383 Game. Apparatus. (*Appareil pour jeu.*)

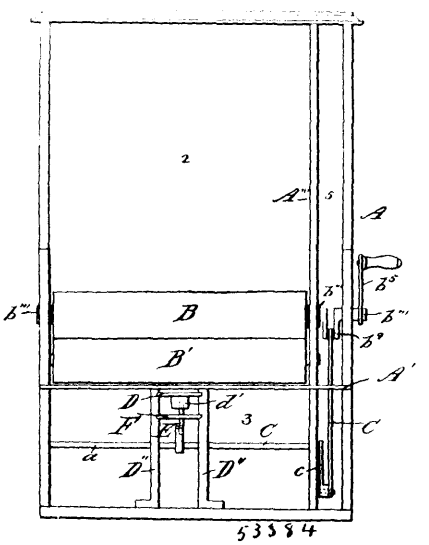


Antonio Apache, Chicago, Illinois, U.S.A., 4th September, 1896; 6 years. (Filed 4th August, 1896.)

Claim.—A game apparatus, comprising a board having a series of stations arranged in a circle in a step by step relation to each other, provided with one or more points of entry arranged outside of the series circle, lay figures for all of the stations on such series circle, lay figures for the point or points of entry for taking up or jumping the figures on a series station, and a set of primitive dice for governing the moves of the game, substantially as described.

No. 53,384. Automatic Vending Machine.

(*Machine de vente automatique.*)

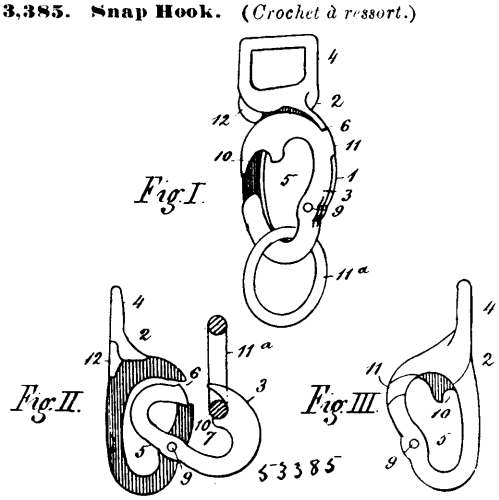


George Harper Bowie, Ottawa, Ontario, Canada, 4th September, 1896; 6 years. (Filed 21st July, 1896.)

Claim.—1st. In an automatic vending machine for newspapers and similar articles, the combination of a casing adapted to hold the articles to be sold and the coins deposited, a stationary plate or shelf separating said casing into an upper and lower compartment and adapted to support a pile of the articles to be sold, a delivery slot or mouth in the front of the upper compartment, immediately above said plate or shelf, a pair of delivery rollers journalled parallel to in front of and above and below said slot and adapted to receive delivery from said slot or mouth between them, spring bearings for the upper one of said rollers, a crank on the axle of said upper roller, means of turning said axle, a rocking shaft journaled below parallel

to said rollers and provided with a crank larger than the crank on the roller, a pitman connecting said cranks, a finger or trip on said rocking shaft adapted to move a slide in one direction, a spring actuated slide above said rocking shaft having a cam on which said trip impinges, a spring actuated slide below said slide through which said trip projects and provided with an arm or bracket projecting through the separating and supporting plate or shelf and carrying a crutch or pusher, registering slots in said two slides and plate or shelf adapted to receive and hold a specific coin and means for supporting and releasing said coin, substantially as set forth. 2nd. In an automatic vending machine for newspapers and similar articles, the combination of a casing having a plate or shelf forming the support of a pile of articles to be sold and the top of the projecting lower part of the casing, a delivery slot above said plate, a pair of rollers parallel and close to said slot, the lower one projecting through a slot in said plate or shelf and having its upper surface about level therewith, spring bearings for the upper roller, a crank in the axle of said upper roller within said casing, a crank and handle on said axle outside said casing, a rocking shaft parallel to said axle and journaled below and provided with a crank larger than the crank on the axle, a pitman connecting said cranks and a cam or finger on said rocking shaft adapted to operate a slide, substantially as set forth. 3rd. In an automatic vending machine for newspapers and similar articles, the combination of a casing having a plate or shelf forming the support of a pile of articles to be sold and the top of the projecting lower part of the casing, a spring actuated slide immediately below said front adapted to slide forward against the pressure of the spring, a spring actuated slide below said slide and adapted to be drawn forward against the pressure of the spring, a rocking shaft below said lower slide, a cam or finger on said rocking shaft projecting through a slot in said slide and adapted to reach and operate a nose or can on the upper slide, registering coin slots in said slides and plate and an arm or bracket at the rear end of said lower slide projecting through a slot in the plate and provided immediately above said plate with a pusher or crutch and means of supporting a coin in the slots of said slides to connect them together while being moved forward by the said trip, substantially as set forth. 4th. In an automatic vending machine for newspapers and similar articles, the combination with a rocking shaft adapted to be oscillated through the rotation of delivery rollers of a hubbed trunk secured upon said shaft, a point or end pivoted near the free end of said trunk and notched at the other to engage a corresponding projection on said trunk and a spring secured to the edge of the trunk opposite that on which the notch and projection is situated, so as to press the two into engagement and adapting said trunk and point as a trip to bend or fold in one direction and be stiff in the other, substantially as set forth.

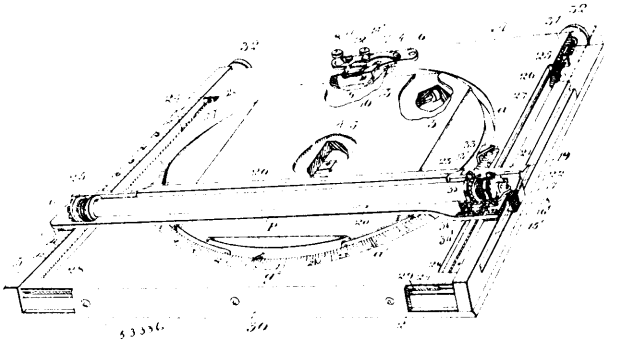
No. 53,385. Snap Hook. (*Crochet à ressort.*)



John T. Nalley and Albert D. Majors, both of Texas, U.S.A., 4th September, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—1st. A snap hook, comprising a main section having a ring-receiving opening and having an entrance slot at one side at one end of the opening, a pivoted section provided with a similar opening and having an entrance slot at the other side and provided at the entrance slot with a ring-receiving notch arranged, when the pivoted section is swung outward to carry a ring through the entrance slot of the main section, substantially as described. 2nd. A snap hook, comprising a main section provided with a loop and having a ring-receiving opening and provided at one side with an entrance slot, a pivoted section mounted on the main section and having an opening and provided at the opposite side with an entrance slot and having adjacent to such slot a ring-receiving recess arranged to carry a ring through the entrance slot of the main section when the pivoted section is swung outward, and a lug arranged at the continuous side of the pivoted section and located within the slot of the main section and filling the same when the snap hook is closed, substantially as described.

No. 53,386. Table for Drawing. (*Table à dessiner.*)



The Laughlin Hough Drawing Table Company, assignee of Samuel John Laughlin, all of Guelph, Ontario, Canada, 4th September, 1896; 6 years. (Filed 18th March, 1895.)

Claim. 1st. The combination with the table A, having a circular opening, of a circular drawing board pivoted centrally upon the pin 4 and supported by rollers journalled in the bottom of the board and resting upon a base board secured to the bottom of the table, as and for the purpose specified. 2nd. The combination with the table A, having a circular opening and a circular drawing board rotatably supported within the opening, and stop brackets secured to the edge at ninety degrees apart, of a pivoted spring catch secured to the table at the edge of the opening and provided with a notch, as and for the purpose specified. 3rd. The combination with the table A, having a circular opening and a circular drawing board rotatably supported within the opening, and stop brackets secured to the edge at ninety degrees apart, of the pivoted catch 6 provided with a notch 7, slot 11, screw pin 12, co-acting spring 10, all arranged as and for the purpose specified. 4th. The combination with a circular drawing board rotatably secured within the circular opening in the table and means for holding the same in any desired position, of a rule provided with a roller extending through a longitudinal opening in the rule and having end spools and cords passing from front to rear of the table, fastened to the spools partially wound thereon and co-acting, as shown and for the purpose specified. 5th. The combination with the table having a circular opening, a circular drawing board rotatably supported within such opening above the level of the table, and guide bars at each side of the table substantially flush with the board, and a rule supported upon the guide bars and having depending blocks from the end thereof with pins extending into side grooves in the outer edge of the guide bars, of a roller journalled above and extending through a longitudinal opening in the rule and having end spools with co-acting cords, all arranged as and for the purpose specified. 6th. In combination with the circular drawing board rotatably supported within a circular opening in the table and a rule provided with a roller and end spools, of a cord passing from the nuts 25 through a hole 26, groove 27, hole 28, on each side of the table to the front groove, nuts 25, in which the rear ends of the cord are fastened, and screw knobs for adjusting the nuts 25 within the slots 31, as and for the purpose specified. 7th. The combination with the drawing board of a rule arranged to move parallelly across the board, a roller journalled in the top of the rule and extending through a longitudinal opening in the same, spacing wheels secured in the end of the roller, and dogs arranged to co-act with the spacing wheels, as and for the purpose specified. 8th. The combination with the drawing board of a rule arranged to move parallelly with the board, a roller journalled in the top of the rule and extending through a longitudinal opening in the same, spacing wheels secured in the end of the roller, and dogs suitably pivoted and having forwardly extending tails adjustable within double-notched spring fingers secured to the rule, as and for the purpose specified. 9th. The combination with the drawing board, of a roller arranged to move parallelly across the board and having end spools, a cord passing from front to rear of the table at each side intermediately fastened to the spools and partially wound thereon, as and for the purpose specified.

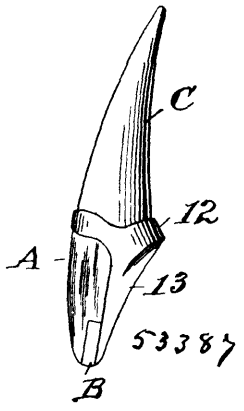
No. 53,387. Porcelain for Dentistry Purposes.

(*Porcelaine à l'usage des dentistes*)

Walter Levy Mason, Red Bank, New Jersey, U.S.A., 4th September, 1896; 6 years. (Filed 27th July, 1896.)

Claim.—1st. A detachable porcelain for crown and bridge work, provided with a pivot pin, a backing shaped to fit the inner face of the porcelain, and having a socket to receive the pivot pin, and means for securing the said backing to a root or to the structure or bridge work, whereby the said porcelain may be removed or replaced without disturbing the backing or the support therefor, as and for the purpose specified. 2nd. A detachable porcelain for crown and bridge work, provided with a chamber, and a pin in the said chamber, extending from the base wall thereof in direction of the edge to

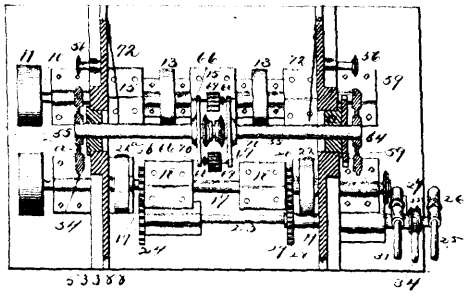
be presented to the gum, a support adapted to be secured to a root or to a portion of the structure of bridge work, and a backing



secured to said support and having a socket to receive the pin, on the detachable porcelain as and for the purpose set forth. 3rd. As an improved article of manufacture, an artificial tooth, consisting of a back plate having a backing secured thereto, a vertical tube secured in the said backing, a hand for securing the said back plate to a root or to the structure of bridge work, and a porcelain shell provided with a chamber at its back adapted to enter the tube in the said backing, substantially as shown and described. 4th. The herein described method of applying detachable porcelains for crown and bridge work, which consists in forming a chamber in the back of the porcelain, placing a pin in said chamber, molding the backing for the porcelain in the chamber of the latter, whereby the tube will adhere to the backing and will be withdrawn from the porcelain with the backing, and finally securing the backing to the back plate or support adapted for attachment to a root, or to a portion of the structure of bridge work as and for the purpose set forth. 5th. An artificial tooth, comprising a backing, having a dove-tail groove, the porcelain, an anchorage strip secured in the said porcelain and true and flush with the inner surface thereof and a separate dove-tail rib secured to said anchorage strip and fitted to the groove of the backing, substantially as set forth. 6th. In an artificial tooth, the porcelain having at its inner face an anchorage strip secured to the porcelain and a separate dove-tail rib secured to said anchorage strip, substantially as set forth.

No. 53,388. Rossing Machine.

(*Machine à décortiquer les billots.*)

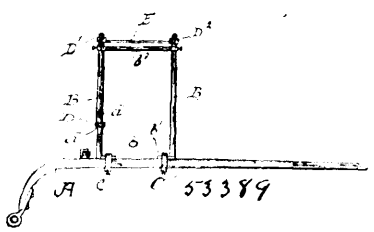


Albert Ebenezer Beals, Norwich, New York, U.S.A., 4th September, 1896; 6 years. (Filed 31st July, 1896.)

Claim.– 1st. The combination with revolving cutters, of log supporting rollers adapted to be shifted to raise or lower the log with relation to said cutters. 2nd. The combination with revolving cutters, of log supporting rollers part of which are adapted to be shifted to raise or lower the log with relation to said cutters. 3rd. The combination with a cutter shaft, and a cutter or cutters mounted thereon, of log supporting rollers on said shaft, and upon the same axial centre as the cutters. 4th. The combination with parallel roller shafts, and cutters mounted thereon of log supporting rollers upon each shaft, each of which is upon the same axial centre as the cutters upon the same shaft. 5th. The combination with a cutter shaft and cutters mounted thereon, of log supporting rollers carried by said shaft normally having their peripheries in planes exterior and parallel to the circle of rotation of the cutters, and means to shift said rollers to change their planes and lower the log to permit said cutters to run. 6th. The combination with a cutter shaft, and cutters mounted thereon of log-supporting rollers carried by said shaft adjacent to its ends and normally supporting the log above the cutters, and means to shift either of said rollers separately to lower either end of the log into position to be engaged by said cutters. 7th. The combination with a cutter shaft, and cutters mounted thereon of log-supporting rollers carried by said shaft adjacent to its ends and normally supporting it above the cutters, and means to shift said rollers together to lower the whole log into engagement with said cutters, or to shift either roller separately to lower either end into engagement with a cutter or cutters. 8th. The combination with parallel cutter shafts and cutters mounted thereon arranged in alternation with reference to their respective shafts, of log-supporting rollers carried by said shafts and means to vary the vertical position of said rollers without changing the plane of either of said shafts. 9th. The combination with parallel cutter shafts, and cutters mounted thereon, rollers carried by said shafts adjacent to said cutters and normally supporting a log clear of said cutters, and means to raise and lower the log bodily or as to either end while being rotated upon said rollers to regulate the cut of said cutters. 10th. The combination with parallel cutter shafts, and cutters mounted thereon, and log-supporting rollers carried by said shafts, and constituting the bottom of the log chamber, and means to raise and lower the log therein while being rotated. 11th. The combination with parallel cutter shafts and cutters mounted thereon and log-supporting rollers carried by said shafts, of power-driven log-rotating rollers mounted in a swinging frame whereby said rollers are caused to follow the contour of an irregular shaped log, and regulate the cut of said cutters. 12th. The combination with a cutter shaft and the cutters thereon of a sleeve upon said shaft an eccentric upon said sleeve, and a ring free to rotate upon said eccentric while supporting a log, and means to shift said eccentric to vary the plane of said ring and raise or lower the log. 13th. The combination with a cutter shaft and the cutters thereon of sleeves upon said shaft, an eccentric upon each sleeve, and a ring free to rotate upon each eccentric while supporting a log, and means to shift said eccentric singly or jointly to raise or lower either end of the log separately, or the entire log bodily. 14th. The combination with multiple cutter shafts, cutters mounted thereon, sleeves upon part of said shafts, eccentrics upon said sleeves, roller rings free to rotate upon said eccentrics, and rollers upon the other shafts, said rollers and rings jointly supporting a log, and means to shift both of said eccentrics to lower the log, or to shift either one separately to lower either end of the log, and regulate the cut of said cutters. 15th. The combination with the cutter shafts, cutters mounted thereon, and the log-supporting rollers carried by said shafts, of a vertically reciprocating frame above said shafts, and log-rolling rollers carried thereby, whereby said log-rollers can be adjusted to logs of different sizes. 16th. The combination with the cutter shafts, cutters mounted thereon, and the log-supporting rollers carried by said shafts, of a vertically reciprocating frame above said shafts, cutters and rollers, a swinging frame pendant from the other frame and log-rolling rollers carried thereby, whereby said log-rollers can be adjusted to logs of different sizes, and will follow the contour of a log irregular in shape and rotate it. 17th. In a rossing machine, a log chamber consisting of multiple shafts, cutters mounted thereon, and log-supporting rollers carried by said shafts, constituting the bottom thereof, in combination with a frame vertically adjustable and adapted to be reciprocated to open or close said chamber, and log-rolling rollers carried by said frame and engaging with a log in said chamber to rotate it. 18th. In a rossing machine, a combination with a cutter shaft, the cutters thereon, sleeves loose upon said shaft, eccentrics upon said sleeves, roller rings upon said eccentrics, and gears upon said sleeve, of a shaft parallel to said cutter shaft provided with a gear 24 engaging with one of said gears, a sleeve on said shaft provided with a gear 29 meshing with the other of said gears, and means to rotate said shaft and sleeve separately to shift the corresponding eccentric, or to rotate both said shaft and sleeve and shift both eccentrics simultaneously. 19th. In a rossing machine, the combination with log-supporting rollers loosely mounted upon eccentrics, upon sleeves upon the cutter shaft, of a worm actuated shaft to rotate one sleeve and its eccentric, worm-actuated sleeve to rotate the other sleeve and its eccentric, and a worm engaging with said shaft and sleeve to rotate both sleeves and said eccentrics, whereby either roller is shifted separately, or both are shifted simultaneously. 20th. In a rossing machine, the combination with a revolving cutter shaft and the cutters thereon, of independently rotatable sleeves around said shaft, and log-supporting rollers mounted upon bearings secured to and eccentric to said sleeves and means to rotate said sleeves separately or simultaneously to shift one or more of said rollers in relation to said cutters. 21st. In a rossing machine, the combination with the cutter shaft and cutters thereon, of log-supporting rollers normally concentric with said shaft, and means to shift them vertically to lower a log into position to be engaged by said cutters. 22nd. In a rossing machine, multiple parallel cutter shafts, cutters upon them spaced apart so as to cut different but merging paths around a log, log-supporting rollers upon said shafts, each in alignment with a cutter upon the opposite shaft, whereby each roller will take its bearings against the log in the path cut by its opposite cutter. 23rd. In a rossing machine, a base, standards erected thereon with a way between them, a frame mounted and adapted to be reciprocated in said way, log-rolling rollers carried by said frame, and means to support said frame when elevated. 24th. In a rossing machine, a base, standards erected thereon with a way between them, a frame mounted and adapted to be reciprocated in

said way and a shaft, a driving gear, and log-rolling rollers carried and driven by said shaft, and means to support said frame when elevated. 25th. In a rossing machine, a log-rolling mechanism comprising a driving shaft, a frame adapted to swing thereon, log-rolling rollers mounted in said frame and means to drive them, actuated by said shaft, in any position they may assume. 26th. In a rossing machine, a log-rolling mechanism comprising a shaft, a frame adapted to swing thereon, log-rolling rollers mounted in said frame and means to drive them, actuated by said shaft, in any position they may assume, in combination with the cutter shafts, the cutters thereon, and log-supporting rollers on said shafts. 27th. In a rossing machine, the combination with the cutter shafts and cutters and log-supporting rollers mounted thereon, of a frame mounted in ways above said shafts and comprising blocks in said ways, a shaft journalled in said blocks, a ratchet wheel and pawl controlling the rotation of said shaft, log-rolling rollers carried by said shaft and driven by it, a drive wheel upon said shaft, and means to drive when permitted by said ratchet. 28th. In a rossing machine, a log-rolling mechanism comprising a base, standards erected thereon and provided with ways, a frame mounted in said ways, log-rolling rollers carried by said frame, a driving sprocket upon said frame, a ratchet and pawl mechanism regulating the rotation of said sprocket, a driving bolt connected to a train of driving gears and means to reverse said bolt, whereby when it is driven in one direction it will drive said log-rolling rollers and in the other direction it will raise said frame and rollers in said ways without driving said rollers. 29th. In a rossing machine, a frame mounted in suitable ways, log-rolling rollers carried and driven by a shaft journalled in said frame, a ratchet and pawl mechanism regulating the revolution of said shaft, a driving sprocket on said shaft, a driving belt actuated by a train of driving gearing and means to reverse said belt, whereby when driven in one direction it will drive said rollers and in the other direction it will elevate said frame, and a trip to release said pawl from said ratchet when said frame is elevated. 30th. In a rossing machine, the combination with log-rolling rollers and a train of belting and gearing for driving them, and a swing frame carrying pinions for reversing said belting, of a brake operating upon the terminal gear of said train and comprising a ring partly encircling a disc upon the shaft carrying said gear, a block rotatably mounted between the arms of said ring, arms thereon engaging with said swing frame, whereby said arms are sprung apart when said frame is swung in either direction and the brake is released. 31st. In a rossing machine, the combination with log-rolling rollers, of a train of gearing to drive them, of a disc upon the shaft of the terminal gear, reversing pinions brought into engagement with said gear by the swinging of a frame upon which they are mounted, a ring brake-shoe partly encircling said disc, a block rotatably mounted between the terminals of said shoe and arms thereon engaging with said frame to partially rotate said block and release said brake whenever said pinions are swung to reverse said terminal gear. 32nd. A train of gearing comprising a driving gear, a terminal gear and a frame carrying intermediate pinions adapted to be respectively brought into engagement with the terminal gear by the swinging of said frame in combination with a brake operative and normally in position to stop said terminal gear, and comprising an expansible ring brake-shoe provided with parallel terminals, and means to spread such terminals apart by the swinging of said frame to bring either pinion into engagement with said terminal gear and release the shoe. 33rd. In a rossing machine, a brake mechanism, a ring brake-shoe partly encircling the object to be acted upon by it, and provided with parallel terminals, and means to spread said terminals apart and expand said shoe to release said object from the brake-shoe.

No. 53,389. Screen. (*Ecran.*)

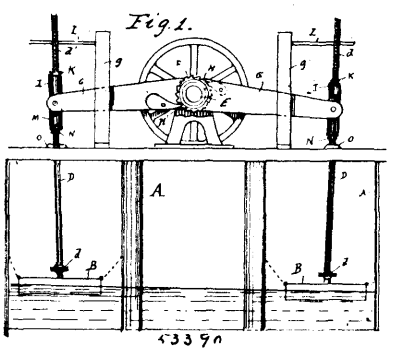


Jacob M. Fleming, Ripley, Texas, U.S.A., 4th September, 1896; 6 years. (Filed 27th July, 1896.)

Claim. 1st. In a screen for vehicles, the combination with the thills, of upright standards secured thereon, and a screen having an upright and overhanging section supported by the standards, substantially as set forth. 2nd. In a screen for vehicles, the combination with the thills, of a screen comprising an upright and overhanging section, and standards adjustably attached to the thills, substantially as described. 3rd. In a screen for vehicles, the combination with the thills, of a vertically-adjustable screen mounted thereon, substantially as and for the purposes set forth. 4th. In a screen for vehicles, the combination with the thills, of standards adjustably attached thereto, brace-rods connecting the upper ends of the standards, cross-rods secured to the standards, and a screen supported by the cross-rods, substantially as described. 5th. In a screen, the combination of a vertically-adjustable frame, a flexible screen carried thereby, and means for adjustably securing the frame to the vehicle, substantially as described.

No. 53,390. Wave-Power.

(*Pouvoir actionné par les vagues.*)



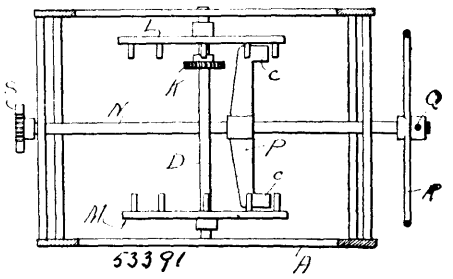
William E. P. Rose, Angel Island, California, U.S.A., 4th September, 1896; 6 years. (Filed 30th July, 1896.)

Claim. 1st. A wave-power comprising a suitably-restrained float, a rod extending therefrom, a shaft having a ratchet, and a lever carrying a pawl engaging the ratchet, said lever being connected with the float-rod. 2nd. A wave-power comprising suitably-restrained duplicate floats, a rod extending from each float, a shaft having a ratchet, duplicate levers, one connected with each rod, and a pawl carried by each lever and engaging the ratchet in such manner as that each shall engage and slip the ratchet alternately whereby said shaft is turned in the same direction. 3rd. In a wave-power, the combination of a suitably-restrained float, a rod extending therefrom, a shaft having a ratchet, a lever having a pawl engaging the ratchet, and an adjustable connection between the lever and the rod of the float, comprising a sleeve freely sliding upon the rod, and to which the lever is connected, a pawl carried by the sleeve and engaging with teeth of the rod and tripping devices whereby the pawl is released upon the limit of movement of said sleeve. 4th. In a wave-power, the combination of a suitably-arranged float, a rod extending therefrom and having teeth, a shaft having a ratchet-wheel, a lever having a pawl engaging said wheel, a sleeve freely slidable upon the rod of the float and to which the lever is connected, a pawl in the upper portion of the sleeve adapted to normally engage the teeth of the rod, an arm of said pawl and a fixed stop above in the path of said arm whereby when the sleeve rises to its limit, its pawl is disengaged from the rod of the float. 5th. In a wave-power, the combination of a suitably-restrained float, a rod extending therefrom and having teeth, a shaft having a ratchet-wheel, a lever having a pawl engaging said wheel, a sleeve freely slidable upon the rod of the float, and to which the lever is connected, a pawl in the lower portion of the sleeve adapted to engage with the teeth of the rod, an arm connected with said pawl and a fixed stop below with which said arm comes in contact on the downward movement of the sleeve whereby the rod is freed and the float allowed to descend. 6th. In a wave-power, the combination of a suitably-restrained float, a rod extending therefrom and having teeth, a shaft having a ratchet-wheel, a lever having a pawl engaging said wheel, a sleeve freely slidable upon the rod of the float and to which the lever is connected, a pawl in the upper portion of the sleeve adapted to normally engage the teeth of the rod, an arm of said pawl, a fixed stop above in the path of said arm whereby when the sleeve rises to its limit, its pawl is disengaged, a pawl in the lower portion of the sleeve adapted to engage with the teeth of the rod, an arm connected with said pawl and a fixed stop below with which said arm comes in contact on the downward movement of the sleeve, whereby the rod is freed and the float allowed to descend. 7th. A wave-power, comprising duplicate, suitably-restrained floats, a rod extending upwardly from each float, a shaft carrying a ratchet-wheel, duplicate levers each carrying a pawl adapted to alternately engage and slip the ratchet whereby the shaft is turned in the same direction, and an adjustable connection between each lever and the rod of the float, consisting of a sleeve freely slidable upon the rod and to which the lever is connected, and pawls in said sleeve engaging oppositely-arranged teeth upon the rod, said pawls having trip-arms, and fixed stops above and below whereby the pawls are released at the upper and lower limits to free the sleeve, substantially as and for the purposes described.

No. 53,391. Mechanical Motor. (*Moteur mécanique.*)

Isak Johnson, Milwaukie, Wisconsin, U.S.A., 4th September, 1896; 6 years. Filed 30th July, 1896.)

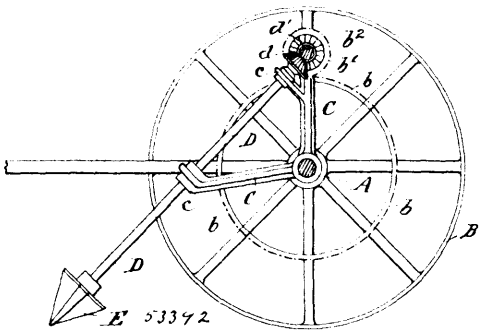
Claim.—1st. The combination of a suitable frame, a gear-train in the frame, suitable means for automatically driving the gear-train.



a pair of escape-wheels carried by an arbor of the gear-train, another arbor between the escape-wheels provided with a bar mounted at right-angles to the escapement wheels and having the extremities thereof in the form of pallets engagable with said wheels, a pendulum hung on the pallet-bar arbor, a crank in gear with the latter arbor, and a longitudinally reciprocative rod connected to the crank. 2nd. The combination of a suitable frame, a series of arbors rotative in the frame and in gear with each other, a drum carried on one of the arbors, a weight in flexible connection with the drum, a pair of escape-wheels carried by another of said arbors, a pallet-bar carried by an arbor rotative in the frame at a right angle to those aforesaid, this pellet-bar being engagable with said escape-wheels, a pendulum hung from the latter arbor, a crank in gear with the pendulum arbor, and a longitudinally reciprocative rod connected to the crank.

No. 53,392. Hay Making Machine.

(*Machine à travailler le foin.*)



Thomas Martin Jarmain, Hasely Iron Works, Oxford, England, 4th September, 1896; 6 years. (Fild 27th July, 1896.)

Claim.—1st. A machine having a winged cone E capable of being revolved when said machine is in motion, for the purposes and substantially as described and illustrated. 2nd. In a machine for turning and breaking up the swath, a winged cone E supported by a frame C and capable of being revolved when the machine is in motion, for the purposes and substantially as described and illustrated.

No. 53,393. Composition for Treating Fiber.

(*Composition pour le traitement de la fibre.*)

Vincent Paul Travers, assignee of Charles Efros, both of New York, U.S.A., 4th September, 1896; 6 years. (Filed 17th June, 1896.)

Claim. The composition consisting of paraffine, naphthalene, wood-tar, tar-oil, rosin-oil, paraffine oil and plumbago, in about the proportions specified for the purpose of impregnating vegetable fiber as set forth.

No. 53,394. Clay Mould for Sanitary Ware.

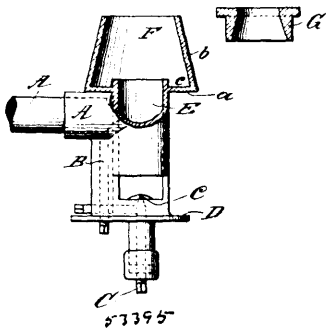
(*Moule en argile pour articles sanitaires.*)

Frederick Bruce Dakin, Iberville, and Charles Cochrane Corneille, Montreal, all of Quebec, Canada, 4th September, 1896; 6 years. (Filed 4th October, 1896.)

Claim.—1st. A clay body for use in the manufacture of sanitary ware, comprising Pennsylvania Feldspathic clay as a base, and a silicious clay, for the purpose set forth. 2nd. A clay body for use in the manufacture of sanitary ware, comprising Pennsylvania Feldspathic clay as a base, and a fluxing agent, for the purpose set forth. 3rd. A clay body for use in the manufacture of sanitary ware, comprising Pennsylvania Feldspathic clay as a base, a silicious clay, and a fluxing agent, substantially in the proportions specified. 4th. A working clay body comprising Pennsylvania Feldspathic clay, English ball clay, and English Cornwall stone, substantially in the proportions specified.

No. 53,395. Hydro-Carbon Burner.

(*Foyer à hydrocarbures.*)



Joseph H. Mathews, Canton, Ohio, U.S.A., 5th September, 1896; 6 years. (Filed 23rd July, 1896.)

Claim.—1st. The combination in a hydro-carbon burner, of the mixing chamber E, the lateral injector A^1 and pipe leading from a hydro-carbon supply, by which fluid hydro-carbon may be injected into the chamber E under pressure, and the truncated conical chamber E, formed integral with the chamber E and the mixing chamber near its bottom, having openings for the admission of air to support combustion, substantially as specified. 2nd. The combination in a hydro-carbon burner, of the mixing chamber E, the truncated conical burning chamber F at the upper end thereof, the lateral injector A^1 for injecting hydro-carbon under pressure into the mixing chamber, the tube B, valve C and pan D, whereby a hydro-carbon in regulated quantity may be admitted to the pan and fired to heat the mixing chamber so as to vaporize the hydro-carbon in said chamber, substantially as specified. 3rd. The combination in a hydro-carbon burner, of the truncated conical chamber F, the mixing chamber E projected a distance into said chamber, a pipe A leading from a hydro-carbon supply to the vaporizing chamber A^1, a pipe leading from said vaporizing chamber to the mixing chamber and valve C, whereby the flow of vaporized hydro-carbon into the mixing chamber may be regulated.

No. 53,396. Process of Manufacturing Tubes of Aluminium. (*Procédé pour la fabrication de tubes en aluminium.*)

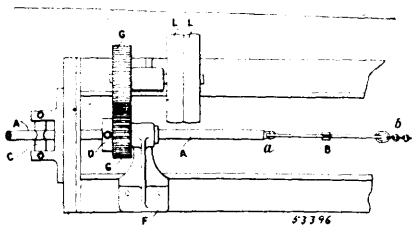


FIG. I.

Frederick Arthur Ellis, Sylvan Grove, London, England, 5th September, 1896; 6 years. (Filed 13th July, 1896.)

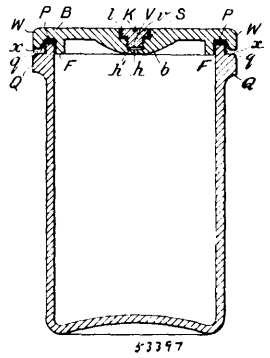
Claim.—1st. A process of manufacture of tubes of aluminium alloy consisting of a combined longitudinal drawing through roller dies and a rapid rotary swaging or planishing by dies, gripping by screw or like pressure the circumference of a seamless ingot of aluminium alloy upon a mandril to produce hardness and a high elasticity and tenacity in the seamless drawn tube, substantially as described. 2nd. The combination in a draw bench, of fixed roller dies for the longitudinal drawing of an aluminium tube and rotary swaging or planishing dies fixed, but free to close together by screw or like pressure in a rotary head rotated by power about the said tube at a high speed as illustrated herewith, and for the purposes substantially as described.

No. 53,397. Bottle Stopper. (*Bouchon de bouteille.*)

Frederick Joynson and William Harrison, both of Liverpool, England, 5th September, 1896; 6 years. (Filed 26th May, 1896.)

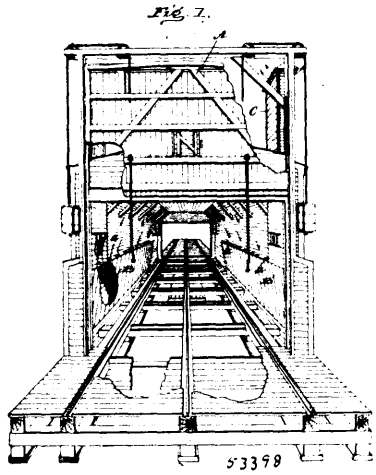
Claim.—The combination with the cover of a hermetically closed jar or like receptacle of a screw valve controlling an airway *h*, in

said cover B, such valve being either countersunk entirely into a flat cover and operated by a key or having a projecting thumb piece



coming flush with the top of a recessed cover whereby the internal and external pressures can be readily equalized and the cover removed substantially as above set forth.

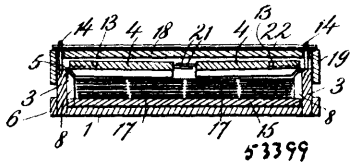
No. 53,398. Drying-Kiln. (*Four à sécher.*)



Albert T. Bemis, Indianapolis, Indiana, U.S.A., 5th September, 1896; 6 years. (Filed 9th May, 1896.)

Claim.—1st. A dry kiln having an inclosed drying chamber and enclosed moist air flues upon opposite sides, thereof, in combination with escape flues having communication with said moist air flues, substantially as described. 2nd. In a dry kiln, a drying chamber having imperforate side walls and roof or ceiling, and having moist air flues enclosed within said chamber, upon opposite sides thereof, in combination with vertical escape flues extending above the roof of the kiln and at their lower ends having communication with the moist air flues, substantially as described. 3rd. In a combination with the drying chamber of a dry kiln, of moist air flues communicating with the interior of the drying chamber, said flues being interposed between the said drying chamber and vertically disposed escape flues with which they communicate, substantially as described and for the purpose set forth. 4th. A dry kiln having moist air flues upon opposite sides, the entrances of said flues being at a point below the upper tiers of lumber upon a loaded truck placed with in the kiln, said flues connecting with the escape flues discharging above the roof of the kiln, substantially as described and for the purpose set forth. 5th. A moist air flue for dry kilns, the same consisting of a chamber adjacent to the side wall of the drying chamber of a dry kiln and extending longitudinally thereof, said flue being substantially wedge shaped in vertical cross section, and being provided at its top with a series of openings, substantially as described. 6th. A moist air flue for dry kilns, the same consisting of a chamber substantially wedge shaped in vertical cross section said chamber being provided with a series of inlet openings and communicating with an escape flue, substantially as described. 7th. A moist air for dry kilns, the same consisting of a substantially wedge shaped chamber, in vertical cross section, said chamber being placed in contact with the lower portion of the side wall of the drying chamber and having a series of openings communicating with the interior of the drying chamber, and with an outlet communicating with an escape flue, substantially as described.

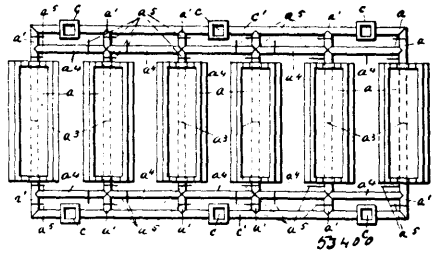
No. 53,399. Box or Crate. (*Boîte à œufs*)



Charles Adrian Grant, Middleburg, Virginia, U.S.A., 5th September, 1896; 6 years. (Filed 23rd March, 1896.)

Claim.—1st. In a box or crate, the combination of a bottom, side strips provided with staples, side-boards forming a continuation of and hinged to said strips, and also having staples, removable end-boards, a cover provided with slots adapted to register either with the staples of the side strips or those of the side-boards, and means for locking the staples in the slots of the cover; substantially as described. 2nd. In a box or crate, the combination of the button, hinged side-boards, cleats arranged at the ends thereof, staples projecting from the upper edges of the side-boards, removable end-boards adapted to fit between said cleats, a cover provided with slots registering with said staples, a locking rod, and means for securing the rod in the staples; substantially as described. 3rd. The combination with the bottom of the box, of parallel side strips provided with staples, folding side-boards secured to said strips, and provided with recesses, and with staples at their upper edges, removable end-boards, and a removable slotted cover and locking rod adapted to co-operate with the staples of the side-boards when the side-boards are in distended position, and with the staples of the side strips when the side-boards are in folded position; substantially as described. 4th. The combination with the bottom of the box, of parallel side strips, provided with staples on their upper edges end strips having their upper edges below the plane of the side strips, and bevelled at their ends, side-boards hinged to said side strips, and recessed to receive the staples thereof, staples projecting from said side-boards, transverse cleats on the box bottom, bevelled cleats on the side-boards, removable end-boards supported by said cleats, a slotted cover and a locking rod, adapted to engage the staples of the side-boards or side strips; substantially as described.

No. 53,400. BricK-kiln. *Four à briques.*)

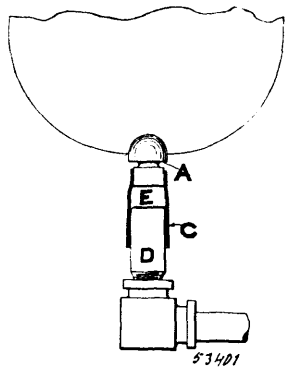


John K. Caldwell, Minneapolis, Minnesota, U.S.A., 8th September, 1896; 6 years. (Filed 10th March, 1896.)

Claim.—1st. The combination with a series of kilns, having their central or bottom flues connected by one or more transverse flues, and provided with dampers operative to throw any two or more of said kilns in communication with each other, through said transverse flues, of out-draft appliances comprising the main top flue extending over the entire series of kilns, branch flues, for tapping said main top flue and connecting therewith the crown holes of any kiln, and a positive forced draft device applied to said top flue, whereby the burning or hot gases may be drawn from any kiln of the series with a down-draft and be forced through and out at the top of any other kiln with an up-draft, substantially as and for the purposes set forth. 2nd. The combination with a series of kilns having all their central or bottom flues connected by one or more transverse flues, and provided with dampers operative to throw any two or more of said kilns into communication with each other, through said transverse flues, of the out-draft appliances, comprising the main top flue a^7, extending over the entire series of kilns, and having elbows a^9, closed by removable caps a^{10}, the movable branch top flues a^{11}, a^{12}, for connecting the crown-holes of any kiln with said main top flue, and a forced draft device a^{13} in said main top flue, whereby the burning or hot gases may be drawn from any kiln with a down-draft and be drawn through and out of any other kiln with an up-draft, substantially as and for the purposes set forth. 3rd. In a down-draft kiln, the combination with the kiln grating, of a central or bottom flue and flue-pit, extending thereunder, lengthwise of the single kiln, with said flue having a closed continuous crown and inlets in its sides, and with the side walls of the flue and the flue-pit spaced apart to form down passages from said grating to the flue inlets, substantially as described. 4th. In

a down-draft kiln, the combination with a central or bottom flue having separated or discontinuous inlets, of vertical partitions in the flue-pit spaced to form a series of separate passages from the kiln grate to said flue inlets, substantially as described. 5th. In a down-draft kiln, the combination with a central or bottom flue having a series of graduated inlets increasing in size from the point nearest the stack to the point most remote therefrom, of vertical partitions in the flue-pit spaced to form separate passages from the kiln grate to said different sizes of flue inlets, substantially as described. 6th. In a down-draft kiln, the combination with a central or bottom flue closed at its top and having inlets in its sides of vertical partitions in the flue-pit spaced to form separate passages from the kiln grate to each pair of opposite flue inlets, substantially as and for the purposes set forth. 7th. In a down-draft kiln, the combination with a central or bottom flue having an arched and continuous closed crown and a series of graduated inlets openings in its sides increasing from the point nearest, to the point most remote from the stack, and a series of vertical partitions in the flue-pit spaced to form separate passages from the kiln grate to each pair of opposite flue inlets, substantially as described.

No. 53,401. Gas Burner. (*Bec à gaz.*)

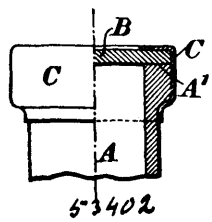


William Bonner Williams, Leigh, England, 8th September, 1896; 6 years. (Filed 3rd March, 1896.)

Claim.- 1st. A gas burner, or a gas burner attachment, composed of a semi-spherical steatite (or similar) tip, with a number of fine radiating holes, and fitted into tubular, and, by preference, tapered part, adapted to fit on to another gas burner, as and for the purpose set forth. 2nd. A gas burner composed of a semi-spherical tip with a number of fine radiating holes, and fitted into a burner body having fine inlet holes, as hereinbefore described.

No. 53,402. Stopper for Bottles, etc.

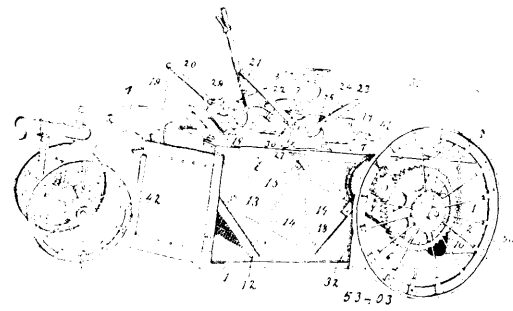
(*Bouchon de bouteilles, etc.*)



Thomas Burbidge, Brixton, England, 8th September, 1896; 6 years. (Filed 26th February, 1896.)

Claim.—1st. In a bottle, jar or the like, the combination with the neck having a laterally extending projection and a flat circular plate that is provided with an eccentric port, of a rotatable cap plate having an eccentric port and a downwardly extending screw threaded flange mounted on the edge of said cap plate, a screw threaded collar provided with an inwardly projecting flange and adapted to engage with the screw threaded portion of the cap plate, and a spring interposed between the latterly extending projection on the neck and the inwardly projecting flange of the collar, substantially as and for the purpose described. 2nd. In a bottle, jar or the like, the combination with the neck having a groove and a washer engaging therein and projecting therefrom, and a flat circular plate that is provided with an eccentric port, of a rotatable cap plate having an eccentric port, and a downwardly extending screw threaded flange mounted on and secured to the edge of said cap plate, a screw threaded collar provided with an inwardly projecting flange and adapted to engage with the screw threaded portion of the cap plate, and a coiled spring interposed between the extended portion of the washer and the inwardly projecting flange of the collar, substantially as and for the purpose described.

No. 53,403. Street Sweeper. (*Balayeuse de rue.*)



David Ferguson Graham, Springfield, Massachusetts, and Erastus Lamar Hawks, Dayton, Ohio, both of the U.S.A., 8th September, 1896; 6 years. (Filed 21st January, 1896.)

Claim.—1st. In a street sweeping machine, the combination with the frame of the receptacle for the sweepings, comprising two plates or members, suitable devices for suspending the inner edges of the plates from above and means for elevating and depressing their outer edges, whereby the inner edges of the plates will separate and permit the discharge of the contents of the receptacle. 2nd. In a street sweeping machine, the combination with the frame, of the dirt receptacle provided with a bottom comprising two plates, links joined in their upper ends to the frame and at their lower ends to the inner edges of the plates, links pivoted at their lower ends to the outer edges of the plates, rocking arms mounted on the frame and connected to the upper edges of the links last named, and means for rocking the arms. 3rd. In a street sweeping machine, the combination with the frame, of a dirt receptacle terminating adjacent to the surface of the ground provided with a bottom comprising two plates, suspending devices connected at their upper ends to the frame and at their lower ends to the inner edge of the plates and constructed to yield vertically to a limited extent, and means for elevating and depressing the outer edges of the plates. 4th. In a street sweeping machine, the combination with the frame, of a dirt receptacle provided with a bottom comprising two plates, links pivoted at their lower ends to the inner edges of the plates and provided at their upper ends with slots, a fixed supporting bar attached to the frame, extending through the slots in the links, and means for elevating the outer edges of the plates. 5th. In a street sweeping machine, the combination of the frame, the dirt receptacle provided with a bottom comprising two plates, means for supporting the inner edges of the plates, vertical links pivoted at their lower ends to the outer edges of the plates, rocking arms mounted on the frame and connected at their outer ends to the upper ends of the links, intermeshing segment racks on the inner ends of the arms, a rock shaft sustained by said frame for moving the arms, and means for rocking the shaft. 6th. In a street sweeping machine, the combination with the frame, of the horizontal rotary brush at the rear thereof, the dirt receptacle at the front provided with a bottom comprising two plates, means for elevating and depressing the outer edges of the plates, a support for the inner edges of the plates and a substantially horizontal apron pivoted at its front edge to the rear edge of the rear bottom plate and sustained at its rear by the frame. 7th. In a street sweeping machine, the combination with the frame, of the dirt receptacle provided with a bottom comprising two plates or members, supports for the inner edges of the plates, vertical guides at the outer corners of the plates, slides mounted to move on the guides and connected to the plates, and means for elevating and depressing the slides whereby the outer edges of the plates will be caused to move in a truly vertical direction. 8th. In a street sweeping machine, the combination with the frame, of the dirt receptacle provided with a bottom comprising two plates, supports for the inner edge of said plates, fixed vertical guide rods at the outer corners of the plates, brackets fixed to the plates, sleeves encircling the guide rods and pivoted to the brackets, vertical links pivoted at their lower ends to the brackets and devices connected to the upper ends of the links for elevating and depressing the same. 9th. In a sweeping machine, the combination of the frame or casing, a rotary brush in rear portion of the same, a dirt receptacle in rear of the brush mounted in the casing on a horizontal transverse axis, a crank arm connected to said receptacle, and an operating rod extending in guides on the side of the casing with its lower end pivoted to the crank arm and its upper end terminating adjacent to the top of the machine. 10th. In a sweeping machine, the combination of a frame or casing having its rear wall in the form of a door hinged at its upper edge to turn upward, a rotary brush in the rear portion of the casing, a movable receptacle mounted in said hinged door, connections extending from said receptacle to the outside for dumping the receptacle, and an operating rod removably attached at its lower end to said connection and extending to the top of the casing, whereby the operating rod may be detached to permit the door to be lifted.

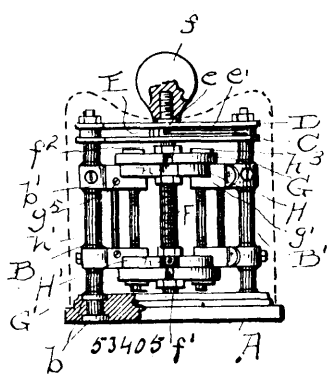
No. 53,404. Corset Clasp. (*Agrafe de corset.*)

Octave Gendron, Montreal, Quebec, Canada, 8th September, 1896; 6 years. (Filed 30th November, 1895.)

Claim.—1st. In combination with a corset clasp, the blank busk C, having apertures extending through the same to receive the full length of the projecting ends of the studs *d*, substantially as described, and for the purposes set forth. 2nd. The combination, with a clasp for corsets, of the blank busk C, located on the outside of the clasp, and provided with apertures *g*, *g*, substantially as described. 3rd. In a clasp for corsets, the blank busk C, located on the outside of the clasp, as and for the purposes described.

No. 53, 405. Multiple Fuse Switch.

(*Aiguille à fusée multiple.*)

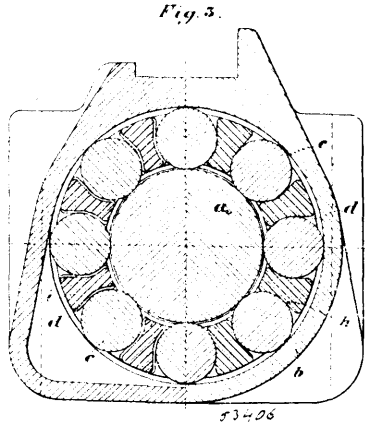


The Multifuse Switch Company, Chicago, Illinois, assignee of Joseph Melzer, Cleveland, Ohio, both in the U.S.A., 8th September, 1896; 6 years. (Filed 13th August, 1896.)

Claim.—1st. A multiple fuse switch, comprising a rotative member having heads of insulating material, recesses in such heads, removable fuse carriers secured therein, and means for rotating the assembled parts contiguous to terminal contacts, adapted to successively make contact with the opposite ends of the removable fuse carriers, substantially as set forth. 2nd. A multiple fuse switch, comprising an insulated revoluble member, having recesses therein, a series of removable fuse carriers placed in such recesses, and suitable set screws or the like adapted to hold the said parts in an assembled position, substantially as set forth. 3rd. A multiple fuse switch, comprising a suitable insulating base and standards thereon, an insulating keeper connecting the said standards, bearings formed in the said base and keeper, a spindle placed therein, insulating flanges or heads upon said spindle, and a series of detachable fuse holders located upon said heads, and contact points or terminals adjacent to the ends of one or more of the said fuse holders, substantially as set forth. 4th. A multiple fuse switch, comprising a rotative member, consisting substantially of a spindle and insulated heads adjustably secured to said spindle, adjustable and detachable fuse holders secured upon said heads, means secured to said spindle whereby the radial position of each of the fuse holders is determined, as well as the vacant or unoccupied space upon said heads located between said holders, and suitable contract points or terminals located adjacent to said heads, so that upon the rotation of the same the said fuse holders will alternately be placed in circuit and out of circuit during the rotation of the spindle, and means whereby said spindle is prevented from being turned in but one direction, substantially as set forth. 5th. A multiple fuse switch, comprising a suitable base and standards thereon, suitable keepers connecting said standards, and bearings formed therein for a spindle, insulated discs or heads upon said spindle, and a series of detachable fuse holders located upon said heads and contact points or terminals adjacent to the same upon one or more sides thereof, said terminals, fuse holders, and discs or heads being respectively adjustable, substantially as set forth. 6th. A multiple fuse switch, comprising a revoluble drum or the like, insulating heads thereon, removable fuse carriers supported by such heads, and suitable contacts for one or more of such carriers, and means for preventing the turning of such drum in one direction, substantially as set forth.

No. 53,406. Roller Bearings. (*Coussinet anti-frottant.*)

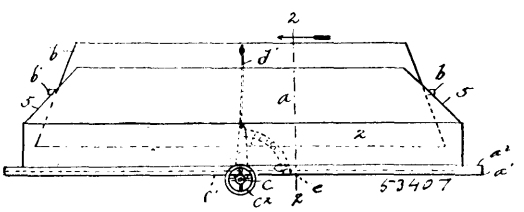
Fig. 3.



William Hugh Woodcock, West Norwood, England, 8th September, 1896; 6 years. (Filed 24th August, 1896.)

Claim.—1st. In roller bearings, the combination of a cylindrical journal or shaft, with or without a sleeve fitted thereon, rollers running between and on the spokes of a cradle, such spokes forming the bearings of the said rollers, substantially as herein described and as illustrated in the accompanying drawing. 2nd. In axle boxes for roller bearings, preventing lateral movement between axles, or shafts and axle boxes or bearings in either direction, by providing grooves in the axle outside the rollers to receive projections formed on the casing of the bearings, substantially as herein described and as illustrated in the accompanying drawing. 3rd. In cradle for roller bearings having the bearing surfaces for receiving the rollers on the upper halves of the spokes, substantially as herein described and as illustrated in the accompanying drawing. 4th. A cradle for roller bearings having the bearing surfaces to receive the rollers formed, on the lower halves of the spokes, substantially as herein described and as illustrated in the accompanying drawing.

No. 53,407. Fire-Place Throat. (*Culotte de foyer.*)



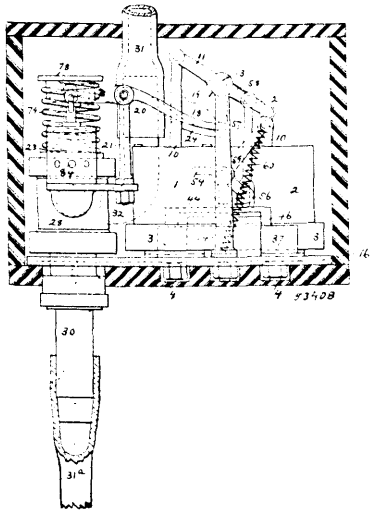
John Lally, Waltham, Massachusetts, U.S.A., 8th September, 1896; 6 years. (Filed 20th August, 1896.)

Claim.—1st The improved fire-place throat, comprising the casing having an outlet at its top and an outwardly projecting horizontal flange surrounding its base, the end and rear portions of said flange being formed to be supported by the back and ends of a fire-place, while the outwardly projecting front portion of said flange constitutes a support for the masonry above the fire-place, a damper pivoted to the casing in the outlet thereof and a damper-operating rod or handle located below and projecting forward from the front portion of the flange. 2nd. The improved fire-place throat, comprising the casing having an outlet at its top, an outwardly projecting horizontal flange surrounding its base, an up-

wardly projecting brick-retaining lip on the front portion of said flange, a damper pivoted in the outlet of the casing, and a damper-operating rod or handle located below and projecting forward from the front portion of said flange. 3rd. The improved fire-place throat, comprising the outwardly-projecting base or flange a^1 the rear and end portions of which are arranged to be supported by the back and ends of a fire-place while its front portion is formed to support the masonry above the fire-place, the throat casing extending upwardly from the said flange, said throat and flange being formed as a single piece or casting, the damper b hung in the opening of the casing, the longitudinally movable rotatable rod c located below the flange a^1 and mounted in bearings projecting downwardly from said flange, the arm c^1 on the inner end of said rod, the connecting rod d^1 connecting said arm with the damper, and the fixed projections on the inner surface of the casing adapted to arrest said arm, the arm being adapted to be engaged with and disengaged from said projections by endwise movements of the rod, as set forth.

No. 53,408. Milking Machine.

(*Machine à traire les vaches.*)

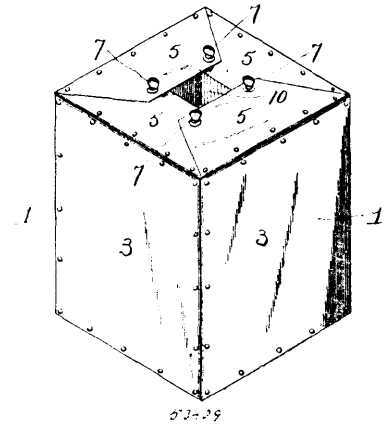


Alexander Shiels, Glasgow, Scotland, 8th September, 1896; 6 years (Filed 22nd August, 1896.)

Claim.—1st. The combination in a vacuum milking machine, of a vacuum pulsating valve and a vacuum destroying valve and a vacuum motor for operating these valves. 2nd. The combination in a vacuum milking machine, of a vacuum pulsating valve, a vacuum destroying valve combined with an air admission valve and a vacuum motor for operating the pulsating valve and air admisssion valve substantially as described. 3rd. In a pulsating vacuum milking machine, a vacuum motor for actuating the machine consisting of the cylinders, the pistons therein, the connecting rods, the cranks, the oscillating shaft, the piston valve for alternately supplying vacuum to each cylinder, and a fork operated from the shaft for shifting the valve, substantially as described. 4th. In a pulsating vacuum milking machine, a vacuum motor for actuating the machine consisting of the cylinders, the pistons therein, the connecting rods, the cranks, the oscillating shaft, the piston valve for alternately supplying vacuum to each cylinder, a fork for operating the valve and a kicker operated from the shaft for reciprocating the fork, substantially as described. 5th. In a pulsating vacuum milking machine, a vacuum motor for actuating the machine consisting of the cylinders, the pistons therein, the connecting rods, the cranks, the oscillating shaft, the piston valve for alternately supplying vacuum to each cylinder, a fork for operating the valve and a kicker provided with two arms arranged to alternately strike a tooth on the fork, said kicker being operated from the shaft, substantially as described. 6th. In a pulsating vacuum milking machine, a vacuum motor for actuating the machine consisting of the cylinders, the pistons therein, the connecting rods, the cranks, the oscillating shaft the piston valve for alternately supplying vacuum to each cylinder, consisting of a tubular casing slotted at each end and having a double piston valve therein arranged to be reciprocated by a fork whose ends project through the slots and act upon the valve, said fork being operated from the oscillating shaft, substantially as described 7th. In a pulsating vacuum milking machine, a vacuum motor for actuating the machine consisting of the cylinders, the pistons therein, the connecting rods, the cranks, the oscillating shaft, the piston valve for alternately supplying vacuum to each cylinder, a fork for operating the valve, a kicker provided with two arms arranged to alternately strike a tooth on the fork, said kicker being operated from the shaft and means for giving a sudden action to the kicker, substantially as described. 8th. In a pulsating vacuum milking machine, a vacuum motor for actuating the machine consisting of the cylinders, the pistons therein, the connecting rods, the cranks, the oscillating shaft, the piston valve for alternately supplying vacuum to each cylinder, a fork for operating the valve, a kicker provided with two arms arranged to alternately strike a tooth on the fork, said kicker being connected to said kicker and a spring attached to the lever for giving a sudden action to the kicker, substantially as described. 9th. In a pulsating vacuum milking machine, a vacuum motor for actuating the machine consisting of the cylinders, the pistons therein, the connecting rods, the cranks, the oscillating shaft, the piston valve for alternately supplying vacuum to each cylinder, a fork for operating the valve, and a kicker provided with two arms arranged to alternately strike a tooth on the fork, said kicker being connected by a slotted link to a crank on the oscillating shaft and operated therefrom, substantially as described. 10th. In combination, the vacuum motor, the shaft operated by the motor, the pulsating valve arranged to be automatically closed by the action of the atmosphere on its diaphragm, and means actuated by the shaft for opening the valve substantially as described. 11th. In combination, the vacuum motor, the shaft operated by the motor, the pulsating valve arranged to be automatically closed by the action of the atmosphere on its diaphragm, a lever attached to the spindle of the valve and a cam on the shaft for depressing the lever at certain times and opening the valve at these times, substantially as described. 12th. In combination, the vacuum motor, the oscillating shaft operated by the motor, the air admission valve normally held closed by a spring, a lever attached to the valve and means operated by the oscillating shaft for opening the valve at certain times, substantially as described. 13th. In combination, the vacuum motor, the oscillating shaft operated by the motor, the air admission valve normally held closed by a spring, a lever attached to the valve and a cam fitted on the oscillating shaft for opening the valve at certain times, substantially as described. 14th. In combination, the vacuum motor, the oscillating shaft operated by the motor, the vacuum destroying valve, the air admission valve located at the side thereof, the lower attached to the air admission valve, and the cam on the shaft for opening the air admission valve at certain times, substantially as described. 15th. The vacuum destroying valve consisting of the valve, the valve spindle, the piston on the spindle, the diaphragm, the casing for the valve and diaphragm, and a spring mounted on top of the casing and adjustable by means of a screwed cap fitted on the end of the valve spindle, substantially as described. 16th. In combination, the casing 27, the valve 26 in the casing, the piston 66 on the valve spindle, the diaphragm 67, the lever 24 connected with the valve spindle and an adjustable spring 100 acting on the lever 24, substantially as and for the purpose set forth. 17th. The construction of vacuum milking machine substantially as described and shown.

No. 53,409. Hot Air Cabinet and Screen.

(*Cabinet et écran à air chaud.*)



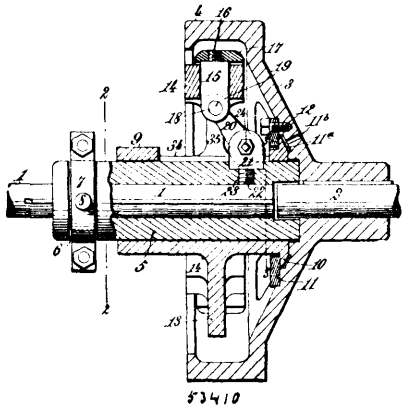
Charles Mower Robinson, Toledo, Ohio, U.S.A., 8th September, 1896; 6 years. (Filed 19th August, 1896.)

Claim.—1st. In a combined hot air cabinet and screen, sections hinged together having flaps upon the upper edge, and means for securing the flaps together when the sections are assembled. 2nd. In a hot air cabinet, sections having side pieces cut substantially at an angle of forty-five degrees, and means for hinging the sections together, whereby the sections can be folded to form an enclosed cabinet, a screen, or compactly for packing.

No. 53,410. Friction Clutch. (*Embrayage à friction.*)

Benjamin Clayton Waite, Geneva, New York, U.S.A., 8th September, 1896; 6 years. (Filed 17th August, 1896.)

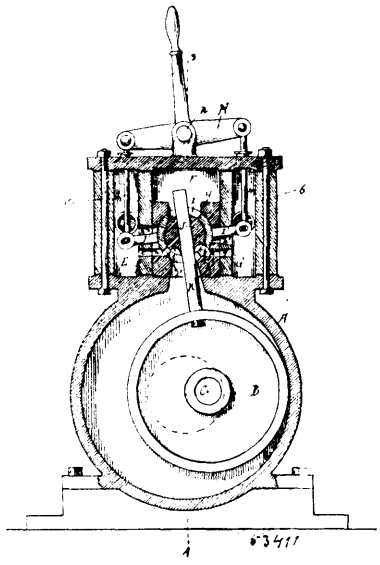
Claim. 1st. In a clutch of the class described the combination with the shafts 1 and 2, of the flanged wheel 3 keyed to the shaft 2



53410

and provided with jaws 32, the sleeve 5 splined upon the shaft 1 and provided with jaws 33 adapted to interlock with the jaws 32 to form a positive clutch, radially sliding thrust blocks 15 carrying brake shoes adapted to frictionally engage the wheel 3, links 20 pivoted at their inner ends to the sleeve 5 and at the outer ends to the thrust blocks 15, and means for moving the sleeve longitudinally whereby the continuous movement of the sleeve in one direction operates to first thrust the brake shoes into engagement with the wheel 3 and then retract said brake shoes and force the jaws 32 and 33 into engagement, substantially as described. 2nd. In a clutch of the class described, the combination with the shafts 1 and 2, of the flanged wheel 3 keyed to the shaft 2 and provided upon its face with jaws 32, of the sleeve 5 splined upon the shaft 1 and provided with jaws 33 adapted to interlock with the jaws 32 to form a positive clutch, the sleeve 9 encircling the sleeve 5 and swiveled to the wheel 3, and provided with an annular web 13, thrust blocks 15 arranged to slide radially in sockets formed in the periphery of said web and carrying at their outer ends friction shoes 17 adapted to engage the flange of the wheel 3, and links 20 pivotally connected at their inner ends to the sleeve 5 and at their outer ends to the thrust blocks 15, the arrangement being such that as the sleeve 5 is moved towards the wheel 3, the friction shoes are first caused to engage the flange of said wheel and are then withdrawn from such engagement and the jaws 32, are thrown into engagement, substantially as described. 3rd. In a clutch of the class described, the combination with the shafts 1 and 2, of the flanged wheel 3 keyed to the shaft 2 and provided upon its face with jaws 32, of the sleeve 5 splined upon the shaft 1 and provided upon one end with jaws 33 adapted to interlock with the jaws 32 to form a positive clutch, the sleeve 9 encircling the sleeve 5 and swiveled at one end to the wheel 3 and provided with an annular web 13, thrust blocks 15 angular in cross section and arranged to slide radially in correspondingly shaped sockets 14 formed in the periphery of said web and carrying at their outer ends segmental friction shoes 17 adapted to engage the flange of the wheel 3, lugs 21 attached to the sleeve 5 and adapted to travel in longitudinal slots 34 in the sleeve 9, and links 20 pivotally secured at their inner ends to the lugs 21 and at their outer ends to the thrust blocks 15, substantially as described. 4th. In a clutch of the character described, the combination with the shafts 1 and 2, of the flanged wheel 3 keyed to the shaft 2 and provided upon its face with jaws 32, the sleeve 5 splined upon the shaft 1 and provided upon one end with jaws 33 adapted to interlock with the jaws 32 to form a positive clutch, the longitudinally slotted sleeve 9 encircling the sleeve 5 and provided at one end with a flange 10, an annulus 11 bearing against the flange 10 and bolted to the wheel 3, an annular web 13 formed on the sleeve 9 and provided upon its periphery with sockets 14, thrust blocks 15 arranged to slide radially in said sockets and provided at their outer ends with segmental friction shoes 17 adapted to engage the flange of the wheel 3, lugs 21 attached to the sleeve 5 and adapted to travel in the slots in the sleeve 9, links 20 pivotally attached at their inner ends to the lugs 21 and at their outer ends to the thrust blocks 15, and means for adjusting the throw of said links, substantially as and for the purpose specified. 5th. In a clutch of the character described, the combination with the shafts 1 and 2, of the flanged wheel 3 keyed to the shaft 2, the sleeve splined upon the shaft 1 and carrying the forked lugs 21, the longitudinally slotted sleeve 9 encircling the sleeve 5 and swiveled in the wheel 3 and provided with an annular web 13 having sockets 14 formed in its periphery, thrust blocks 15 arranged to slide radially in said sockets, links 20 pivotally connected at their outer ends to said thrust blocks, an eccentric 28 journalled in the inner end of each of said links and provided with an annular aperture, a pin 24 journalled in each of the lugs 21 and having a similarly shaped angular portion fitted in said aperture and screw-threaded at its opposite ends, nuts 29 and 30 for engaging said threaded ends for preventing rotation of the pin, and means for turning the pin, substantially as and for the purpose specified.

No. 53,411. Rotary Engine. (*Machine rotatoire.*)



53411

Isaac N. Forrester, Camden, New Jersey, U.S.A., 8th September, 1896; 6 years. (Filed 8th August 1896.)

Claim. 1st. The combination of the cylinder, the rotated piston therein, an oscillated abutment carried by said piston, a valve block through which the abutment passes, said valve block having steam passages, chambers on either side of the valve block adapted for use as supply or exhaust mediums for the steam, means for governing the use of said chambers, and communicating passages extending from said chambers to the periphery of the valve block, said valve block adapted to be moved into line with the said steam passages by the oscillation of the abutment, substantially as described. 2nd. The combination of the cylinder, the piston therein, an abutment connected to said piston, a valve block through which said abutment passes and by which it is operated, a cut-off sleeve surrounding said valve block, steam ports, and devices for reversing the position of the cut-off sleeve, substantially as specified. 3rd. The combination of the cylinder and its piston, the abutment, an oscillated valve block, supply and exhaust chambers on either side of the valve block, valves controlling the inlet and outlet of the motive fluid to said chambers, a cut-off sleeve surrounding the valve block, and levers connected to the cut off sleeve and the valves controlling the inlet and outlet of the motive fluid, whereby the position of said cut-off sleeve and the direction of movement of the engine may be reversed, substantially as specified.

No. 53,412. Connecting Rod. (*Bielle.*)

53412

Daniel John Crosby, Black Oak Farm, Kadina, South Australia, 8th September, 1896; 6 years. (Filed 20th August, 1896.)

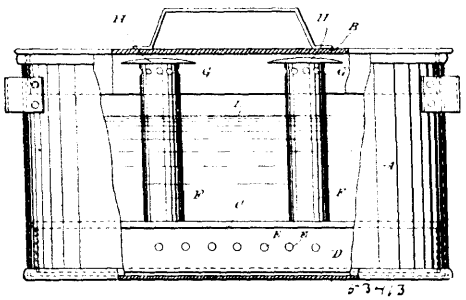
Claim.—1st. In a connecting rod a spring supported and confined so that upon an obstruction being met with by the operating part of the machine or apparatus causing severe strain the spring is compressed and allows the length of the rod to vary sufficiently to avoid breakage substantially as set forth. 2nd. A connecting rod formed in two main parts with a spring and keys which enable the rod to lengthen or shorten when obstruction is met with by the operated parts substantially as and for the purpose set forth. 3rd. A connecting rod consisting of two main parts, first, a spindle or plunger encircled by a spring confined by two keys working in slots in the said spindle, and secondly, a sleeve or frame having two bosses or bearings through which the spindle passes and between which are the keys and spring substantially as described and for the purposes set forth.

No. 53,413. Boiler for Clothes. (*Bouilloire pour linge.*)

Dominique Chartrand, St. Cunegonde, Quebec, Canada, 8th September, 1896; 6 years. (Filed 24th August, 1896.)

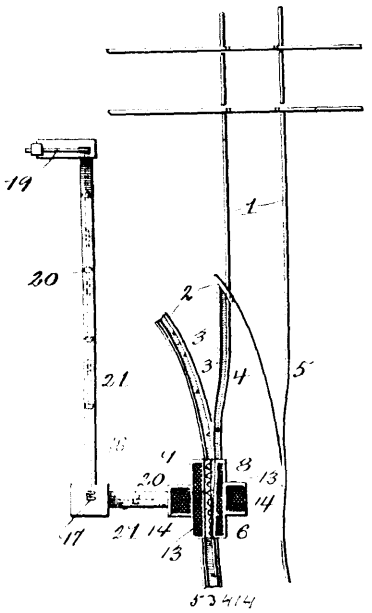
Claim. 1st. A clothe boiler having a false bottom C provided with the tubes F having the holes G and covers H, and the underside

projection D having the holes E, substantially as described and for the purposes set forth. 2nd. In a clothe boiler the combination of a



false bottom C provided with the tubes F having the holes G and covers H, and underside projection D having the hole E, with the ordinary boiler A, and cover B, substantially as described, and for the purposes set forth.

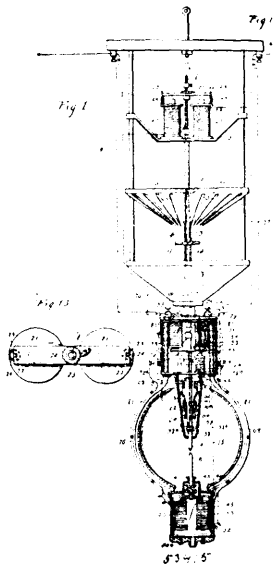
No. 53,414. Derailing Device. (*Aiguille de croisement.*)



Joseph Y. Porter, Cleveland, Ohio, U.S.A., 8th September, 1896; 6 years. (Filed 31st July, 1896.)

Claim. 1st. In a derailing device, the combination, with the main track, of a switch normally set to divert a car from said main track, and a switch operating device adapted to set the switch for diverting the car from the main track when released, said operating device being situated at some distance in advance of the switch, to which place the conductor or other operator must precede the car before it can pass the switch, and at which place only the said switch can be shifted to clear the main track, substantially as specified. 2nd. The combination, with the main track, of a switch normally set to divert the car from said main track, a switch operating mechanism situated at a point in advance of said switch, whereby the conductor or other operative is compelled to precede the car and set the switch, so as to permit the car to continue its passage on the main track, and means for automatically restoring said switch to its normal position when the operating mechanism is released, substantially as specified. 3rd. The combination, with the main track, of an obstructing device situated on said track, near a danger point, and arranged normally to divert an approaching car from the main track, operating mechanism connected to said obstructing device and situated in advance of the same, to which place the operative is required to precede and manipulate said operating mechanism to free the main track of the obstruction, and means whereby said obstruction device is automatically restored to its normal position on the main track, as soon as the hand setting mechanism is released, substantially as specified. 4th. The combination, with the main track, of a rockable switch point normally set to divert an approaching car from said main track, mechanism situated at a point in advance of the switch, whereby the same may be operated to permit the car to continue its passage on the main track, and automatic means for returning the switch point to its normal position.

No. 53,415. Electric Lamp. (*Lampe électrique.*)



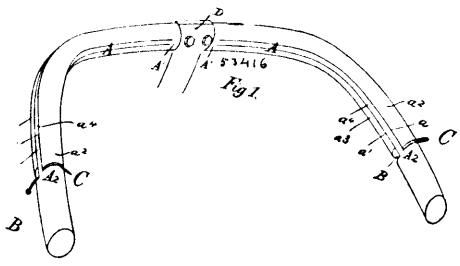
Alvic O. Mackin, Anderson, Indiana, U.S.A., 9th September, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. In an electric lamp, the combination with the upper and lower carbon holders, and with a magazine designed to contain a number of upper carbons of mechanism for successively and automatically feeding the carbon from the magazine into the upper holder, and for releasing at the proper times the upper and lower carbons, whereby the lower carbon is permitted to fall away from the lamp, and the partially burned upper carbon is caused to drop into the lower holder, together with means whereby said partially burned upper carbon is caught in the lower holder and becomes the lower carbon, substantially as specified. 2nd. In an electric lamp, the combination with a magazine designed to contain a plurality of carbons, and with positive and negative carbon holders or clamps, of means for releasing automatically the carbons from both the said holders when the positive carbon has been burned to a predetermined point, and means for automatically feeding into the positive holder a carbon from the magazine when said positive carbon is released and for causing the lower holder to receive and retain the partially burned carbon which is released from the upper holder, substantially as specified. 3rd. In an electric lamp, the combination of a lower carbon holder having gravity actuated and electrically controlled clamps, and upper carbon holder consisting of a tube through which the carbon is fed by its own gravity, said tube having clamps of similar character to those of the lower holder, electro-magnetic devices for releasing said clamps at the proper times, a magazine holder designed to contain a plurality of carbons, and electrically operated mechanism for feeding one carbon at a time from the said magazine into the upper carbon holder, substantially as specified. 4th. An arc electric lamp having a magazine designed to contain a plurality of carbons, mechanism for automatically feeding said carbons successively into the upper carbon holder of the lamp and mechanism whereby when the upper carbon becomes burned to a predetermined point, the lower carbon is automatically released and drops from the lamp, and the upper carbon falls and takes the place of the lower carbon together with means in connection with said lower holder for catching and retaining the partially burned upper carbon therein, substantially as specified. 5th. In an arc light, the combination of a magazine holder for upper carbons, an upper carbon holder capable of a limited vertical movement and designed to permit a gravity feed of the carbon therethrough, clamps carried by said holder and arranged to grip the carbon when said tube is raised, and to release it as it is lowered, a lower carbon holder, its gravity actuated clamps, electro-magnetic devices for controlling the movement of said upper holder and for releasing the clamps of the lower holder, a rotary feeding device arranged to feed one carbon at a time from the magazine into the said upper carbon holder, electro-magnets for operating said feeding device and automatic switches, whereby when the upper carbon has burned to a predetermined point said switches are moved to throw into operation the clamp-releasing and carbon-feeding devices, substantially as specified. 6th. In an electric lamp, the combination of a magazine designed to contain a plurality of carbons, a gravity feed positive carbon holder below the magazine, feeding mechanism for feeding one carbon at a time from the magazine into said holder, electro-magnet and armature mechanism for actuating the feeding mechanism, a lower or negative carbon holder, electro-magnetic devices for automatically feeding the positive carbon towards the lower one, and for controlling the operation of the positive and negative holders, electric connections and a switch operated by the positive carbon and

arranged when said carbon has burned to a certain point to throw into circuits the magnets of the devices which control the carbon holders and the feeding mechanism from the magazine, whereby the negative carbon is released and falls from its holder, the positive carbon is released and caught by the negative holder, and a new carbon is fed from the magazine and is caught in the positive holder, substantially as specified. 7th. In a magazine arc lamp, a magazine designed to contain a plurality of carbons, and consisting of an upper, hollow, inverted cone, having therein a series of radial slots and a lower cone also hollow and inverted, and having a series of radial channels which correspond to the slots in the upper cone, together with a feed device arranged centrally of the said magazine and designed to take one carbon at a time therefrom, substantially as specified. 8th. In an arc electric lamp, a magazine consisting of an upper, hollow, inverted cone, having a series of radial slots therein, a lower cone, also hollow and inverted, and having a series of radial channels or troughs which correspond to the slots of the upper cone, and gravity rollers arranged to run in the said slots, together with mechanism arranged centrally of the said cones and designed to take one carbon at a time therefrom and feed it to the lamps, substantially as specified. 9th. In an arc electric lamp, the magazine having an upper, hollow, inverted cone formed with a series of radial slots and a lower cone also hollow and inverted, and formed with radial channels which correspond to the said slots, said lower cone having also a central depression in its bottom, a feed tube communicating with the centre of said depression, a rotary vertical shaft having a bearing in said depression, and hollow for a portion of its length, said hollow portion being open at one side, the slotted discs carried by said hollow portion, and having hooks and pivoted lugs arranged in said depression opposite the lower ends of the radial channels, all substantially as and for the purposes described. 10th. In an arc electric lamp, the combination with a magazine arranged to support a plurality of carbons in vertical position, of a rotary shaft arranged centrally of the magazine and hollow for a portion of its length, said hollow portion being open at one side, discs carried by said hollow portion and formed each with a radial slot in alignment with said open side, a hook device carried by each of said discs adjacent to said slot, and a feed tube secured in the bottom of the magazine and having its opening in alignment with the said shaft, together with means for automatically rotating said shaft by a step by step movement at the proper times, substantially as specified. 11th. In an arc electric lamp, the combination with a magazine arranged to support a plurality of carbons in radial series around its centre and to feed them towards its centre by graviry of a rotary vertical shaft arranged centrally of the said magazine, and having a hollow portion which communicates with a feed passage to the lamp below, said hollow portion being open at one side, mean son said shaft whereby one carbon at a time is taken from the magazine into the said hollow portion, and means for automatically imparting a step by step rotation to the said shaft at the proper times, substantially as specified. 12th. In an arc electric lamp, the combination with a magazine arranged to support a plurality of carbons therein, of a rotary shaft arranged centrally of the said magazine, and having a hollow portion, and means of taking one carbon at a time from the said magazine into said hollow portion, said shaft having also a threaded portion, a nut engaging said threaded portion, electro-magnets, an armature therefor carried loosely by said nut, means for preventing the rotation of said armature, means for locking the nut to the armature as the latter is attached to the magnet, and for permitting the nut to rotate on said shaft during the recovery of the armature, and means for recovering the armature, together with means for temporarily energizing the magnets at the proper times, substantially as specified. 13th. In an arc electric lamp, the combination with the main lamp circuit, including the carbons and carbon holders, and inverted electro-magnets, of an electro-magnet located in a shunt of the main circuit, a spring supported armature, a cut out for said inverted magnets operated by the said armature, an armature for said inverted magnets, and a mechanical connection between the said armature and the clamps of the upper carbon holder, substantially as specified. 14th. In an arc electric lamp, the combination with a magazine and the electro-magnetically operated devices for feeding automatically one carbon therefrom at a time to the lamp, of the vertically movable tube placed below the magazine and in line with the delivery thereof, the inverted magnets, the armature thereof arranged to slide upon said tube, the pivoted carbon clamps carried by said tube, and connected with the said armature, and means for automatically cutting said magnets out of the circuit to release the said armature and actuate said clamps, whenever the resistance in the main circuit is increased to a pre-determined degree, substantially as specified. 15th. In an arc electric lamp, the combination of the inverted magnets 28 having their coils in the main circuit, the shunted magnet 29, its armature 30, the adjustable spring 31, which supports said armature and which forms a resistance coil, the switch operated by said armature for cutting the said magnets 28 out of circuit, an electrical connection between the said spring and the leading in wire of the said magnets and between said switch and the main negative binding post of the lamp, substantially as described. 16th. In an arc electric lamp, the upper carbon holder consisting of a vertical tube, clutches pivoted thereto and arranged to grip the carbon, an armature mounted to slide vertically on the said tube, mechanical connections between said clutches and the said armature, and electro-magnets for controlling said armature, substantially as specified. 17th. In an arc electric lamp, the combination with the magnets 28 having their coils in the main lamp circuit of the magnet 29 whose coil is in a shunt of the said circuit, the armature 30, its supporting spring 31, which forms a resistance coil, the lever 34 attached to said magnet and pivoted to and insulated from the lamp frame, the said lever having a contact portion, a contact plate normally in contact with said lever, and electrical connections whereby as the said armature is attracted the magnets 28 are cut out of the main circuit, substantially as specified. 18th. In an arc electric lamp, the combination of the magnet 28 whose coils are in the main circuit, the shunted magnet 29, the armature 30, its supported and resistance spring 31, the lever 34 attached to said armature and pivoted to the frame, the contact plate 36 normally impinged by said lever, and the contact 79, arranged to be impinged by said lever when the said armature is attracted to its magnet 29, together with the necessary electrical connections substantially as specified. 19th. In an arc electric lamp, the combination of the vertically movable feed tube 37, the clamps or clutches 39 pivoted thereto, means for limiting the movement of said tube, the armature arranged to move vertically on the said tube, the rods connecting the said armature with arms of the said clamps or clutches, and electro-magnet and switch devices for controlling the said armature, substantially as specified. 20th. The combination with the upper and lower carbon holders, their clutches or clamps and the electro-magnetic devices for releasing said clutches or clamps, of the lever pivoted to the upper carbon holder and having a gravity arm which normally makes contact with the upper carbon said lever forming part of the main or lamp circuit, a contact piece electrically connected with the magnets which control the mechanism for releasing the clutches of the lower holder, means whereby at the same time the clutches or clamps of the upper holder are released, to permit the upper carbon to drop into the lower holder means whereby said carbon is caught and held by the said lower holder, a magazine containing a plurality of upper carbons, and means operated automatically by the action of said lever for feeding a single carbon at a time from said magazine into the upper holder, substantially as specified. 21st. In an arc electric light, the lower carbon holder, having clutches adapted to hold the carbon and normally held in action by the gravity of the holder, an armature suspended from said holder, electro-magnets which control said armature, and means for holding a new carbon in said holder after the first has been released and before the clutches are brought back to operative position, substantially as specified. 22nd. In an arc electric light, a lower carbon holder which retains the carbon by the action of its own gravity, an armature suspended from said holder, and a magnet or magnets for raising said armature and holder, together with means for energizing said magnet or magnets at the proper time, substantially as specified. 23rd. In an arc electric light, a lower carbon holder comprising a holder proper, as the part 46, pivoted clutch dogs 47, which are normally held in contact with the carbon by the gravity of the holder, an armature suspended from said holder, electro magnets for raising said armature and holder, the pivoted clamps 48, normally out of operation and means whereby as said holder is raised, said clamps are thrown into operative position, substantially as specified. 24th. In an arc electric light, a lower carbon holder, consisting of a stationary portion, as the part 44, the holder proper suspended therein, the clutch dogs 47 normally held in operative position by the gravity of said holder, an armature connected to said holder and suspended therefrom, electro-magnets for raising said armature and thereby the holder to release said dogs, the pivoted clamps 48, and means whereby said clamps are thrown into operation when the dogs are released and are released when the dogs are again brought into operation, substantially as specified. 25th. In an arc electric light, a lower carbon holder consisting of a stationary portion, as 44, having a tube 43, the part 46 suspended in said stationary portion the clutch dogs 47, the yoke connected to said part 46 and suspended therefrom, the armature carried by said yoke, the magnets above said armature, the swinging clamps 48, the dogs 55, and means for operating said clamps and dogs, all substantially as and for the purpose specified. 26th. The herein described magazine arc electric lamp, comprising upper and lower carbon holders, means for feeding the upper carbon as it burns, means whereby when said upper carbon has burned to a certain point both the carbons are released from their holders and the upper carbon drops to become the lower one, a magazine containing a plurality of upper carbons, and mechanism operated automatically to feed one carbon from said magazine into the upper holder as the preceding carbon is released therefrom, substantially as specified. 27th. The herein described magazine arc electric lamp, comprising essentially a magazine arranged to support a plurality of upper carbons in vertical position and in radial series, a rotary device arranged centrally of the said series and arranged to take and receive one carbon at a time from the said magazine, electro-magnetically operated mechanism for operating said device, upper and lower carbon holders having clutches or clamps, a gravity feed passage from said rotary device to the upper carbon holder, means for feeding the upper carbon as it burns, electro-magnetic devices for releasing the said clutches or clamps, a switch operated by the upper carbon and arranged to automatically throw the current into and out of the coils of said electro-magnetic mechanism and devices, and means in the lower carbon holder for catching the upper carbon as it falls therein from the upper carbon after the lower carbon has been released and dropped, substantially as specified.

No. 53,416. Handle Bar for Velocipedes.

(*Barre de poignée de bicycles.*)



John Francis O'Brien, London, England, 9th September, 1896; 6 years. (Filed 31st July, 1896.)

Claim.—1st. A handle bar for velocipedes, consisting of a suitably bent bar having a solid middle portion A^1 and solid end portion A^2, the parts between said middle and end portions being slit as at a, a^1, b, b^1, all for the purposes and substantially as described and illustrated. 2nd. A handle bar for velocipedes, consisting of a suitably bent bar having a solid middle portion A^1 and solid end portion A^2, the parts between said middle and end portions being slit as at a, a^1, b, b^1, comparatively large portions B and comparatively small portions C, being respectively cut from the lower and upper parts of said handle bar, all for the purposes and substantially as described and illustrated. 3rd. A handle bar for velocipedes, consisting of two or more strips clamped at their centres, the upper being shorter than and its ends adapted to engage with stops on the strip immediately under said upper strip, all for purposes substantially as described and illustrated.

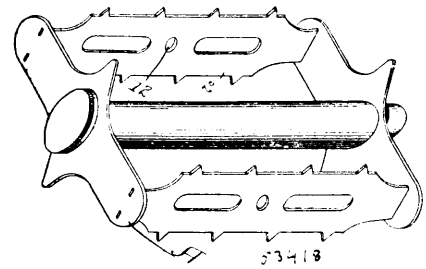
No. 53,417. String Fastener. (*Attache de lacets.*)

Charles Cade Pine, New York, State of New York, U.S.A., 9th September, 1896; 6 years. (Filed 27th July, 1896.)

Claim. 1st. A string fastener, comprising a back plate, a front plate, a cross-bar connecting the said plates with each other and around which the string is wrapped, and a tongue for holding the end of the string and held on one of the said plates, substantially as shown and described. 2nd. A string fastener, comprising two oppositely arranged plates, connected with each other by a cross-bar having an external groove, and a tongue held on one of the said plates in the space between the plates to receive the end of the string after the latter has been wrapped once or twice around the said cross-bar, substantially as shown and described. 3rd. A string fastener, comprising a back plate provided with means for attaching the plate to the article on which the fastener is to be used, a peripheral cross-bar extending from the top of the said back plate parallel to a front plate and in front of the same, and a tongue held on the inner face of the said front plate to engage the end of the string after the latter has been wrapped once or twice around the said cross bar, substantially as shown and described. 4th. A string fastener, comprising a back plate, a front plate, a cross-bar slotted in one or both ends, connecting said plates with each other and around which the string is wrapped, and a tongue for holding the end of the string and held on one of the said plates, substantially as shown and described. 5th. A string fastener, comprising two oppositely arranged plates connected with each other by a peripheral cross-bar, slotted and having an external groove, and a tongue held on one of the plates in the space between the plates, and also slotted to receive the end of the string after the latter has been passed through the slots and around the cross-bar, substantially as shown and described. 6th. A string fastener, comprising a front plate and a back plate, provided with means for attaching the back plate to the article on which the fastener is to be used, a peripheral grooved and slotted cross-bar connecting said plates, and a tongue held on the inner face of one of the said plates to engage the end of the string after the latter has been carried through the slots and around the cross-bar, substantially as shown and described. 7th. A fastener for shoe and other laces, consisting of a plate provided with means whereby it may be secured to the device in connection with which it is used, and having projected outwardly therefrom two auxiliary plates in each of which is formed a slot of an approximate width equal to the thickness of the lace in connection with which it is used, the said slots being oppositely disposed in their respective auxiliary plates and being of uniform width throughout their length, substantially as shown and described. 8th. A string fastener, comprising two oppositely arranged plates connected by a cross-bar provided on its outer side between said plates with a groove extending transversely of the cross-bar to the edges thereof and adapted to receive the string, said cross-bar being continued on the inner faces of the plates by spaced segmental flanges enclosing between them a slot forming an entrance to the groove of the cross-bar, substantially as shown and described.

No. 53,418. Toe Clip for Bicycle Pedals.

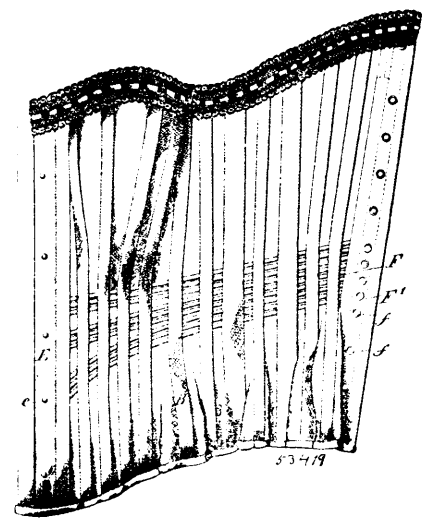
(*Arrête-pieds pour pédales de bicycles.*)



Edward Albert Thiem, St. Paul, Minnesota, U.S.A., 9th September, 1896; 6 years. (Filed 20th July, 1896.)

Claim. 1st. As an improved article of manufacture, a toe clip of the class described, comprising a toe embracing loop and a foot embracing loop, said foot embracing loop having its ends adjustly connected underneath the foot. 2nd. As an improved article of manufacture, a bicycle pedal toe clip, consisting of a foot embracing loop, with the ends slidably connected underneath the foot, to permit of their relatively lateral adjustment, the toe loop rigidly connected to the top of said first-named loop, and engaging the interlocked ends of said first-named loop underneath the foot, and the clamp for securing the ends of both loops in adjusted positions to the pedal. 3rd. A toe clip for bicycle pedals, consisting of the toe receiving loop, the adjustable side guards, and the bolt for securing the side guards at any desired width and attaching the clip to the pedal.

No. 53,419. Corset. (*Corset.*)



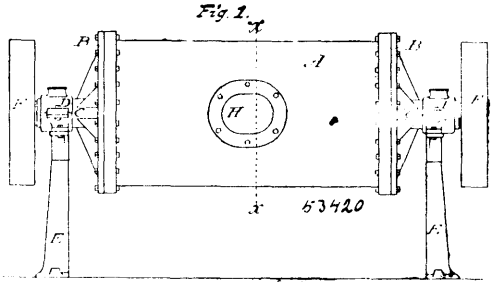
James Stone, Aurora, Illinois, U.S.A., 9th September, 1896; 6 years. (Filed 27th June, 1896.)

Claim. 1st. The combination with the cloth forming the body of the corset, bone pockets formed by strips applied to the outer surface of said cloth and stiffening strips or bones inserted therein, of a wide girdle consisting of a plurality of narrow strips applied circumferentially at the waist region of the corset between the said cloth com-

posing the body of the corset and the bones, at a distance apart less than the width of the strips, each of said strips consisting of fabric stitched to the cloth body, substantially as described. 2nd. The combination with the cloth forming the body of the corset, bone pockets formed of strips applied to the outer surface of the said cloth and stiffening strips or bones inserted therein, of a plurality of narrow strips applied circumferentially at the waist region of the corset between the said cloth composing the body of the corset and the bones, each of said strips consisting of cloth folded at its edges and secured to the cloth body by means of lines of stitching passing through its folded edges, substantially as described.

No. 53,420. Crushing Machine. (*Machine à broyer.*)

Fig 1.

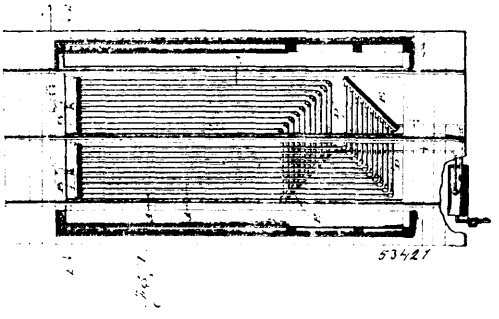


John E. Sutphen, Albany, New York, U.S.A., 9th September, 1896; 6 years. (Filed 26th May, 1896.)

Claim.—In a crushing and amalgamating machine, the combination with a closed, horizontally rotatable hollow cylinder having a true, even inner surface and a smaller cylinder or roller located within said hollow cylinder, having a true, even outer surface or periphery, held, by gravity alone, in continual even pressure against said hollow cylinder, substantially as described.

No. 53,421. System of Heating Kilns.

(*Système de chauffer les fours.*)



Albert T. Bemis, Indianapolis, Indiana, U.S.A., 9th September, 1896; 6 years. (Filed 9th May, 1896.)

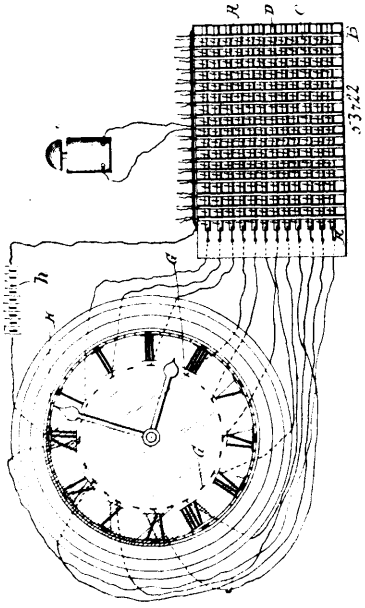
Claim. 1st. In a heating system of pipes, the combination with the main pipes of the system, of a header disposed at an angle to the direction of the main pipes, and expansion pipes connecting the main pipes with the header, substantially as described. 2nd. In a system of heating pipes for dry kilns or other buildings, the combination with the main pipes of the system, a header either in the same horizontal or vertical plane with the said pipes and disposed at an angle to the length of the pipes with the header, substantially as described. 3rd. In a pipe system for steam or hot water heating, a series of pipes, a header placed in the same horizontal plane with the said pipes and disposed at an angle thereto, and expansion pipes of a uniform length, connecting the main pipes with the header, substantially as shown and described. 4th. A header for heating pipes systems, the same being provided with pipe connec ions disposed at an angle of substantially forty-five degrees to the length of the header, substantially as described.

No. 53,422. Electric Annunciator.

(*Indicateur électrique.*)

Thomas J. Stansel, Hillsboro, Texas, U.S.A., 9th September, 1896; 6 years. (Filed 7th January, 1896.)

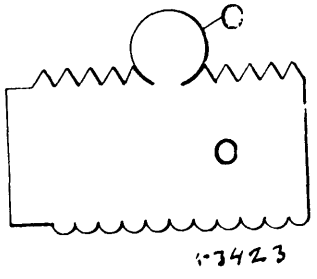
Claim.—A switch board consisting of a suitable base, a series of metallic strips embedded in the base, a second series of metallic strips arranged at right angles thereto, crank levers pivoted to the under strips at points between the intersecting upper strips, said crank levers making contact with the top strips, a bar on the upper edge of the switch board connected with the battery, suitable connections between a bell and the bar, connection between the bell and the upper metallic strips in combination with a clock having a



series of wires protruding on the face, and connecting with the lower metallic strips, the minute hand making electric connections when in contact with the wires on the face, a second series of wire protruding in a manner to make contact with the hour hand and connected with the battery, as and for the purpose described.

No. 53,423. Adhesive Capsule for Bottles, etc.

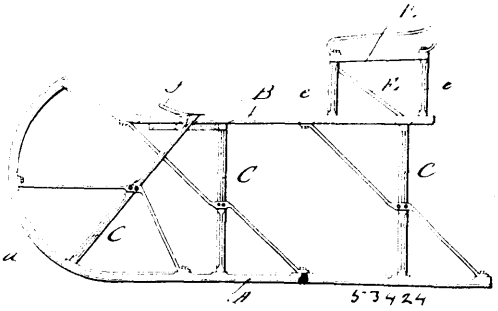
(*Capsule adhésive pour bouteilles, etc*)



Austin Bucknall, Duglas, Isle of Man, Great Britain, 9th September, 1896; 6 years. (Filed 18th December, 1895.)

Claim.—An adhesive capsule for bottles, jars and similar vessels, constructed of paper or other similar suitable material, and consisting essentially of an oblong part to surround the neck or upper part of the bottle or vessel, and a circular part attached to the oblong part and adapted to be folded over the cork or closing device, substantially as hereinbefore described and as illustrated by the accompanying drawings.

No. 53,424. Sleigh. (*Traîneau.*)

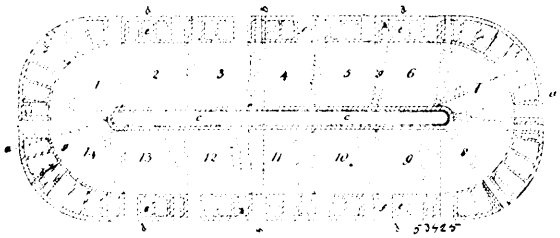


Amié Taillefer, Montreal, Quebec, Canada, 9th September, 1896; 6 years. (Filed 9th September, 1895.)

Claim.—1st. In a sleigh, the combination with the runners, and the side bars above them, of the diagonal struts arranged between

the said parts in front, and two similar frames arranged crosswise between the said parts behind the said struts, said frames each comprising a horizontal bar secured to the side bars, an arched bar secured to the runners, curved bars connecting the ends of the said horizontal and arched bars, and zig-zag braces interposed between the said bars, substantially as set forth. 2nd. In a sleigh, the combination with the runners, and the side bars above them, of the diagonal struts arranged between the said parts in front, two similar frames arranged cross-wise between said parts behind the said struts, said frames each comprising a horizontal bar secured to the side bars, an arched bar secured to the runners, curved bars connecting the ends of the said horizontal and arched bars, and zig-zag braces interposed between the said bars, two curved bars c, secured to the side bars, a seat supported by the bars c, and longitudinal braces F secured to the said two frames and provided with loops at their front ends secured to the said side bars, substantially as set forth.

No. 53,425. Flues for Kilns. (*Tuyau pour fours.*)

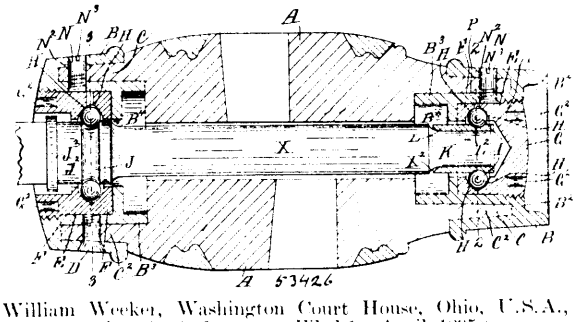


George Warren, Exmouth, England, 9th September, 1896; 6 years. (Filed 3rd June, 1895.)

Claim. 1st. The construction of a continuous kiln, substantially as described, with a central flue between the arches, so that the heat escaping from the cooling chambers may pass directly to the chambers in which green bricks or other goods are stacked ready for firing, substantially as and for the purpose described. 2nd. A continuous kiln constructed substantially as described, with a flue connected with the chimney stack in the centre between the arches at the upper part of the kiln to remove the steam generated by the green brick or other goods, and also for the purpose of obtaining an up draught when necessary and to better regulate the heat in the chambers, the improved kiln hereinbefore described and illustrated in the accompanying drawings.

No. 53,426. Ball Bearing Wheel.

(*Roue à coussinet anti-frottant.*)

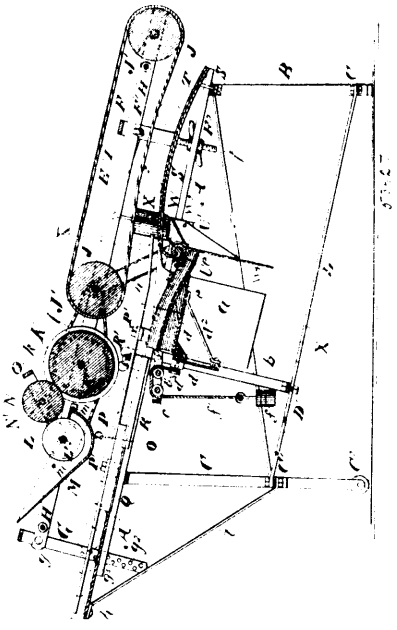


William Weeker, Washington Court House, Ohio, U.S.A., 9th September, 1896. 6 years. (Filed 1st April, 1895.)

Claim. 1st. The band B, having an opening N^2, and the rings F F, each ring having a recess and entering within said band, and the axle having a groove J, one of the rings having a groove P, and the bearing balls I, substantially as and for the purposes specified. 2nd. The band B, having an opening N^2, and the rings F, F, screwing into the band, each ring having a recess and entering within said band, and the axle having a groove J, one of the rings having a groove P, and the bearing balls I, substantially as and for the purposes specified. 3rd. In a hub, the band B, interiorly screw threaded, and the rings F, F, exteriorly screw threaded, one of said grooves having a groove P, substantially radial, the band B, having the opening N^2, provided with means for closing the same, the opening N^2, being located over the space between the rings when one is retracted from the other, the balls, I, and grooved axle or spindle, substantially as and for the purposes specified. 4th. In a hub, the band B, interiorly screw threaded, and the rings F, F, exteriorly screw threaded, one of said rings having a groove P, substantially radial, the band B, having the opening N^2, provided with the screw closing the same, the opening N^2, being located over the space between the rings when one is retracted from the other, and balls I, and grooved axle or spindle, substantially as and for the purposes specified. 5th. The combination of an axle, the band B, having the opening N^2, and the rings fitting within the band, one of said rings being provided with a radial groove therein of less depth than the radius of the ball which runs within the annular chamber formed by the rings and axle, substantially as and for the purposes specified. 6th. The combination of the band B, having opening N^2, axle balls, rings having annular recesses, one of said rings having a transverse groove or radial groove, the ring F, having a cap and enveloping the end of the axle, substantially as and for the purposes specified.

No. 53,427. Can Labelling Machine.

(*Machine à étiqueter les pots.*)

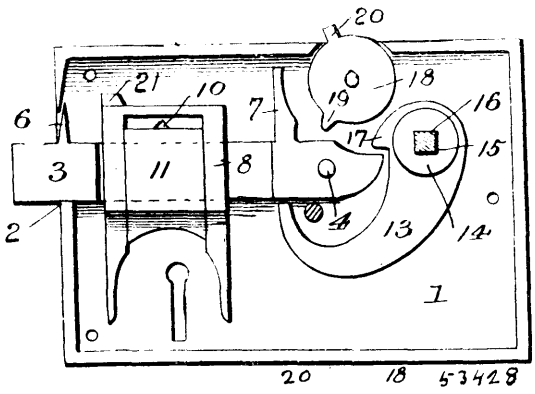


William G. Trethewey, Vancouver, and Fred. H. Godfrey, Victoria, both in British Columbia, Canada, 9th September, 1896; 6 years. (Filed 30th July, 1896.)

Claim. 1st. In a can labelling machine, the combination of an inclined bed; an adjustable can chute or run-way connected to the bed; a paste supplying wheel arranged over the said chute, made to paste and space cans on their way over the bed, substantially as specified. 2nd. In a machine for labelling cans, the combination of a bed; a frame E, adjustably arranged above the bed; a can engaging, pasting and spacing wheel mounted in the frame E; a paste supplying wheel mounted in the said frame E, arranged to turn in a paste receptacle and made to supply paste to a spreading roller which lies upon, and is turned by the can-engaging and spacing wheel, substantially as and for the purpose set forth. 3rd. In a machine for labelling cans, the combination of a bed; the frame E, supported and adjustably fixed above the bed by support brackets G and F; the said bracket F being threaded upon its lower dependences, and having wing-nuts F^2 to rigidly fix it at various elevations above the bed, and near its upper part lug bolts which support and grip the frame E, and by which means the said frame E is adjustably set lengthwise of the machine; the bracket G, pivotally connected to the frame E, and at its lower dependencies having a plurality of apertures to receive pins adapted to bear on the bed, substantially as specified. 4th. In a machine for labelling cans, the combination of an inclined bed with an adjustable can chute or runway, the rear part of the said chute or runway having a circular rise and declivity; a frame arranged above the bed as E; and belt wheels J, mounted in the said frame E, at the opposite sides of the circular rise and declivity in the bed; and a belt I taking round the said wheels J, substantially as specified. 5th. In a machine for labelling cans, the combination of a bed having a label opening or passage a means for moving labels up through said opening or passage; label guides adjustably arranged on opposite sides of said opening or passage; a roller U, arranged in the opening and made to project across the end of said opening; a paste receptacle or fountain W arranged, with an opening to fit and bear against the periphery of the said roller U and means for supplying paste thereto; a scraper lying across the label opening parallel to and in front of the roller U, all substantially as specified. 6th. In a can labelling machine the combination of a bed having a passage for labels; label guides adjustably arranged on opposite sides of the said passage, resilient hooked pins adjustably fixed on the forward part of the said label guides and similar pins rigidly fixed at a declivity to the forward pins and made to engage the rear opposite edges of the labels, by their lateral projection through slots in the said guides, and having can-rum supports to the rear of label guides, and convexed cushioned plate S, acting in conjunction with the said can-rim supports of the label guides substantially as specified. 7th. In

a machine for applying labels to cans, the combination of a bed having a can runway or chute provided with an adjustable can-rim supporting portion, a label opening in the rare of the can-rim supporting portion, a vertical guide frame b, adjustably fixed beneath the bed, a sliding frame d, carrying a horizontal or flat portion d^1; a label block upon said flat portion provided with a curved and yielding spring at one end; and means for moving the sliding frame d, upwardly on the vertical guide frame b, substantially as specified. 8th. In a can labelling machine the combination of a bed with an opening or passage for labels, a vertical guide frame at the front end of said opening; a sliding frame carrying a label support mounted in said guide frame, shoulders on said sliding frame made to bear against the upper front sides and the lower rear sides of the vertical guide frame b, and means for moving the label support upwards; of the paste roller U arranged across the opposite end of the label space, a scraper placed parallel to and in front of the said roller and a depending plate W^4, beneath the roller, a label guide depending and placed at right angles to the plate W^4, and a short depending label guide adjustably fixed parallel to the first mentioned label guide and on the opposite side of the label opening or passage, and resilient pins projecting laterally into the label passage and made to engage the topmost label, all substantially for the purposes specified. 9th. In a machine for labeling cans, the combination of an inclined bed, having its rear portion of convex form, a small pasting roller mounted beneath the front part of the convexed or raised portion, and suitable means for supplying paste thereto; a passage for labels in front of the said roller, and means for supplying labels thereto; of an adjustable frame arranged above the bed; belt wheels J, mounted on shafts therein, and a belt I, taking round said wheels, a small pulley mounted on the end of the front shaft J^1, a small pulley mounted on the shaft U^2; and an elastic belt u, taking round said pulley; of a small sprocket wheel mounted upon the front shaft J^1, a large sprocket wheel mounted on the shaft K^1; and a similar sprocket wheel mounted upon the shaft L^1; and a sprocket belt made to take around the said sprocket wheels, all substantially as specified. 10th. In a can labelling machine, the combination of a bed provided with a can chute or run-way adjustably fixed thereto; an adjustable frame mounted above the bed; a paste wheel mounted in the said frame; a paste receptacle designed to receive the lower periphery of the said wheel, and made to yieldingly bear against the rear of the said wheel by rods passing through and to the opposite sides of the frame E; flanges designed to bear against the sides of the paste wheel; a slide valve or opening, m^2, designed to regulate the flow of paste; of a paste spreading roller N, journalled on a shaft N^1, mounted in a swinging bracket O, with its periphery adjacent to the paste supply wheel L, and lying upon the cushioned, can-pasting and spacing wheel K, all substantially as and for the purpose specified. 11th. In a machine for applying labels to cans, the combination of a bed; a can run way or chute adjustably fixed thereto; lateral depending flanges R, at opposite sides of said chute adjustably fixed thereto by thumb nuts R^1, in slots R^2; of an adjustable frame arranged above the bed; a wheel K, having a bevel flange k, mounted in the said frame, and means for transmitting slow motion to the said wheel, substantially as specified. 12th. In a can labelling machine the combination of a bed having longitudinal slots therein; a bar D, rigidly fixed and lying at a distance below and parallel to the bed, and having a slot D^1; of a vertical guide frame b, adjustably fastened by bolts passing through apertures in the said frame b and the slots A^2, of the bed, and slot D^1 of the parallel bar D, substantially as specified.

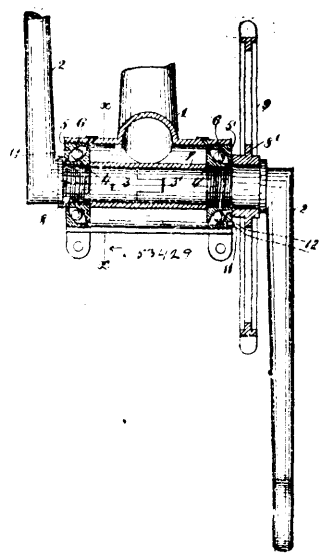
No. 53,428. Door Lock. (*Serrure de portes.*)



Eugene Silas Sutton, and James Hagan, both of Snotromish, Washington, U.S.A., 9th September, 1896; 6 years. (Filed 8th August, 1896.)

Claim.—1st. In a lock, the combination with a casing having a lug on its inner side, a bolt pivoted therein and provided with notches in one of its edges, a yoke mounted to slide longitudinally on said bolt, a block mounted to slide in said yoke, and provided with a tooth to engage said notches, substantially as set forth. 2nd. In a lock, the combination with a casing, a pivoted bolt provided with an arm, a disc pivoted in said casing, and provided with a stud adapted to be moved against said arm to lock the bolt against vertical movement, substantially as set forth. 3rd. In a lock, the combination with a casing having a slot in one of its edges for the play of the bolt, a bolt pivoted in said casing and projecting through said slot, said bolt having a fixed lug, whereby the slot is closed to prevent the extrance of duct, etc., substantially as set forth. 4th. A lock comprising a casing having a lug on its inner side, a bolt pivoted in said casing and having notches formed in its upper edge, an upwardly projecting arm secured to said bolt, an actuating lever pivoted in said casing, and adapted to be operated by the door knob shank, said lever having a lower curved end adapted to engage the bolt at one side of its pivot to raise the same, and provided at its upper end with a lug adapted to engage the bolt at the other side of its pivot, whereby the bolt may be actuated when the shank is turned in either direction, a disc pivoted in said casing and provided with a lug to engage the upwardly projecting arm, a yoke frame having a longitudinal sliding engagement with the bolt, and a vertical sliding block mounted in said yoke frame and provided with a tooth to engage the notches in the bolt, substantially as set forth.

No. 53,429. Crank. (*Bielle.*)



Robert H. Harris, assignee of William E. Gard, both of New York, State of New York, U.S.A., 9th September, 1896; 6 years. (Filed 7th August, 1896.)

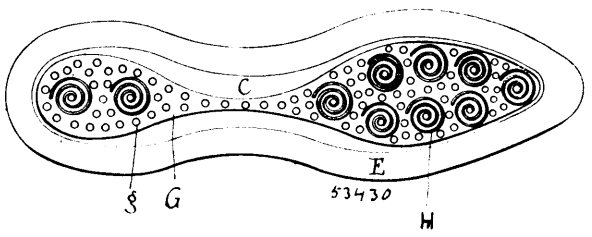
Claim. 1st. In a crank, the combination, with two crank arms and two crank shaft sections secured each to one of said crank arms and having ends adapted to interlock, of independent bearing cones mounted upon said crank sections and facing toward the crank arms, other bearing cones suitably supported and adapted to engage with said first named cones and facing toward the centre of the crank shaft bearing balls inclosed between said cones and collars or shoulders upon said shaft sections, outside of but in close proximity to and adapted to engage with said last named cones, whereby the bearing balls are at all times retained between the bearing cones, substantially as described. 2nd. In a crank, the combination with two crank arms and two crank shaft sections secured each to one of said crank arms and having ends adapted to interlock, of independent bearings cones mounted upon said crank sections and facing toward the crank arms, other bearing cones, screwing into the crank bracket and adapted to engage with said first named cones, and facing toward the centre of the crank shaft, and collars or shoulders upon said shaft sections, outside of but in close proximity to and adapted to engage with said last named bearing cones whereby when said cones are screwed into or out of the crank bracket the shaft sections are drawn together or pulled apart, substantially as described.

No. 53,430. Shoe. (*Chaussure.*)

John Ernest Kennedy and Charles Ellsworth Slater, both of Montreal, Quebec, Canada, 10th September, 1896; 6 years. (Filed 28th August, 1896.)

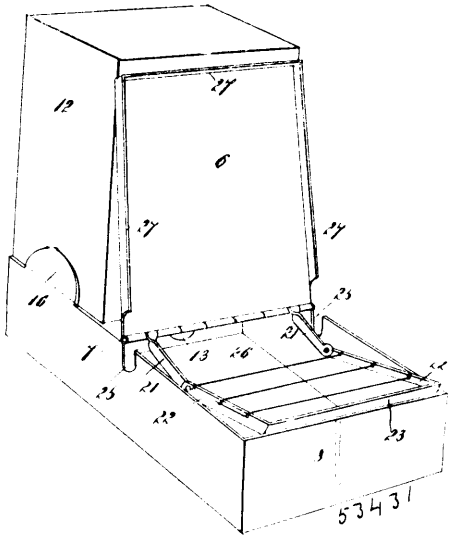
Claim. 1st. A shoe provided with an air chamber between its insole and outer sole, substantially as set forth. 2nd. A shoe provided with an air chamber between its insole and outer sole, and springs arranged between the insole and outer sole in the said chamber, substantially as set forth. 3rd. A shoe provided with an air chamber between its insole and outer sole, springs arranged in

the said chamber and supporting the insole, and a metallic plate interposed between the said springs and insole, substantially as set



forth. 4th. A shoe provided with a perforated insole, an air chamber between its insole and outer sole, springs arranged in the said air chamber, and a perforated plate interposed between the said springs and insole, substantially as set forth.

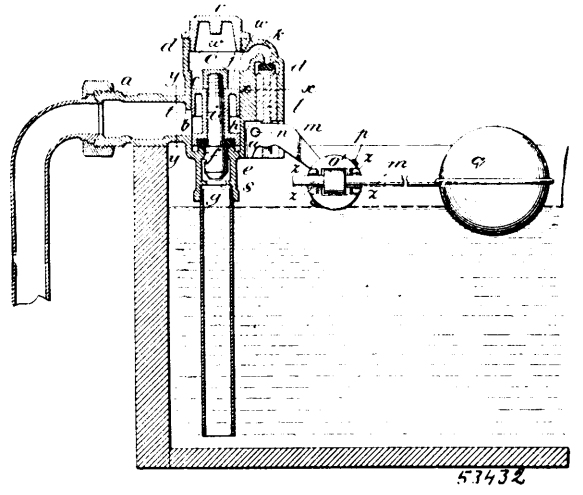
No. 53,431. Mucilage Bottle. (*Bouteille de mucilage.*)



Christian Aleth Biorn and John M. Jones, both of Piermont, New York, U.S.A., 10th September, 1896; 6 years. (Filed 24th

Claim.—1st. In a mucilage stand or receptacle, the combination with a suitable box or casing, having a cover which is hinged thereto, centrally thereof, of a mucilage reservoir or vessel mounted on the rear end of said box or casing and provided with a neck which projects downwardly thereinto, substantially as shown and described. 2nd. In a mucilage stand or receptacle, the combination with a suitable box or casing, having a cover which is hinged thereto, centrally thereof, of a mucilage reservoir or vessel mounted on the rear end of said box or casing and provided with a neck which projects downwardly thereinto, said box or casing being provided at its front end with a downwardly and backwardly inclined plate or wall, and said hinged cover being provided with downwardly directed arms which are pivotally connected with a brush-cleaning frame which when said hinged cover is closed rests at the bottom of the box or receptacle and when said cover is raised it is projected forwardly and upwardly over said partition plate or wall, substantially as shown and described. 3rd. In a mucilage stand or receptacle, the combination with a suitable box or casing, having a cover which is hinged thereto, centrally thereof, of a mucilage reservoir or vessel mounted on the rear end of said box or casing and provided with a neck which projects downwardly thereinto, said box or casing being provided at its front end with a downwardly and backwardly inclined plate or wall, and said hinged cover being provided with downwardly directed arms which are pivotally connected with the brush-cleaning frame which when said hinged cover is closed rests at the bottom of the box or receptacle and when said cover is raised is projected forwardly and upwardly over said partition plate or wall, and said brush-cleaning frame being provided with transverse wires by which the surplus mucilage is removed from the brush, and sides of the box or casing in front of the hinge of the cover being provided with notches or recesses which are adapted to receive the handle of the brush, substantially as shown and described. 4th. In a mucilage stand or receptacle, the combination with a suitable box or casing, having a cover which is hinged thereto, centrally thereof, of a mucilage reservoir or vessel mounted on the rear end of said box or casing and provided with a neck which projects downwardly thereinto, said box or casing being provided beneath the mucilage vessel or receptacle with a vertical partion by which a chamber is formed which is open at the top, substantially as shown and described.

No. 53,432. Valve. (*Soupape.*)



Frank Wilber Foster, Boston, Massachusetts, U.S.A., 10th September, 1896; 6 years. (Filed 28th October, 1895.)

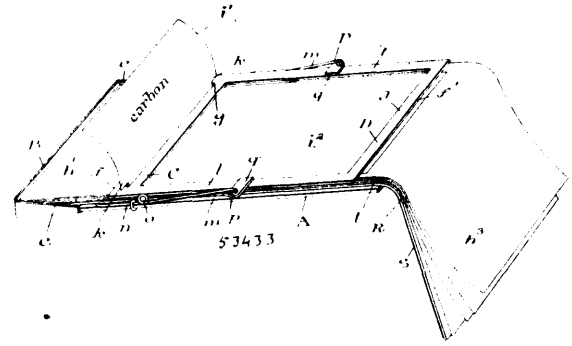
Claim.—1st. In a valve device, the combination of a valve chamber provided with a discharge port, an inlet pipe leading to the valve chamber, a valve piston fitting the valve chamber closely, a valve stem fitting the discharge port closely, and operating with the piston so as to open and close the discharge port, an auxiliary outlet leading from the valve chamber above the piston, and an auxiliary controlling valve therefor, substantially as and for the purpose set forth. 2nd. In a valve device, the combination of a valve chamber provided with a discharge port, an inlet pipe leading to the valve chamber, a valve piston fitting the valve chamber closely, a valve disc, a valve stem which fits the discharge port closely and operates with the piston and disc so as to move into and out of its close fit in the discharge port in such a way as to almost close the discharge port or to make a free passage through it, and auxiliary outlet leading from the valve chamber above the piston, and an auxiliary controlling valve therefor, the piston disc and stem being so arranged that as the valve disc moves to its seat the valve stem moves into close fit with the discharge port so as to form a water cushion between the discharge port and the inlet port, substantially as set forth. 3rd. In a valve device, the combination of a valve chamber provided with a discharge port, a valve seat surrounding the discharge port, an inlet pipe leading to the valve chamber above the discharge port, a valve piston and valve disc fitting the valve chamber closely, a valve stem which fits the discharge port closely and operates with the piston and disc so as to move into and out of its close fit in the outlet port, the valve piston, valve disc and valve stem being so arranged that as the valve disc moves to its seat the inlet pipe is obstructed and the valve stem thereafter moves into close fit with the discharge port so as to form a water cushion between the discharge port and the valve disc, substantially as set forth. 4th. In a valve device, the combination of a valve chamber provided with a discharge port, a valve seat surrounding the discharge port, an inlet pipe leading to the valve chamber above the discharge port, a valve piston and valve disc fitting the valve chamber closely, a valve stem which fits the discharge port closely and operates with the piston and disc so as to move into and out of its close fit in the outlet port in such a way as to make a free passage through and almost close the outlet port, an auxiliary outlet leading from the valve chamber above the piston and an auxiliary controlling valve therefor, the valve piston, valve disc and valve stem being so arranged that as the valve disc moves to its seat the inlet pipe is obstructed and the valve stem thereafter moves into close fit with the discharge port so as to form a water cushion between the discharge port and the inlet port, substantially as set forth. 5th. In a valve device, the combination of a valve chamber provided with a discharge port, a valve seat surrounding the discharge port, an inlet pipe leading to the valve chamber above the discharge port, a valve piston and valve disc fitting the valve chamber closely, a valve stem which fits the discharge port closely and operates with the piston and disc so as to move into and out of its close fit in the outlet port in such a way as to make a free passage through and almost close the outlet port, an auxiliary outlet leading from the valve chamber above the piston and an auxiliary controlling valve therefor, the under side of the valve disc when the valve is closed, being exposed to the upward pressure of the water which tends to open the valve, and being opposed by the downward pressure of the water above the piston, substantially as set forth. 6th. In a valve device, the combination of a valve chamber provided with a discharge port, an inlet pipe leading to the valve chamber above the discharge port, a valve piston and valve disc fitting the valve chamber closely, a valve stem which fits the discharge port closely and operates with the piston and disc so as to move into and out of its close fit in the

outlet port in such a way as to make a free passage through and almost close the outlet port, an auxiliary outlet leading from the valve chamber above the piston and an auxiliary controlling valve therefor, the valve piston, valve disc and valve stem being so arranged that as the valve disc moves to its seat the inlet pipe is obstructed and the valve stem thereafter moves into close fit with the discharge port so as to form a water cushion between the discharge port and the inlet pipe, the under side of the valve disc, when the valve is closed, being exposed to the upward pressure of the water which tends to open the valve, and being opposed by the downward pressure of the water above the piston, substantially as set forth. 7th. In a valve device, the combination of a valve chamber provided with a discharge port, a valve seat surrounding the discharge port, an inlet pipe leading to the valve chamber above the discharge port, large at the inner end and gradually diminishing in size toward the outlet end of the valve, a valve piston and valve disc fitting the valve chamber closely, a valve stem which fits the discharge port closely and operates with the piston and disc so as to move into and out of its close fit in the outlet port in such a way as to make a free passage through and almost close the outlet port, an auxiliary outlet leading from the valve chamber above the piston and an auxiliary controlling valve therefor, the valve piston, valve disc and valve stem being so arranged that as the valve disc moves to its seat the inlet pipe is obstructed and the valve stem thereafter moves into close fit with the discharge port so as to form a water cushion between the discharge port and the inlet pipe, substantially as set forth. 8th. In a valve device, the combination of a valve chamber provided with a valve seat surrounding the discharge port, an inlet pipe communicating with the valve chamber at the side and above the valve seat and provided with one or more vertical partitions, a valve disc fitting the valve chamber closely, a valve stem fitting the discharge port closely in such a way as to almost close the discharge port and adapted to move out of its close fit when the valve is open in such a way as to make a free passage through the discharge port, a discharge pipe leading from the discharge port and provided with a contracted opening of less area than the discharge port, the valve disc and valve stem being so arranged that as the valve disc moves to its seat the inlet pipe is obstructed and thereafter the valve stem comes into close fit with the discharge port so as to form a water cushion between the discharge port and inlet pipe, substantially as set forth. 9th. In a valve device, the combination of an inlet pipe, a valve chamber having a recess W at its upper end, a valve seat surrounding the discharge port, a valve piston fitting the inner part of the valve chamber closely and adapted to extend into the recess when the valve is open, an auxiliary outlet leading from the valve chamber above the valve piston, and an auxiliary valve to control the auxiliary outlet, substantially as set forth. 10th. In a valve device, the combination of an inlet pipe, a valve chamber having a recess W at its upper end, a valve seat surrounding the discharge port, a valve piston fitting the inner part of the valve chamber closely and adapted to extend into the recess, when the valve is open, an auxiliary outlet leading from the valve chamber above the valve piston, an auxiliary valve to control the auxiliary outlet, a valve disc fitting the outer end of the valve chamber closely and a valve stem supporting the valve disc and a valve piston, and adapted to fit the discharge port closely, substantially as set forth. 11th. In a valve device, the combination of an inlet pipe, a valve chamber, and an inlet opening between the two, divided by one or more partitions running in a direction parallel with the axis of the valve disc, whereby the inflowing current is diverted and prevented from striking directly against the valve, substantially as set forth. 12th. In a valve device, the combination of an inlet pipe, a valve chamber, inlet openings connecting the two, large at their inner ends and gradually diminishing in size toward the discharge end, a piston fitting the inner end of the valve chamber closely, an auxiliary outlet connected with the valve chamber above the valve piston, an auxiliary valve controling said outlet, a valve lever connected with the auxiliary valve, consisting of two parts provided with toothed or notched discs adapted to fit into each other and suitable means for fastening the discs together in any fixed position, said valve lever being pivoted at one end, a float attached to the valve lever, a valve seat surrounding the discharge port of the valve, a valve disc fitting the outer end of the valve chamber closely, a valve stem supporting the valve piston and valve disc and adapted at its lower end to fit the discharge port closely, and an annular ring in the outlet pipe beyond the discharge port, having an opening less in area than the area of the discharge port, forming a chamber between the discharge port and the ring, all substantially as set forth.

No. 53,433. Manifolding Tablet. (*Tablette Multiple.*)

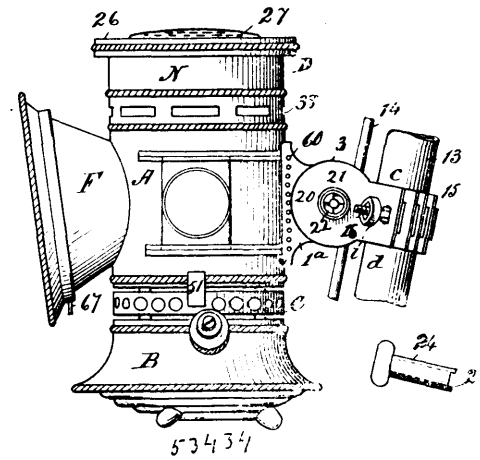
William Assheton, David Stewart and Charles Jerome Carroll, all of Baltimore, Maryland, U.S.A., 10th September, 1896; 6 years (*Filed* 28th July, 1896.)

Claim.—1st. In a manifolding tablet, the combination of a back plate provided with a register or stop to determine the position of a paper pad resting on said plate, a sizer or folder to rest on the topmost slip of a paper pad and connected yieldingly with said back plate, and carbon paper, which has two sections, one of which extends under the sizer or folder, and the other loose like a flap. 2nd. In a manifolding table, the combination of a back plate provided with a register or stop to determine the position of a paper pad resting on said plate, a sizer or folder connected with said back plate, and having its extreme upper and lower edges extending in a



direction crosswise of the back plate, said edges serving for the projecting ends of a paper slip to be folded, one end downward and the other end upward, a carbon paper holder, and carbon paper which has two writing sections, one of which folds over the other, and one section provided at opposite edges with a notch or shoulder which engage the said holder and thereby retains the carbon paper in position. 3rd. In a manifolding tablet, the combination of a back plate provided with a register or stop to determine the position of a paper pad resting on said plate, a frame having two extreme parallel edges extending in a direction crosswise of the back plate, said edges serving as folders over which the paper slips are to be turned, a slot extending parallel with said folding edges, and carbon paper inserted in said slot and provided at opposite edges with a notch or shoulder which engages the plate at the ends of the slot. 4th. In a manifold tablet, the combination of a back plate provided with a register or stop to determine the position of a paper pad resting on said plate, a sizer or folder to rest on the topmost slip of a paper pad, spring arms connecting the said sizer with the back plate, and carbon paper having two writing sections, one of which is held flat by the said sizer or, folder and the other section folds over said flat section.

No. 53,434. Bicycle Lamp. (*Lampe de bicycle.*)



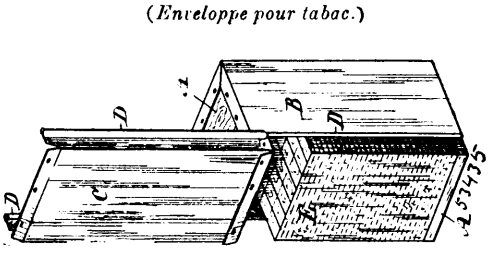
Frank Rhind and The Bridgeport Brass Company, both of Bridgeport, Connecticut, U.S.A., 10th September, 1896; 6 years. (Filed 21st May, 1896.)

Claim.—1st. The combination with a lamp body having an opening, of a drum having wings which are passed through said opening and are riveted to the inner side of the body, substantially as described and shown. 2nd. The combination with a lamp body having an opening, of a drum having wings which are passed through said opening and are riveted to the inner side of the body, the ends of said wing being shaped to form ways to hold the back reflector, substantially as described and shown. 3rd. The combination with a lamp body having an opening, of a drum having wings which are passed through said opening and are riveted to the inner side of the body and side plates which are adapted to turn relatively to the drum so that the lamp may be adjusted in the vertical plane, substantially as described and shown. 4th. The combination with a bicycle lamp provided with a drum, of side plates lying on opposite

sides of the drum, a bolt for clamping the side plates to the drum which will permit the drum to oscillate when the pressure is relieved, a flexible strap attached to one of the side plates and adapted to inclose a part of a bicycle, and a lock for adjustably securing said strap to the other side plate, said strap consisting of separate sections one or more of which can be disconnected for varying the length of the strap, substantially as described and shown. 5th. The combination with a bicycle lamp provided with a drum, of side plates lying on opposite sides of said drum, a flexible strap adapted to inclose a part of a bicycle, a bolt for pivotally securing the side plates to the drum and for locking the parts in position after the lamp has been adjusted in the vertical plane, and a bolt for locking the flexible strap to the side plates so as to retain the lamp in position, said strap consisting of separate sections, one or more of which can be disconnected to vary the length of the strap, substantially as described and shown. 6th. The combination with a bicycle lamp provided with a drum having a recess *a* to receive the brake rod of a bicycle, of side plates lying on opposite sides of said drum, a flexible strap adapted to inclose a part of a bicycle, a bolt for pivotally securing the side plates to the drum and for locking the parts in position after the lamp has been adjusted in the vertical plane and a lock for securing the flexible strap to the side plates so as to retain the lamp in position, substantially as described and shown. 7th. The combination with a bicycle lamp having a drum, said plates lying on opposite sides thereof, and a bo t for pivotally securing the side plates to the drum and for locking the drum in position after adjustment, of a flexible strap adapted to inclose a part of a bicycle, one end of said strap being connected to one of the side plates and the other provided with a threaded rod 16 and a nut for securing the threaded rod to the other side plate, said strap consisting of separable sections one or more of wh'ch can be disconnected to vary the length of the strap, substantially as described and shown. 8th. The combination with a bicycle lamp having a drum and side plates pivotally secured to said drum, of a bolt for locking the side plates to the drum and a strap for securing the side plates to a bicycle, substantially as described and shown. 9th. The combination with a bicycle lamp, plates pivotally connected thereto, and a bolt for locking the plates after the lamp has been adjusted in the vertical plane, of a flexible strap adapted to inclose a part of a bicycle, the ends of said strap being secured respectively to the plates, substantially as described and shown. 10th. A wind guard for bicycle lamps comprising an inner part having opening 29 to permit free passage of air from the body of the lamp, and a non-perforated top plate and an outer part having a top plate provided with perforations 27 to permit passage of air in either direction, openings 36 to permit passage of air outward, openings 38 to permit entrance of outside air and a ring 37 which covers the openings in the inner part leaving an opening 39 between said inner part and said outer part for free passage of the current of air which enters at openings 38 and passes out at openings 36, substantially as described and shown. 11th. In a bicycle lamp the combination with a body, of a removable outer part N having openings 36 to permit free escape of the products of combustion, openings 38 to permit free entrance of outside air and a ring 37 and an independently removable inner part O having openings 29 to permit free escape of the products of combustion and a non-perforated top plate, said ring 37 covering the openings in the inner part and leaving an opening 39 between the inner part and the outer part, substantially as described and shown. 12th. In a bicycle lamp the combination with a wick tube whose sides at the top are curved so as to expose more wick at the ends than at the centre, of an air deflector-acting as and for the purpose set forth whose sides at the top are straight so as to form a guide in trimming whereby a flame higher at the ends than at the centre is produced from a wick cut straight across. 13th. In a bicycle lamp the combination with a wick tube whose sides at the top are curved so as to expose more wick at the ends than at the centre, of an air deflector acting as and for the purpose set forth whose sides at the top are straight so as to form a guide in trimming and whose ends are lower than the sides whereby a flame higher at the ends than at the centre is produced from a wick cut straight across. 14th. The combination with a body, a reservoir, an open connection between said body and reservoir and a wick tube, of a burner plate having perforations through which the air may pass freely to the body and below said burner plate a non-perforated air deflecting plate which fits the wick tube closely, an opening or openings being provided at the edge of the air deflecting plate so that air entering the body from below must first pass the air deflecting plate then inward and upward through the burner plate whereby puffs and currents of air in the body are prevented, substantially as described and shown. 15th. The combination with the burner plate having a lug 54 and an opening 56, of a body having an opening 55 to receive said lug and an opening 56 and a spring actuated latch extending across under the burner plate and provided with an inwardly turned end 53 which is adapted to pass through opening 57 in the body and engage the opening in the burner plate whereby the parts are locked together, substantially as described and shown. 16th. The combination with open connection C and a burner plate provided with a lug 54 and an opening 56, of a body having an opening 55 to receive said lug and an opening 57 which registers with opening 56 and a sliding spring actuated latch having bearings in the open connection and provided at one end with a finger piece and at the other end with an upwardly and inwardly turned end which is adapted to pass through the opening in the body and engage the opening in the burner plate, substantially as described for the purpose set forth. 17th. The combination with a body having two openings 59 at the back thereof, one of said openings being above and the other below the burner, of drum 1 which covers said openings and the sides of which are provided with openings 60 for the entrance of air whereby currents of air entering the drum are broken up and are only permitted to enter the combustion chamber from the rear and above and below the flame, the currents being thereby equalized and flickering of the flame prevented, substantially as described and shown. 18th. In a bicycle lamp, the combination with a no-chimney burner, a body, and a cone reflector, of a back reflector having secured thereto a transparent shield with parallel faces to protect the back reflector from smoke and heat, substantially as described and shown. 19th. In a bicycle lamp, the combination with a no-chimney burner, a body and a cone reflector, of a back reflector having secured thereto a protecting concave convex glass shield, substantially as described and shown. 20th. In a bicycle lamp, the combination with a no-chimney burner, a body and a cone reflector, having a transparent shield with parallel faces on its inner end, of a back reflector having secured thereto a transparent shield also having parallel faces to protect it from heat and smoke, substantially as described and shown. 21st. In a bicycle lamp, the combination with a no-chimney burner, a body and a cone reflector having a protecting concave convex glass shield secured to its inner end, of a back reflector, having secured thereto a transparent shield to protect it from heat and smoke, substantially as described and shown. 22nd. In a bicycle lamp, the combination with a no-chimney burner, a body and a cone, of a transparent shield having parallel faces secured to the inner end of the cone to protect it from smoke and heat, substantially as described and shown. 23rd. In a bicycle lamp, the combination with a no-chimney burner, a body and a cone reflector having secured to its inner end a protecting concave convex glass shield, of a back reflector having secured thereto a protecting concave convex glass shield, substantially as described and shown. 24th. In a bicycle lamp, the combination with a no-chimney burner, a body and a cone, of a transparent concave convex shield secured to the inner end of the cone to protect it from smoke and heat, substantially as described and shown. 25th. In a bicycle lamp the combination with a fixed part having a shoulder and in front of said shoulder an inclined socket and in the plane of the socket an opening, of a removable part adapted to rest against said shoulder and a ring having outwardly turned ends adapted to pass through said opening and lying at a distance apart so that when said ends are pressed toward each other the ring will be contracted and the removable part may be taken out, and when the ring is in place it will be forced by the incline against the removable part and prevent rattling, substantially as described and shown. 26th. The combination with a fixed part of a lamp having a shoulder and in front of said shoulder an inclined socket and in the plane of the socket an opening, of a removable part adapted to rest against the shoulder and a ring having outwardly turned ends adapted to pass through said opening and lying at a distance apart said ends of the ring being bent backward from each other so that said ends form an acute angle to the body of the ring, substantially as described for the purpose set forth. 27th. The combination with a front reflector having an opening 64, a socket or sockets and a shoulder or shoulders back of the socket or sockets, of a glass adapted to rest against the shoulder or shoulders and a spring ring having outwardly turned ends passed through said opening and lying at a distance apart, said rings being held in the socket or sockets outside of the glass solely by its elasticity and by the outwardly turned ends in the opening so that when said ends are pressed toward each other the ring will be contracted and both ring and glass may be tilted forward and removed, substantially as described and shown.

No. 53,435. Tobacco Package or Caddy.

(*Enveloppe pour tabac.*)

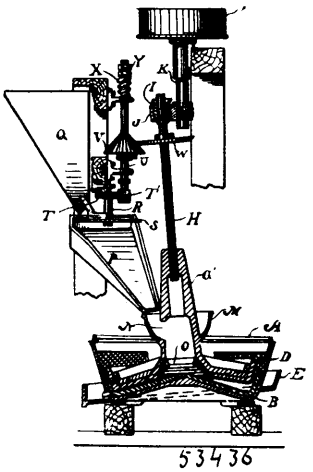


George Learmouth, Fitzroy Harbour, Ontario; Silas W. Bradley, and Alfred Meach, both of Aylmer, Quebec, all in Canada, 10th September, 1896; 6 years. (Filed 6th August, 1896.)

Claim.—1st. A tobacco package or caddy having a sheet metal body B, C, divided longitudinally by sliding joints D, and one portion removable from the attached ends A, A, as and for the purpose set forth. 2nd. A package of tobacco comprising a caddy composed of two sheet metal body portions B, and C, joined longitudinally by slip joints D, D, and attached to ends A, A, as and for the purpose set forth.

No. 53,436. Rock Crushing and Grinding Apparatus.

(*Machine à broyer la roche.*)

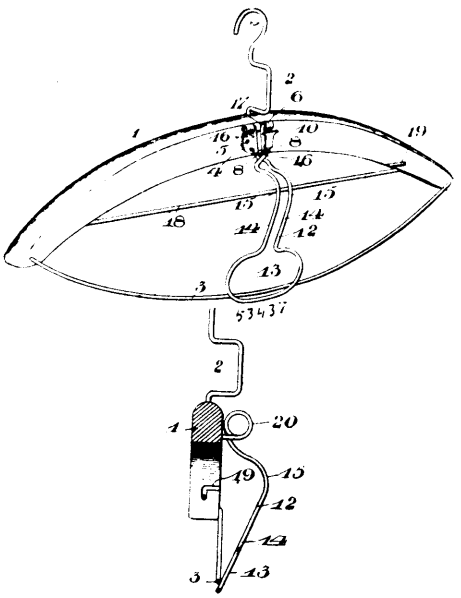


The Kinkead Mill Company, San Francisco, California, assignee of James H. Kinkead, Virginia city, Nevada, both in the U.S.A., 10th September, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—1st. An improved crushing and grinding apparatus consisting of a pan having a conical bottom declining outwardly from the centre and diverging sides extending upwardly from the periphery of the bottom, a pan shaped muller having a conical bottom and diverging sides extending upwardly from its pheriphery, the bottom having a concavity slightly less in depth than the corresponding convexity of the bottom of the pan, a hollow cone extending upwardly from the centre of the muller having an opening or openings in the side, an annular bowl surrounding the cone below the openings adapted to receive the ore and deliver it through the openings into the interior of the cone, a preliminary corrugated crusher fixed within the lower part of the cone, a shaft extending upwardly from the top of the cone and a horizontally rotating crank with which the upper end of the shaft is connected whereby a gyratory motion of the muller and crusher is produced. 2nd. A crushing and grinding apparatus consisting of a pan having a conical bottom inclining outwardly from the centre, diverging, upwardly extending sides, a correspondingly shaped muller, the concavity of the bottom being slightly less in depth than the corresponding convexity of the pan bottom, a hollow cone extending upwardly from the centre of the muller having a die fixed within it surrounding the centre of the conical pan bottom and having corrugations or steps formed upon its lower surface, openings in the side of the cone above the corrugated ring, a bowl surrounding the cone to receive the material to be crushed and deliver it through the openings to the crushing surfaces, a shaft extending upward from the top of the cone, a vertical shaft and means for rotating it situated above the pan and in line with its vertical axis, a crank fixed upon said shaft, a universal joint connection between the crank and the top of the muller shaft whereby a gyratory motion of the muller is produced by the rotation of the driving shaft, a disc fixed upon the muller shaft and a feed mechanism with which the disc makes contact at each revolution of the crank. 3rd. The combination with a pan and a gyratory muller and muller shaft of a disc fixed to the gyrating muller shaft, a cone fixed to a vertical shaft so that the disc forms contact with and turns it at each contact, a hopper adapted to receive the ore and having a discharge opening at the bottom, a disc fixed to a rotary vertical shaft so that its periphery stands beneath the discharge opening of the hopper, and connections between it and the cone carrying shaft whereby the disc is advanced with each movement of the cone shaft, and a portion of ore is delivered from the hopper to the crushing apparatus. 4th. A crusher and grinder consisting of a stationary pan, a gyrating muller with a shaft and a crank by which it is gyrated over the bottom of the pan, an ore receiving hopper fixed near the gyrating shaft, a horizontal disc fixed to a vertical shaft with its pheriphery beneath the discharge opening of the hopper, a gear wheel fixed upon the disc shaft, a second vertical shaft journaled parallel with the disc shaft having a pinion upon it engaging with the gear wheel, a cone fixed to this shaft and a disc fixed to the gyrating muller shaft so as to form contact with and rotate the cone at each gyration of the muller shaft, adjusting nuts or collars upon the cone shaft, and a spring whereby the cone shaft is allowed to yield in the direction of its length to relieve the contact between the cone and the disc.

No. 53,437. Hanger for Coats, etc.

(*Crochet pour pantalons, habits, etc.*)

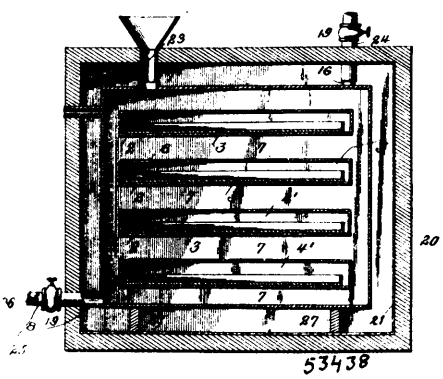


Harvey Jacob Flegal, Clearfield, Pennsylvania, U.S.A., 10th September, 1896; 6 years. (Filed 8th August, 1896.)

Claim.—1st. The combination with the curved hanger having a suitable suspension hook, of a rod secured to one end of the hanger and having its free end detachably secured in a slot in the other end, a bracket secured to the side of the said hanger, and a clamp pivotally hung in the said bracket, substantially as and for the purpose set forth. 2nd. The combination with the curved hanger having a suitable suspension hook, of a rod secured to one end of the hanger and having its free end detachably secured in a slot in the other end, a bracket secured to the side of the said hanger, approximately at its centre, the said bracket being formed with a curved tongue provided with notches, and a clamp consisting of a single wire bent into an enlarged lower part and having spring arms directed therefrom, the ends of said clamp being pivotaliy hung in the said bracket, substantially as and for the purpose set forth. 3rd. The combination with the curved hanger having a suitable suspension hook, of a rod connecting its outer ends, a rod secured to one end of the hanger and having its free end detachably secured in a slot in the other end, a bracket secured to the side of the said hanger, approximately at its centre, the said bracket being formed with a curved tongue provided with notches, and a clamp consisting of a single wire bent into an enlarged lower part and having spring arms directed therefrom, the ends of said clamp being pivotally hung in the said bracket, substantially as and for the purpose set forth. 4th. The combination with the curved hanger having a suitable suspension hook, of a rod connecting its outer ends, a rod secured to one end of the hanger and having its free end detachably secured in a slot in the other end, and a spring clamp secured to the hanger, substantially as and for the purpose set forth.

No. 53,438. Apparatus for Thawing Explosives.

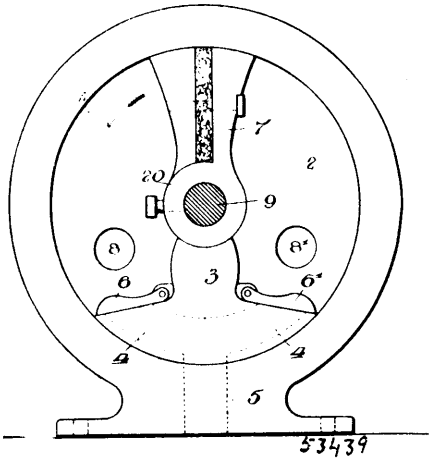
(*Appareil pour dégeler des explosifs.*)



Thomas Long, Phillipsburg, Montana, U.S.A., 10th September, 1896; 6 years. (Filed 8th August, 1896.)

Claim.—1st. In a device for thawing explosives, a casing provided with a series of horizontal shelves arranged so as to provide spaces between them for the reception of a heating medium, partitions arranged between the alternate shelves so as to provide spaces closed at the ends and rear side for the reception of trays containing the material to be thawed, and said shelves being somewhat shorter than the casing whereby to form spaces between them and the casing to receive the thawing medium, a door hinged to the casing and adapted to close the front thereof, and filling and discharge pipes carried by the casing for the purpose specified. 2nd. In a device for thawing explosives, the combination with a casing provided with a series of shelves arranged so as to provide spaces between them for the reception of a heating medium, and to provide spaces between them and the casing also for the reception of said heating medium, filling and discharge pipes carried by said casing, of an outer jacket or casing into which said inner casing is adapted to fit, and filling and discharge pipes carried by said outer jacket and adapted to register with the like pipes of the inner casing, for the purpose specified. 3rd. In a device for thawing explosives, the combination with a casing provided with a series of shelves arranged so as to provide spaces between them for the reception of a heating medium, to provide spaces for the reception of the material to be thawed and to provide spaces between them and the casing also for the reception of the heating medium, filling and discharge pipes for steam, of an outer jacket or casing into which the described inner casing is adapted to fit, and filling and discharge pipes for hot water and steam carried by the outer jacket, adapted to register with the filling, and discharge pipes for hot water and steam carried by the inner casing, for the purpose specified.

No. 53,439, Pump. (*Pompe.*)



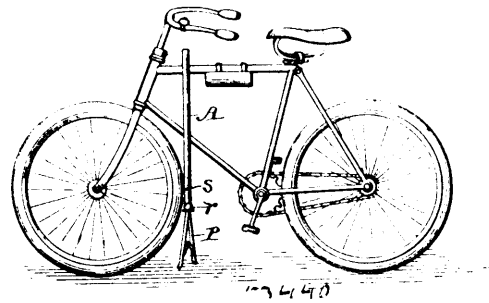
Anthony Wayne Thierkoff, Redding8 California, U.S.A., 10th September, 1896; 6 years. (Filed 4th August, 1896.)

Claim.—1st. A pump, comprising a casing provided with a removable partition having an induction passage provided with a foot valve, an oscillating piston, and provided with suitable eduction valves, substantially as and for the purpose set forth. 2nd. A pump, comprising a casing provided with an interior radial removable partition, containing an induction passage provided with a foot valve, a piston adapted to oscillate on either side of the partition and provided with suitable exhaust or outlet valves, substantially as and for the purpose set forth. 3rd. In a pump, the circular casing 2, provided with a removable cover 10, having cored outlet or exhaust passage 8 and valve 14 located in the removable cap 17, as and for the purpose set forth. 4th. An oscillating pump, one of the removable sides of which is provided with the exhaust outlets having suitable outwardly opening valves, substantially as and for the purpose set forth. 5th. A pump, comprising a casing provided with a partition having an induction passage controlled by a foot valve, an eduction passage provided with a suitable valve, and a piston consisting of two parts adapted to secure their packing between them, as and for the purpose set forth.

No. 53,440. Bicycle Rest. (*Support pour bicycles.*)

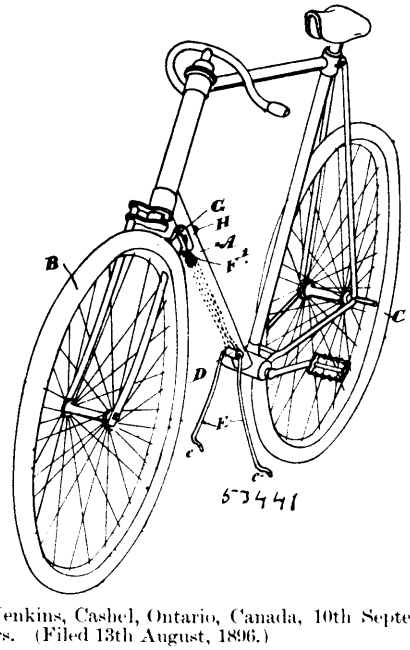
Le Roy B. Thomson and Walter Burke, both of Portland, Oregon, U.S.A., 10th September, 1896; 6 years. (Filed 11th August, 1896.)

Claim.—1st. In a bicycle-rest, the combination of a tube, a block sliding in said tube, spring-jaws secured thereon, and pivoted legs having extensions above their pivots adapted to be grasped by said spring-jaws to open said legs, substantially as described. 2nd. In a bicycle-rest, the combination of a tube, a block sliding therein, spring-jaws secured on said block, pivoted legs having extensions above their pivots adapted to be grasped by said spring-jaws to open said legs, and a brace pivoted on the legs below the pivot of the latter, substantially as described. 3rd. In a bicycle-rest, the combination of a tube, a block sliding therein, spring-jaws secured on



said block, pivoted legs having extensions above their pivots adapted to be grasped by said spring-jaws to open such legs, and a sectional hinged brace folding within said legs, substantially as described.

No. 53,441. Bicycle Support. (*Support pour bicycles.*)



William Jenkins, Cashel, Ontario, Canada, 10th September, 1896 6 years. (Filed 13th August, 1896.)

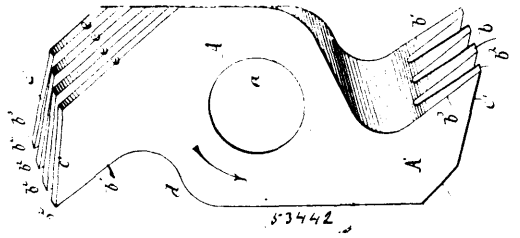
Claim.—1st. The combination with the bicycle frame and wheels and lower reach, of a double-spring strut, a bolt passing through the tubular reach and sleeve on the end thereof to pivotally support the one end of the double strut as and for the purpose specified. 2nd. The combination with the bicycle frame and wheels and lower reach, of a double-spring strut, a bolt passing through the tubular reach and sleeve on the end thereof to pivotally support the one end of the double strut and the grip clip provided with the concaved cross bar at the outer end with U-shaped ends to receive the ends of the double-spring strut as and for the purpose specified. 3rd. The combination with the bicycle frame and wheels and lower reach, of a double-spring strut, a bolt passing through the tubular reach and sleeve on the end thereof to pivotally support the one end of the double strut and L-shaped sharpened ends at the free ends of the double-spring strut as and for the purpose specified. 4th. The combination with the bicycle frame and wheels and lower reach, of a double-spring trut, a bolt passing through the tubular reach and sleeve on the end thereof to pivotally support the one end of the double strut and a spring clasp secured to the reach and designed to be pressed against the rim of the bicycle as and for the purpose specified. 5th. The combination with the bicycle frame and wheels and lower reach, of a double-spring strut, a bolt passing through the tubular reach and sleeve on the end thereof to pivotally support the one end of the double strut and a spring clasp comprising the concave portion secured by bolt to the reach, the lips g^1, the angled portion G^1 and the tip g^2 as shown and for the purpose specified.

No. 53,442. Rotary Cutter. (*Coupoir rotatif.*)

George Daniel Gillette, Oswego, New York, U.S.A., 10th September, 1896; 6 years. (Filed 13th August, 1896.)

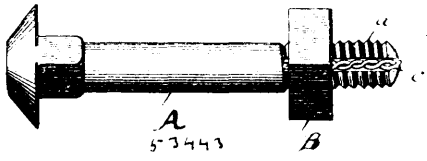
Claim.—1st. A cutter head having wings, each formed with a front face which is inclined transversely and reversely to that of the opposite wing so as to have clearing edges at alternate front side

corners of the wings, an outer face grooved longitudinally and a draw cut cutting edge comprising narrow side edges and an inter-



posed shaping edge at the forward end of said groove, substantially as set forth. 2nd. A rotary cutter for wood work having projecting wings which have their front faces inclined transversely, and alternately opposite directions in the several wings, and cutting teeth arranged side by side in the outer portions of each wing, which teeth have plane outwardly inclined sides, substantially as set forth. 3rd. A rotary cutter for wood work having projecting wings which have their front faces inclined transversely and alternately in opposite directions in the several wings, each wing having the outer edge of its oblique front face equidistant from end to end from the axis of the cutter and cutting teeth arranged side by side in the outer portion of each wing, which teeth have plane outwardly inclined sides and rounded bottom portions, connecting the bases of adjacent teeth, substantially as set forth. 4th. The combination with two rotary cutters, each having projecting wings which have their front faces inclined transversely and alternately in opposite directions in the wings of each cutter, each wing having cutting teeth arranged side by side in its outer portion, which teeth have plain outwardly inclined sides and rounded bottom portions connecting the bases of adjacent teeth, of an intermediate cutter having its outer portion concaved alternately on opposite sides and provided at the front corner of each outer portion with a transversely inclined front face, said front faces being inclined alternately in opposite directions, substantially as set forth.

No. 53,443. Nut-Lock. (*Arrête-écrou.*)

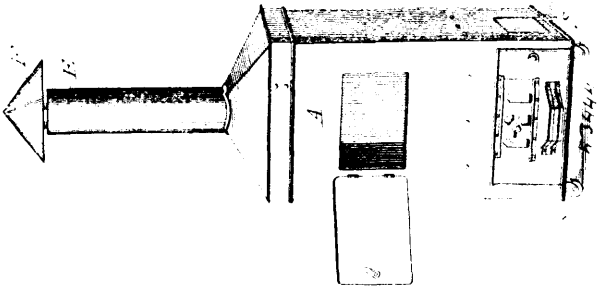


John Marshall Martin, Martin, Florida, U.S.A., 10th September, 1896; 6 years. (Filed 18th August, 1896.)

Claim.—In a nut-lock, the combination with a screw threaded bolt having a groove or grooves therein across the screw threads, of a nut screwed on to said screw threads, and a plurality of wires lying in said groove or grooves and cut into by said nut and twisted together in rear of said nut, substantially as described.

No. 53,444. Refining Stove for Photographers.

(*Poêle pour photographes.*)

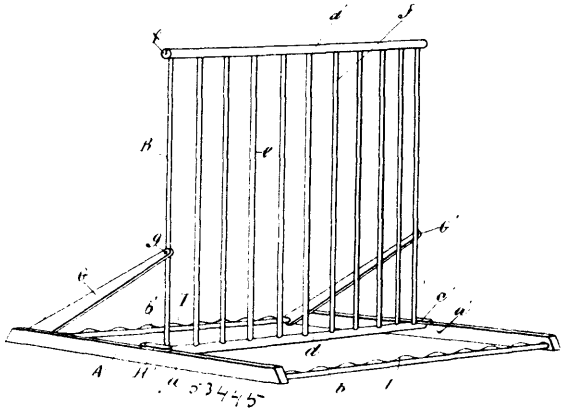


Daniel Romaine Van Riper, Paterson, New Jersey, U.S.A., 10th September, 1896; 6 years. (Filed 19th August, 1896.)

Claim.—As a new article of manufacture, a photographer's stove consisting of the body port on A, cover B, pyramid C adapted to be secured inside of the cover B, leaving a space between the two, the cap D having a perforated top and adapted to fit inside of the pipe or cover, the upper pipe portion E adapted to fit over and around the the cap D and pipe or cover, and cone F secured to the upper pipe, the grate H composed of semi-circular grate bars a short distance apart and secured together in any appropriate manner, a shoulder or strip secured to the inner walls of the body of the stove adapted to support the grate, said strips K having a sloping face inclined toward and extending over the edges of the ash-box, the ash-box P and the casters S, all constructed substantially as shown and described and for the purposes specified.

No. 53,445. Folding Bicycle Rack.

(*Ratelier pliant pour bicycles.*)

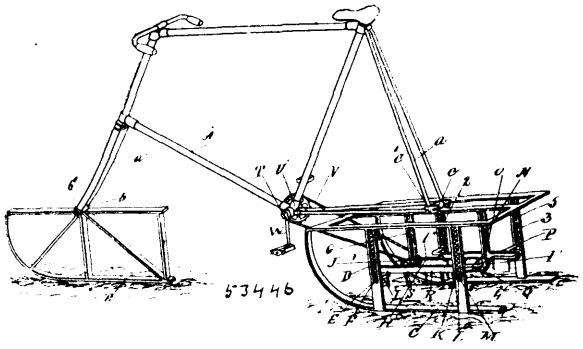


Ansel F. Temple, Muskegon, Michigan, U.S.A., 11th September, 1896; 6 years. (Filed 20th August, 1896.)

Claim. 1st. A folding bicycle rack, consisting in the combination with a base frame having wheel-holding projections, of the folding frame provided with parallel rods, and the links connecting said folding frame with the base frame. 2nd. In a folding bicycle rack, the combination with the base frame having its parallel rods provided with wheel-holding projections, of the folding frame having the parallel bars between which the bicycle wheels are received, the links pivoted to the base frame and to the folding frame, and the spring-provided recesses on the inner faces of the lateral parts of the base frame for receiving the lower ends of the folding frame, substantially as described. 3rd. The combination of the base frame having parallel rods provided with wheel-holding projections formed of a bent wire, the folding frame adapted to engage spring-provided recesses in the base frame and to be held in engagement by button devices, and the links pivoted to the folding frame and to the base frame.

No. 53,446. Foot-Propelled Sleigh or Sled.

(*Traîneau propulsé par le pied.*)

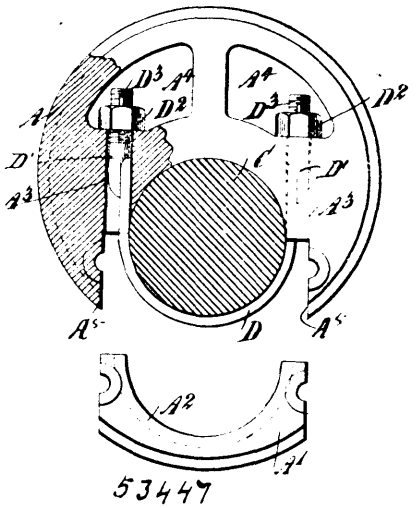


John Berry, East Toronto, Ontario, Canada, 11th September, 1896; 6 years. (Filed 20th August, 1896.)

Claim.—1st. A foot-propelled vehicle, consisting of a suitable frame, runners connected to the frame, crank shafts journalled in one of the runners, a propeller mounted on the said crank shaft, comprised of a connecting rod and a series of teeth depending from the under side of the connecting rod adapted to penetrate the surface over which the vehicle is travelling, and means for imparting motion from the pedal shaft to the crank shafts, substantially as specified. 2nd. A foot-propelled vehicle, consisting of a frame, runners connected to the lower part of the frame, crank shafts journalled in vertically adjustable bearings mounted on one of the runners, a connecting rod mounted on the crank shafts, teeth depending from the under side of the connecting rod adapted to penetrate the surface over which the vehicle is travelling, and means for imparting motion from the pedal shaft to the crank shafts, substantially as specified. 3rd. A foot-propelled vehicle, consisting of a frame, runners connected to the frame, a pedal shaft mounted in the frame, cranks for imparting motion to the pedal shaft, a sprocket wheel mounted on the pedal shaft, uprights connected to one of the runners, vertical guides formed in the said uprights, bearing boxes vertically adjustable in the said guides, a

crank shaft mounted in each opposite pair of boxes, a propeller mounted on the said crank shafts, consisting of a connecting rod and a series of depending teeth depending from the under side of the connecting rod, adapted to penetrate the surface over which the vehicle is travelling, a sprocket wheel mounted on one of the crank shafts, and a sprocket chain passing around the said sprocket wheels, substantially as specified.

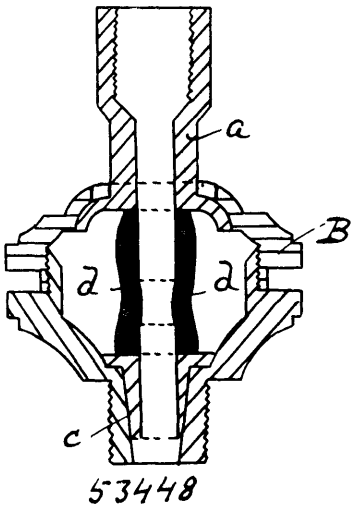
No. 53,447. Eccentric. (*Excentrique.*)



Charles Linstrom, Vicksburg, Mississipi, U.S.A., 11th September, 1896; 6 years. (Filed 22nd August, 1896.)

Claim.—1st. An eccentric, consisting of a disc having an eccentric bore and composed of a main section and a complementary section, the main section provided with opposing jaws projecting past the major diameter of the shaft on which the eccentric is to be mounted and having their inner faces extending transversely of said shaft, a clamp constructed to engage said shaft and extending through a part of the main section in a plane transversely to the axis of the shaft for clamping the main section thereupon, and means for retaining the complementary section between and against the said transverse inner faces of the opposing jaws of the main section, substantially as described. 2nd. An eccentric, consisting of a disc having an eccentric bore and composed of a main section and a complementary section, the main section having opposing jaws with their inner faces extending transversely of the shaft on which the eccentric is to be mounted, and the complementary section being inserted between and having its ends abutting said inner faces of the opposing jaws, a clamp for rigidly clamping the main section upon the shaft, and means independent of said clamp for retaining the complementary section in operative connection with the said opposing jaws, substantially as described. 3rd. An eccentric, consisting of a disc having an eccentric bore and composed of two sections, one a main section having opposing jaws and the other a complementary section inserted between and having its ends abutting said opposing jaws, a yoke-clamp constructed to partially encircle a shaft and having its arms engaged with the main section, nuts mounted on the arms of the yoke-clamp, and means for retaining the complementary section in operative position, substantially as described. 4th. An eccentric, consisting of a disc having an eccentric bore and composed of a main section and a complementary section, the main section provided with opposing jaws extending past the major diameter of the shaft on which the eccentric is to be mounted and having their inner faces arranged transversly of said shaft, and the complementary section constructed with a curved or segmental groove and having its ends abutting said transverse inner faces of the opposing jaws, a yoke-clamp partially encircling the shaft, lying in the groove of the complementary section and formed with two arms engaging the main section, nuts mounted on the arms of the yoke-clamp for causing it to rigidly secure the main section to the shaft, and means independent of said yoke-clamp for retaining the complementary section between two jaws of the main section, substantially as described. 5th. The combination in an eccentric having an eccentric bore, of main and complementary disc sections in which said bore is formed, the complementary section having a groove running around a portion of the bore, and the main section having two passages extending transversely to the axis of the bore, a yoke-clamp having a curved portion fitting in the groove of the complementary section, and two arms passing through passages in the main section, means for clamping the yoke-clamp and the main section upon a shaft, and means for retaining the complementary section in rigid connection with the main section, substantially as described.

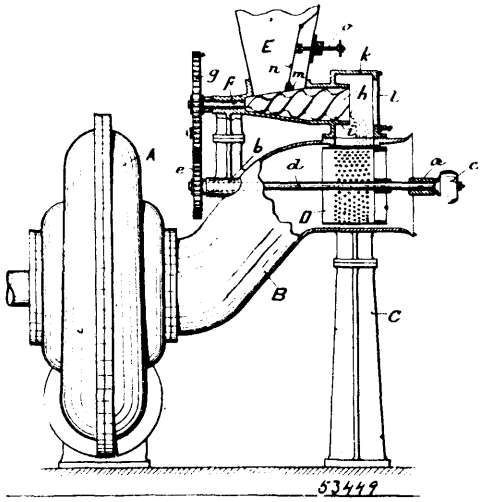
No. 53,448. Ball Joint. (*Joint à boule.*)



Carl Kuhn, Berlin, Germany, 11th September, 1896; 6 years. (Filed 24th August, 1896.)

Claim.—In a ball joint, the arrangement of a short piece of rubber or other elastic hose which forms a connection between the upper and lower tube ends, and at the same time acts to retain the parts in their respective positions as substitute for the spring hitherto employed in such points.

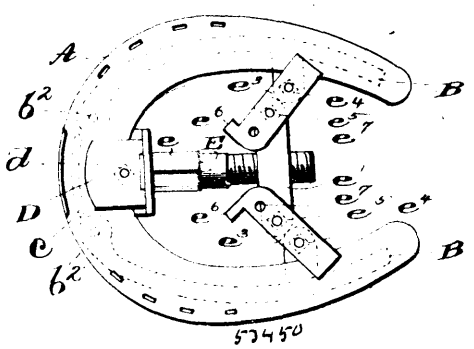
No. 53,449. Furnace and Apparatus for Burning Coal Dust. (*Fournaise et appareil à brûler la poussière de charbon*)



Ferdinand de Camp, Berlin, Germany, 11th September, 1896; 6 years. (Filed 24th August, 1896.)

Claim.—1st. In a furnace for burning coal dust, the combination with a coal dust feeding device, of a fan such as A, so arranged as to propel the coal dust together with air into the furnace, substantially as described. 2nd. In a furnace and apparatus for burning coal dust, such as is referred to in the first claim, the arrangement of a rotary shifting cylinder D, which serves to uniformly distribute the coal dust before the latter enters the fan, substantially as described. 3rd. In a furnace and apparatus for burning coal dust, such as is referred to in the first claim, the device for feeding the coal dust to the distributor D, consisting in the arrangement of a worm *h*, which closes the issue of the coal dust hopper E, by means of its conical portion in such a manner that the coal dust taken up by the conical portion of the worm from the hopper, is conveyed to the cylindrical enlarged portion of the worm, in a loose condition for further conveyance, substantially as described.

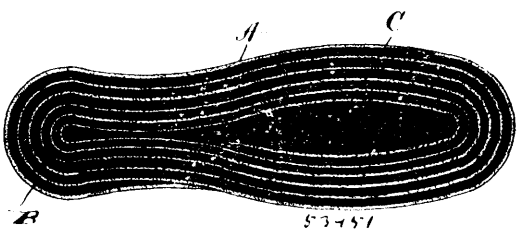
No. 53,450. Horse Shoe Calk. (*Crampon de fer à cheval.*)



Henry Sachs, Washington, Columbia, U.S.A., 11th September, 1896; 6 years. (Filed 26th August, 1896.)

Claim. 1st. In an anti-slipping device, the side members, a toe calk plate, the side members being pivoted to said plate, a screw, the head of which is swivelled in the toe calk plate, levers pivoted in side members, the ends of which, when the levers are in a locked position, extend over the side members, means for adjusting the levers and side members to shoes of different thicknesses, and means connecting the screw and levers. 2nd. In an anti-slipping device for horse shoes, the side members, the toe calk plate, a clamping plate on said toe calk plate, levers pivoted to said side members, means for adjusting the clamping plate and said levers to shoes of different thicknesses, a screw swivelled to the toe calk plate, and means connecting the levers and screw. 3rd. In an anti-slipping device for horse shoes, the side members, lugs extending laterally from the same near the heel, the double L shaped toe calk plate, the side members being pivoted to said toe calk plate, a screw, the head of which is swivelled in said toe plate, a squared portion formed on the screw, a cross head having a screw threaded opening in which the screw is adapted to work, levers pivoted to the laterally extending lugs of the side members, downwardly projecting studs formed on the forward end of said levers, the rear end of said levers being drawn out to a thin edge, washers secured between the side members and rear ends of said levers, a screw-threaded bolt passing through the toe calk plate, and clamping plate secured to said bolt.

No. 53,451. Sole. (*Semelle.*)



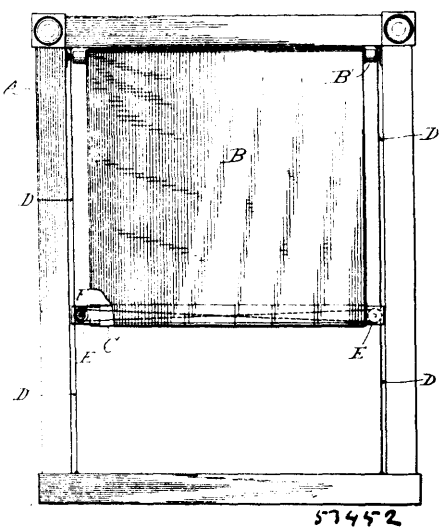
Herman Mayer, Bradford, Pennsylvania, U.S.A., 11th September, 1896; 6 years. (Filed 27th August, 1896.)

Claim.—1st. An improved sole or heel composed of transversely alternating strips of rubber and textile material wound in successive layers from a central or starting point, and a means for securing together the strips, substantially as shown and described. 2nd. An improved method of making soles and heels which consists in winding sheets of rubber and textile material to form a block or roll and securing the sheets together, then pressing the block or roll to the shape of the sole or heel, and finally slicing the sole or heel therefrom, substantially as described. 3rd. An improved method of making soles and heels, consisting in winding sheets of textile material and non-vulcanized rubber about a spindle to form a block or roll, then substituting a core of non-vulcanized rubber, then placing the block or roll in a press to conform it to the shape of the sole or heel, vulcanizing the rubber while in the press, and finally slicing the sole or heel from the block or roll after removing from the press, substantially as described. 4th. A sole or heel consisting of united strips of rubber and textile material wound spirally, substantially as shown and described.

No. 53,452. Curtain-Guide. (*Guide pour rideaux.*)

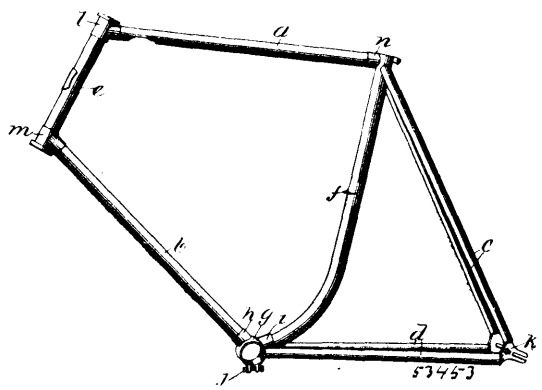
Edward T. Burrows, Portland, Maine, U.S.A., 11th September, 1896; 6 years. (Filed 27th August, 1896.)

Claim.—1st. The combination with a hollow curtain stick, having means at the ends thereof for supporting pulleys, pulleys removably held by said supporting means, and guides passing over the pulleys, substantially as described. 2nd. The combination with a hollow stick, of removable end sections, pull ys removably secured in the end sections, and guides. 3rd. The combination with a hollow stick, of boxes secured in the ends of the stick, and pulleys removably journalled in the boxes. 4th. The combination with a hollow stick, of longitudinally adjustable extensions at the ends of the stick,



and flexibles guides passing into and out of the stick. 5th. The combination with a hollow stick having a yielding section, of boxes frictionally held within the stick by the yielding sections, and pulleys in the boxes. 6th. The combination with a hollow stick, of pulley boxes at the ends of the stick having a removable side, and removable pulleys in the boxes. 7th. The combination with a hollow stick, of pulleys in the stick, guide openings formed at the end of the stick in opposite sides of the vertical centre thereof, and guides passing through the openings into the stick and over the pulleys. 8th. A pulley box for hollow curtain sticks, consisting of a box having a removable side, a journal secured in the box, and a pulley on the journal. 9th. The combination with the end of a curtain stick of a pulley box secured thereon, comprising a box section and a removable side section, a journal secured to the box section and passing into the removable side, and a pulley on the journal. 10th. The combination with a shade, of a hollow stick carried thereby, guide cords passing through the stick, movable pulley boxes in the ends of the stick, pulleys in the boxes, and a removable section on the box by which the pulley may be removed from the box. 11th. The combination with a curtain, of a hollow stick thereon, pulley boxes in the ends of the stick and having guide openings in its upper and lower edges at opposite sides, grooved pulleys in the boxes, and guide cords passing into openings over the pulleys and into the stick.

No. 53,453. Bicycle Frame. (*Cadre pour bicycles.*)



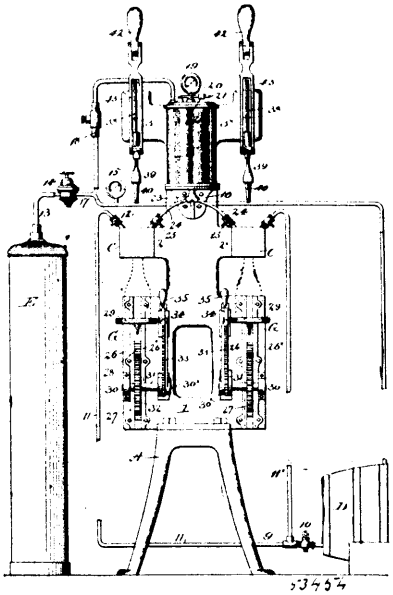
Robert Michael Keating, Springfield, Massachusetts, U.S.A., 11th September, 1896; 6 years. (Filed 28th August, 1896.)

Claim.—1st. In a bicycle frame of the diamond type, the combination of a central bar *f* curved at its lower end and suitably attached to the crank bracket and attached at its upper end to a top bracket, substantially as and for the purposes hereinbefore set forth. 2nd. In a bicycle frame of the diamond type, the combination of the crank axle bracket having a transverse bearing for the crank axle and an upwardly and rearwardly extending recessed lug, and the centre bar having its lower portion curved to terminate in a forwardly-projecting end entering said recessed lug, substantially as

and for the purposes hereinbefore set forth. 3rd. The combination of the top bar *a*, the lower front bar *b*, the bars *c* and *d*, the head *e*, the brackets *l*, *m*, *g*, *n* and *k*, and the bar *f* curved in its lower portion, substantially as and for the purposes hereinbefore set forth.

No. 53,454. Bottle-filling Machine.

(*Machine à embouteiller.*)

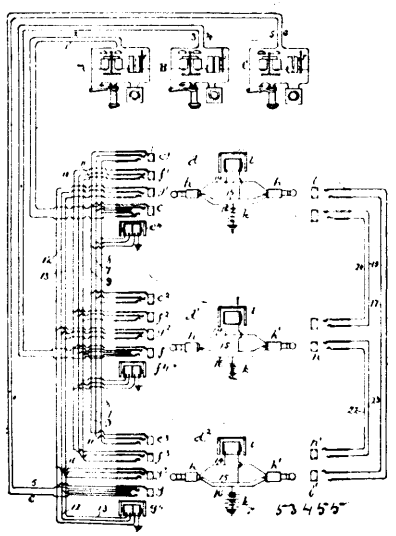


Thomas Benjamin Booth and Alexander Robinson, both of Boston, Massachusetts, U.S.A., 11th September, 1896; 6 years. (Filed 8th August, 1896.)

Claim.—In a bottle-filling machine, the combination with the filling head, of a corking and bottle-holding mechanism, comprising a vertical standard having an arm 36 projecting therefrom formed with a sleeve 37, a cork plunger 39 having its stem 38 slidingly arranged in the said sleeve and formed with a tapering corking plug 40, a hand lever 42 fulcrumed to the vertical post 1, and a link 43 having its respective ends pivotally connected to the said lever and to the stem of the cork plunger below the said sleeve, and the co-acting bottle holder comprising a suitably supported vertical guide, a rack-bar 28 arranged in said guide and formed with a bottle seat on its upper end, the shaft 31, a gear wheel on the shaft to mesh with the rack-bar, a suitably supported sector rack, a lever to turn the said shaft and a pawl to engage the sector rack, substantially as and for the purpose specified.

No. 53,455. Apparatus for Telephone Switch Boards.

(*Appareil d'échange de téléphone.*)

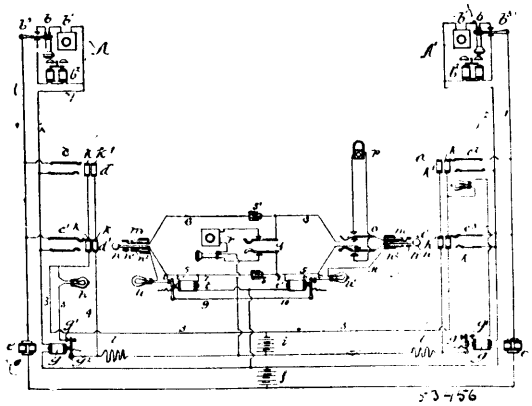


The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 11th September, 1896; 6 years. (Filed 8th April, 1896.)

Claim.—1st. The combination with a telephone line, of a line spring-jack upon each of several sections of a multiple switch board, and an answering spring-jack at one of the sections having contacts adapted to be separated when a plug is inserted into the spring-jack and arranged to cut off the conductor extending to the line spring-jacks, as described. 2nd. The combination with a telephone line, of a line spring-jack upon each of several multiple switch boards, and an annunciator in a bridge of the circuit, and a answering jack having separable contacts included in the line circuit between the substation and the line jacks and annunciator, as described. 3rd. In combination, two telephone lines, each extending normally through separable contacts in an answering jack, and thence to line spring-jacks upon different sections of a multiple switch board, connecting plugs inserted in the different spring-jacks, and a loop conductor completing the circuit between the plugs, as described. 4th. In combination, two telephone lines, each extending normally through separable contacts in an answering spring-jack upon a section of a multiple switch board, and thence to a signal indicator in the same section and to line spring-jacks on the different sections of the switch board, a transfer line extending between the switch boards whereon the answering jacks are located, and means for connecting each answering jack with the trunk line, whereby the telephone lines may be united in a through circuit devoid of appended line jacks and signalling instruments, as described.

No. 53,456. Apparatus for Telephone Switch Boards.

(*Appareil d'échange de téléphone.*)

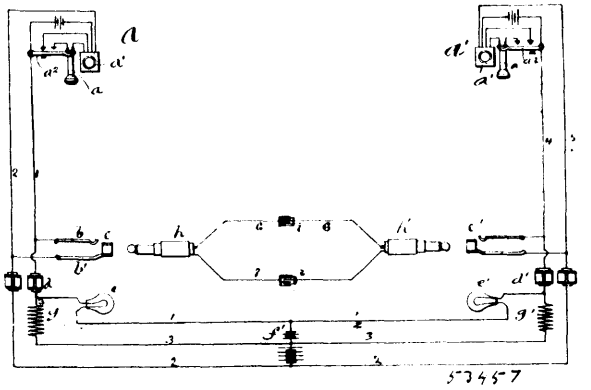


The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 11th September, 1896; 6 years. (Filed 8th April, 1896.)

Claim.—1st. The combination with a telephone line of a relay included in the line circuit, a local circuit including a source of current and a subsidiary signal controlled by the relay, and means for short-circuiting the said signal when connection is made with the line, substantially as described. 2nd. The combination with a telephone line of a source of current and a relay included in the line, a local circuit including a source of current and a subsidiary signal controlled by the relay, two normally separated contacts in the spring-jack connected respectively with the terminals of the said signal, and means for electrically connecting the contact pieces when a plug is inserted into the spring-jack, substantially as described. 3rd. The combination with a telephone line of means for closing the line at the substation while it is in use, a relay and a source of current in the line at the central station, a local circuit controlled by the relay, including a source of current, a resistance coil and a signal lamp, and contact pieces in the spring-jack, and circuit connections therewith adapted to short circuit the signal lamp when connection is made with it, substantially as described. 4th. The combination with a telephone line of a relay and a source of current in the line, a signal in a local circuit controlled by said relay, spring-jacks connected with the line, and test contacts in the spring-jacks, electrically connected with said local circuit, the connections being so made that the electrical condition of the test rings is altered when the local circuit is closed, substantially as described. 5th. The combination with a telephone line provided with means at the substation for closing the line circuit thereat, and with a relay at the central station adapted to be operated when the line circuit is closed, a local circuit controlled by said relay, spring-jacks connected with the line, test contacts in the spring-jacks, and electrical connections from the test contacts to the local circuit adapted to alter the electrical condition of the test contacts when the local circuit is closed by the relay, whereby the spring-jacks are caused to test busy when the line is closed at the substation. 6th. The combination with a telephone line of a switch controlling its continuity at the substation, and a relay at the central station adapted to respond to the closure of the line, a local circuit controlled by the relay, including a signal, spring-jacks connected with the line, test contacts in the spring-jacks, switch contacts in each spring-jack, constituting normally separated terminals of the said signal, means

for crossing said normally separated terminals together when a plug is inserted into the spring-jack, and circuit connections adapted to alter the electrical condition of the test contacts both when the local circuit is closed and when the signal is short circuited, whereby the spring-jacks are caused to test busy when the line circuit is closed at the substation or when a plug is inserted in a spring-jack of the line. 7th. The combination with the spring-jacks of a telephone line in a multiple switchboard, of test contacts in the different spring-jacks electrically connected together, and two normally open branches from a battery to said test rings, means for closing one of said branches when a plug is inserted in the spring-jack, and relay contacts adapted to close the other of said branches, the relay being responsive to currents in the line circuit, and an instrument for testing the electrical condition of any test ring, substantially as described. 8th. The combination with the spring-jacks of a telephone line in a multiple telephone switchboard, of test contacts in the different spring-jacks, electrically connected together, two normally open branches from one pole of a battery to said test rings, one of said branches terminating in a contact in each spring-jack adapted to be closed to the test ring when a plug is inserted into the spring-jack, relay contacts included in the other branch, the relay being connected in the line circuit and adapted to close the branch when the telephone is removed from the switch-hook at the substation, and a testing instrument connected in a branch from the other pole of the battery adapted to be applied to any test ring to ascertain its electrical condition, substantially as described. 9th. The combination with a telephone line of means for closing the line at the substation during the use of the telephone, and a relay and source of current at the central station, said relay being adapted to close its contacts when excited, spring-jacks upon the different sections of a multiple switchboard connected with the line, a local circuit, including a source of current and a resistance coil, and divided into two parallel branches, one of said branches including a signal and the contact points of said relay, the other of said branches terminating in normally separated contact pieces in each of said spring-jacks, adapted to be connected together by a plug inserted in the spring-jack, and a test ring in each spring-jack connected with the local circuit, whereby the signal is operated and the condition of the test rings is altered when the telephone is brought into use, and whereby the signal is short circuited and the altered electrical condition of the test rings is maintained when the plug is inserted into a spring-jack of the line, substantially as described.

No. 53,457. Signalling Apparatus for Telephone Switch Boards. (*Appareil de signal pour échange de téléphone.*)

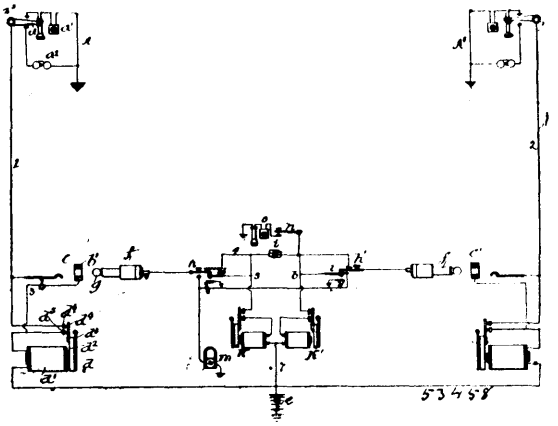


The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 11th September, 1896; 6 years. (Filed 8th April, 1896.)

Claim.—1st. The combination with an electric-signalling circuit including a source of current and a signalling instrument adapted to be displayed when excited by a predetermined current, of a shunt about the signalling instrument forming with a portion of the signalling circuit, a closed local circuit through the signalling instrument including a source of current, the current in the local circuit being almost sufficient to display the signal, substantially as described. 2nd. The combination in a signalling circuit including a source of signalling current and divided at one point into two parallel branches, of an electric incandescent lamp in one branch, a resistance coil in the other branch, and a source of current in one of the branches, the normal current through the lamp being adju ted to be insufficient to illuminate the lamp, substantially as described. 3rd. The combination with a telephone circuit, of a source of current permanently included in the circuit, and means at the substation for closing a normal interruption of the circuit, the signalling circuit being divided at one point into two parallel branches, an incandescent lamp included in one of said branches, a resistance coil in the other branch, a source of current in one of the branches, the strength of the current produced in the local circuit formed by the two branches being so adjusted with relation to the signalling current in the entire signalling circuit that when both circuits are closed the current through a lamp is sufficient to illuminate it, substantially as described. 4th. The combination with several telephone lines having different resistance, each including a source of electric current and normally open at a substation, and each divided at one point into two parallel branches, of a signal lamp in one of each pair of parallel branches and a resistance coil in the other, and a source of current in one branch of each pair, the resistance and electro-motive force in each local circuit through a signal lamp being so adjusted to each other that the normal currents through the different lamps and the signalling currents in the corresponding lines illuminate the different lamps to the same degree, substantially as described. 5th. The combination with a telephone circuit extending between central and substations, of a partially excited signalling instrument in the circuit at the former station and means actuated by the removal of the telephone from its support for the complete excitation and operation of the said signal.

No. 53,458. Telephone Exchange System.

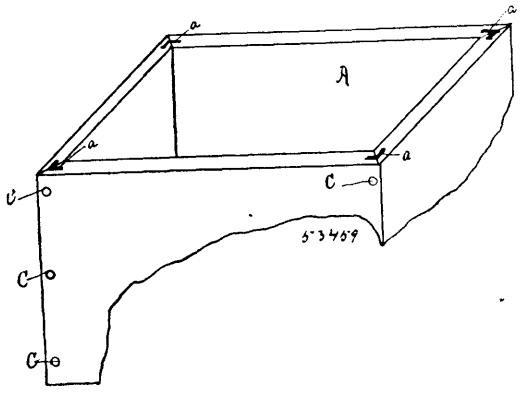
(*Système d'échange de téléphone.*)



The Bell Telephone Company of Canada, Montreal, Quebec Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 11th September, 1896; 6 years. (Filed 26th May, 1896.)

Claim.—1st. The combination with a telephone line, of an annunciator and a battery normally included in the circuit of said line at the central station, a switch at the subscriber's station adapted to open the circuit of said line, and a pair of contact points in said line normally connected together, controlled by said annunciator and adapted to be opened to disconnect said annunciator from the line when the circuit of said line is interrupted by the switch at the subscriber's station. 2nd. The combination with a telephone line, of an annunciator and battery normally in circuit therewith at the central station, a switch at the subscriber's station for opening the circuit of said battery, contacts controlled by said annunciator adapted to be opened when the circuit of said battery is interrupted and switch contacts closed together in the act of making connection with the line adapted to bridge the interruption of the circuit at the annunciator to restore the annunciator. 3rd. The combination with a telephone line, of an annunciator and a battery normally in circuit with said line at the central station, contacts controlled by said annunciator adapted to be opened when the circuit through said annunciator is interrupted, said line being provided at the subscriber's station with two branches of substantially equal resistance, one of said branches containing the telephonic apparatus and the other the calling apparatus, and a switch adapted to alternately include said branches in circuit with the line, and to momentarily open the circuit of said battery by the act of changing the connection through said branches. 4th. The combination with a telephone line, of an annunciator and a battery in the line, contact points controlled by the annunciator adapted to open the circuit through the annunciator when the magnet of the annunciator is unexcited, a spring-jack for the line, and contact points therein adapted to be closed together when a plug is inserted in the spring-jack and to again connect the annunciator with the line, and means for interrupting the line circuit at the subscriber's station to operate the annunciator, substantially as described. 5th. The combination with a telephone line, of means for interrupting the line circuit at the substation, a battery in the line at the central station, two annunciators in parallel branches of the circuit at the central station, each having contact points controlled by it adapted to open the circuit through it when the current through it is interrupted, and a circuit formed temporarily in the spring-jack, bridging the switch contacts of one of the annunciators, substantially as described.

No. 53,459. Box. (*Boîte.*)

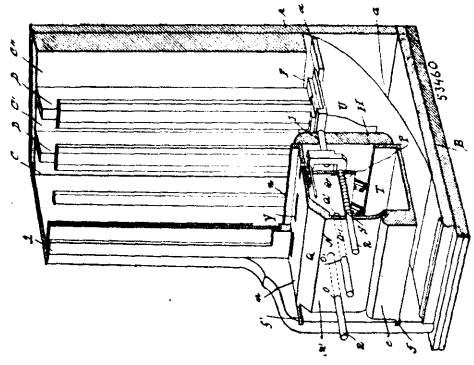


Austin Berry, Warden; Frank Wilson, Joseph Ward and John S. Clunie, all of Montreal, Quebec, Canada, 11th September, 1896; 6 years. (Filed 21st March, 1896.

Claim.—1st. A box made of sides mitred at the corners and having an angle iron reaching the length of the mitre joint, the rib and web of such angle iron extending laterally a suitable distance into the contiguous parts of the sides adjacently placed to form the joint substantially as set forth. 2nd. A box having sides mitred at their joints and having a narrow metal strip bent at the same angle as that made by the convergence of the said sides and reaching the lengths of the mitre joint and protruding beyond the material contiguous to the said joint in the form of an incline or wedge to facilitate the entry of the exposed metal into the material of the box bottom substantially as set forth. 3rd. A box having sides mitred at their joints and a contained metal strip bent laterally to the same angle as that of the converging sides, the rib and web of the metal extending into the material of the said sides combined with nails driven from one side of the box near its end and into the end of the contiguous side near to or through the metal strip whereby a water-tight joint is formed substantially as set forth. 4th. A box having sides and a bottom with a continuous piece of metal preferably wire, extending under the sides between the outer and inner edges of the said sides; the bottom, answerable in size, to that of the box and nailed to the box, the metal between the bottom and the box being forced into the material of both by pressure to form a water-tight joint, substantially as set forth. 5th. A box having sides mitred together at the corners and having a strip reaching the length of the mitred joint and extending laterally a suitable distance into the contiguous parts of the sides adjacently placed to form a water-tight joint as described. 6th. A box having sides abutted together, the end of one side resting against the contiguous side at its end, and a metal strip reaching the length of this joint, and extending laterally a suitable distance into the contiguous boxed material to form thereby a water-tight joint, substantially as and for the purposes set forth. 7th. A box having sides abutted together, the end of one side resting against the contiguous side at its end and another strip reaching the length of this joint and extending laterally a suitable distance into the contiguous boxed materially, substantially as and for the purposes set forth. 8th. A box side made of independent pieces of material placed together, their points of contact forming a joint, and a strip of metal reaching the length of this joint, and extending laterally a suitable distance into the contiguous pieces, whereby a water tight joint is produced, substantially as set forth.

No. 53,460. Coin Controlled Vending Machine.

(*Machine actionnée par une pièce de monnaie.*)



Joseph Mackin, Toronto, Ontario, Canada, 12th September, 1896; 6 years; (Filed 7th August, 1896.)

Claim.—1st. In a coin controlled or automatic vending machine, a movable coin retaining carriage consisting of a plunger, vertical guides carried by the plunger, arranged to act as gauges to retain only the predetermined operating coin until after the delivery of the goods from the magazine, substantially as specified. 2nd. In a coin controlled or automatic vending machine, a movable coin retaining carriage consisting of a plunger, two vertical arms carried by the plunger, a vertical flange on the side face of each arm, one of the flanges substantially triangular shaped in cross section, the receding side of the flange opposed to a flat face on the other flange, to form a gauge to separate spurious coins from the operating coin, substantially as specified. 3rd. In a coin controlled or automatic vending machine, a movable coin retaining carriage consisting of a plunger, vertical guides carried by the plunger, arranged to act as gauges to retain only the predetermined operating coin until after the delivery of the goods from the magazine, and a spring connected to one of said guides, to prevent the displacement of the coin when engaging the delivery mechanism, substantially as specified. 4th. In a coin controlled or automatic vending machine, a movable coin retaining carriage consisting of a plunger, two vertical arms carried by the plunger, a vertical flange on the side face of each arm, one of the flanges substantially triangular shaped in cross section, the receding side of the flange opposed to a flat face on the other flange, to form a gauge to separate spurious coins from the operating coin, and a spring connected to the other flange to prevent the displacement of the coin when engaging the delivery mechanism, substantially as specified. 5th. In a coin controlled or automatic vending machine, a movable coin holding carriage, adapted to temporarily retain the operating coin in combination with a detaching finger, to remove the coin from the coin carriage after having operated the delivery mechanism, substantially as specified. 6th. In a coin controlled or automatic vending machine, a movable coin retaining carriage consisting of a plunger, vertical guides carried by the plunger, arranged to act as gauges to retain only the predetermined operating coin until after the delivery of the goods from the magazine, and a detaching finger to remove the coin from the said carriage after operating the delivery mechanism, substantially as specified. 7th. In a coin controlled or automatic vending machine, a movable coin retaining carriage consisting of a plunger, two vertical arms caried by the plunger, a vertical flange on the side face of each arm, one of the flanges substantially triangular shaped in cross section, the receding side of the flange opposed to a flat face on the other flange, to form a gauge to separate spurious coins from the operating coin, and a detaching finger to remove the coin from the said carriage after operating the delivery mechanism, substantially as specified. 8th. In a coin controlled or automatic vending machine, a movable coin retaining carriage consisting of a plunger, arranged to act as gauges to retain only the predetermined operating coin until after the delivery of the goods from the magazine, a spring connected to one of said guides, to prevent the displacement of the coin when engaging the delivery mechanism, and a detaching finger to remove the coin from the said carriage after operating the delivery mechanism, substantially as specified. 9th. In a coin controlled or automatic vending maching, a movable coin retaining carriage consisting of a plunger, two vertical arms carried by the plunger, a vertical flange on the side face of each arm, one of the flanges substantially triangular shaped in cross section, the receding side of the flange opposed to a flat face on the other flange, to form a gauge to separate spurious coins from the operating coin, a spring connected to the other flange to prevent the displacement of the coin when engaging the delivery mechanism, and a detaching finger to remove the coin from the said carriage after operating the delivery mechanism, substantially as specified. 10th. In a coin controlled or automatic vending machine, a magazine comprised of two upright guides having a substantially open bottom, a horizontal flange at the bottom of the inner side of each of said guides to temporarily support the goods, and a slot at the rear of the bottom of the magazine through which the goods are delivered by the delivery mechanism, substantially as specified. 11th. In a coin controlled or automatic vending machine, the combination of a movable coin, a retaining carriage, a delivery plunger, one end of which is adapted to engage the coin carried by the coin retainining carriage, the other end of the plunger forked to engage the goods in the magazine, and a spring to return the delivery plunger to its normal position after being operated.

No. 53,461. Wheel for Road Vehicles, etc.

(*Roue de voitures.*)

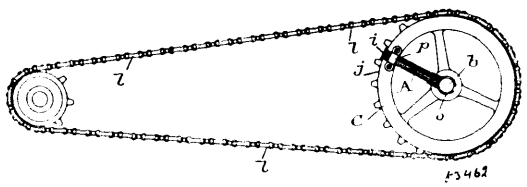
Frederick William Schroeder and Henry Marcus Clark, both of Newton, New South Wales, 12th September, 1896; 6 years. (Filed 17th August, 1896.)

Claim.—1st. In wheels for road vehicles, cycles and the like, the construction of the spokes in halves or two pieces coupled or braced together at intervals so as to make a series of loops or circles or the like, substantially as herein described and explained. 2nd. In wheels for road vehicles, cycles and the like, the combination and arrangement with a spectacle spoke as set forth in the preceding (first) claiming clause hereof, and affixed at their inner ends to the boss or hub of the wheel of a nipple in which the outer end of said spoke is firmly held, and a thimble to receive said nipple and tensionally adjust said spoke, substantially as herein described and explained. 3rd. In wheels for road vehicles, cycles and the like, the

combination and arrangement with a spectacle spoke as set forth in the preceding (first) claiming clause and having tensional adjusting

devices at its outer end of devices for receiving and firmly holding to the boss or hub the inner ends of said spokes, substantially as herein described and explained. 4th. In wheels for road vehicles and the like, the combination and arrangement with spoke-ends either solid or split of thimbles nipples screwing into said thimbles and holding devices securing and spoke-ends to said nipples, substantially as herein described and explained and as illustrated in figures 2, 4, 5, 6, 7, 8, 9, and 10 of the drawings. 5th. In wheels for road vehicles, cycles and the like, the combination and arrangement with the hub or boss and inner spoke-ends looped or having an eye of a holding pin taking in two metals or flanges of said hub or boss, and having its central part less in diameter and eccentric to its outer ends, substantially as herein described and explained and as illustrated in figures 2 *d* and 11 of the drawings.

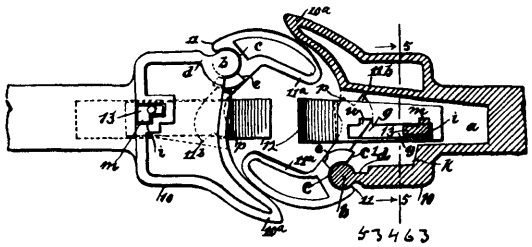
No. 53,462. Lubricator. (*Graisseur pour bicycles.*)



Frank Della Torre, Edward Hammond and Augustin Louis Taveau, all of Baltimore, Maryland, U.S.A., 12th September, 1896; 6 years. (Filed 21st August, 1896.)

Claim.—1st. In a bicycle, the combination with the endless chain and sprocket wheel, of a receptacle to contain fluid lubricant and carried by said wheel, an absorbent pad on the said wheel-rim between the adjacent teeth thereon so as to apply lubricant to one link of the chain by the pressure of the link on said pad, and a tube having one end extending into said receptacle to near its bottom and the other end open adjacent said pad. 2nd. The combination of a sprocket wheel and chain, an oil receptacle connected with or carried by the sprocket wheel and having an end adjacent the rim of the wheel, a cap closing one end of the receptacle, a pad taking on the wheel rim in position to be pressed by a link of the chain, a plate connected with the receptacle and protecting said pad, and means for conveying oil from the receptacle to said pad 3rd. The combination of a sprocket wheel and chain, an oil receptacle connected with or carried by the sprocket wheel and having an end adjacent the rim of the wheel, a cap closing said end, a pad extending laterally from the receptacle and taking over the wheel-rim in position to be pressed by a link of the chain, a tube in the oil receptacle extending to near its bottom and connecting through the cap, and a feed-yarn or cord extending through the said tube to the said pad. 4th. The combination of a sprocket wheel, a lubricating receptacle connected with or carried by the sprocket wheel, a pad on the rim of the wheel in position to be pressed by a link of the chain, a tube extending into the receptacle to near its bottom and connecting from the said receptacle to the pad, and a feed-yarn or cord extending through the tube. 5th. In a lubricator for bicycles, having, in combination, an oil receptacle to be carried by the sprocket wheel, a cap closing the receptacle, a pad attached to the receptacle and projecting laterally therefrom to take over the rim of the sprocket wheel, and a small tube in said receptacle one end of which opens to the exterior and adjacent the pad and the other end extending to near the bottom and opening inside of the receptacle and through which lubricant is fed to the pad. 6th. In a bicycle, the combination with the endless chain and sprocket wheel, of a lubricant receptacle carried by the wheel and having one end located adjacent the wheel-rim, a pad projecting laterally from said end and over the wheel-rim, a laterally-extending plate protecting the pad and provided with perforations through which oil may pass from the pad to the chain, and means for conveying the lubricant from the receptacle to the said pad. 7th. In a bicycle, the combination of an endless chain and sprocket wheel, a lubricant receptacle carried by the said wheel, a screw-cap closing the outer end of the receptacle and provided with packing, and an opening through both the cap and packing, a tube passed through the said opening in the cap and packing and held by friction and extending to near the bottom of the receptacle, a pad on the rim of the wheel, a plate attached to the outer end of the tube and in contact with the said pad, and a feed yarn or cord extending through said tube and conveying lubricant to said pad.

No. 53,463. Car Coupler. (*Attelage de chars.*)

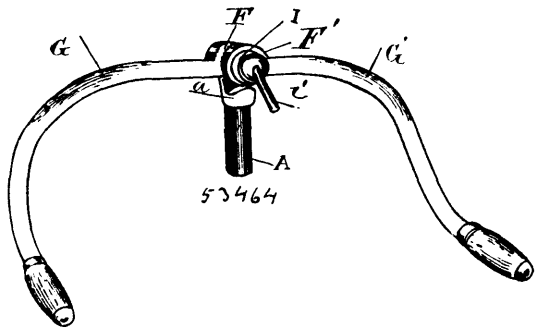


James A. Ward, Thomas J. Hauck and Frank A. Hauck, all of Delta, Idaho, U.S.A., 12th September, 1896; 6 years. (Filed 28th August, 1896.)

Claim. 1st. In a car-coupling, the combination with a draw-head, of a knuckle having a vertical channel formed in it to engage a pintle on one wall of the draw-head, the said knuckle having an outward opening of less width than the diameter of the pintle, the inner wall of said outward opening being adapted to engage the inner surface of the draw-head at the rear of the pintle, substantially as described. 2nd. In a car-coupling, the combination with a draw-head having a pintle formed on one of its side walls and a reduced or web portion between said wall and pintle, of a knuckle having a channel to engage the pintle, the said channel having an outward opening of less width than the diameter of the pintle, the inner wall of said outward opening being adapted to engage the inner surface of said reduced or web portion, substantially as described. 3rd. The combination with a chambered draw-head, and a knuckle hinged thereto and having a tailpiece, of a slide-block adapted to reciprocate in the drawhead, and having a horizontal and a vertical slot extending longitudinally therein, the tailpiece swinging in the horizontal slot and contacting with its front wall to push the block out of the draw-head when the knuckle is opened, and a locking-key for the knuckle, engaging the vertical slot in the sliding block, and adapted to be held elevated therein when the knuckle is open, and to fall to lock the knuckle when said knuckle is closed, substantially as described. 4th. In a car-coupling of the construction described, the combination with a chambered draw-head, a knuckle hinged thereon, and a longitudinally slotted slide-block movable in the draw-head, of a vertical locking-key working in perforations in the draw-head and through one of the slots in the slide-block, said key being adapted to lock the knuckle tailpiece when the knuckle is closed and the slide-block is rearwardly moved in the draw-head, and also to release the knuckle and receive support from the slide-block when the key is lifted and the knuckle is opened, substantially as described.

No. 53,464. Adjustable Handle Bar.

(*Manche de barre ajustable.*)

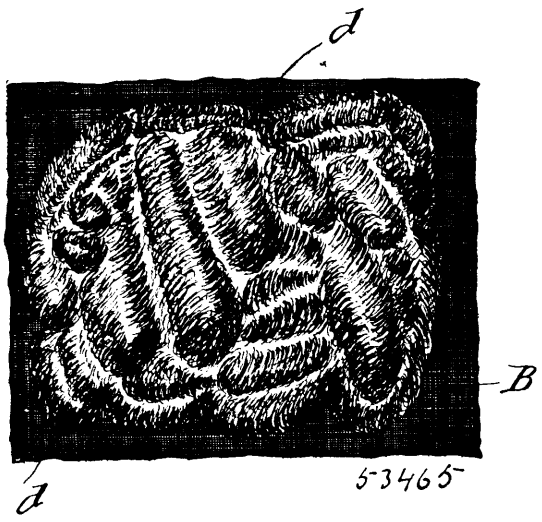


John Galt and Archibald Paterson Rankin, both of Toronto, Ontario, Canada, 12th September, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. The combination with the steering head of the two handle bars mounted thereon at their inner ends on coincident axes, an intermediate connecting gearing sustained by the head and operatively connected to the handle bars, and means for holding the handle bars in their adjusted positions as specified. 2nd. The combination with the steering head of the two handle bars provided with gear teeth and pivotally connected to said head on coincident axes, gear wheels mounted in bearings sustained by the head and meshing with each other and also with the teeth on the handle bars, and means for locking the handle bars in their adjusted positions, substantially as specified. 3rd. The combination with the steering head provided with a horizontal arm formed with bearings, of two intermeshing gears mounted in the bearings in said arm, two handle bars provided at their inner ends with eyes to receive the arm and formed with internal gear teeth meshing respectively with the two gears, and means for locking the arms in their adjusted positions, substantially as specified. 4th. A steering apparatus for bicycles consisting of a steering post, a slotted horizontal arm extending from the steering post, a handle bar comprised of two independent sections, each section provided with an eye through which passes the said arm, an annular gear on the inner face of each of the eyes, two engaging pinions within the slotted sleeve, the teeth of each pinion adapted to engage with the teeth in the eye of its respective handle bar section, substantially as specified. 5th. A steering apparatus for vehicles consisting of a steering post, a slotted horizontal arm extending from the steering post, a handle bar comprised of two independent sections, each section having an eye through which passes the said arm, a semi-annular gear cut on the inner face of each of the said eyes, the teeth extending partially across the same, leaving a clearance contiguous to the adjacent meeting faces of the said eyes, two engaging pinions within the slotted arm the teeth of which extend beyond the same, and engage with the teeth of the semi annular gear, and with each other, substantially as specified. 6th. A steering apparatus for vehicles consisting of a steering post, a slotted horizontal arm extending from the steering post, a handle bar comprised of two independent sections, each section provided with an eye, through which passes the horizontal arm, an annular gear on the inner face of each of the eyes, two engaging pinions within the slotted arm, one pinion adapted to engage with the gear of its respective eye, and a cap or nut to lock the handle bar sections in their adjusted position, substantially as specified. 7th. A steering apparatus for vehicles consisting of a steering post, a slotted horizontal arm extending from the steering post, a handle bar comprised of two independent sections, each section having an eye through which passes the said arm, a semi-annular gear cut on the inner face of each of the said eyes, the teeth extending partially across the same, leaving a clearance contiguous to the adjacent meeting faces of the said eyes, two pinions within the slotted sleeve, the teeth of which extend beyond the same, and engage with the teeth of the semi-annular gear, and with each other, and a cap or nut to lock the handle bar sections in their adjusted position, substantially as specified.

No. 53,465. Imitation de Mouton de Perse.

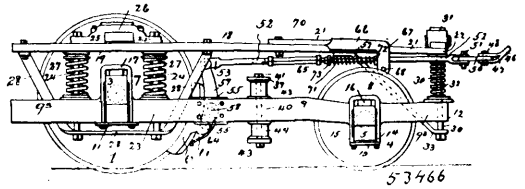
(*Imitation of Persian lamb.*)



Marguerite Boisvert, Montréal, Québec, Canada, 14 Septembre 1896; 6 ans. (Déposé 17 Juillet, 1896.)

Résumé.—Une imitation de mouton de perse comprenant une pièce de flanelle ou autre tissu convenable A, recouverte d'une mince couche de laine cardée, ouate etc B, et des coites de laine vierge (non filée) entrelacées avec cette pièce de flanelle et sa couverture B de manière à former des loupes soulevées *d* ayant leurs extrémités nouées à la flanelle au moyen d'un double point c, le tout tel que décrit et pour les fins indiquées.

No. 53,466. Motor Truck. (*Chassis de moteur.*)

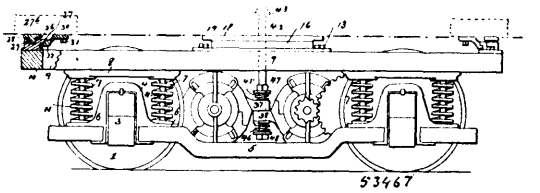


John A. Brill, Philadelphia, Pennsylvania, U.S.A., 14th September, 1896; 6 years. (Filed 18th October, 1896.)

Claim 1st. The combination in a truck having wheels of varying diameter, a frame deriving its support from the axle boxes of the truck, side bearing spring supported upon said frame adjacent to and outside of the large wheels, a bearing and a resilent support for the bearing upon said frame located within the wheel gage in line with the truck centre, and adjacent the small wheels of the truck, substantially as described. 2nd. The combination, in a truck having large or driving wheels at one end and smaller or trailing wheels at the opposing end, of a frame for maintaining the parallelism of the axles supported upon the axle boxes, segmental side bearings resiliently supported upon said frame outside of the larger wheels, the course of the segments being struck from a point within the axle of the larger wheels, and end bearing, and a resilient support for the bearing upon said frame, said support and rub plate being located in a line with the longitudinal centre of the truck adjacent the small wheels, substantially as described. 3rd. A car truck having large and small wheels, an axle box frame supported on the axle boxes, in combination with the segmental side bearings spring supported on the axle box frame outside of and adjacent to the large wheels, and an end bearing having a rotatable element adapted to make a rolling contact with a car body, and a spring support for the bearing on said frame directly below the bearing within the wheel gage and adjacent the small wheels, substantially as described. 4th. In a car truck, the combination of an axle box frame supported upon the axle boxes and encompassing all the wheels of the truck, an upper chord having a contracted portion at one end, springs for supporting the upper chord about the axle boxes at one end of the truck, and additional springs for supporting the contracted end of the upper chord upon the axle box frame, substantially as described. 5th. In a car truck, the combination with an axle box frame encompassing the wheels and supported upon the axle boxes, an upper chord having a contracted portion at one end thereof, springs for supporting the upper chord about the axle boxes at one end of the truck, and springs of a lesser carrying capacity supporting the contracted portion of the upper chord upon the axle box frame, substantially as described. 6th. The combination of a car and truck, the truck having wheels of varying diameter, an axle box frame supported upon the axle boxes and encompassing the wheels of the truck, an upper chord having a contracted portion at one end spring supported about the axle boxes adjacent the larger wheels, additional springs for supporting the contracted portion of the upper chord, said last mentioned springs having a support upon the axle box frame entirely removed from the axle boxes of the smaller wheels, truck bearings oppositely located over the springs adjacent to the large wheels, a bearing located over the additional springs and means for engaging said bearings with the car body, substantially as described. 7th. In a truck, the combination with a substantially rectangular axle box frame, an upper chord encompassing the wheels at one end and lying within the wheels at the other, and springs between the upper chord and axle box frame, located adjacent to the axle boxes at one end of the truck, and between an extension of the axle box frame and the upper chord at the opposite end of the truck, substantially as described. 8th. In a car truck, the combination with an axle box frame disposed outside of the wheels at all its points of suspension, an upper chord smaller in diameter at one end than the truck gage, and springs for supporting the upper chord adjacent to the axle boxes at one end of the truck, and additional spring extending between the axle box frame and the upper chord outside of the wheel base of the truck, substantially as described. 9th. In a car truck, the combination of an axle box frame on the axle boxes, an upper chord, springs between the said chord and frame and adjacent to the axle boxes at one end of the truck, an additional car spring supported on a transverse member of the truck at the other end, substantially as described. 10th. A truck having large and small wheels, an axle box frame extending outside of the wheel base and about the small wheels, an upper chord, and springs for supporting the upper chord of a car body on said frame, some of which are adapted to support the car body on the small wheels from a point without the wheel base, substantially as described. 11th. A pivotal truck having large and small wheels, car springs adjacent to the axle boxes of the large wheels, additional springs outside of the wheel base at the small wheel end, a support for said springs on the truck, and devices for pivotally uniting the car body to the truck about the large wheels, substantially as described. 12th. A truck adapted to preponderate the major part of the weight of a superposed car upon the wheels at one end, and a minor

part upon the wheels at the other, and devices for counterbalancing such inequality in distribution of weight located without the wheel base of the truck at one end thereof, said devices operating initially entirely outside the wheel base to oppose the weight at the opposite end of the truck, substantially as described. 13th. A truck having large and small wheels, and adapted to distribute the major part of the weight of a superposed car body upon the large wheels, and a minor part upon the small wheels, such minor part being transmitted to the small wheels through the instrumentality of a lever of the first order, said lever having its power end directly below the weight, fulcrumed on the axles of the small wheels, and opposed by the weight at the large wheel end, substantially as described. 14th. A truck adapted to place the major part of the weight of a superposed car upon the wheels at one end, such wheels having the motive power for propelling the truck applied thereto, the minor part of the superposed weight being taken by the small wheels, and devices comprising a resilient element or elements for counterbalancing such inequality of distribution of weight located outside of the wheel base of the truck at one end thereof, said resilient element being entirely outside of the wheel base, substantially as described. 15th. In a truck for railway cars, an axle having a pair of driving wheels thereon, and a pair of guide wheels which are of less diameter than the driving wheels, and an axle box frame supported by said two pairs of wheels, springs supported on the side bars of the axle box frame near the axle boxes of the driving wheels only, an upper chord supported about the axle boxes at the large wheel end by said so located springs, and by additional springs outside of the guide wheels, and devices for pivotally mounting a car body on said upper chord directly over the axles of said driving wheels, and additional springs, substantially as described. 16th. An axle box frame comprising side bars and cross bars uniting the side bars, the side bars having saddles or bearing surfaces for the axle boxes extending above and below the main web of the side bars, the side and cross bars and saddles being formed into one piece of metal homogeneous throughout, substantially as described. 17th. The combination with the wheels and axles, of the axle box frame supported on all points without the wheels, having a cross bar disposed without the wheel base at one end, an upper chord spring supported about the axle boxes at the opposite end, and a spring between the said cross bar and upper chord, substantially as described. 18th. The combination with the wheels and axles, of the axle box frame supported on all points without the wheels, having a cross bar disposed without the wheel base at one end, an upper chord spring supported about the axle boxes at the opposing end, a spring between the said chord and bar, and a rub plate on the chord and above the spring, substantially as described. 19th. In a car truck, the axle box frame extension disposed outside of the wheel base at one end of the truck and adapted to receive weight from a superposed car, axle boxes, and an elastic support for said extension upon the axle boxes, substantially as described. 20th. In a truck, the combination with the axle box frame having a cross bar extending between the side bars thereof, a spring supported upper chord smaller in diameter where it approaches the cross bar, and a spring between the cross bar and the reduced end of the upper chord, substantially as described. 21st. An axle box frame made into a single homogeneous piece of metal, comprising longitudinal and transverse members, axle box yokes or pedestals in the longitudinal members, the transverse members, extending between the extreme ends of the longitudinal members, thereby making a continuous unbroken frame, substantially as described. 22nd. An axle box frame having side and cross bars, the side bars being deflected downward at one end, the cross bars uniting the side members at the end thereof, and axle box yokes in the side bars having bearing surfaces of varying height both in relation to each other and to the side bars, the side and cross bars and the yokes being made or formed into one single homogeneous piece of metal continuous throughout, substantially as described. 23rd. In a truck, the axle box frame having a bar extending transversely of the truck from a point beyond the axle at one end of the truck, and a weight secured to said bar, whereby additional tractive power is given to the wheels at that end, substantially as described. 24th. In a truck, the axle box frame having a transversely extending cross bar outside of one of the truck axles, and a weight detachably secured to said cross bar, substantially as described. 25th. In a truck, the axle box frame having a transversely extending cross bar disposed without the wheel base of the truck, and a weight secured to said cross bar, substantially as described. 26th. The upper chord having a substantially rectangular contour at one end and a pyramidal contour at the other, combined with the truck, and supporting springs, oppositely located about the axle boxes at one end of the truck and between the opposing sides of the truck at the other end, substantially as described. 27th. In a car truck, the combination of the axle box frame, the upper chord, car springs for supporting the upper chord or car body on the axle box frame located adjacent to the axle boxes at one end of the truck, and additional springs extending between a transverse member of the axle box frame and the upper chord or car body, said additional springs being of a lesser carrying capacity than the axle box springs, substantially as described. 28th. The upper chord of substantially rectangular form at one end and narrowed at the other end, combined with a system of springs for supporting the same, the rectangular end of the upper chord being supported by oppositely located springs, the narrowed end being supported by springs located between the opposing sides of the truck, substantially as described.

No. 53,467. Motor Truck. (*Chassis de moteur.*)

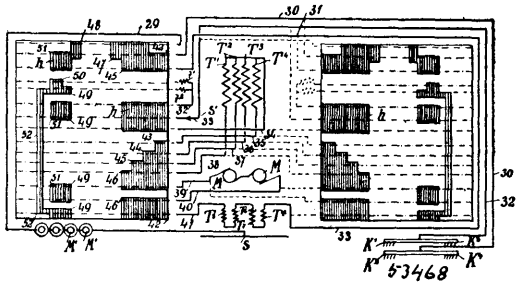


John A. Brill, Philadelphia, Pennsylvania, U.S.A., 14th September, 1896; 6 years. (Filed 18th October, 1894.)

Claim.—1st. The combination of a truck and superposed car, and draw heads secured alike to the car and truck at each end of the truck, which draw heads permit a radial movement of the car and truck in relation to each other, and side bearings and side rub plates on the car and truck, the side bearings being secured to the side members of the truck, the draw head and bearing and rub plates being located outside of the wheel base, substantially as described. 2nd. A truck having a top or upper chord, and a superposed car body supported upon the truck by devices which permit of the swiveling movement of the car and truck in relation to each other, said devices being located on one or both ends outside of the wheel base, and on the sides of the truck outside of the wheel gage, substantially as described. 3rd. The combination of a car and truck, with side bearings on the truck adapted to take the weight of the superposed car, and drawing devices on the ends of the truck, both the side bearing and drawing devices permitting of a movement of the car on the truck in the arc of a circle, and means connected with the drawing devices to prevent disconnection of the parts, substantially as described. 4th. The combination in a truck, of a motor supported at one end upon the truck or one of its axles, the other end of the motor being supported by means separate from and independent of the truck or its framing, said means permitting the truck and motor to have a swivelling movement relatively to said support without imparting a like movement to the support, substantially as described. 5th. In a truck, the combination of a motor supported at one end upon the truck or one of its axles, the other end being supported by means independent of the truck or its framing, said means being fixed in relation to the motor or truck, said means being located at a point about which the truck is adapted to swivel, substantially as described. 6th. The combination in a truck, of a motor supported at one end upon the truck or one of its axles, a superposed car body, and means for supporting the free end of the motor depending from the car body, which means permit of the free end of the motor being supported from a fixed point, said fixed point being located at the pivotal point between the car and truck, and which remains unaffected by the swivelling movement of the car on the truck, substantially as described. 7th. The combination with the truck and car, of the motors sleeved at their outer ends upon the truck axles, a pendant secured to the car body and passing through the free ends of both motors, elastic cushions above and below such free ends, and an interposed cushion between the free ends of both motors, substantially as described.

No. 53,468. Electric Railway.

(*Chemin de fer électrique.*)



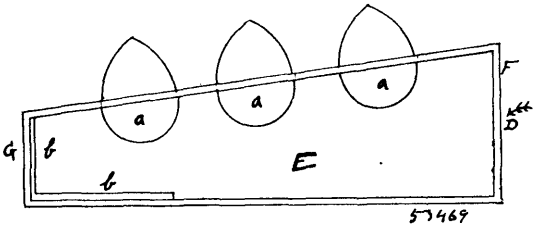
Franz Krizik, Prague, Bohemia, Austria, 14th September, 1896; 6 years. (Filed 7th February, 1896.)

Claim. 1st. In an electric tramway or railway system, the combination of lines of rails *a* and *b* adapted to support and guide suitable motor vehicles working thereon, with two lines of discontinuous rails *c* and *d* laid and insulated in the road bed, an electrical supply *D*, an automatic contact device *Q* with carbon contacts *m* and *n*, circuit connections between the supply D and rails *c* and *d*, and collecting brushes K^1, K^2, K^3, K^4, situated on the motor vehicle and adapted to make electrical contact with the said rails *c* and *d*, substantially as and for the purpose herein described and shown. 2nd. In an electric tramway or railway system, the combination of two lines of discontinuous conducting rails *c* and *d*, with a group of automatic contact devices such as *Q* and Q^1, a series of circuit connections establishing electrical connections between each

pair of rails such as *c*, *d*, and each automatic contact such as Q, and carbon contacts *m*, *n*, so arranged and operating when closed to establish electrical communication between the supply D and the said rails *c* and *d*, substantially as and for the purpose herein described and shown. 3rd. In an electric tramway or railway system, the combination of parts constituting an improved commutator H with electrical circuits as indicated, substantially as and for the purpose described and shown. 4th. In an electric tramway or railway system, the combination of a line of railway adapted to support and guide a suitable motor vehicle thereon, with two lines of discontinuous conducting rails such as *c* and *d*, an electrical supply D, an automatic contact device such as Q, circuit connections between the supply D and rails *c*, *d*, collecting brushes K^1, K^2, K^3, K^4 on the motor vehicle, and an auxiliary accumulator M^1 also on the vehicle, substantially as and for the purpose herein described and shown. 5th. In an electric tramway or railway system, the auxiliary source of electricity such as M^1, an electric motor such as M, collecting brushes such as K^1, K^2, K^3, K^4, a commutator such as H, electrical connections between the aforesaid parts, all carried upon a motor vehicle and combined with the line of railway for the said vehicle, two lines of discontinuous conducting rails such as *c*, *d*, arranged in groups electrically connected in groups with a source of electricity such as D, and automatic contact devices such as Q adapted to close each pair of conducting rails in circuit with the said motor M, and source of electricity M^1 in succession by the said collecting brushes of the moving vehicle, substantially as and for the purpose herein described and shown. 6th. In an electric tramway or railway system, the combination of groups of discontinuous conducting rails arranged in pairs such as *c*, *d*, c^1, d^1, c^2, d^2 and the like, with a supply source of electricity such as D, an auxiliary source of electricity such af M^1 on a motor vehicle adapted to close successive circuits embracing pairs of the said conducting rails and to replenish the said source auxiliary of electricity, substantially as and for the purpose herein shown and described. 7th. In an electric tramway or railway system, a road bed constructed and arranged with the usual rails *a* and *b*, the discontinuous lines of conducting rails *c* and *d* laid in asphalte, and combined with current connections arranged and operating, substantially as and for the purpose herein described.

No. 53,469. Egg Tester.

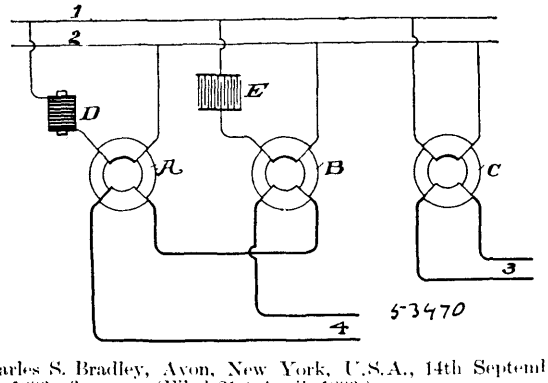
(*Appareil à faire l'épreuve des œufs*)



Annie M. L. Chute, Bridgetown, Nova Scotia, Canada, 14th September, 1896; 6 years. (Filed 18th March, 1896.)

Claim.—1st. The combination of the mirrors *b b* and the top containing the egg receptacles *c c c c c c*, substantially as and for the purpose hereinbefore set forth. 2nd. the combination with the mirrors *b b* and the top containing the egg receptacles *c c c c c c*, of the end containing the holes D D, substantially as and for the purpose hereinbefore set forth.

No. 53,470. Converting Simple into Polyphase Alternating Currents. (*Conversion de courant alternatif en simple courant polyphase.*)

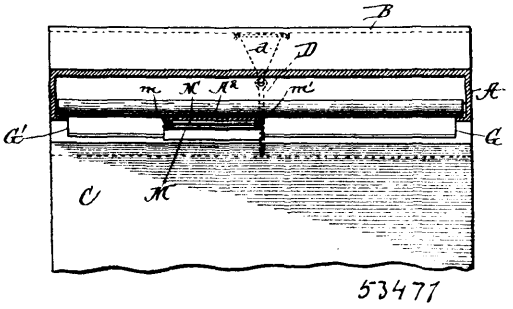


Charles S. Bradley, Avon, New York, U.S.A., 14th September, 1896; 6 years. (Filed 21st April, 1896.)

Claim.—1st. The method of changing the phase difference of alternating currents, consisting in establishing electromotive forces whose phases differ by an oblique angle, and bringing said electromotive forces into inductive re co-operation with relatively reversed phases. 2nd. Means for changing the phase difference of alternating currents comprising a source of two electromotive forces differing in phase by an oblique angle, and inductively co-operating coils having their terminals reversely connected with respect to said electromotive forces. 3rd. Means for producing two co-operating alternating currents of pre-determined phase difference comprising a supply circuit, a circuit supplied by the latter through a phase-changing device, a translating device, a companion-supplied circuit, and connections for relatively reversing the associated phases in the translating device. 4th. The combination with a simple alternating circuit of two or more branches containing respectively a condenser and a reaction coil, and a work-circuit in fixed inductive relation to both branches, and connections for combining the two displaced electromotive forces in the same work-circuit to produce a pre-determined resultant phase therein. 5th. The combination with a simple alternating current circuit, of a plurality of transformers supplied thereby, means for creating a difference of phase in the several transformers, and interconnections for combining the displaced phases to produce a resultant phase or phases. 6th. The combination of a simple alternating current circuit, a plurality of transformers supplied thereby through phase-advancing and retarding devices, and a plurality of coils in inductive relation to the several phases, said coils being connected in series relation.

No. 53,471. Panoramic Display Device.

(*Appareil d'étalage panoramique.*)

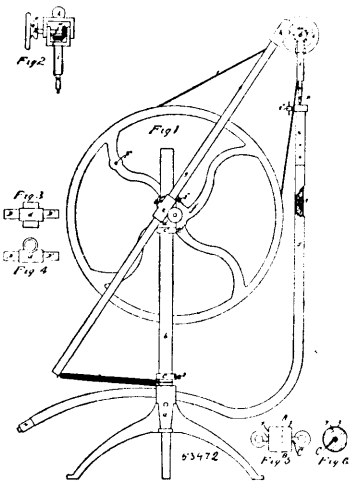


Levi W. Yaggy, Lake Forest, Illinois, U.S.A., 14th September, 1896; 6 years. (Filed 16th July, 1896.)

Claim.—1st. The combination with a case A, having a pair of apertures, as G and G^1, in one of its sides, of a scroll within the case and extending from between the apertures across one of them, as G, and being folded backwardly and returning across the other aperture as G^1, rollers journalled within the case, for carrying the scroll. 2nd. The combination with the case A, having a pair of apertures in one of its sides, of a pair of carrying rollers journalled within the case, transverse to the aligment of the apertures and upon opposite sides of one of them, an idle roller journalled at the outer or remote side of the other aperture, a scroll having its ends attached one to each of the carrying rollers and being turned over the idle roller, whereby it is spread before both of the apertures and presents an opposite face to view at each of them, substantially as described and for the purpose set forth. 3rd. The combination with a case having one of its sides apertured for the exhibition of panoramic views, of a leaf for covering the apertures and hinged below the same so that it may be opened downwardly, a leg hinged to the opposite side of the case so that it may be folded against the same or thrown backwardly therefrom, a rigid arm extending within the case from the leaf and link connection between the arm and the leg, substantially as described and for the purpose set forth. 4th. The combination with a panorama case having a pair of exhibiting apertures in one of its sides, of a leaf hinged between the apertures transversely to their aligment and being of sufficient width to cover either of such apertures. 5th. The combination with a panorama case having a pair of exhibiting apertures in one of its sides and differing in size, such apertures being spaced apart, of a jointed leaf hinged between the apertures transversely to their aligment, such leaf being of sufficient width to cover the wider aperture and none of its sections being wider than the space between the apertures. 6th. The combination with a panorama case having a pair of apertures of unequal size in one of its sides and spaced apart, of a jointed leaf hinged between the apertures and contiguous to the margin of the wider aperture, the extreme width of the leaf being equal to the distance from its point of attachment to the case to the remote side of either aperture. 7th. The combination with a panorama case having a pair of exhibiting apertures in one of its sides, of a pair of carrying rollers journalled within the case, transverse to the aligment of the apertures and upon opposite sides of one of them, an idle roller journalled at the outer or remote side of the other aperture, a scroll having its ends attached one to each of the carrying rollers and being turned over the idler, whereby it is spread before both of the apertures and presents an opposite face to view at each of them, and sliding screens for covering the apertures. 8th. The combination

with a panorama case having a pair of exhibiting apertures in one of its sides, of a pair of carrying rollers journalled within the case, transverse to the alignment of the apertures and upon opposite sides of one of them, an idle roller journalled at the outer or remote side of the other aperture, a scroll having its ends attached one to each of the carrying rollers and being turned over the idler, whereby it is spread before both of the apertures and presents an opposite face to view at each of them, and a screen or curtain for alternately covering the apertures. 9th. The combination with a panorama case and with an exhibiting scroll, of rollers journalled within the case for carrying the scroll and having a gudgeon projecting through the wall of the case and being longitudinally apertured to receive a key and transversely recessed at its inner end to expose the key, of a key adapted to the longitudinal aperture, and a tumbler resting within the transverse recess and having a shoulder lying in the path of the key when turned in one direction, substantially as described and for the purpose set forth. 10th. The combination with a rotatable spindle having a reduced neck and a key-hole entering its end, and opening laterally through its neck, of a key adapted to the key-hole, and a tumbler resting upon the neck of the spindle and having a shoulder lying across the path of the key, whereby the movement of the latter is limited to one direction, substantially as described and for the purpose set forth. 11th. The combination of the case A, having the apertures G, G^1, the carrying rollers F, F^1, journalled within the case as shown, the idle roller *f*, the scroll E having its ends secured respectively to the rollers F, F^1, and being turned over the roller *f*, the gudgeons F^2, F^3, for the rollers F, F^1, passing through the wall of the case and each having a reduced neck and a key-hole entering its end and opening laterally through the neck, a key adapted to the key-hole, and a tumbler resting upon the neck of each gudgeon and having a shoulder lying across the path of the keys, substantially as described and for the purpose set forth.

No. 53,472. Machine for Clipping Horses and Shearing Sheep. (*Appareil pour tondre les chevaux et moutons.*)



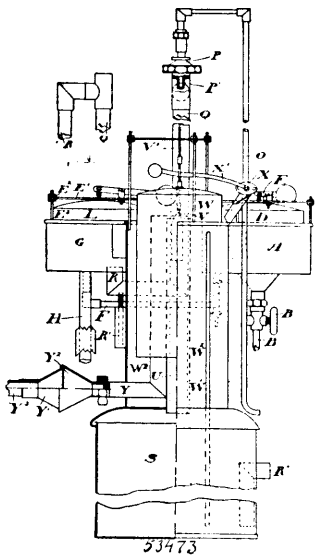
John Peter Dean, Waterford, Ontario, Canada, 14th September, 1896; 6 years. (Filed 12th March, 1896.)

Claim.—1st. The combination in machines for clipping horses or shearing sheep of the stand and upright tube and a single piece cast head having a bearing arm on either end as and for the purpose specified. 2nd. The combination in machines of this kind of the stand and upright tube, a single piece cast head having a bearing arm on either end, a band or fly wheel hung on one arm of said head and having a handle fixed on said wheel as and for the purpose specified. 3rd. The combination in machines of this kind of the stand and upright tube, a single piece cast head having a bearing arm on either end, a band or fly wheel hung on one arm of said head and having a handle fixed on said wheel, a casting hung on the other arm of said head bearing or holding the shaft conveying the head and gearing of said machine as and for the purpose specified. 4th. The combination with the frame or stand and upright tube of a steel coil spring connecting the said upright tube with the lower end of the aforesaid shaft carrying the head and gearing of said machine as and for the purpose specified.

No. 53,473. Manufacture and Storage of Inflammable Gas. (*Fabrication et emmagasinage de gaz inflammable.*)

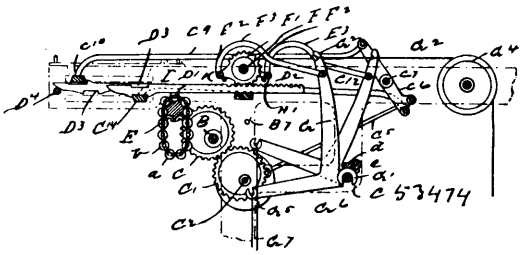
John Alston Wallace, Melbourne, Victoria, Australia, 14th September, 1896; 6 years. (Filed 3rd August, 1896.)

Claim.—1st. In the manufacture of inflammable gas—The employment of a water blast or spray set within a down pipe and arranged to produce a suction in a pipe connected with such down pipe so as to draw together the mixture of gas and air and force



same with the water into a receptacle beneath substantially as and for the purposes set forth. 2nd. In the manufacture of inflammable gas, in combination a pontoon as A, inlet pipe as B^2, valve as C, set within such pipe an i linked to a weighted lever as E, a dome as D, connected with such valve and lever and an outlet pipe as F, substantially as described and as illustrated on figure 4 of the accompanying drawings. 3rd. In the manufacture of inflammable gas, in combination a double pontoon as G, a floating dome as L, within same controlled by a balanced lever as E, and connected with a slide valve as K^2, a plate as H^4, having ports as F^1 H^1, inlet pipes for gas and air respectively as F and H, and outlet pipe R, for the mixed gases, substantially as described and as illustrated on figures 5 and 6. 4th. In the manufacture of inflammable gas, in combination a chamber as S, on which is mounted an open vessel as W^2, pipes U and Y, floating dome W, connected with a valve as V, set within the pipe U, and controlled by an arm as X^1, operating the cock as X, of a water pipe, substantially as described and as illustrated on figure 1. 5th. In the manufacture of inflammable gas,—in combination a water blast as P, having nozzle as p^1, pipe as R, through which the mixed gases are drawn and a pipe as Q, through which the water carrying the mixed gases falls and a chamber as S to receive same substantially as and for the purposes described. 6th. The general combination and arrangement of the whole of the parts substantially as described and as illustrated on the accompanying drawings.

No. 53,474. Loom. (*Métier.*)

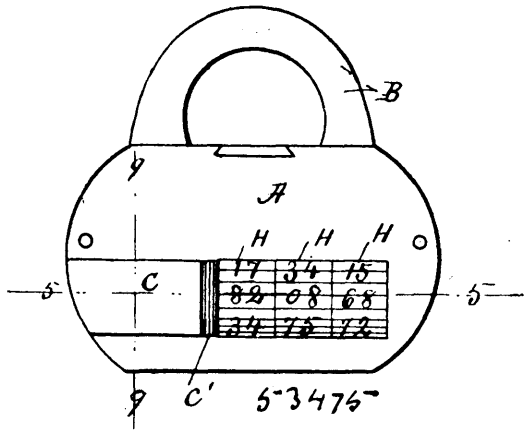


Baptiste Hilbert, Worcester, Massachusetts, U.S.A., 14th September, 1896; 6 years. (Filed 12th August, 1896.)

Claim—1st. In a loom shedding mechanism, the combination of a series of pivoted levers operatively connected with the harness-frames, segmental gears capable of an oscillating movement through an arc greater than a half revolution, radial arms projecting from said gears, fixed rods held by the frame of the loom in the path of said arms, whereby the oscillations of said gears are limited, a series of sliding jacks having teeth engaging said gears and notches adapted to be engaged by a pair of sliding knives, a pair of sliding knives engaging said toothed jacks, a bar held in the frame of the loom by which said jacks are raised out of engagement with one of said sliding knives, links connecting said oscillating gears with said pivoted levers, means for imparting a sliding motion to said knives, and a pattern mechanism for carrying said jacks into engagement with said knives, substantially as described. 2nd. The combi-

nation with the frame of the loom, provided with slots forming ways for a reciprocating knife-bar, and a reciprocating knife-bar moving in said slots, of detached bars forming one side of said slots and blade springs attached at one end to the frame of the loom, and at their opposite ends to said detached bars, whereby said bars are capable of yielding against the pressure of the knife-bar, substantially as described. 3rd. The combination of the shafts B^2, and B, connecting-gears B^1, and B^2, and clutching connection between said gears and said shaft B, eccentric gear C, carried upon said shaft B, eccentric gear C^1, rotating upon a stud held in the framework and carrying a crank-plate G^2, link C^5, connecting said crank-plate and oscillating arms, links connecting said oscillating arms with the reciprocating knife-bars, and reciprocating knife-bars engaging a series of jacks, and a series of jacks operatively connected with the harness-frames, substantially as described. 4th. The combination of the sliding toothed jacks D^1, segmental gears F^1, having radial arms F^2, operatively connected with the harness-frames by intermediate mechanism, substantially as described, a pattern-chain-carrying shaft J, rotating shaft B, intermediate connecting mechanism, by which the rotation of the shaft B, is made to impart an intermittant rotary motion to the shaft J, substantially as described, a gear J^3, carried upon the said shaft B, and engaged by a driving-gear J^4, provided with a hand-wheel J^6, and a supporting stud J^5, all arranged and operating, substantially as set forth.

No. 53,475. Permutation Lock. (*Serrure à combinaison.*)

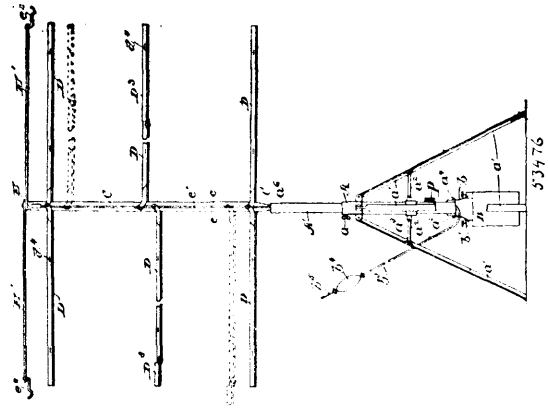


Stefano Bozano, Boston, Massachusetts, U.S.A., 14th September, 1896; 6 years. (Filed 10th August, 1896.)

Claim.—In a permutation lock, in combination, an enclosing case, a pivoted bow B, a longitudinally adjustable slide C, having a projection C^{11}, on its underside, a stationary slitted sleeve F, a locking bolt D, longitudinally adjustable in said sleeve, and having side projecting *d*, *d*, D^{11}, and groove D^1 engaging with the slide projection C^{11}, a series of lettered or numbered discs H, H, journaled on said sleeve, and having internal grooves *h*, and a spring pressed hook lever I adapted to interlock with the free end of the bow B, substantially as and for the purpose set forth.

No. 53,476. Electric Flash Light Apparatus.

(*Appareil à éclat de lumière électrique.*)

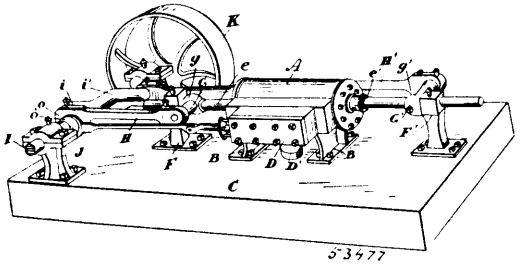


William Bruns, assignee of George R. Lawrence, both of Chicago, Illinois, U.S.A., 14th September, 1896; 6 years. (Filed, 18th February, 1896.)

Claim.—1st. An electrically connected supporting frame or standard in combination with an electrically connected piece secured parallel with said standard, a series of arms or pans movably and adjustably secured to the standard, each carrying an electric conductor, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 2nd. The combination of an electrically connected supporting frame or standard with an electrically connected piece secured parallel with said standard, a series of arms or pans movably and adjustably secured to the standard, each carrying an electric conductor, engaging at their inner ends with said piece, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 3rd. The combination of a supporting frame or standard with a battery electrically connected thereto, a piece secured parallel with said standard, and having an electric connection with the battery, a series of arms or pans movably and adjustably secured to the standard, each carrying an electric conductor engaging at their inner ends with said piece, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 4th. The combination of a supporting frame or standard with a battery suspended thereon, and having one of its connections therewith through one of its suspending devices, a piece secured parallel with said standard and having an electric connection with the battery, a series of arms or pans movably and adjustably secured to the standard, each carrying an electric conductor, engaging at their inner ends with said piece, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 5th. The combination of a supporting frame or standard having an electric connection, with an adjustable and folding stand, a piece secured parallel with said standard and having an electric connection, a series of arms or pans movably and adjustably secured to the stand and each carrying an electric conductor engaging at their inner ends with said piece, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 6th. The combination of a supporting frame or standard mounted on an adjustable stand, with a battery suspended thereto and having a connection therewith, a piece secured parallel with said standard and having an electric connection, a series of arms or pans movably and adjustably secured to the stand and each carrying an electric conductor engaging at their inner ends with said piece, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 7th. The combination of an electrically connected supporting frame or standard with a hollow and slotted piece secured parallel therewith having an electric connection, a series of arms or pans movably and adjustably secured to the standard and having receptacles for the fuses an electric conductor, on each pan or arm, extending at its inner end through the slot and into the hollow of said piece and adapted to contact therewith, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 8th. The combination of an electrically connected supporting frame or standard with a hollow and slotted piece secured parallel therewith having an electric connection, a series of arms or pans movably and adjustably secured to the standard and having openings in their walls to receive the fuses, an electric conductor, on each pan or arm, extending at its inner end through the slot and into the hollow of said piece and adapted to contact therewith, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 9th. The combination of an electrically connected supporting frame or standard with a hollow and slotted piece secured parallel therewith, having an electric connection, a series of arms or pans movably and adjustably secured to the standard, each of said arms or pans being provided with a tube to receive a conductor, and receptacles for the fuses, an electric conductor, in each of said tubes, extending at its inner end through the slot and into the hollow of said piece and adapted to contact therewith, and a number of fuses adapted to complete the circuit on the pan or arms and to ignite the powder, substantially as described. 10th. The combination of an electrically connected supporting frame or standard having a vertical slot or guide-way with a hollow and slotted piece secured parallel therewith having an electric connection, a series of arms or pans having forked projections at their inner ends to stride the standard and rivets to movably and ajustably secure them thereto, so that when lowered to a horizontal position they will be fairly braced, an electric conductor, on each of said arms or pans, extending at its inner end through the slot and into the hollow of said piece and adapted to contact therewith, and a number of fuses adapted to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 11th. The light supporting arms or pans D, having the tubes d^3, the conductors G, in said tubes, and receptacles on the tubes for the reception of the fuses, the same contacting with the conductors, substantially as described. 12th. The light supporting arms or pans D, having the tubes d^3, the conductors G, in said tubes, the slots d^4, and springs *i*, for the fuses, substantially as described. 13th. The combination with the supporting standard C, of a hollow and slotted piece F, secured parallel therewith and each having an electric connection, and the arms or pans D, pivotally and movably secured on said standard, and having the tubes d^3, and receptacles for the fuses, the conductors G, located in said tubes and extending at their inner ends into the piece F, substantially as described. 14th. The combination with an electric conducting supporting frame provided at its lower portion with attaching devices for the battery, of said bat-

tery suspended thereon by means of conductors, a piece secured parallel with the frame and near the same and electrically connected with the battery, a pneumatic device in the lower portion of the frame to complete the circuit when desired, substantially as described. 15th. The combination with an electric conducting supporting frame provided at its lower portion with attaching devices for the battery, of said battery suspended thereon by means of conductors, a piece secured parallel with the frame and near the same and electrically connected with the battery, a pneumatic connection between the lower portion of the frame and camera to complete the circuit and make the exposure simultaneously, substantially as described. 16th. The combination with an electric conducting supporting frame provided at its lower portion with attaching devices for the battery, of said battery suspended thereon by means of conductors, a piece secured parallel with the frame and near the same and electrically connected with the battery, a pneumatic device in the lower portion of the frame to complete the circuit when desired, a series of pans or arms movably and adjustably secured on the frame and having receptacles for the fuses, an electric conductor on each pan or arm, adapted to engage a conductor at its inner end, and a number of fuses to complete the circuit on the pans or arms and to ignite the powder, substantially as described. 17th. The combination of the main supporting post A, provided at its lower portion with the hooks a^4, and a^5, and internal cylinder B^1, with the battery B, having the devices b, and b^1, to engage the said hooks and to form an electric connection, the pneumatic bulb b^4, having the pipe b^5, connected to the post and adapted to raise the cylinder B^1, and complete the circuit, substantially as described. 18th. The combination of the main supporting post A, provided at its lower portion with the hooks a^4, and a^5, and internal cylinder B^1, with the battery B, having the devices b, and b^1, to engage the said hooks and to form an electric connection, the bulb b^4, having a pneumatic connection with the lower part of the post A, and camera, and adapted to complete the circuit and to make the exposure, substantially as described. 19th. A fuse consisting of a piece of material, having shoulders i^4, and a projection i^5, with a wire wound diagonally around said piece and imbedded in its edges, substantially as described.

No. 53,477. Steam Engine. (*Machine à vapeur.*)

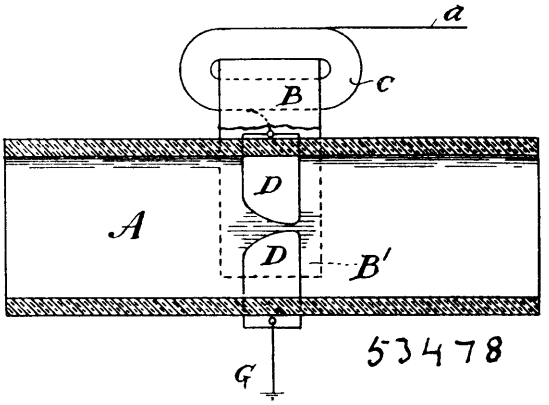


Joseph Hardill, Benson French and Robert Talbot Harding, all of Stratford, Ontario, Canada, 14th September, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—1st. In a steam engine, a cylinder provided with two pistons and rods and a suitably operated valve whereby steam is directed against the outer ends of faces of the pistons to force them inwardly, as and for the purpose specified. 2nd. In a steam engine, a cylinder provided with two pistons and rods and a suitably operated valve whereby steam is directed against the outer ends or faces of the piston to force them inwardly and at the end of the inward stroke is admitted into the cylinder between the pistons to force them outwardly, as and for the purpose specified. 3rd. In a steam engine, the combination with the cylinder and two pistons and rods, deriving movement therein in opposite directions simultaneously, of an outer bearing for each piston rod, laterally extending arms adjustably secured to the rods, and connecting rods pivotally connected to each arm, and the main shaft provided with two cranks of opposite throw to which each rod is suitably attached, as and for the purpose specified. 4th. In a steam engine, in combination the cylinder, the pistons and piston rods having movement therein, the steam chest, the elongated port extending from the central portion of the chest to one end of the cylinder, the central port extending from chest to central cylinder, and a suitably operated and constructed valve designed to cut off and connect the ports and allow of the exhaust, as and for the purpose specified. 5th. In a steam engine, in combination the cylinder, the pistons and piston rods having movement therein, the steam chest, the elongated port extending from the central portion of the chest to one end of the cylinder, the central port extending from chest to cylinder, a suitably operated and constructed valve designed to cut off and connect the ports and allow of the exhaust, and an air exhaust port extending through one end of the cylinder, as and for the purpose specified. 6th. In a steam engine, in combination the cylinder, the pistons and piston rods having movement therein, the steam chest, the elongated port extending from the central portion of the chest to one end of the cylinder, the central port extending from chest to cylinder, and a suitable valve provided with a port designed to connect the central port and elongated port at the end of the inward stroke of the pistons, and an exhaust port designed to be connected to the central port at the end of the outward stroke of the pistons, as and for the purpose specified. 7th. In a steam engine, in combination the cylinder, the pistons and piston heads having movement therein, the steam chest, elongated ports connected the central portion of the chest to the inner ends of the cylinder when the piston is at the end of its outward stroke, the central port midway between them, the valve suitably operated and provided with double ports designed to co-act with a central port and elongated ports, the exhaust port in the valve designed to connect with the central port, and the supplemental port in the valve designed to co-act with one elongated port, the elongated ports being cut off and connected to the central port by the suitably operated valve, as shown and for the purpose specified.

No. 53,478. Method of Extinguishing Electric Arcs.

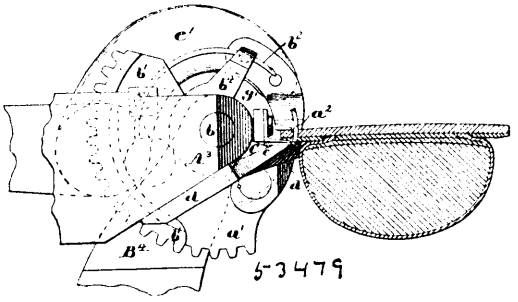
(*Méthode d'éteindre les arcs électriques.*)



The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of William B. Potter, Schenectady, New York, U.S.A., 14th September, 1896; 6 years. (Filed 8th July, 1896.)

Claim.—1st. The method of extinguishing an electric arc, which consists in restraining the path of the arc to a line of direction substantially transverse to the lines of force from an arc disrupting-means tending to extinguish it. 2nd. The method of extinguishing an electric arc, which consists in confining the path of the arc to a line of direction substantially transverse to the lines of force of an arc-rupturing magnet. 3rd. The method of extinguishing an electric arc, which consists in inclosing the arc within a chute of refractory insulating material closed at the sides and open at both ends, arranged to co-operate with other arc-extinguishing means. 4th. The method of extinguishing an electric arc, which consists in inclosing the arc within a chute of insulating refractory material closed at the sides and open at both ends, and providing a magnetic feed within the chute. 5th. In combination, terminals at which an arc may be formed, a chute of insulating refractory material closed at the sides and open at both ends and inclosing such terminals, and an arc-extinguishing means co-operating with the chute. 6th. In combination, terminals at which an arc may be formed, an electro-magnet having its poles closely approximated to such terminals, and a chute of refractory insulating material inclosing the terminals, the chute being open at both ends and closed at the sides.

No. 53,479. Welt Bevelling Attachment for Sole Sewing Machines. (*Attache de machines à coudre pour ébiseler les semelles de chaussures.*)

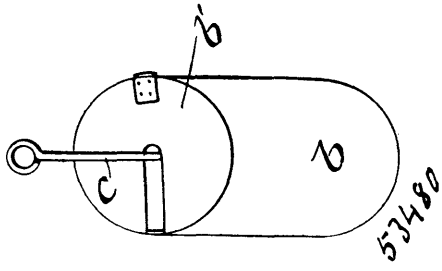


John B. Hadaway, Brockton, Massachusetts, U.S.A., 14th September, 1896; 6 years. (Filed 28th July, 1896.)

Claim.—1st. In combination with a stitch forming mechanism of a sewing machine, a work support; mechanism for feeding the work; a knife located just in the rear of the needle and awl slot in said work support and movable with said feed mechanism and adapted to cut a section of a bevelled shaving from the upper surface

of the welt at each retraction of said feed mechanism. 2nd. In combination with the stitch forming mechanism of a sewing machine, a work support; mechanism for feeding the work; a knife located just in the rear of the slot in said work support and having its cutting edges slightly inclined to a horizontal plane and movable with said feed mechanism; and adapted to cut a section of a bevelled shaving from the upper surface of the welt at each retraction of the feed mechanism. 3rd. In combination with the stitch forming mechanism of a sewing machine, a work support; mechanism for feeding the works, a knife located just at the rear of the slot in the work support, and having its cutting edge slightly inclined to a horizontal plane and oblique to the line of feed of the work and movable with said feed mechanism, and adapted to cut a section of a bevelled shaving from the upper surface of the welt at each retraction of the feed mechanism. 4th. In combination with the stitch forming mechanism of a sewing machine, a work support having the rear of inner portion of its upper surface rabbeted or cut away as described; mechanism for feeding the work; a knife carried by said feed mechanism and movable in said rabbet or cut away space, whereby a section of a bevelled shaving is cut at each retraction of the feed mechanism. 5th. In combination with the stitch forming mechanism of a sewing machine, a work support having the rear or inner portion of its upper surface rabbeted or cut away, as described; mechanism for feeding the works a knife carried by said feed mechanism and movable therewith, and located above said rabbet with its front end adjacent to the slot in said support for the passage of the needle, and having a portion of its cutting edge at its front end turned downward from its main body as described. 6th. In combination with the stitch forming mechanism of a sole sewing machine, a work support having the rear or inner portion of its upper surface rabbeted or cut away as described; mechanism for feeding the work; a cutter carried by said feed mechanism and movable therewith, and adapted to cut a section of a bevelled shaving from the upper surface of the welt at each retraction of said feed mechanism; and a guard or gage to determine the thickness of said shaving. 7th. The combination with the stitch forming mechanism of a shoe sewing machine, of mechanism for feeding the work, and welt bevelling mechanism arranged to bevel the welt during the sewing operation, substantially as described. 8th. The combination with the stitch forming mechanism of a shoe sewing machine, of mechanism for feeding the work, a movable cutter arranged to bevel the welt during the sewing operation, and means for actuating said cutter, substantially as described. 9th. In a welt bevelling attachment for shoe sewing machines, a welt bevelling knife having relatively angularly disposed cutting edges, substantially as described. 10th. The combination with the stitch forming mechanism of a shoe sewing machine, of mechanism for feeding the work, welt bevelling mechanism for bevelling the welt, and means for operating the welt bevelling mechanism while the work is held by the stitch forming mechanism, substantially as described. 11th. The combination with the stitch forming mechanism of a shoe sewing machine, of mechanism for feeding the work, a cutter arranged to bevel the welt and means for adjusting the cutter to determine the thickness of the shaving cut from the welt, substantially as described.

No. 53,480. Egg Beater. (*Vergette de cuisine.*)



Henry Beaumont and George Wells, both of Montreal, Quebec, Canada, 15th September, 1896; 6 years. (Filed 9th July, 1896.)

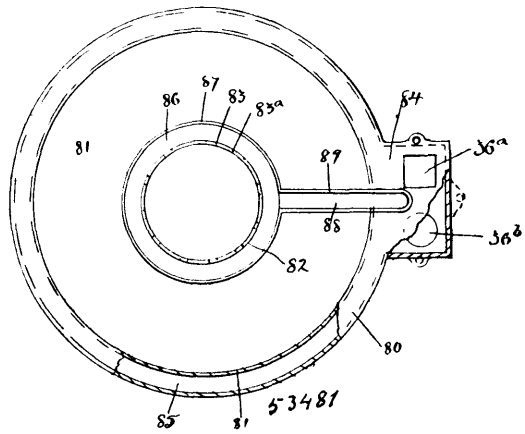
Claim.—1st. A beater consisting of a cylindrical receptacle with conical bottom and a vertically movable perforated plunger of conical form. 2nd. A beater consisting of a cylindrical receptacle having one end open and provided with a cover and the other end closed by an inwardly projecting cone secured therein; a plunger formed of a perforated cone corresponding in diameter to the interior of said receptacle and having the apex thereof connected to the end of an agitator rod adapted when the plunger is in place in the receptacle to project through said cover, as and for the purpose set forth.

No. 53,481. Hot Water Heater.

(*Appareil à chauffer l'eau.*)

John Barclay, Montreal, Quebec, assignee of George Alfred Watson, Toronto, Ontario, both in Canada, 15th September, 1896; 6 years. (Filed 24th April, 1896.)

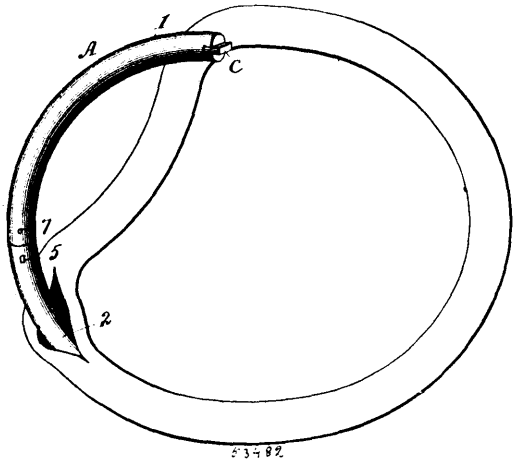
Claim.—1st. An integral annular section for hot water heaters formed of a series of separate annular water chambers forming the



wall of the section, and each enclosing a separate heating space. 2nd. A section for hot water heaters, formed of two water chambers and a series of independent separate annular water passages connecting said chambers and forming the wall of the section, and each enclosing a separate heating space, with flow connections from one, and a return connection to the other, of said chambers. 3rd. A section for hot water heaters formed of two water chambers and a series of independent separate annular water passages connecting said chambers, each passage enclosing a separate heating space, and heat passages extending from said heating spaces through said water chambers which flow connections from one, and a return connection to the other, of said chambers. 4th. In a hot water heater, the combination of an ash pit section formed with a jacket having an outlet to the open air, a grate, an annular fire pot section arranged above said ash pit section and formed of a series of separate vertical annular water chambers arranged side by side and each enclosing a separate heating space connected at its lower end with said jacket, one or more water sections located above said fire pot and a top water section located above said water sections, said water sections having a series of vertical passages there through connecting the spaces enclosed by said annular water chambers with a space formed by said top section, and a series of passages connecting the space formed by said top section with the fire pot, a flow and return connection with the body of water contained in said heater, for the purposes set forth. 5th. In a hot water heater, the combination of an ash pit section formed with a jacket having an outlet to the open air, a grate, an annular fire pot section arranged above said ash pit section and formed of a series of separate vertical annular water chambers arranged side by side and each enclosing a separate heating space connected at its lower end with said jacket, one or more water sections located above said fire pot and a top water section located above said water sections, said water sections having a series of vertical passages there through connecting the spaces enclosed by said annular water chambers with a space formed by said top section, and a series of passages connecting the space formed by said top section with the fire pot, a flow and return connection with the body of water contained in said heater, and an independent heated air supply from the ash pan to the fire pot, for the purpose set forth. 6th. In a heater, the combination with a main flue or flues connecting the fire chamber with the chimney connections, of a secondary conductor or passage independent of the grate section of said main flue or flues, and connecting said underside of the grate with the fire chamber, for the purpose set forth. 7th. In a heater, the combination with a coal magazine, and main flue or flues connecting the fire chamber with the chimney connection, of a secondary flue or flues independent of the grate section, and of the main flue or flues, and connecting said underside of the grate with said coal magazine, for the purpose set forth. 8th. In a hot water heater, the combination of, an ash pit section formed with an ash pan section smaller than and set within said ash pit section, and located near the top thereof to form a jacket or chamber surrounding said ash pan on all sides excepting the front and top thereof, said front portion communicating with an opening in the front of the casing, and said jacket or chamber communicating with the chimney, a grate located at the top of said ash pan or section, a fire pot section arranged above and resting upon said ash pit section and formed of two circular water chambers located one above the other and connected by a series of tubes and a U-shaped portion to form independent water passages from one to the other of said circular water chambers, a series of tubes each of which extend from the lower side of said lower circular chamber to the upper side of said upper circular chamber, and located within and being of fess diameter than said first mentioned tubes, one or more water sections located above said fire pot section and provided with a series of vertical passages corresponding in size with and connected to the passages formed by the smaller tubes through said fire pot section, a second circle of

vertical passages and a tube leading from the fire pot upward through all of the said water sections, a water-back formed by a rearward extension from each of said water sections, and a vertical dividing diaphragm extending from said central tube rearward to the rear of said extension, communicating openings between said sections and located on either side of said diaphragm, a top section located above said water sections and formed to present a water chamber, a chamber communicating with all of the vertical passages through said water sections, and an air chamber encircling the upper perforated end of a central tube extending vertically therethrough and corresponding to the central tube of said water sections, said tube being provided with a cover, a rearward extension corresponding to said water-back, and having a communication with same, a pipe connected with and extending from said circular air space to and connected with the ash pan, a damper for opening or closing said pipe, flow connections from said top section, and return connections to the lower circular chamber of the fire pot section, for the purpose set forth. 9th. In a hot water heater, the combination of, an ash pit section, a grate located at the top of said ash pit section, a fire pot section arranged above and resting upon said ash pit section and formed of two circular water chambers located one above the other and connected by a series of tubes to form independent water passages from one to the other of said circular water chambers, a series of tubes each of which extend from the lower side of said lower circular chamber to the upper side of said upper circular chamber, and located within and being of less diameter than said first mentioned tubes, one or more water sections located above said fire pot section and provided with a series of vertical passages corresponding in size with and connected to the passages formed by the smaller tubes through said fire pot section, a second circle of vertical passages and a tube leading from the fire pot upward through all of the said water sections, a top section located above said water sections and formed to present a water chamber, and a chamber communicating with all of the vertical passages through said water sections, and an air chamber encircling the upper perforated end of a central tube extending vertically therethrough and corresponding to the central tube of said water sections, a pipe connected with and extending from said circular air space to and connected with the ash pan, a damper for opening and closing said pipe, flow connections from said top section, and return connections to the lower circular chamber of the fire pot section, for the purpose set forth. 10th. In a hot water heater, the combination of, an ash pit section formed with a jacket having an outlet to the open air, a grate, a fire pot section arranged above said ash pit section and having heat passages therethrough, one or more water sections located above said fire pot and having a series of heat passages therethrough connected with the fire pot, and additional heat passages connected with the heat passages of the fire pot sections, and a top water section located above said water sections enclosing a space and communicating with all of the heat passages of said water sections, a flow and return connection with the body of water contained in said heater, an open ended vertical fuel magazine extending from the fire chamber to the top of the heater, and provided with a cover, and a heated air supply from the ash pan to the upper end of said magazine, for the purpose set forth.

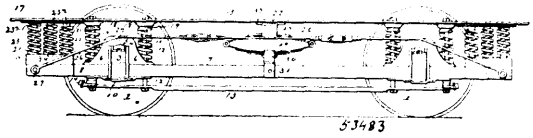
No. 53,482. Mandrel for Forming Pneumatic Tire Sheaths. (*Mandrin pour la formation des étuis pour bandages pneumatiques.*)



Fred W. Morgan and Rufus Wright, assignees of William Holmes, all of Chicago, Illinois, U.S.A., 15th September, 1896; 6 years. (Filed 2nd July, 1896.)

Claim.—1st. The annular mandrel A for the purpose described, having a swiveled section connected with the main portion of the mandrel by a swivel joint comprising a swivel pin engaging in recesses in the section and main portion of the mandrel and having a groove which receives a stop, substantially as set forth. 2nd. The annular mandrel A for the purpose described, having a section which is swiveled at one end, the opposite end of the swiveled section and the adjacent end of the main portion of the mandrel being provided with latching means, substantially as set forth. 3rd. The annular mandrel A for the purpose set forth, having a section which is swiveled at one end, and means for holding and locking together the free end of the section and the adjacent end of the main portion of the mandrel, comprising a dovetailed tongue and groove and a latch, said tongue and latch being concealed when the swiveled section is held and locked in place, substantially as described.

No. 53,483. Car Truck. (*Chassis de chars.*)

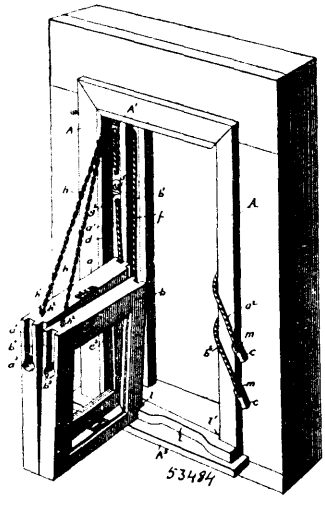


John A. Brill, Philadelphia, Pennsylvania, assignee of Joseph L. Levy, New York, State of New York, both in the U.S.A., 15th September, 1896; 6 years. (Filed 1st August, 1894.)

Claim.—1st. The combination in a truck, of the stationary and movable frames, and springs for resiliently supporting a car comprising a series adapted to primarily support the car, and an additional series adapted to offer a successive resistance to the downward movement of the car, substantially as described. 2nd. The combination of a truck frame having an element thereof for supporting the car springs, and a resilient or spring support for the car comprising the usual springs about or adjacent to the axle boxes, and a set of springs independent of the axle box springs adapted to be successively compressed, substantially as described. 3rd. The combination in a truck, of the movable and stationary frames, the axle box springs supporting the movable frame on the stationary frame, and a nest of graduated springs extending between portions of the movable and stationary frames, which portions lie outside of the axles of the truck at both ends thereof, substantially as described. 4th. The combination in a car truck, of a stationary frame and a movable frame or car body, and car supporting springs located about or adjacent to the axle boxes, and an additional set or series of graduated springs located between the stationary and movable frames and outside of the axles of the truck, said additional set of graduated springs being adapted to be successively compressed by the motion of the car body thereon, substantially as described. 5th. The combination in a truck, of the movable and stationary frames, the axle box springs supporting the movable frame on the stationary frame, and a nest or series of graduated springs extending between the movable and stationary frames and lying outside of the axles, the axle box springs being adapted to be compressed by the downward movement of the car body prior to the compression of any one of the said nest of graduated springs, each single spring of each series or nest being successively compressed by said motion of the car body, substantially as described. 6th. The combination of the movable and stationary frames, of the axle box springs about or adjacent to the axle boxes, and an additional set or series of springs grouped together for successive action, each spring of said set or series being adapted to offer a varying resistance to the downward movement of the car body thereon, substantially as described. 7th. In a truck, the combination of the movable and stationary frames, axle box springs about or adjacent to the axle extending between the stationary and movable frames, and an intermediate spring lying between the axle box springs and extending between the stationary and movable frames, said spring being adapted to offer a resistance to the downward movement of the car body and varying as to its time of co-action with the axle box springs, substantially as described. 8th. The combination in a truck, of the movable and stationary frames, the axle box springs located adjacent to or about the axle box and extending between the movable and stationary frames, and a spring auxiliary to said springs extending between the frame and lying between the innermost of said axle box springs, said auxiliary spring being adapted to be compressed subsequent to the compression of the axle box springs, substantially as described. 9th. The combination in a truck, of the stationary and movable frames, the axle box springs extending between said frames, an additional spring lying between said frames, differing in character from the axle box springs, and a nest of springs adapted to be brought into successive compression extending between said movable and stationary frames, substantially as described. 10th. The combination of a truck having a movable and stationary frame, of the axle box springs extending between the same, a spring intermediate of the axle box springs and extending between said frames, and a nest or series of springs adapted to be brought into successive compression extending between the movable and stationary frames and lying outside of the wheel base of the truck, substantially as described. 11th. The combination in a truck, of the stationary and movable frames, the axle box springs extending between both frames, an additional spring intermediate of the axle box springs and extending between both frames, the said intermediate spring being adapted to be compressed subsequent to the compression of

the axle box springs, and a series or nest of springs adapted to be brought into successive compression extending between the extended portions of the stationary frame and the movable frame or car body, substantially as described. 12th. The combination in a truck, of the movable and stationary frames, the axle box springs, the spring intermediate of the axle box spring adapted to be compressed subsequent to the compression of the axle box springs, and a nest or series of springs extending between the extended portion of the stationary frame and a movable frame or car body, the said nest of springs being adapted to be brought into compression subsequent to the compresson of the axle box springs, the compression of all of said nest or series taking place prior to or contemporaneously with the compression of the said intermediate springs, substantially as described. 13th. In a truck, the combination of the movable and stationary frames, the axle box springs extending between said frames, additional resilient elements adapted to offer successive resistance to the downward movement of the car extending between the extended portions of the stationary frame and the movable frame or car body, and a resilient element auxiliary to the said last mentioned springs, which is adapted to be compressed to resist the unequal compression and elevation of the car on its supporting springs, substantially as described. 14th. The combination in a truck, of the movable and stationary frames, the axle box springs, and a nest or series of springs adapted to be brought into successive compression, said nest extending between the movable and stationary frames outside of the wheel base of the truck, and a spring auxiliary to said nest or series of springs adapted to be compressed by the unequal depression of the movable frame at the opposite end of the truck, substantially as described. 15th. In a truck, the combination with the car springs, of the additional springs 24, the upper chord or car body, the springs 34, and an abutment therefor, and means for connecting the springs 34 with the upper chord, substantially as described.

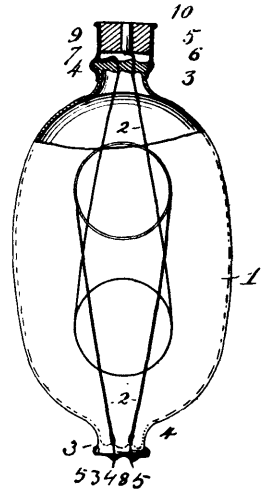
No. 53,484. Window. (*Fenêtre.*)



William Randel, Elizabeth, New Jersey; Charles Albert French, Boston, Massachusetts, and Richard Noble Morton, New York, State of New York, all in the U.S.A., 15th September, 1896; 6 years. (Filed 30th July, 1896.)

Claim.—1st. The combination with a window casing and a sash movable therein, and fixed cylindrical shell like coupling members with slotted outer ends secured in round recesses in the sides of the casing, of a removable inner stop bead, rotatable coupling members mounted therein and having elongated shanks and projections on their inner ends to co-operate with the slotted outer ends of said fixed members and hold the bead in place, sash cords, and a detachable connection between one of said cords and the sash, whereby the latter can be swung into the room about its connected edge as a pivot when the stop bead is removed, substantially as described. 2nd. A window casing having a vertical groove in its side to receive a parting bead, a segmental holder provided with a projecting rim on its rounded side, inserted in the casing with its straight side adjacent the edge of the groove, and a segmental disc or latch rotatable on the holder and flush with the rim, combined with a parting bead adapted to enter the casing groove, and having an undercut recess in its side, to be entered at times by the disc, substantially as described. 3rd. A detachable coupling, consisting of a cylindrical shell-like member having a slotted end, and adapted to enter a cylindrical recess, and a co operating member having a cylindrical shank to form a journal provided with a projection on its inner end, to enter the slot in the outer end of the other member, partial rotation of one member relative to the other, locking them together, substantially as described. 4th. The combination with a window casing and a sash movable therein, of a removably secured inner stop bead, sash cords, a detachable connection between the sash and cord adjacent the said bead, whereby by removal of the bead the sash may be removed from that side of the casing and disconnected from the adjacent sash cord, an overhead auxiliary support for the free side of the sash, and a detachable locking device notched to receive the inner vertical edge of the sash when swung out about a vertical axis, and adapted to be held in place on the casing to lock the sash in place, substantially as described.

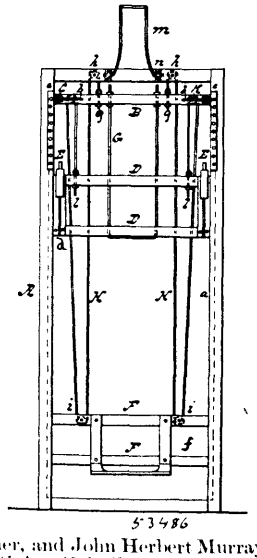
No. 53,485. Incandescent Lamp.
(*Lampe à incandescence.*)



John Thomas Lisler and William Selah Chamberlin, both of Cleveland, Ohio, U.S.A., 15th September, 1896; 6 years. (Filed 17th August, 1896.)

Claim.—1st. In an incandescent lamp, the combination with a shell of a pair of filaments and circuit terminals therefor, the circuit terminals for one filament being at one end of the shell and the circuit terminals for the other filament being at the other end of the shell, substantially as described. 2nd. In an incandescent lamp, the combination with a shell, provided with uniformly shaped and open extremities of a pair of filaments and circuit terminals therefor, and transparent discs in which said circuit terminals are inserted, the circuit terminals for one filament and disc in which the said terminals are inserted being at one end of the shell and the circuit terminals for the other filament and disc in which the said terminals are inserted being at the other end of the shell, substantially as described.

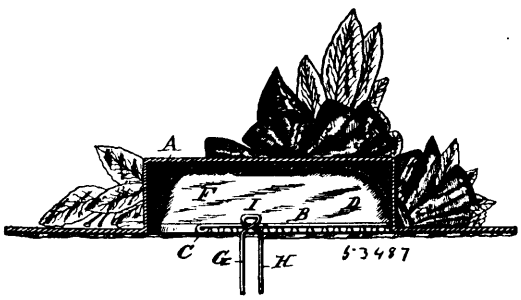
No. 53,486. Apparatus for Adjusting Garments.
(*Appareil à ajuster les vêtements.*)



Lee Harmon Deaner, and John Herbert Murray, both of Muskegon, Michigan, U.S.A., 15th September, 1896; 6 years. (Filed 22nd August, 1896.)

Claim.—1st. In a garment adjusting machine, the combination of a main frame, a rigid slide bar at the upper end thereof having pivoted locking levers which permit it to have a vertical adjustment, a vertically movable frame below said bar, and the pairs of grippers carried thereby and operative to engage a garment, said grippers being arranged to strike the upper bar when they are lifted so as to release the garment, substantially as described. 2nd. In a garment adjusting machine, the combination of the main frame, the stationary bar at the upper end which is capable of adjustment, the pairs of spring provided gripping fingers, a vertically movable slide carrying said fingers, a foot operated slide at the base of the main frame and connections between it and the finger carrying slide. 3rd. In a garment adjusting machine, the combination with the main frame, of a vertically movable slide, automatically operating grippers carried thereby for engaging the garment, an adjustable upper bar against which the grippers strike and open a foot operated slide at the base of the machine and connections between it and the gripper carrying slide, substantially as specified. 4th. In a garment adjusting machine, the combination with a main frame, of a stationaay bar situated near the top of the frame, a movable frame sliding on the main frame, automatically movable fingers carried by said movable frame, said fingers being closed by springs and opened by striking against the upper bar, a movable foot operated frame at the base of the machine and cords or cables connecting the several frames, substantially as described. 5th. The combination of the main frame, a normally stationary bar at the upper end thereof, locking levers carried thereby for adjusting the position of said bar, a movable frame which slides in ways in the main frame, a stop rod attached to the stationary bar and passing through the movable frame so as to limit its movement, automatically operating fingers carried by the movable frame, a foot operated frame at the base of the machine, cables or cords connecting the movable frame with the foot operated frame, substantially as described.

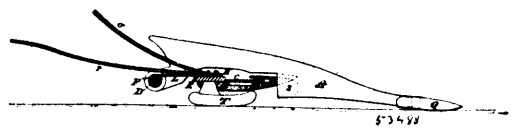
No. 53,487. Hat Fastener. (*Attache pour chapeaux.*)



Katie D. Head, Lawrenceburg, Kentucky, U.S.A., 15th September, 1896; 6 years. (Filed 27th July, 1896.)

Claim.—1st. In a hat fastener, the combination with a hat, of a loop or eye connected thereto, and a fastening pin adapted for insertion through said eye and into the hair of the wearer, substantially as described. 2nd. In a hat fastener, the combination with a hat, of a series of loops or eyes connected thereto, and pins having a plurality of prongs and adapted for insertion through the eyes and into the hair of the wearer, substantially as described. 3rd. In a hat fastener, the combination with a hat, of a series of resilient wire loops or eyes connected to the hat, and pins adapted for insertion through said eyes and into the hair of the wearer, substantially as described. 4th. In a hat fastener, the combination with a hat, of a fastening wire connected thereto, spring wire coiled about the fastening wire and formed into loops or eyes, and fastening pins adapted for insertion through said eyes and into the hair of the wearer, substantially as described.

No. 53,488. Pea Harvester. (*Arrache-pois.*)



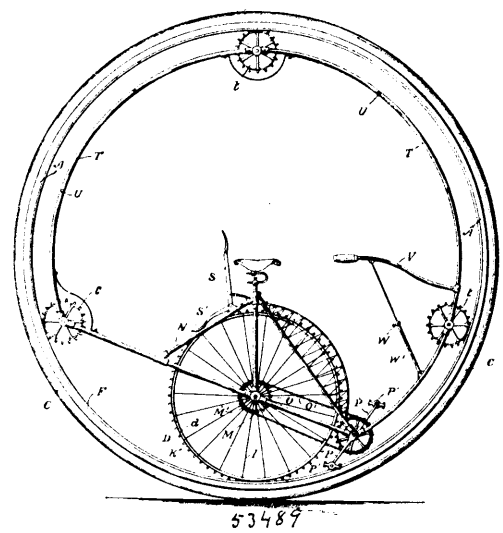
Wright Chatterson, Wellington, Ontario, Canada, 15th September, 1896; 6 years. (Filed 6th August, 1896.)

Claim.—1st. The combination of the overhead lifter A with the mower bar E, substantially as and for the purposes hereinbefore set forth. 2nd. The combination of the lifter A with the shoe Q, substantially as and for the purposes hereinbefore set forth. 3rd. The combination of the outer lifter A and the separator H with the rods O and P, substantially as and for the purposes hereinbefore set forth.

No. 53,489. Unicycle. (*Unicycle.*)

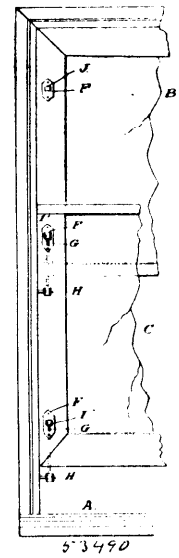
David Shelly, Bridgeport, Ontario, Canada, 15th September, 1896; 6 years. (Filed 29th August, 1896.)

Claim. 1st. The combination of wood rim A, sprocket plate F, sprocket gear *d*, rubber band K, and teeth D secured to same, said



gear *d* held in place by frame N, ratchet R, brake S, semi-circular arms T and bars or cleats U, and idle sprocket wheels *t* secured therein, extension brace W^1 to secure handle bars, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with the rim A, sprocket plate F, the sprocket gear *d*, held in place by frame N, the ratchet R and brake S, semi-circular arms T, with idle sprocket wheels *t*, and bars U secured therein, and extension brace W^1, substantially as and for the purpose hereinbefore set forth.

No. 53,490. Hinge. (*Penture.*)



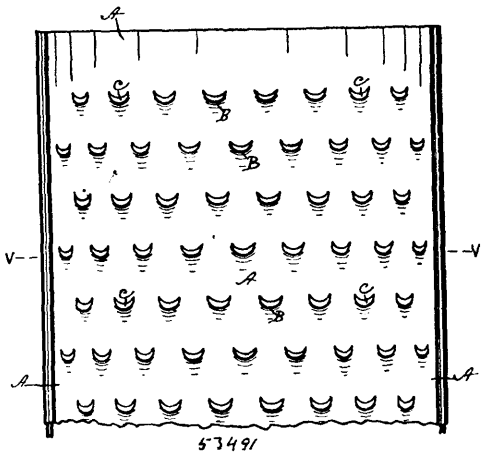
Robert Bruce McClellan, San Francisco, California, U.S.A., 15th September, 1896; 6 years. (Filed 12th August, 1896.)

Claim. In a window having holes in its frame and sash and plates having smaller holes secured over the first mentioned holes, the herein described separable hinge consisting of two members, each having a shank adapted to enter the hole in a plate, said shank being provided with a longitudinal groove, and a spring secured at its inner end within the groove, having a shoulder near its other end standing normally out of the groove, and continued beyond this shoulder into a handle also standing normally out of the groove, as and for the purpose set forth.

No. 53,491. Grater. (*Râpe.*)

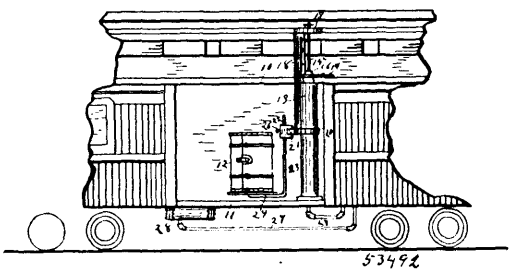
Evangeline Gilmore, Hamilton, Ontario, Canada, 15th September, 1896; 6 years. (Filed 29th August, 1896.)

Claim.—1st. A grater plate constructed and formed with a number of series of cutters raised above the face thereof, the sides and



lower part of each said cutter sloping from the apex to the face of the plate and each cutter having an aperture, substantially as described and set forth. 2nd. In a grater, a plate having a number of series of raised cutters forming a straight and gradual slope from their highest part or apex, B, to the face of their plate, the rear of each cutter conforming in shape thereto and having apertures for egress of grated material, substantially as described and set forth. 3rd. A metallic plate formed with a number of series of raised and projecting cutters the rear of the plate conforming thereto, the sides and lower part of the cutters gradually sloping from their highest part to the face, and apertures through said plate forming clean cutting edges to said cutters, substantially as described and set forth.

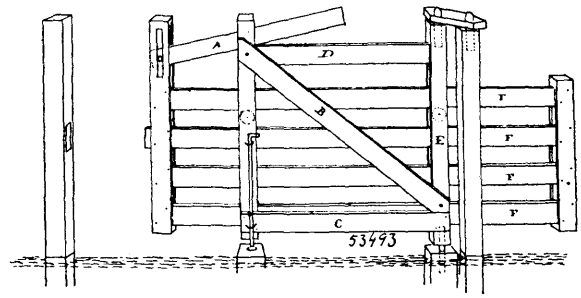
No. 53,492. Baggage Loader. (*Monte-baggage.*)



George Henry Wall, Cadillac, Michigan, U.S.A., 15th September, 1896; 6 years. (Filed 28th August, 1896.)

Claim.—1st. A baggage loader comprising an air cylinder and plunger, a support attached to the cylinder and plunger in a manner to slide up and down and to turn laterally on said cylinder, and a baggage platform attached to said support, substantially as set forth. 2nd. A baggage loader comprising an air cylinder and plunger, a support attached to said cylinder and plunger in a manner to slide up and down and to turn laterally on the cylinder, and a baggage support adjustably attached to said sliding support, substantially as set forth. 3rd. A baggage holder comprising an air cylinder and plunger, a supporting bar attached to the cylinder in a swivelled manner at one end and attached to the plunger in a swivelled manner at the other end, and a baggage platform attached to said swivelled supporting bar, substantially as set forth. 4th. A baggage loader comprising an air cylinder and plunger, a support attached to the cylinder and plunger in a manner to turn laterally, a baggage platform attached to said support, a source of air supply, and pipes leading therefrom to the air cylinder, substantially as set forth. 5th. A baggage loader comprising an air cylinder and plunger, a support attached to said cylinder and plunger in a manner to slide up and down and to turn on said cylinder, a baggage platform attached to the support, and said air cylinder having a safety air escape below its upper end, substantially as set forth. 6th. A baggage loader comprising an air cylinder, a plunger, a supporting bar attached to the cylinder and plunger in a manner to slide up and down and to turn laterally on the cylinder, a baggage platform attached to said supporting bar, a source of air supply, pipes leading therefrom to the cylinder, and a throttle valve in said pipe for letting on and off the air, substantially as set forth. 7th. A baggage loader comprising an air cylinder and plunger, a swivelled supporting bar provided with a cam portion adapted to form a cam engagement with a suitable projection to automatically swing the support on its swivelled connections, and a baggage platform attached to the swivelled support, substantially as set forth.

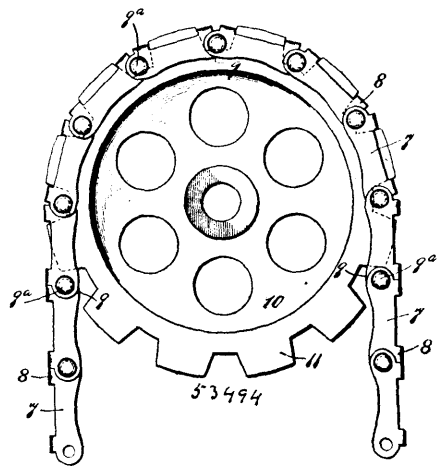
No. 53,493. Farm Gate. (*Barrière.*)



Charles M. Abell, Morrisburg, Ontario, Canada, 15th September, 1896; 6 years. (Filed 12th August, 1896.)

Claim.—1st. In a gate, a self supporting frame right angle in form on the crane principle, as shown and described for the purpose set forth. 2nd. In a gate drop-lock bar as shown and described for the purpose set forth.

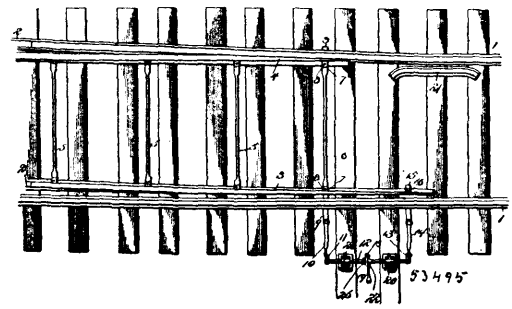
No. 53,494. Sprocket Chain. (*Chaîne dentée.*)



Erick Juno Swedlund, Atwater, Minnesota, U.S.A., 15th September, 1896; 6 years. (Filed 26th August, 1896.)

Claim.—1st. A sprocket chain composed of links comprising flat sheet-metal side-portions, cross-bar portions connecting the upper longitudinal edges of said side portions, and transverse pivots connecting the overlapping ends of the side portions of adjacent links, substantially as described. 2nd. A sprocket chain consisting of links comprising side portions, the end or cross-bar portions connecting said side portions, and means for pivoting the adjacent ends of the links upon one another, in combination with the sprocket-wheel having teeth and provided with openings or recesses for the reception of the pivots, substantially as described. 3rd. A sprocket chain composed of tapering links comprising slightly converging side portions having their inner faces recessed or cutaway at the larger ends of the links, the cross-bar portions connecting the upper longitudinal edges of the side portions, and transverse pivots connecting the overlapping ends of the side portions of adjacent links, substantially as described.

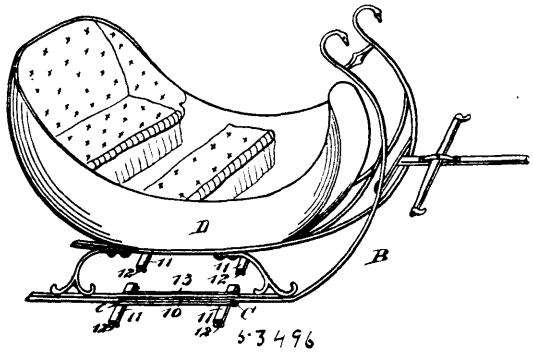
No. 53,495. Railroad Switch. (*Arguille de chemin de fer.*)



Rufus G. Burton, Bluefield, West Virgina, U.S.A., 15th September, 1896; 6 years. (Filed 26th August, 1896.)

Claim.—1st. The combination with main and sliding-track rails, of switch-rails, a switch-bar connecting said switch-rails and provided with an integral terminal elastic tongue 9, a rock-shaft and means for operating the same, a crank carried by the rock-shaft, and a rod connecting the crank to the extremity of said tongue and adapted to deflect the tongue as the crank is moved from one position to the other to reverse the positions of the switch-rails, the resilience of the tongue locking the parts in either position, substantially as specified. 2nd. The combination with main and sliding-track rails, of connected switch-rails, a switch-bar connected to the rails and having a terminal horizontally flattened elastic tongue, a horizontally disposed rock-shaft and means for operating the same, a crank carried by the extremity of the rock-shaft, and a connecting-rod between said crank and the extremity of the tongue on the switch-bar, said connecting bar being pivoted to the tongue to swing in a horizontal plane and avoid binding and straining of the parts, substantially as specified. 3rd. The combination with main and sliding track rails, and inner and outer switch-rails, the outer switch-rail extending beyond the extremities of the inner switch-rail, of a switch-bar provided with clips to engage the inner flanges of said switch-rails and terminating beyond the outer switch-rail in an integral flat spring tongue, a clamp attached to the extremity of the outer switch-rail, a horizontal rock-shaft arranged parallel with the main track-rails and having terminal crank arms, connecting rods between the extremities of the crank arms and the ends of said tongue and clamp, the rock-shaft being provided at an intermediate point with an angular seat and a contiguous shoulder, a crank arm having an eye fitting upon said seat and held in contact with said shoulder by a nut threaded upon the shaft, and an operating rod connected to the crank, substantially as specified.

No. 53,496. Sleigh Truck. (*Patins pour traîneaux.*)



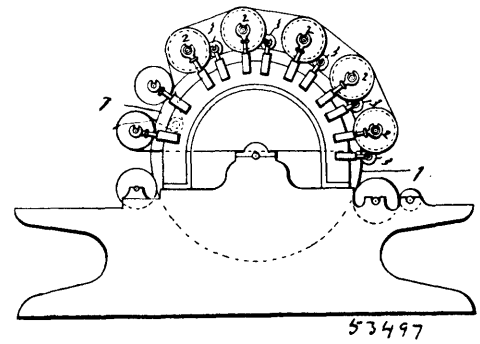
Seth C. Nutter, Sherbrooke, Quebec, Canada, 15th September, 1896; 6 years. (Filed 26th August, 1896.)

Claim.—1st. A sleigh truck, comprising a reach bar, a cross bar at each end of said reach bar, caster on the under side of each end of the cross bars, and a buffer block on the end of the truck, substantially as described. 2nd. A sleigh truck, comprising a reach bar, a cross bar at each end of the reach bar, a double roller caster on the under side of each end of the cross bars, and a buffer block projecting at each end of the truck, the nose of each of said blocks having clearance from the surface that supports the caster rollers, substantially as described. 3rd. In a device of the described construction, the similar buffer blocks at the end of the sleigh truck, each block comprising a base plate having a downwardly and forwardly projecting nose, and a stiffening flange at each side of the block and engaging the base plate and nose thereon, substantially a described 4th. A sleigh truck, comprising a reach bar, a cross bar at each end of the reach bar, a grooved track rail secured on the reach bar, casters on the under side of each end of the cross bars, and a buffer block projecting at each end of the truck, having a downwardly inclined nose that avoids contact with the surface over which the castors travel, substantially as described.

No. 53,497. Carding Engine. (*Machine à carder.*)

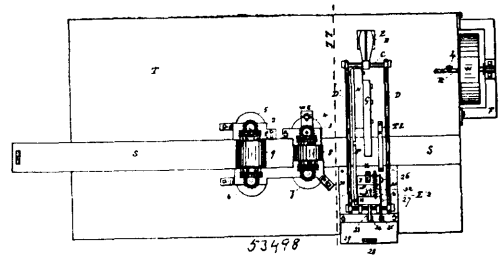
Alfred A. Langewald, Warren, Massachusetts, U.S.A., 15th September, 1896; 6 years. (Filed 25th August, 1896.)

Claim.—1st. In a carding engine, the combination of a main cylinder and other carding accessories, a worker of greater length than the cylinder and accessories and mounted on a shaft so as to be rotated and longitudinally vibrated, a cam and groove connection between said worker and shaft and suitable means for rotating the worker and cam at different rates of speed so as to cause relative movement between the cam and groove for vibrating the worker, substantially as shown and described. 2nd. In a carding engine, the combination of a roller of substantially the character specified, a shaft upon which said roller is mounted and with which it has spline-and-groove connection, a pulley for driving said shaft, and an independent pulley mounted loosely on said shaft and having cam connection with the roller, all substantially as and for the purpose set forth. 3rd. In a carding engine, the combination of a longitudinally-movable worker, and a pulley mounted upon the shaft of said worker and having a hub projecting within the same, one of said parts being provided with an inclined circumferential slot and the



other being provided with a pin engaging the same whereby they are relatively shifted as explained. 4th. In a carding engine, the combination of a roller of substantially the character specified, a shaft upon which said roller is mounted, a cam cylinder 7 fitted within the roller and having the circumferential cam slot 8 inclined to its axis, and the pulley 9 having a hub 10 fitting upon the roller shaft and also fitting within the cam cylinder, and having a roller pin 12 engaging in the slot 8 of said cylinder, all substantially as and for the purposes set forth.

No. 53,498. Mould for Butter. (*Moule à beurre.*)

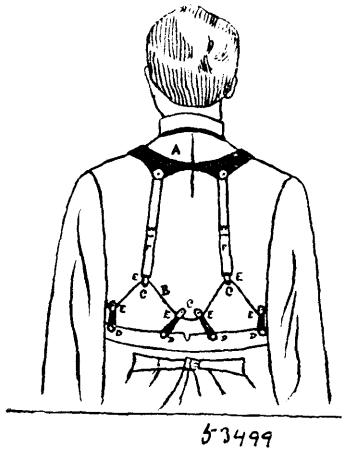


Edward Bartlett, Belleville, Ontario, Canada, 15th September, 1896; 6 years. (Filed 25th August, 1896.)

Claim.—1st. A machine for moulding and printing or stamping butter. Comprising a table, a frame carrying a combination of rollers driven by ratch gears and pinions, a slide S passing under and between said rollers, a crank 45 keyed to a shaft having a bevel gear attached to its other extremity, receiving motion from a pinion 40 on the main pulley shaft, a pitman 49 connected to the crank 45 by adjustable crank pin and bifurcated at its outer extremity, having a dog 50, attached by a rod IX, passing through said arms and dog, said rod slides freely in the apertures O, A, a spring H attached to said dog 50, a slide A^1 9^1, a fixed bottom part A^{10}, substantially as and for the purpose specified. 2nd. A machine for moulding and printing or stamping butter, comprising a table, a frame attached to said table having boxing adapted to the roller shafts or bearings having mitre gears attached to their upper ends engaging in similar gear on the parallel shafts of the rollers 8 and 9, the combination of the rollers 4, 5, 6, 7, 8 and 9, a slide S provided on its underside with ratch gears R^1 and R^2, engaging in pinions W^5 and W^6, attached to the lower ends of roller shafts 5 and 7, a ratchet gear R^3, with cogs adapted to engage with the dog 50, a pitman 49 preferably bifurcated attached to said dog 50 and crank 45 by adjustable crank pin, a spring attached to the dog 50, a slide A^9, a stationary part A^{10}, having sides 51 with guide apertures O, A, a shaft having a crank 45 attached, and at its other extremity a level gear 42, engaging with a pinion 40 a clutch A^2 and A^3, a pulley W with frame F, a lever L and dog with segment R, substantially as and for the purpose specified. 3rd. A machine for moulding and printing or stamping butter comprising a table, having a frame attached carrying the driving mechanism, a belt pulley, a clutch forming part of its hob engaging in a similar clutch on hob of pinion 40, communicating motion to the bevel wheel 42, attached crank shaft and crank 45, and connected by a crank pin 48 to a pitman 49 bifurcated at its other end, having a dog 50 playing between its arms, a rod passing through said dog and arms forming a hinged joint, a spring H attached to said dog adapted to slide with the reciprocal motion of pitman 49 on the slide A^9, a stationary part A^{10} with side pieces 51 having guide apertures O, A, a slide S having a ratch gear R^3, attached to its underside with cogs adapted to engage with dog 50, and ratch gears R^2 and R^1, also attached to the underside of said slide S, adapted to engage with pinions W^5 and W^6 attached to the axle of rollers 5 and 7, said rollers have attached to the upper ends of their axles mitre gears engaging with similar gears on the parallel axles of the rollers 8 and 9, a frame carrying said rollers and gears adapted for adjustment of said roller bearings a driving mechanism comprising an intermittent

gear forming part of wheel 42 engaging alternately with a pinion 41 keyed to shaft L T, having a flattened portion C⁵ on its hub adapted to slide on the projecting rib 44 on wheel 42, said shaft L T has attached to its extremity a crank 46, connected by a crank pin 47 and pitman 52 to the oscillating beam E having a swing bearing B, an oscillating beam E, a frame attaching said driving mechanism to the table T, a double or bifurcated pitman D connected to the oscillating beam E by a pin C and attached at its other extremity to the bracket B K, preferably by a rod and suitable boxing, a slide 30 adapted to the base of the bracket B K, a cross-bar and bolts or pins 24 and 25 adapted to engage with the trip and lock levers 23 and E^2, a trip lever 23 fulcrumed on a pin in bracket B K, its inner end engaging with bolts B^3, a spring placed between its head and the part 92, a lock lever E^2, hinged on a pin 26, a lock pin 27, a spring 94, a part 92 preferably of wood forming the top of the printer attached with hinges to bracket B K, having adjustable set screws 21 and 22 engaging with the upper surface of part J, a part J having a bolt B^3 attached to its upper surface, a bolt B^3 in combination with the stamping or printing block J, a folding side part Y hinged to part 92, having a spring 32 in combination with Y and B K, and rollers X adapted to engage with spring E^{21}, said spring is attached to the block G, a slide S in combination, a knife P hinged on a pivot near its outer extremity having a spring P S attached to its upper edge engaging with a roller 33, a spring A^1, in combination with knife P, a stationary block T L in combination with the parts Y J, 92 and B K, a slide or movable platform 29 with fixed side pieces and bottom, a platform or slide 29 in combination with the butter wrapping paper or cloth, substantially as and for the purpose specified.

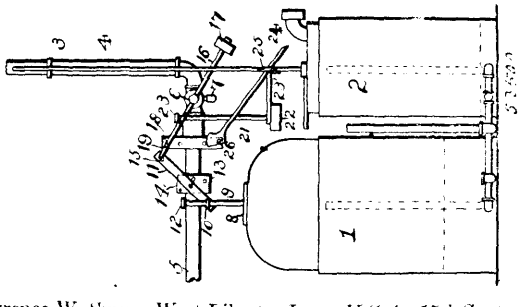
No. 53,499. Suspender for Panteloons. (*Bretelles.*)



Alfred Brown, Ottawa, Ontario, Canada, 15th September, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. The combination of collar A, supporting shoulder straps FF, back and front and pulley or tubes E E, with loop cord B and button straps D D, forming long loops C, side and back. 2nd. The combination forming a fifth or back loop C by the bearing of the two back button straps D D on loop cord B inside between the two back supporting shoulder straps FF, where connected by pulleys or tubes E E with loop cord B for purposes hereinbefore set forth.

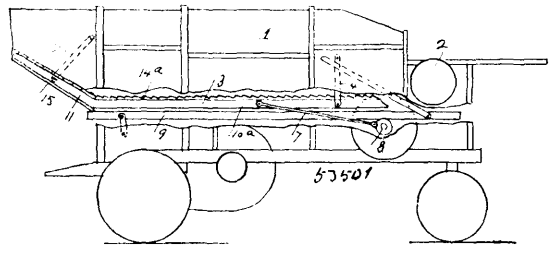
No. 53,500. Air Pump. (*Pompe à air.*)



Lawrence W. Swem, West Liberty, Iowa, U.S.A., 15th September, 1896; 6 years. (Filed 17th August, 1896.)

Claim.—1st. The combination of the reservoir and the air pump, the hydraulic-cylinder having its piston connected with the air-pump cylinder, a cock controlling the supply of pressure fluid to the cylinder, a gravitating-lever connected to the stem of said cock, a trip-lever engaging with said lever and holding the cock closed, means for tripping the trip lever when the cylinder of the reservoir falls below a pre-determined point, a weight as 22 connected to the cock-lever to swing it down when released from the trip-lever, thereby opening the cock, said weight being released from pressure on the cock-lever when the pump-cylinder rises, and a movable part adapted to engage the cock-lever and temporarily hold it down when relieved from said weight, substantially as and for the purpose described. 2nd. The combination of the reservoir and the air-pump, the hydraulic-cylinder and supply-pipe connected thereto, the controlling-cock and the gravitating-lever connected thereto, the vertically movable weight, attached to said cock-lever and adapted to normally swing it down when released, a trip-lever engaging the upper end of the cock-lever, a weight connected to the free end of the trip-lever and adapted to trip it when the cylinder of the air-reservoir falls, and a lever carrying a flange adapted to engage the cock-lever after it is relieved from the pressure of the weight, and to hold it depressed until the air-pump cylinder reaches the limit of its upward stroke, substantially as described.

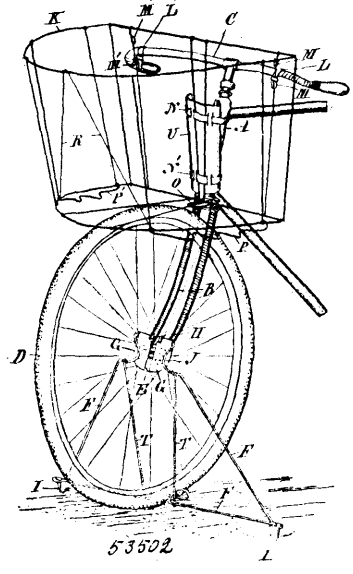
No. 53,501. Straw Carrier, etc. (*Monte-paille, etc.*)



Osman H. Anderson, Goddard, Kansas, U.S.A., 15th September 1896; 6 years. (Filed 17th August, 1896.)

Claim.—A combined straw-carrier and separator consisting of a rectangular frame adapted to be supported for horizontal vibration within a threshing-machine and having an upwardly inclined end portion formed by angled extensions of the side bars of the frame, a series of parallel obliquely-disposed cross-slats connecting the side bars of the frame from end to end thereof and having flat upper edges, a series of parallel notched feed strips disposed longitudinally of the frame and secured directly on the flat upper edges of the slat, a number of said feed-strips being closely grouped together at one end of the horizontal portion of the frame, and a single one of said strips being arranged to extend centrally and longitudinally the entire length of the frame, substantially as set forth.

No. 53,502. Bicycle Parcel-Carrier and Stand Combined. (*Porte-paquet et appui-bicycles combinés.*)

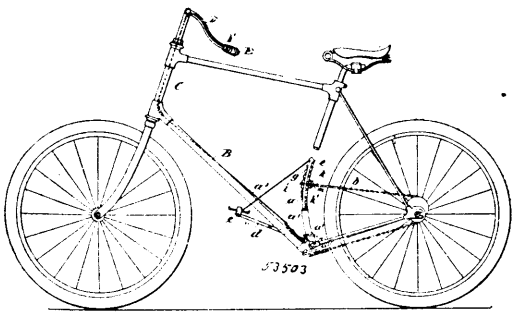


Charles Avery Kennedy, Coaticook, Quebec, Canada, 17th September, 1896; 6 years. (Filed 2nd September, 1896.)

Claim.—1st. The combination with a bicycle, of a supporting stand, comprising a triangular-shaped frame having the ends open at the apex and connected pivotally to the bicycle on opposite sides of the front wheel to keep the bicycle erect when the stand is touching the ground, and when inverted by rotation on its pivot centres support a basket, and a basket carried forwardly on the front post

and attached to the bicycle, and provided with springs to engage the inverted stand, substantially as set forth. 2nd. In a bicycle, a stand, comprising a V-shaped frame straddling the front wheel, the free ends at the apex journalled in bearings secured to the bicycle on both sides of the wheel, or supported by the axle, to suspend the stand removably from the bicycle and provided with prongs l, to enter the ground, and a basket strapped to the front post and handle bar and having a spring or springs to engage the stand when inverted to support the basket, substantially as set forth.

No. 53,503. Mechanism for Changing the Point of Application of the Load on Treadles and Levers. (*Mécanisme pour changer le point d'appui de la charge sur les pédales et leviers.*)

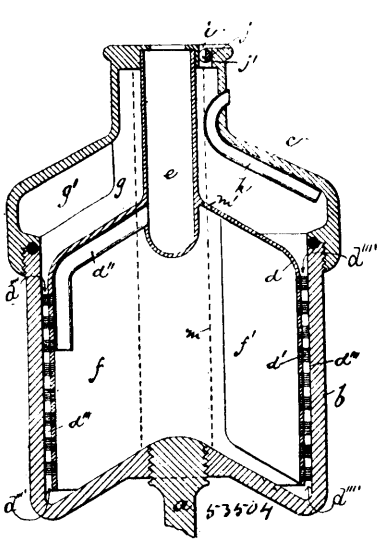


Frederick Ljungstrom, Stockholm, Sweden, 17th September, 1896; 6 years. (Filed 1st September, 1896.)

Claim.—1st. A device for changing the point of application of the load or the power on lever arms, treadles, levers or the like, consisting of a piece, a bow *i*, which is movable along the arm and on which the load or the power acts, of hooks *k*, k^1, which are fixed to the said piece, and which, during the angular motion of the arm, seize alternately or indirectly said arm, thereby moving the piece *i*, stepwise over teeth *h*, or such like arranged on the arm. 2nd. A device for changing the point of application of the load or the power on lever arms, treadles, levers, or such like, by means of a bow *i* or such like, which is movable along the lever arm, the treadle, etc., and on which the load or the power acts, consisting of a series of teeth *h* arranged along the arm, and between which the bow enters, a piece or strip *c* mounted on the arm on the opposite side of the same with respect to the teeth, and provided with holes *f*, notches, recesses, or such like, and which piece or strip may move along the arm, hooks *k*, k^1, which are pivotally mounted on the bow, and which according to the position of the piece or strip, and in consequence of the variation of the angle between the arm and the bow, which depends on the movement of the arm, alternately engage into the holes, and move the bow, or that part by means of which the power or the load is applied to the arm, the movement taking place in the one or the other direction along the arm, one step for every stroke of the same. 3rd. A device for changing the point of application of the load or power on lever arms, treadles, levers, or the like consisting of a bow *i* which is movable along the arm provided with teeth *h*, and on which bow the load or power acts, a double pawl *k*, k^1, which is fixed to the bow and with either pawl engages with holes in the arm, and a spring which moves the pawl out of engagement with the arm when the bow, owing to the swinging of the arm, has passed over nearest tooth *h*. 4th. A device for changing the point of application of the load or power on lever arms, treadles, levers, or the like, consisting of a bow *i* which is movable along the arm on which the power acts, a piece or strip *c* provided with holes A, and extending along and also movable along the arm, a double pawl *k*, k^1, fixed to the bow and engaging with either pawl in said holes and moving the bow during the oscillation of the arm in either direction over the teeth *h* on the arm, and a spring *m* which releases the pawl from its engagement with the strip *c* after the said movement of the pawl has taken place. 5th. In a cycle the combination of a treadle arm, a driving chain acting upon the driving-wheel and connected to said arm by means of a bow, so that it may be moved along the same, a double pawl, mounted in the bow, a piece or strip movable along the arm and provided with holes for the engagement with the pawl, and a rope or chain or such like extending to the steering the pivotally mounted steering handle and connected with the said strip, in order that the latter may be moved by turning the said handle, and thus the strip be brought in position to engage with the one or the other point of the pawl, so that the bow may be moved in the one or the other direction along the toothed arm during the oscillation of the same. 6th. In a cycle, the combination of a treadle arm, a driving chain acting upon the driving wheel and connected to the arm by means of a bow, so that it may be moved along the same, a double pawl mounted in the bow or strip *c* movable along the arm and having holes for the engagement of either point of the pawl, a movable piece a^1 formed concentrically to the treadle shaft and being in engagement with the strip *c*, a rope which is attached to the piece a^1 and extends to the pivotally mounted steering handle, in order that with the aid of said handle the strip *c* may be placed in position to be engaged by the one or the other point of the pawl, so that the bow will be displaced in the one direction or the other along the toothed arm during the oscillation of this latter. 7th. In a cycle, the combination of the treadle arm *a*, a driving chain *b* acting upon the driving wheel and connected to the toothed arm *a* by means of a bow *i* movable along said arm, a double pawl *k* k^1 mounted in the bow, an air bulb *p* placed close to the said pawl and an air bulb p^{111} placed within the reach of the rider, for instance on the steering handle, and connected with the first mentioned air bulb by means of an air pipe p^{11}, in order that the pawl may come in engagement with the holes in the arm *a* by squeezing the air bulb p^{111}, so that during the oscillation of the arm the bow may be moved along the same. 8th. In a cycle, the combination of the treadle arm *a*, a driving chain *b* acting upon the driving wheel and connected to the toothed arm *a* by means of a bow *i* movable along said arm, a double pawl *k* k^1 mounted in the bow and arranged to engage with holes in the arm *a*, an air bulb interposed between the parts of the double pawl and by means of an air pipe connected with another air bulb p^{111} placed on the steering handle, in order that by applying pressure upon the latter bulb the pawl may be caused to engage with the arm and the bow to move along the arm during the oscillation of the latter. 9th. In a cycle, the combination of a treadle arm, a driving chain acting upon the driving wheel and connected to the toothed arm by means of a bow *i* movable along said arm, a double pawl mounted in the bow on a shaft *l* which may be displaced in the bow, a flat spring *r* fixed to the shaft, an air bulb *p* placed against said spring and by means of an air pipe p^{11} connected to an air bulb p^{111} placed near the steering handle, in order that, when pressure is applied to the last mentioned bulb, the pawl may be brought in position to engage with holes *x* in the arm, so that the bow may be displaced along the arm during the oscillation of the latter (Fig. 10.) 10th. In a cycle, the combination of a treadle arm, a driving chain acting upon the driving wheel and connected to the arms by means of a bow movable along said arm, a double pawl *k* k^1 mounted in the bow, a part (*s or t*) adjustable along the arm, which part according to its position allows the pawl to engage with the arm or nut, an air bulb placed near said part and by means of an air pipe connected with an air bulb p^{111} placed near the steering handle, in order that, when applying pressure to the latter bulb, the said part may be placed in such a position as to allow the pawl to engage with the arm and thus the bow be caused to move along the oscillating arm (Fig. 12-14.)

No. 53,504. Centrifugal Creamer.

(*Crémeuse centrifuge.*)



Olof Ohlson, Newark, New Jersey, U.S.A., 17th September, 1896; 6 years. (Filed 12th August, 1895.)

Claim.—1st. The herein described process of creaming milk which consists in first separating the more readily separable fat particles by centrifugal action, then agitating the partially skimmed milk while under centrifugal action by dividing the same into diverging and converging currents where by the fat particles contained in such partially skimmed milk are prepared for the final separation, and finally separating these fat particles from the skim milk by centrifugal action. 2nd. The herein described process of creaming milk which consists in first separating the more readily separable fat particles by centrifugal action, then agitating the partially skimmed milk while under centrifugal action by dividing the same into diverging and converging currents whereby the fat particles contained in such partially skimmed milk are prepared for the final

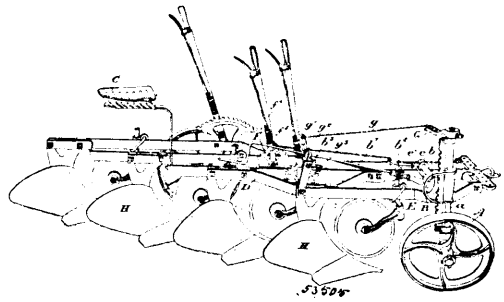
separation, and finally separating these fat particles from the skim milk by centrifugal action and discharging together the fat particles resulting from the two separations. 3rd. In a centrifugal separator, the combination, substantially as set forth, with a preliminary centrifugal separating chamber in which the full milk is subjected to a preliminary separation, of an agitating chamber which receives the partially skimmed milk from the preliminary chamber and prepares the fat particles contained in such partially skimmed milk for the final separation and a final centrifugal separating chamber which receives the liquid from the agitating chamber and in which the fat particles contained in such liquid are separated from the skim milk. 4th. A centrifugal separator, substantially as set forth, provided with a preliminary centrifugal separating chamber in which the full milk is subjected to a preliminary separation, a centrifugal agitating chamber which receives the partially skimmed milk from the preliminary chamber and prepares the fat particles in such partially skimmed milk for the final separation, and a final centrifugal separating chamber which receives the liquid from the agitating chamber and in which the fat particles contained in such liquid are separated from the skim milk. 5th. In a centrifugal separator, substantially as set forth, provided with a preliminary centrifugal separating chamber in which the full milk is subjected to a preliminary separation, an agitating chamber which receives the partially skimmed milk from the preliminary chamber and which is provided with obstructions whereby such partially skimmed milk is divided into diverging and converging currents, and a final centrifugal separating chamber which receives the liquid from the agitating chamber and in which the fat particles contained in such liquid are separated from the skimmed milk. 6th. In a centrifugal separator, substantially as set forth, provided with a preliminary centrifugal separating chamber in which the full milk is subjected to a preliminary separation, a centrifugal agitating chamber which receives the partially skimmed milk from the preliminary chamber and which is provided with obstructions whereby such partially skimmed milk is divided into diverging and converging currents, and a final centrifugal separating chamber which receives the liquid from the agitating chamber and in which the fat particles contained in such liquid are separated from the skim milk. 7th. A centrifugal creaming bowl having suitable inlet and outlet conduits and suitable driving mechanism, and provided with a preliminary separating chamber in which the full milk is subjected to a preliminary separation, a peripheral agitating chamber which receives the partially skimmed milk from the preliminary chamber and prepares the fat particles contained in such partially skimmed milk for the final separation, and a final separating chamber which receives the liquid from the agitating chamber and in which the fat particles contained in such liquid are separated from the skim milk, substantially as shown and described. 8th. A centrifugal creaming bowl having suitable inlet and outlet conduits and suitable driving mechanism, and provided with a preliminary separating chamber in which the full milk is subjected to a preliminary separation, a peripheral agitating chamber which receives the partially skimmed milk from the preliminary chamber and with it is provided with obstructions whereby such partially skimmed milk is divided into diverging and converging currents, and a final separting chamber which receives the liquid from the agitating chamber and in which the fat particles contained in such liquid are separated from the skim milk, substantially as shown and described. 9th. A centrifugal creaming bowl having suitable inlet and outlet conduits and suitable driving mechanism, and provided with a preliminary separating chamber in which the full milk is subjected to a preliminary separation, a thin peripheral agitating chamber which receives the partially skimmed milk from the preliminary chamber and prepares the fat particles contained in such partially skimmed milk for the final separation, and a final separating chamber which receives the liquid from the agitating chamber and in which the fat particles contained in such liquid are separated from the skim milk, substantially as shown and described. 10th. A centrifugal creaming bowl having suitable inlet and outlet conduits and suitable driving mechanism, and provided with a preliminary separating chamber in which the full milk is subjected to a preliminary separation, a thin peripheral agitating chamber which receives the partially skimmed milk from the preliminary chamber and which is provided with obstructions whereby such partially skimmed milk if divided into diverging and converging currents, and a final separating chamber which receives the liquid from the agitating chamber and in which the full particulars contained in such liquid are separated from the skim milk, substantially as shown and described. 11th. The bowl *b* having suitable inlet and outlet conduits and driving mechanism, in combination with the interior concentric bowld forming an annular chamber d^{1111} provided with obstructions d^1, substantially as and for the purposes set forth.

No. 53,505. Means of Adjusting Plough Wheels.

(*Moyen d'ajuster les roues de charrues.*)

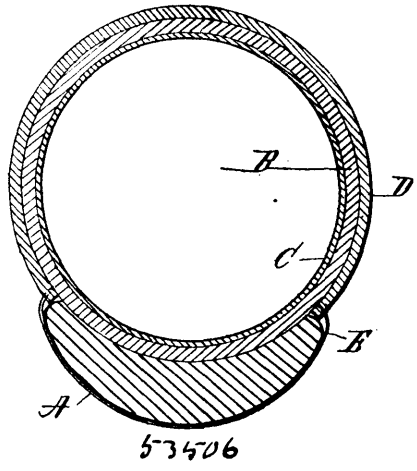
The Verity Plough Company, Brantford, Ontario, Canada, assignee of Charles McLeod, Melbourne, Victoria, Australia, and Robert Henry Verity, Brantford, Ontario, Canada, 17th September, 1896; 6 years. (Filed 24th April, 1896.)

Claim.—1st. In ploughs, the combination with a rack attached to or connected with a furrow wheel, of means co-acting with such rack whereby the rack may be raised or lowered to any desired position in relation to the frame, and held securely in such position,



as and for the purpose specified. 2nd. In ploughs, the combination with a rack attached to or connected with the furrow wheel of a serpentine faced cam in gear with the teeth of such rack, substantially as and for the purpose specified. 3rd. In ploughs, the combination with the horizontal bar or spindle suitably supported in the frame, a sleeve carrying the furrow wheel at one end, a connecting rod on the end of such sleeve, a bell crank, connecting rod, and lever, all operated as and for the purpose specified. 4th. In a plough, a furrow wheel having an arm projecting from its vertical spindle, in combination with a hand lever having a spindle catch and connected to said arm by means of a rod, substantially as and for the purpose specified. 5th. In a plough, a horizontal bar carrying the furrow wheel and adapted to slide endwise in combination with a bell crank set horizontally and connected to a hand lever provided with a spring catch and mounted upon the framing of the plough, as and for the purpose specified. 6th. In a plough, the combination with the land wheel and axle thereof suitably journalled, of a lever and a retaining plate and coacting guide-way for such plate secured to the side bar of the machine, as and for the purpose specified. 7th. In a plough, the combination with the land wheel and axle thereof suitably journalled, of a lever, the retaining channel plate to which the axle is attached, the guide-way secured to the side bar, a quadrant secured to the top of the retaining plate, the lever pivoted on such quadrant and connected by link to the side bar and provided with a spring catch to engage with such quadrant, as and for the purpose specified.

No. 53,506. Bicycle Tire. (*Bandage de bicycle.*)

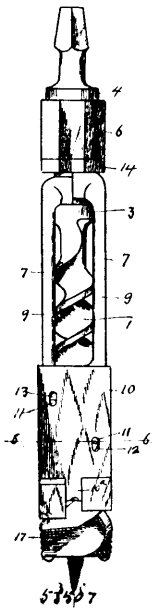


Andrew Graff, Brooklyn, New York, U.S.A., 17th September, 1896; 6 years. (Filed 18th December, 1895.)

Claim.—1st. The herein described method of treating leather, which consists in first soaking the leather in water, then running the same through a pair of rollers, then allowing the same to dry, then placing the same in a bath of water proof cement, then running the same through another pair of rollers, then covering the surface thereof with sand, and passing it again through a pair of rollers whereby a hose pipe tire formed entirely of sole leather is produced, substantially as described. 2nd. The herein described method of treating leather for use in making pneumatic tires, which consists in first soaking the leather in water, then running the same through a pair of rollers, then allowing the same to dry, then placing the same in a bath of water proof cement, and then running it through another pair of rollers, after which the tire is formed into a tube and secured upon a rim, whereby a hose pipe tire formed entirely of sole leather is produced, substantially as described. 3rd. The herein described method of forming a hose

pipe or tire, which is made entirely from heavy leather, consisting in first soaking the leather in water, then running the same through a pair of rollers, then allowing the same to dry, then placing the same in a bath of water proof cement, then running the same through another pair of rollers, then covering the surface thereof with sand, and passing it again through a pair of rollers, substantially as described. 4th. The herein described method of forming a tire entirely of heavy leather, which consists of first soaking the leather in water, then running the same through a pair of rollers, then allowing the same to dry, then placing the same in a bath of water proof cement, then running the same through another pair of rollers, then covering the surface thereof with sand, and passing it again through a pair of rollers, whereby a hose pipe tire formed entirely of sole leather is produced, substantially as described.

No. 53,507. Auger. (*Tarière.*)



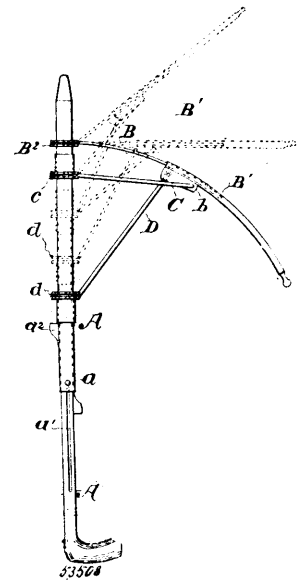
Olof E. Wallner, Superior, Wisconsin, U.S.A., 17th September, 1896; 6 years. (Filed 12th June, 1896.)

Claim.—1st. The combination with the rotary bit, of slidable angle cutters, and intermediate cutters arranged between the contiguous edges of and operatively connected to the angle cutters, substantially as specified. 2nd. The combination with a rotary bit, of slidable angle cutters operatively connected to the bit, a sleeve slidably mounted upon said angle cutters, intermediate cutters carried by the sleeve and operating between the contiguous edges of the angle cutters, and guiding devices comprising bolts and carried by the angle cutters and operating in longitudinal slots in the sleeve, substantially as specified. 3rd. The combination with a rotary bit, slidable angle cutters capable of reciprocation parallel with the axis of the bit, and operating connections for the bit and the angle cutters, of intermediate cutters arranged between the contiguous edges of the angle cutters, and operating connections between the angle cutters and the intermediate cutters, whereby the latter are simultaneously reciprocated by the forward movement of either of the angle cutters, substantially as specified. 4th. The combination of a rotary bit provided with a shoulder 4 having a cam 13, angle cutter provided at their upper ends with guides which are mounted upon the shank of the bit and provided with rounded upper end arranged in the path of said cam, a split collar embracing said guides and fitting in a channel formed in the outer surfaces thereof, said collar having a threaded extension, and a nut engaging said threaded extension to hold the parts of the collar and hence the guides in operative positions, substantially as specified.

No. 53,508. Folding Umbrella. (*Parapluie pliant.*)

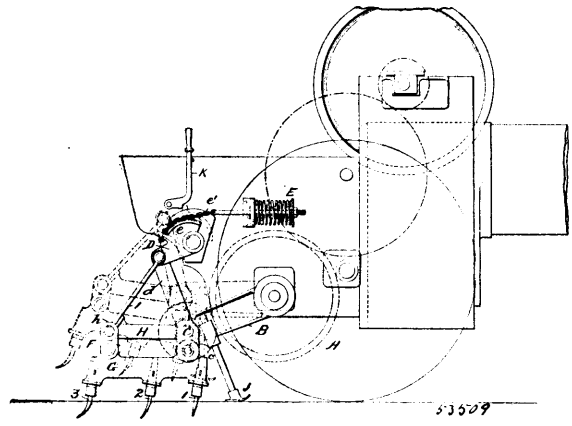
Henry Eummelen and Elliott V. Byrne, both of Vancouver, British Columbia, Canada, 17th September, 1896; 6 years. (Filed 24th June, 1896.)

Claim.—1st. In a folding umbrella the combination with a stick, ribs composed of slidable sections, the outer being of tubular form, and made to receive the inner portions, stretcher ribs pivotally secured to lugs on the outer portions of the slidable ribs, and to a runner on the stick, and brace ribs secured to the said lugs, and with their opposite ends pivoted to a second runner upon the said stick, substantially as specified. 2nd. In a folding umbrella the combination of a stick in two sections, the one portion being tubular with sectional cover ribs pivoted to a ferrule mounted thereon, stretcher ribs secured to lugs on the outer portions of the sectional ribs, and to a runner on the said stick, brace ribs, composed of parallel wires made



to traverse on either side of the stretcher ribs, and having their outer ends secured on the outer portions of the sectional ribs, and their inner portion pivoted to a runner on the said stick, substantially as and for the purposes hereinbefore set forth.

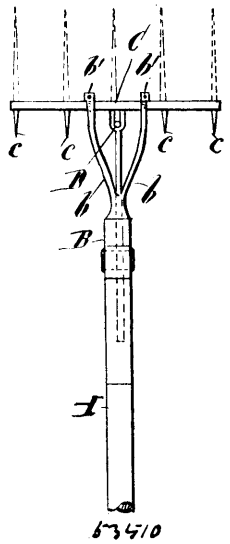
No. 53,509. Machinery for Cultivating and Cleaning the Land. (*Machine pour cultiver et nettoyer la terre.*)



Thomas Cooper, The Elms, King's Lynn, Norfolk, England, 17th September, 1896; 6 years. (Filed 9th July, 1896.)

Claim.—1st. A digging machine, for cultivating and tilling the soil, comprising an elastically suspended digging mechanism having a tendency to rise, operating shafting for such mechanism, a spur wheel upon such shafting and a driving gear acting upon said spur wheel to operate such shafting and to depress said digging mechanism, for the purposes set forth. 2nd. In a digging machine, the means hereinbefore described, for maintaining the diggers at an even working depth, consisting of an elastic suspension device for the digger mechanism, operating shafting for the digger mechanism, a driving gear connected with said operating shafting and tending to depress same with the digger mechanism operated thereby, and a stop or stops bearing on the ground surface, for the purpose set forth. 3rd. In a digging machine, the elastically suspended digging mechanism hereinbefore described, having parallel crank shafts operated in unison and carrying rows of digging forks of different forms adapted to break up the soil and to clean the weeds from the loosened ground in a single operation, as set forth. 4th. Digging machines having rows of forks mounted one behind the other, and the first row of forks being of spike form for breaking up the ground while the succeeding forks are more or less bent or curved so as to rake or comb the loosened soil and bring the weeds to the surface, as set forth.

No. 53,510. Combined Controvertible Gardening and Field Implement. (*Outil pour jardiner et travailler dans les champs.*)

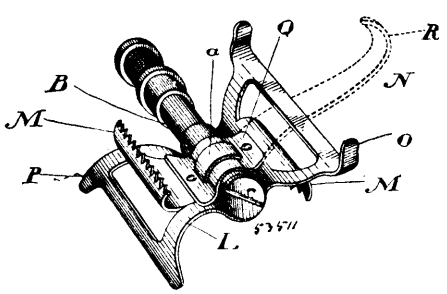


George Washington Biddell, Chattanooga, Tennessee, U.S.A., 17th September, 1896; 6 years. (Filed 29th July, 1896.)

Claim.—1st. In a garden implement the combination of a handle having a bore *a*, therein a head-piece B with arms *b*, secured on the end of said handle, said arms being split at their ends to receive the cross-bar C, set screws b^1, securing the split ends of the arms together, a rod D, arranged within the bore of the handle and having its forward end connected to a finger or hoe-blade, a sleeve E, mounted on the handle, the screw *d*, connecting said sleeve and rod, and a detent *e*, arranged to engage a rack e^1, set into the upper side of the handle, substantially as shown and described. 2nd. In a garden tool or implement, the combination with a handle, one end of which is tubular or provided with a central bore, of a head piece having a central bore secured to the tubular end of the handle, said head piece being provided with side arms or projections a cross bar or head pivotally connected with the outer ends of the side arms or projections and provided with a number of fingers or times, or a hoe or spade, a rod arranged in said tubular portion of the handle and adapted to slide therein, and passing through the central bore of the head piece, and pivotally connected at its outer end with the said fingers or tines, or hoe or spade and means connected with the tubular portion of the handle, and with the rod therein, to adjust said rod and hold it in any desired position said means consisting of a slide mounted on the tubular handle, provided at one side with a screw or projection extending through a slot in the handle, and connected with said rod, and on the outer side with a pawl or detent adapted to operate in connection with a rack formed on, or secured to said handle, substantially as shown and described.

No. 53,511. Pedal for Bicycles, etc.

(*Pédales pour bicycles, etc.*)

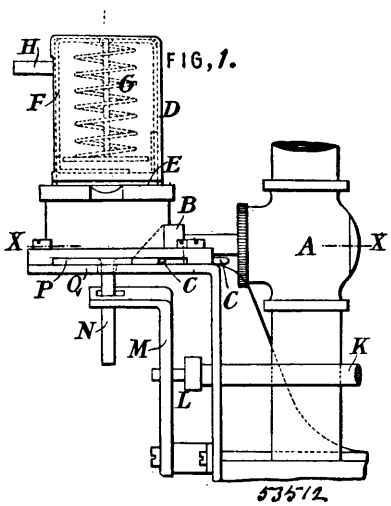


Marmaduke Mathews, Alexander Jardine, and Agnes Jardine, all of Beacondale, Ontario, Canada, 17th September, 1896; 6 years. (Filed 10th August 1896.)

Claim.—1st. In a pedal and in combination with the spindle casing thereof, a plate having a flange formed on its rear end and two lugs on the other end adapted to grip the sides of the riders shoe, the middle part of the plate being secured to the said casing, substantially as and for the purpose specified. 2nd. In a pedal and in combination with the spindle casing thereof, a plate rigidly connected to the said casing and stamped out at each side thereof to form a rearward flange for one side of the pedal and a forward flange or foot rest for the other side of the pedal, substantially as and for the purpose specified. 3rd. In a pedal, and in combination with the spindle casing thereof, a plate rigidly connected to the said casing and stamped out at each side thereof to form a rearward flange for one side of the pedal, and a forward flange or foot rest for the other side of the pedal, one or both of the forward flanges or foot rests being provided with lugs to grip the sides of the sole of the rides shoe, substantially as and for the purpose specified. 4th. In a pedal and in combination with the spindle casing thereof, a plate rigidly connected to the said casmg and stamped out at each side thereof to form a rearward flange for one side of the pedal and a forward flange or foot rest for the other side of the pedal, one of the forward flanges on one side being provided with a single lug and that on the other side with two spring lugs adapted to grip the sides of the sole of the riders shoe, substantially as and for the purposes pecified. 5th. In a pedal, the spindle A, having thereon the stationary cone C, the cone D, formed on the sleeve E, screwed on the spindle and the clamping set screw G, adapted to bear against both the spindle and the sleeve, in combination with the casing B, having cups I and J formed thereon, one or more races of balls located between the said cups and cones, and the crank F, into which the said sleeve is screwed, substantially as and for the purpose specified. 6th. In a pedal, the spindle A, having thereon the stationary cone C, and the cone D formed on the sleeve E, screwed on the spindle, in combination with the casing B, having cups I and J formed thereon, one or more races of balls located between the said cups and cones, the crank F, into which the said sleeve is screwed, and the clamping set screw G, screwed into the end of the sleeve and bearing against the spindle, substantially as and for the purpose specified. 7th. In a pedal, the spindle A, having its end slotted to receive a screw driver, and having thereon a stationary cone C, a cone D, formed on the sleeve E, having a shoulder *e* formed thereon and screwed on the spindle, and the clamping set screw G, screwed into the end of the sleeve and spindle in combination with the casing B, having cups I and J, formed thereon, one or more races or balls located between the said cups and cones, the crank F, into which the said sleeve is screwed, and the clamping set screw G, screwed into the end of the spindle and bearing against the end of the sleeve and the crank arm, substantially as and for the purpose specified. 8th. In a pedal, the spindle A, having thereon the stationary cone C and the cone D formed on the sleeve E, screwed on the spindle in a direction contrary to that in which the spindle moves when the machine is in motion, in combination with the casing B, having cups I and J formed thereon, one or more races of balls located between the said cups and cones, the crank F, into which the said sleeve is fitted, the said screw S and the clamping set screw G screwed into the end of the sleeve and bearing against the spindle, substantially as and for the purpose specified.

No. 53,512. Coin-freed Apparatus for Fluid Meters.

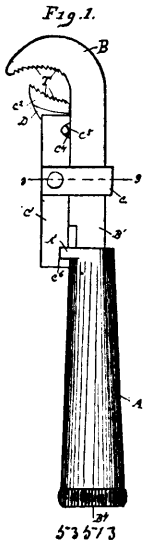
(*Mètre actionné par une pièce de monnaie.*)



The Wrights Gas Meter Syndicate, Westminster, assignee of John Frederick Simmance, 223 The Grove, Hammersmith, both in England, 17th September, 1896; 6 years. (Filed 11th August, 1896.)

Claim.—In coin-freed apparatus for fluid meters, the combination of the stop valve for the fluid having on its stem a head with an inclined face, the cylinder with slot for introduction of a coin, and with spring plunger, the reciprocating plate adapted to be moved to and fro under the cylinder by mechanism operated by the counted gear of the meter, and the spring adapted to close the valve, arranger and operating substantially as described.

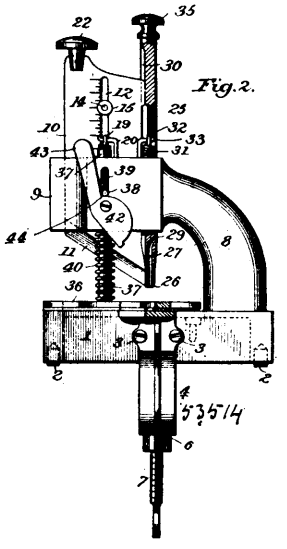
No. 52,513. Wrench. (*Clé à écrou.*)



Daniel Metcalfe, Troy, New York, U.S.A., 17th September, 1896; 6 years. (Filed 3rd August, 1896.)

Claim.—In a wrench, the combination with a barrel handle A, inner and outer jaws and jaw arms, one of said arms having a slot C^6 adapted to receive a lug A^1 on the barrel, and a slideway clip embracing the other arm, said other arm being inserted through an end aperture in the barrel and provided with a screw-threaded shank, of an adjusting nut rotatively secured within the barrel upon the screw-threaded shank and having a projecting operating head, substantially as described.

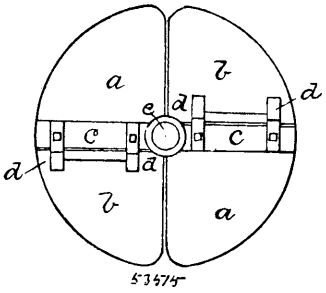
No. 53,514. Buttonhole Cutter. (*Coupe-boutonnières.*)



Abby S. Vose, Providence, Rhode Island, U.S.A., 17th September, 1896; 6 years. (Filed 20th July, 1896.)

Claim.—1st. In a machine for cutting buttonholes, the combination with a vertically operating knife or cutter, of a horizontally disposed plate attached to the base of the machine and having a longitudinal slot and a scale, and an adjustable device working in said slot and adapted to be projected through each buttonhole as it is cut, whereby the distance between the buttonholes is regulated, substantially as described. 2nd. In a machine for cutting buttonholes, the combination of the plate formed with the longitudinal slot, the button or gage adjustable in said slot, and a gage plate adjustable at right angles to the slot, substantially as described. 3rd. In a machine for cutting buttonholes, the combination of the plate 50 having the longitudinal slot provided with an adjustable gage, and transversely and longitudinally adjustable gage-plates working on said plate, substantially as described. 4th. In a machine for cutting buttonholes, the combination of a knife or cutter and a punch, each operating independently of the other, the one being partly guided by the other in its movements, substantially as described. 5th. In a machine for cutting buttonholes, the combination of a punch normally held to an elevated position and formed with a groove in its side, and a knife or cutter also normally held to an elevated position and having one of its edges entering the groove of the punch, said knife and punch operating independently of each other, substantially as described. 6th. In a machine for cutting buttonholes, the knife having the vertical slot provided with an adjustable screw button and formed at its lower end with an oblique cutting edge, in combination with a punch working directly adjacent one edge of the cutter and independently of the latter, substantially as described. 7th. In a machine for cutting buttonholes, the combination of the base plate provided with a clamp for attachment to a support, the curved arm projecting from said plate and the body or guide 9, the knife working through said guide and provided with the adjusting button, the spring for retracting the knife, the punch also spring retracted and grooved to receive an edge of the knife, the presser-foot and its spring, and the cam operating upon a projection from the stem of said presser-foot, substantially as described. 8th. In a machine for cutting buttonholes, the combination of a knife or cutter, the slotted plate 50 provided with the adjustable gage or button for regulating the distance between the holes to be cut, and a gage or guide for the fabric, said gage or guide being adjustable to vary the distance of the buttonholes from the edge of th fabric, substantially as described.

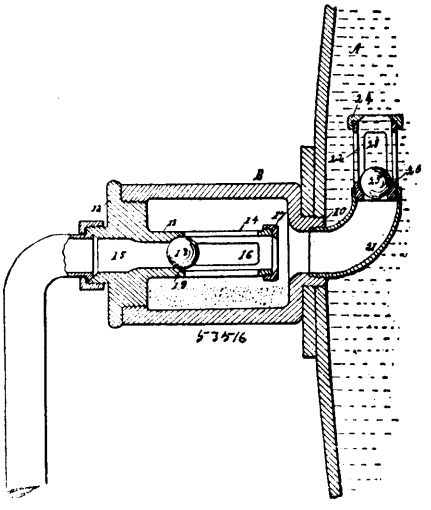
No. 53,515. Earth Auger. (*Sonde à trépan.*)



Robert Leighton, Waterloo, Ontario, Canada, and Charles Lyman Tuttle, Rochester, New York, U.S.A., 17th September, 1896; 6 years. (Filed 15th August, 1896.)

Claim.—1st. A post hole auger the bit or plate of which is made in sections and are alternately rigid cutting sections and hinged or jointed sections, substantially as and for the purpose hereinbefore set forth. 2nd. The combination in the bit or plate of a post hole auger, of the rigid cutting sections *aa*, the hinged or jointed sections *bb*, the bar *c*, and the hinges *dd*, substantially as and for the purpose hereinbefore set forth. 3rd. A post hole auger having the cutting sections of the bit or plate *aa*, the hinged or jointed sections *bb*, the bar *c*, the hinges *dd*, the handle *e*, and the screw *f*, substantially as and for the purpose hereinbefore set forth.

No. 53,516. Safety Check for Boilers.
(*Alarme de sûreté pour chaudières.*)

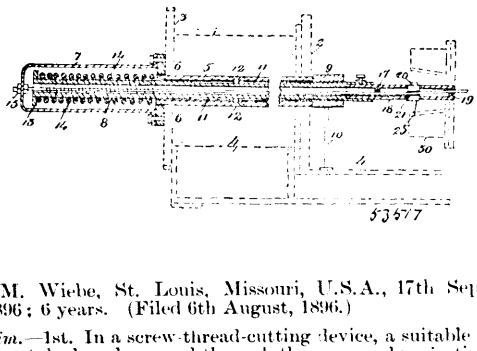


Frank Albin and Paul Henkel, both of Dodge City, Kansas, U.S.A., 17th September, 1896; 6 years. (Filed 17th August, 1896.)

Claim.—1st. A safety check for boilers, the same comprising a casing having at one end a bossed opening and having the opposite end open, a cap fitted within said open end of the casing, the cap having a tube axially coincident with the cap and terminating in a valve cage, a ball confined within said cage, an elbow pipe held at one end by the boss of the opening in the casing, a valve cage at the opposite end of the elbow pipe, and a ball confined within said valve cage, substantially as described. 2nd. A safety check for boilers, comprising a casing, a nut at one end of the casing, a valve carried by the nut and held out of contact with the sides of the casing whereby a mud pocket is formed in the casing, and a second valve supported on the casing and communicating with the interior thereof, substantially as described. 3rd. A safety check, the same consisting of a casing capable of having communication with the boiler at one end and having its remaining end open, a cap removably fitted within said end, and a valve carried by the cap, the valve being held away from the sides of the casing whereby a mud pocket is formed in the casing, substantially as described. 4th. A safety check for boilers, the same consisting of a cylindrical casing having at one end means by which it may communicate with the boiler, the opposite end of the casing being open, a cap removably fitted within said end, an axially coincident valve cage carried by the cap and located within the chamber, and a valve ball inclosed by the cage, substantially as described. 5th. A safety check, having a cylindrical casing, one end of which is open and the remaining end having a central opening surrounded by outwardly-projecting boss, a cap removably fitted within and closing the open end of the casing, the cap having an axially coincident tube extending into the casing and the tube having its inner end formed with a valve cage, and the bore of the tube being extended through the cap, and the cap having a boss projecting from the opening therein and oppositely to the tube, a ball operating with the valve cage of the tube, an elbow pipe connected at one end with the boss of the casing, a valve cage carried by the remaining end of the elbow pipe, and a ball operating the cage of the elbow pipe, substantially as described.

No. 53,517. Screw-thread-cutting Device.

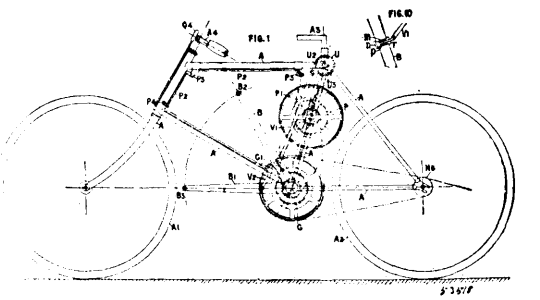
(*Filière à vis.*)



Paul M. Wiebe, St. Louis, Missouri, U.S.A., 17th September, 1896; 6 years. (Filed 6th August, 1896.)

Claim.—1st. In a screw-thread-cutting device, a suitable rotating sleeve, a tube loosely passed through the same and projecting a suitable distance therefrom, a tool carried by the projecting end of the tube, intermediate connections between the sleeve and tube for rotating the latter with the sleeve and simultaneously advancing the same and the tool carried by it, and means for restoring the tube to its normal or original position within the sleeve upon the completion of the cutting operation, substantially as set forth. 2nd. In a screw-thread-cutting device, a rotating sleeve, a tube loosely passing through the same and projecting outwardly from each end thereof, a head carried by one of the projecting ends of the tube, a coiled spring encircling the tube and interposed between the head and the adjacent end of the sleeve, the opposite end of the tube having a peripheral screw-threaded portion, a stationary collar passed over the screw-threaded portion, a tool holder carried by the tube exterior to the collar, a longitudinal groove or slit formed along the outer surface of the tube and located within the sleeve, and a pin carried by the sleeve and co-operating within the groove of the tube, the parts operating substantially as and for the purpose set forth. 3rdr In a screw-thread-cutting device, a tool holder, a tool-supporting block movable within the same, a cutter adapted to be inserted in the block, a binding bolt for securing the shank of the tool within the block, a screw-threaded socket formed in the shank of the tool or cutter, an adjusting bolt passed into said socket, a head for the adjusting bolt, a peripheral groove formed on said head, and suitable securing plates carried by the upper surface of the block and having their curved edges passed into the groove of the head of the adjusting bolt, the parts operating substantially as and for the purpose set forth. 4th. A screw-thread-cutting device, comprising a sleeve 5, a cup 7, a tube 8, a head 13, a coiled spring 14, grooves 11, pins 12, an exterior screw-threaded portion formed on the tube on one of the projecting ends thereof, a collar 9, a tool holder 18, a cutter 25, a supporting block 20, an inclined groove formed along one of the surfaces of the block, a guide rod 16, the parts operating substantially as and for the purpose set forth.

No. 53,518. Cycling Machine. (*Bicycle.*)



John Hayston Mitchell and Thomas Joseph Cain, both of Gympie, Queensland, 18th September, 1896; 6 years. (Filed 8th September, 1896.)

Claim.—1st. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers, of pawls pivoted thereto, and engaging on the downward strokes of the said levers with ratchet power wheels keyed to the main shaft from which motion is transmitted through intermediate gearing to a chain wheel on the rear road wheel substantially as hereinbefore described. 2nd. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers of grippers actuated thereby and engaging on the downward strokes of the said levers with power wheels keyed to the main shaft from which motion is transmitted through intermediate gearing to a chain wheel on the rear road wheel, substantially as hereinbefore described. 3rd. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers of straps bolted thereto and engaging on the downward strokes of the said levers with grooved power wheels keyed to the main shaft from which, motion is transmitted through intermediate gearing to a chain wheel on the rear road wheel substantially as hereinbefore described. 4th. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers such as B B^1 of pawls such as G^1 pivoted to the said levers and ratchet power wheels such as G keyed to a main shaft such as C substantially as hereinbefore described. 5th. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers, of grippers, such D D^1 tension bars such as E^2 and power wheels such as L keyed on the main shaft substantially as hereinbefore described. 6th. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers such as B, of straps such as *d* bolted to the said levers and grooved power wheels such as *a* keyed to the main shaft such as C substantially as hereinbefore described. 7th. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers actuating a main shaft of a gear wheel loose on said shaft, but capable of being made fast to it by means of a sliding clutch, and gearing to a compound wheel loose on a second shaft from which compound wheel motion is transmitted to a compound wheel loose on the said main shaft, the compound wheel on the said main shaft transmitting motion to a chain wheel on the rear road wheel substantially as hereinbefore described. 8th. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers actuating a main shaft such as C of gear wheel such as N and compound wheel such as N^1 N^2 on said shaft and compound wheel such as O O^1 on a second shaft, and clutch such as Q capable of making the wheels N and N^1 N^2, loose or fixed to the said shaft substantially as hereinbefore described. 9th. In driving gear for bicycles and other cycling machines the combination with two alternately reciprocating foot levers, of connecting rods, such as V^1 V^2, straps or chains such as U^2 U^3, secured to drums or wheels such as U U^1, for the purpose of returning the said levers on completion of their downward strokes, substantially as hereinbefore described. 10th. In brakes for the bicycles and other cycling machines the combination and arrangement of a brake wheel such as P, brake straps such as P^1, connecting rods such as P^2, bell crank levers such as P^3, and oscillating footrest such as P^4, for actuating the brake substantially as hereinbefore described.

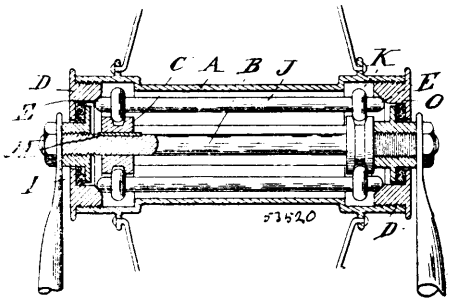
No. 53,519. Enamel Paint and Combination of Material for Composing Same. (*Fabrication de peinture.*)

George William Nathaniel Hamilton, Albert Park, Victoria, Australia, 18th September, 1896; 6 years. (Filed 8th September, 1896.)

Claim.—1st. My hereinbefore described enamel paint consisting essentially of a mixture of methylated spirits, ether or alcohol, commercial shellac, white pine resin or copaiba balsam, commercial camphor, purified white gum, such as gum arabic, and a suitable colouring matter, all incorporated together substantially as and for

the purposes set forth. 2nd. A paint consisting of the following—one gallon of methylated spirits, ether or alcohol, three pounds of commercial shellac, one pound of white pine resin or copaiba balsam, one quarter of a pound of camphor, one quarter of a pound of purified white gum arabic, dextrin or analogous glutinous matter, and sufficient desired colouring matter, all incorporated together substantially as and for the purposes set forth.

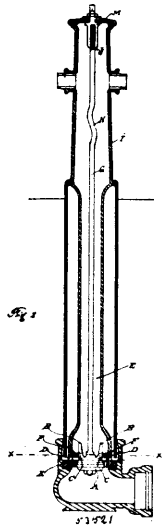
No. 53,520. Roller Bearing. (*Coussinet à rouleau.*)



Herbert H. Ellis, Walkerville, Ontario, Canada; William J. Payne, Condor, New York, U.S.A., and Charles A. Sullivan, Windsor, Ontario, Canada, 18th September, 1896; 6 years. (Filed 24th August, 1896.)

Claim.—1st. In a roller bearing, the combination of the enclosing casing or hub, and the axle, of rollers, sleeves or enlargements thereon, having bearing on one member, and a rounded extension on the end of the roller, having a bearing on the other member. 2nd. In a roller bearing, the combination of the casing or hub, the axle, the rollers, rounded enlargements thereon having bearing on one member, a rounded extension on the end of the roller having a bearing on the other member, and means for adjusting the end bearing. 3rd. In a roller bearing, the combination of the casing or hub, the axle, the rollers, of rounded enlargements thereon having bearing on one member, one of these enlargements of each roller having an endwise movement thereon, and a rounded extension on the rollers having a bearing on the other member.

No. 53,521. Hydrant. (*Borne-fontaine.*)

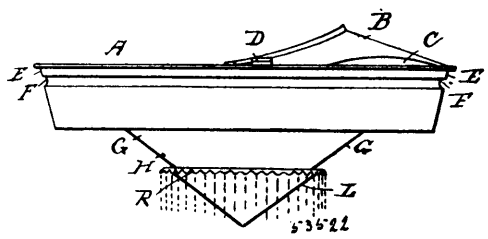


Eugène S. Manny, Montréal, Québec, Canada, 18 Septembre 1896; 6 ans. (Déposé 6 Août 1896.)

Résumé.—1° Dans une borne-fontaine, la combinaison de la valve A avec les oreilles B B, tel que décrit. 2° Dans une borne-fontaine, la combinaison avec les oreilles B B des rainures C C correspondant aux ouvertures D, tel que décrit. 3 Dans une borne-fontaine, la combinaison avec le siège K des coussinets F F servant de guides aux oreilles B B, tel que décrit. 4 Dans une borne-fontaine, la combinaison des coussinets F F avec les ouvertures de vidange D, tel que décrit. 5° Dans une borne-fontaine, la combinaison de la valve A avec la tige G courbée en H, tel que décrit et pour les fins indiquées.

No. 53,522. Self-Closing Milking Bucket.

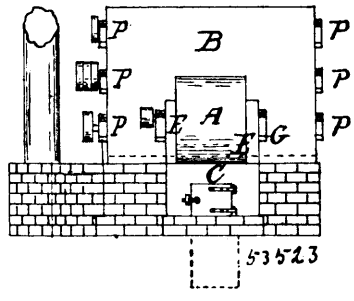
(*Seau à lait se fermant automatiquement.*)



Charles Frederick Cooper and James Emanuel Mansfield, both of Melbourne, Victoria, 18th September, 1896; 6 years. (Filed 3rd September, 1896.)

Claim.—1st. In an improved self-closing milking bucket, and inside the said bucket and regulated by a nut an inverted cone shaped non-return valve with or without a dropped rim having corrugations on its bottom edge, as and for the purposes hereinbefore described. 2nd. In an improved self-closing milking bucket, a cover having an inverted cone as G, with a milk discharge hole as I, in combination with an inverted cone shaped non-return valve as L, adjusted by a nut as M, and with or without a dropped rim, having corrugations as R, as hereinbefore described. 3rd. In an improved self-closing milking bucket, the combination of a cover as A, having a splash plate as B, with removed portions as C, lugs as D, rim as E, with or without a groove as F, inverted cone as G, vent holes as H, milk discharge hole as I, bridge piece as J, with upwardly-turned spans as K, an inverted cone shaped non-return valve as L, with or without a dropped rim having corrugations as R, supported by a spindle as M, and adjusted by a nut as N, as and for the purposes hereinbefore set forth. 4th. In an improved self-closing milking bucket, the combination of a bucket as O, having ears as P, with shoulders as Q, with a cover as A, having a splash plate as B, with removed portions as C, lugs as D, rim as E, with or without a groove as F, inverted cone as G, vent holes as H, milk discharge hole as I, bridge piece as J, with upwardly-turned spans as K, an inverted cone shaped non-return valve as L, with or without a dropped rim, having corrugations as R, supported by a spindle as M, and adjusted by a nut as N, all as and for the purposes hereinbefore set forth.

No. 53,523. Wool Drying. (*Procédé pour sécher la laine.*)



John McCreath, Trovercargill, New Zealand, 18th September, 1896; 6 years. (Filed 3rd September, 1896.)

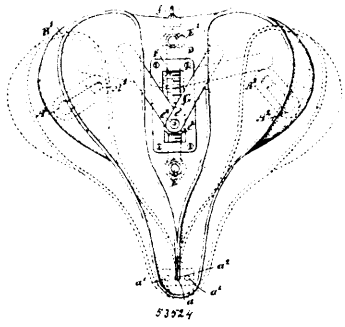
Claim.—1st. In the process of the drying of wool or analogous material, the combination of a fan, such as A with a furnace such as C, for producing a current of hot air to be applied so that the hottest air reaches the wool in its last stages of drying, substantially as shown and described herein. 2nd. In the process of the drying of wool or analogous material, the combination of enclosed endless netting travelling tables such as M, for carrying the wool through a continuous current of heated air forced by a fan such as A, and directed to the whole of the wool by ripples such as L, substantially as shown and described herein. 3rd. The method of drying wool or analogous material by passing it over enclosed endless bands of travelling netting tables, and forcing a continuous current of hot air thoroughly through same, in such manner that the hottest air reaches the wool in its dryest stages by a machine, substantially as shown and described herein.

No. 53,524. Pneumatic Saddle. (*Selle pneumatique.*)

Oliver Franklin Baker, Galt, Ontario, Canada, 18th September, 1896; 6 years. (Filed 2nd September, 1896.)

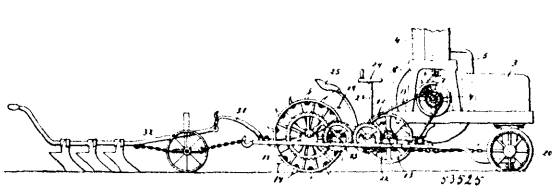
Claim.—1st. In a pneumatic saddle, in combination two laterally extending pneumatic cushion wings with a continuous air-chamber connecting each through the front or horn of the saddle, a support-

ing base for each wing and said base and means for laterally adjusting the pneumatic wings, as and for the purpose specified. 2nd. In



combination two laterally extending pneumatic cushion wings connected together at the front and provided with suitable air-chamber, a supporting strip for each wing pivotally connected to the front or horn of the saddle, a supporting base provided with pivots for pivoting the fronts of the strips and means for laterally adjusting the pneumatic wings, as and for the purpose specified. 3rd. In combination two laterally extending pneumatic cushion wings connected together at the front and provided with suitable air-chamber, a supporting strip for each wing pivotally connected to the front or horn of the saddle, a supporting base provided with pivots for pivoting the fronts of the strips, and a slotted plate set angularly beneath each pneumatic wing and secured to the base board, pins secured on the bottom of the strips extending into the slots in the plates and means for laterally adjusting the pneumatic wings, as and for the purpose specified. 4th. In combination two laterally extending pneumatic cushion wings connected together at the front and provided with suitable air-chamber, a supporting strip for each wing pivotally connected to the front or horn of the saddle, a supporting base provided with pivots for pivotally connecting the screws of the strips, a connection between the rear or wing end of the strips and the base board for limiting their outward movement and means for laterally adjusting the pneumatic wings, as and for the purpose specified. 5th. In combination two laterally extending pneumatic cushion wings connected together at the front and provided with suitable air-chamber, a supporting strip for each wing pivotally connected to the front or horn of the saddle, a supporting base provided with pivots for pivotally connecting the screws of the strips, a connection between the rear or wing end of the strips and the base board for limiting their outward movement, arms pivotally connected to the strip or support for each wing and means pivotally connected to the other end of the arm for imparting an outward movement to the outer ends of the arms, as and for the purpose specified. 6th. In combination two laterally extending pneumatic cushion wings connected together at the front and provided with suitable air-chamber, a supporting strip for each wing pivotally connected to the front or horn of the saddle, a supporting base provided with pivots for pivotally connecting the screws of the strips, a connection between the rear or wing end of the strips and the base board for limiting their outward movement, arms pivotally connected to the strip or support for each wing, a screw spindle supported in suitable bearings attached to the base board and secured from longitudinal movement, a turning nut at the rear end, an internally-threaded sleeve supported on the screw spindle and a pin for pivotally connecting such sleeve to the inner ends of the arms, as and for the purpose specified.

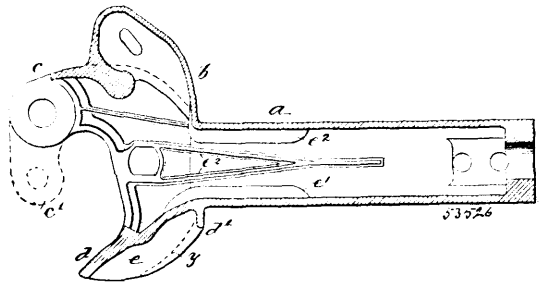
No. 53,525. Traction Motor. (*Moteur à traction.*)



Antoine Jean Pater Noster De Souza, Paris, France, 18th September, 1896; 6 years. (Filed 2nd September, 1896.)

Claim.—1st. The combination of a motor with a traction wheel having teeth projected therefrom and means for transmitting power from the motor to the said wheels, and a frame work for carrying the parts, substantially as shown and described. 2nd. The combination of a toothed traction wheel and a frame work and a truck, said truck having a motor mounted thereon and a train of gearing connecting the motor to the traction wheel, the device adapted to be attached to an agricultural machine, substantially as shown and described.

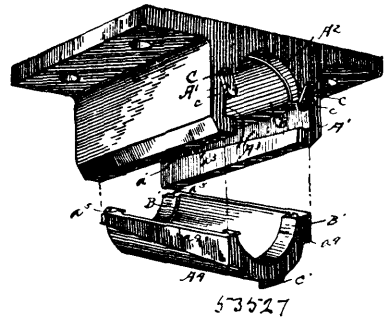
No. 53,526. Car Coupler. (*Attelage de chars.*)



Stephen Jones Meeker, Newark, New Jersey, U.S.A., 18th September, 1896; 6 years. (Filed 2nd September, 1896.)

Claim.—1st. In a car-coupler, the head of the draw-bar provided with the guard-arm *d*, and one or more ribs located on its inner shell extending to a point at either side of the line of union between the arm and the shank of the draw-bar, substantially as described and for the purpose set forth. 2nd. In a car-coupler, the head of the draw-bar provided with the guard-arm *d*, having a shoulder on its rear side, a series of ribs extending from said shoulder to the forward end of the arm, and one or more ribs located on the inner shell of the draw-bar, extending to a point at either side of the line of union between the head and shank of the draw-bar, substantially as described and for the purpose set forth. 3rd. In a car-coupler, the draw-bar provided with a series of ribs located on its several inner walls extending to a point at either side of the line of union between its head and shank, substantially as described and for the purpose set forth.

No. 53,527. Truck-Bearing. (*Coussinet de camion.*)



Stephen A. Eisele, San Antonio, Florida, U.S.A., 18th September, 1896; 6 years. (Filed 2nd September, 1896.)

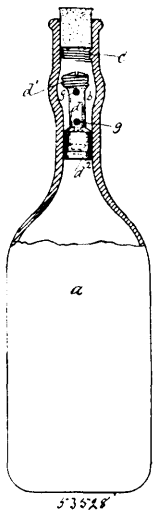
Claim.—1st. A bearing comprising an upper section and a separable lower section, wedge-like interlocking portions being extended in the direction of length of said sections whereby they may be held together, substantially as shown and described. 2nd. A bearing provided with an upper section and a longitudinally slidable lower oil-cup section, a wedge-like slide and slideway being provided by which to connect the two sections, substantially as set forth. 3rd. A bearing comprising the upper section having depending flanges provided in their adjacent faces with longitudinal grooves having inclined walls, and a lower oil-containing section provided with longitudinal slides or ribs having inclined sides and slidable in said grooves, and means for holding the lower section in place, substantially as set forth. 4th. A bearing comprising an upper section, having opposed longitudinal grooves the lower walls of which are inclined upwardly from their outer ends, and the lower slidable oil-cups having longitudinal ribs inclined on their lower sides to correspond with said lower walls of the grooves, and means for holding the oil-cup in place, substantially as set forth.

No. 53,528. Bottle. (*Bouteille.*)

Thomas N. Sterry and John J. Murphy, both of Norwich, Connecticut, U.S.A., 18th September, 1896; 6 years. (Filed 2nd September, 1896.)

Claim.—1st. In combination with a bottle, a portion of the neck of which is internally threaded, a plug having an enlarged threaded upper portion adapted to be screwed through the threaded neck, and having its lower end enlarged to fit tightly in said neck, all substantially as specified. 2nd. In combination with a bottle, a portion of the neck of which is internally threaded, a plug having

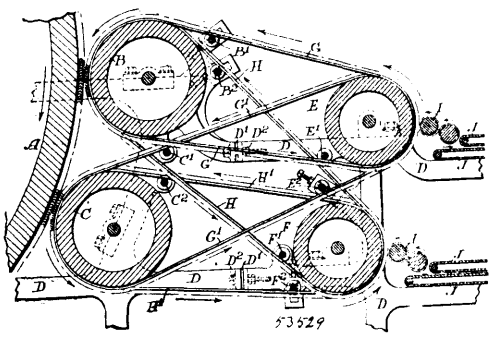
an enlarged threaded upper portion adapted to be screwed through the threaded neck, an l an enlarged lower end that may fit tightly



in said neck, said plug being formed as a hollow section open at its lower end and with lateral openings as set forth, and having loosely fitted within said tube a float valve, all substantially as specified.

No. 53,529. Rubber Condenser for Carding Engines.

(*Condenseur en caoutchouc pour machines à carder.*)



Thomas Green Beaumont, Toothill Grove, Rastrick, York, England, 18th September, 1896; 6 years. (Filed 1st September, 1896.)

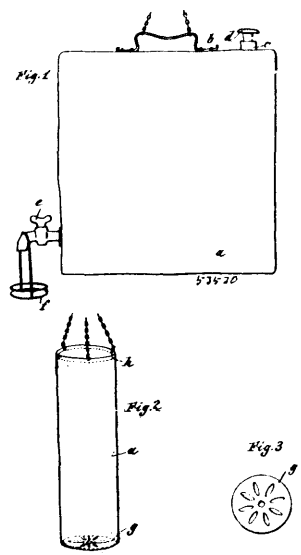
Claim.—1st. The production of a thread composed of two slivers doffed from two different parts of a swift in a condensing carding engine, in the manner substantially as shown and described. 2nd. In condensing carding engines, the double doffing endless card fillets, traversed around doffing and carrying rollers, for removing fibre from the swift or cylinder, and bringing the slivers or films of fibre taken from one part of the swift into contact and contiguous with the slivers or fibres taken from another part of the swift, and in means for shipping the compound fibres from the card fillets for the purpose of forming one thread or carding in the manner and for the purposes substantially as herein shown and described. 3rd. In means for producing threads or cardings each composed of the slivers or films of fibre taken from different parts of the swift, shafts having flanges, guiding strips or bobbins thereon, or division plates or grooved rollers for guiding the endless card fillets and preventing lateral movement thereof, and means for adjusting the tension of said card fillets all arranged and operating in the manner substantially as herein shown and described. 4th. The general arrangement, combination and operation of the parts substantially as herein shown and described for producing threads or cardings from the swifts of condensing carding engines each composed of fibres taken from two separate parts of the swift.

No. 53,530. Apparatus for Cooling Water.

(*Réfrigérateur.*)

August Georg Heinrich, Lüderitz, Hamburg, Germany, 18th September, 1896; 6 years. (Filed 31st August, 1896.)

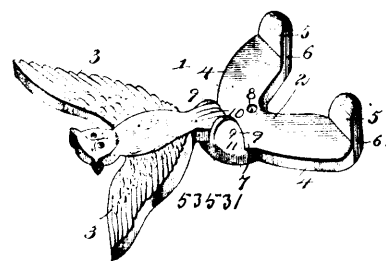
Claim.—A device or apparatus for cooling liquids or solid substances made of thick woven material or fabric and having an inlet opening *c* and an outlet tap *e* or one or more valves *d* for the purpose of providing an unbreakable cooler as light in weight as possible



whereby in consequence of the evaporation of percolating water a highly cooling action takes place on the liquid inside the vessel or receptacle, constructed and arranged substantially as hereinbefore described.

No. 53,531. Window Sash Lock.

(*Serrure pour cadres de chassis.*)



Thomas W. Crozier, Roanoke, Virginia, U.S.A., 18th September, 1896; 6years. (Filed 31st August, 1896.)

Claim.—A sash lock, comprising a locking plate, divergent arms provided on said locking plate, a lateral contact lip formed at the outer end of each of said arms and adapted to bind against a surface for positively engaging the lock therewith, an enlargement also formed on said locking plate and provided with an opening for the reception of suitable means for pivoting the lock, spaced lugs formed on said enlargement, and a substantially triangular-shaped weight provided with a projection, said projection being pivotally secured between said spaced lugs and adapted to permit the weight being operated to hold the locking plate in adjusted position to prevent a window or other sash being lowered or raised, substantially as set forth.

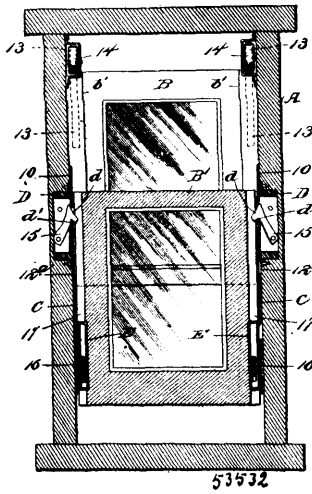
No. 53,532. Device for Operating Window Sashes.

(*Appareil pour actionner les cadres de châssis.*)

Porter Marshall, Fair Play, Missouri, U.S.A., 18th September, 1896; 6 years. (Filed 31st August, 1896.)

Claim.—1st. The combination, with the upper and lower sashes of a window-frame, and strips angular in cross-section and having sliding movement in the frame, of a connection between the said strips and the upper sash, and gravity-latches carried by the lower sash, and adapted for locking engagement with the aforesaid apertured strips, as and for the purpose specified. 2nd. The combination, with the upper and lower sashes of a window-frame, and slides, angular in cross-section, having free movement in said frame and connected with the upper sash, of gravity locking devices located in the frame, adapted for locking engagement with one member of each of the said strips, and similar locking devices carried by the lower sash and adapted for engagement with the second members of the aforesaid strips, as and for the purpose specified. 3rd. The combination of a window-frame, sashes arranged to move therein, a

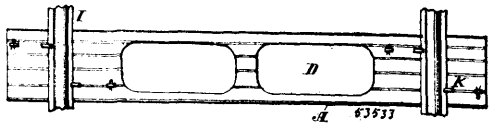
locking-strip connected to and arranged to move with one sash and having means to detachably connect it to the other sash, and a



gravity-latch mounted on the frame in position to engage and hold said locking-strip against movement, substantially as specified. 4th. The combination of a window-frame, sashes arranged to move therein, a locking-strip, a flexible connection between the locking-strip and one sash, a gravity-latch mounted in the frame and arranged to engage said strip and hold the same against movement, and a gravity-latch carried by the other sash and detachably connected with the locking-strip, substantially as set forth.

No. 53,533. Metallic Railway Tie.

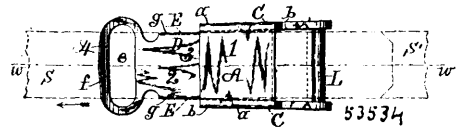
(*Traverse métallique de chemin de fer.*)



The Hamilton Malleable Iron Company, New York, assignee of Samuel F. Adams, Brooklyn, both in the State of New York, U.S.A., 18th September, 1896; 6 years. (Filed 26th August, 1896.)

Claim.—1st. As a new article of manufacture, a tie composed of sheet metal, longitudinally corrugated, provided with downturned sides, also longitudinally corrugated, each side havidg an inturned base, a transverse flattened channel across the upper face near each end to receive the rails and slotted openings in the body of the tie on each side of said channel, substantially as set forth. 2nd. A railway tie constructed of sheet metal, its entire body being longitudinally corrugated, the sides formed by downturned portions and the base by inturned wings, the upper surface having depressed and flattened transverse channels, and slotted openings on each side of said channels in combination with a rail, U-shaped levers in said slotted openings, engaging with the flanges of said rail, and keys for securing same, substantially as set forth. 3rd. A railway tie composed of sheet metal, longitudinally corrugated, and having downturned sides and inturned base, the upper surface having near each end a transverse flattened channel, said channel being slightly curved from end to end, so that the initial pressure or load will rest centrally on said tie, substantially as set forth. 4th. A railway tie having its entire body composed of longitudinally corrugated sheet metal, with downturned sides and inturned base, the upper sides being slightly convexed and the base elastic, substantially as set forth. 5th. A railway tie composed of sheet metal, having on its upper side near each end a flattened transverse channel, in combination with a rail, an insulated strip in the transverse channel provided with a upward curve, beneath the rail, and a U-shaped fastening lever on each side of the rail, with insulating material interposed between the rail and lever, and clamped by said U-shaped levers, substantially as set forth. 6th. A fastening for railway ties composed of a lever with two upturned right angled ends, one end being hinged to the tie adjacent to the rail and having a dog which projects over and binds the rail flange, and the other upturned end having a slot to receive a key, in combination with a metal tie and rail, substantially as set forth. 7th. The combination with a metal tie having at each end a transverse channel and a railway rail, of a rail fastener, composed of a lever with two upturned right angled ends which pass through slots in the tie, one end being hinged to the tie, adjacent to the rail, and having a dog which projects over and binds the rail flange, and the other upturned and having a slot and a key for fastening the same, and insulating material in said transverse channel, substantially as set forth.

No. 53,534. Buckle. (*Boucle.*)

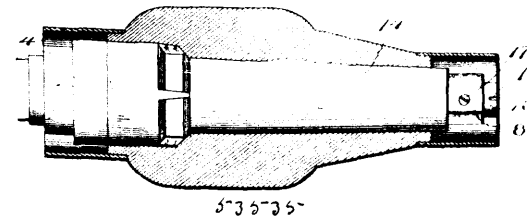


George Francis Stansbury, Weedsport, Ezra Willmarth Smith, Albany, and Eliza Ann Raymond, Syracuse, all in New York, U.S.A., 18th September, 1896; 6 years. (Filed 28th August, 1896.)

Claim.—1st. A device of the class described, comprising a casing formed integral with its upper and lower sides arranged at an angle to form a converging chamber, said case having means for the attachment of a strap or analogous article, and an integral key adapted to enter the casing and having its upper and lower sides arranged at an angle equal to that of the similar sides of the casing whereby a gripping action may be secured between the key and casing equal throughout the extent of the gripping surfaces, all combined and operating substantially as described. 2nd. The combination, in a device of the class described, of a casing formed with its roof and floor converging, and a key similarly formed and adapted to move in said chamber and exert equal gripping pressure throughout its upper surface in conjunction with the adjacent parallel inner surface of the chamber, substantially as described. 3rd. The combination, in a device of the class described, of a casing with its base at an angle to its top, and a key having depending flanges whose outer surfaces are similar to the adjacent interior surfaces of the chamber, whereby as the key is drawn through the chamber the edges of the flanges may move over the floor of the chamber and gradually elevate the body of the key to exert a gripping pressure against the inner surface of the roof of the chamber, which said pressure will be equal throughout the extents of the gripping surfaces, substantially as described. 4th. The combination, in a device of the class described, of a casing with its base at an angle to its top, and a like converging or wedge-shaped key adapted to move in the converging chamber of the case, the said key having an extremity provided with an elongated aperture disposed transversely to the line of draft of said key, substantially as described and for the purposes hereinbefore set forth. 5th. In a device of the class described, in combination, a casing enclosing a converging chamber, and a key similarly formed adapted to move in said chamber and exert an equal gripping pressure throughout its upper surface against the adjacent surface of the chamber, said key having an aperture to receive a material to be passed between the gripping surface of the key and its casing, substantially as specified. 6th. The combination, in a device of the class described, of a casing enclosing a converging chamber and a similar key adapted to move in said chamber and exert a gripping pressure in conjunction with the casing, said key having an aperture to receive a strap passed between the key and casing and contribute a bend to the strap to cause it to more effectually draw the key into operative position, as set forth. 7th. The combination, of a casing formed integral with its base at an angle to its top, a similarly formed key comprising a web having downwardly extending runners whose lower edges form angles with the web, said key having its outer end turned upwardly and diagonally of its path, and provided with a perforation in the upturned portion at right-angles to the web of the key, and a strap passed between the web of the key and the top of the casing and through the perforation in the key whereby it may be gripped or released by the adjacent surfaces of the key and casing as the key is manipulated, as set forth.

No. 53,535. Hub Attaching Device.

(*Appareil à attacher les moyeux.*)

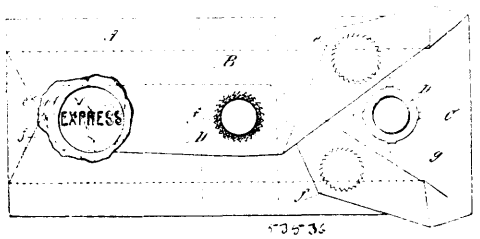


Henry Martin Cromer, Anderson, South Carolina, U.S.A., 19th September, 1896; 6 years. (Filed 31st August, 1896.)

Claim. The combination with a spindle having an inner cone, of a box provided at its inner and outer ends with conical or flared seats 9 and 10, the outer end of the spindle being reduced and

threaded as at 6, an outer cone 7 threaded upon said reduced portion of the spindle and having an abrupt inner end arranged at an interval from a shoulder 12 formed by the reduction of the spindle, an abrupt parallel-sided ring 13 integral with the box at the inner end of the seat 10 and disposed between the inner end of the outer cone and the contiguous shoulder of the spindle, packing rings interposed between the sides of said ring and the contiguous extremity of the cone and the shoulder of the spindle, and means for limiting the inward adjustment of the cone, said seat 10 extending beyond and over-hanging the outer packing ring to prevent displacement, substantially as specified.

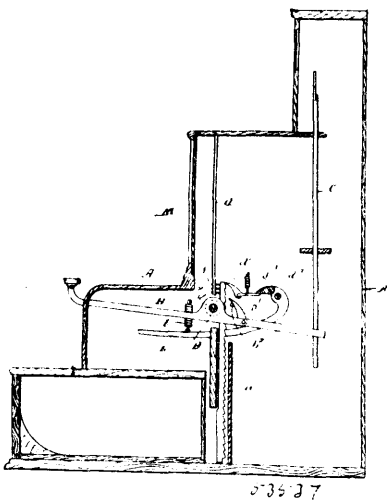
No. 53,536. Envelope Seal. (*Sceau pour enveloppes.*)



Frank M. Converse, New York, State of New York, U.S.A., 19th September, 1896; 6 years. (Filed 17th August, 1896.)

Claim.—1st. The combination with an envelope or wrapper, of a safety device having one or more openings therein and secured to the innermost flap or portion of the envelope or wrapper and extending through perforations in the overlying flap or flaps, said device and perforations being so formed as to permit sealing wax to unite said overlying flap or flaps to the innermost flap or portion through the opening or openings in said safety device. 2nd. The combination with an envelope or wrapper having perforations through its overlying flaps, of a hollow safety device secured to the face of an inner portion or flap, and having its inner edge projected upwardly through said perforations whereby said overlying flaps may be sealed to the inner flap through the hollow of the safety device, as and for the purpose set forth. 3rd. As an article of manufacture, the safety dealing device consisting of a ring having an upwardly flared inner edge formed to leave a clinching space between it and the surface to which it is attached and provided with securing prongs for attaching it to such surface in a manner to leave intact that portion within the ring, substantially as and for the purpose set forth. 4th. As an article of manufacture, an envelope having a perforation through its lower overlying flap and a larger perforation through its outer overlying flap, in combination with a ring secured to an inner flap of the envelope by prongs in the manner specified and having its inner edge upwardly flared to project through said perforations and to form a clincher on the sealing wax, substantially as set forth. 5th. A safety sealing device for envelopes or wrappers consisting of a piece of sheet metal constructed to be secured to the face of a portion of a wrapper and formed to provide a re-entering space or cavity beneath the metal under which the wax may flow and become attached to that portion of the wrapper enclosed by said device.

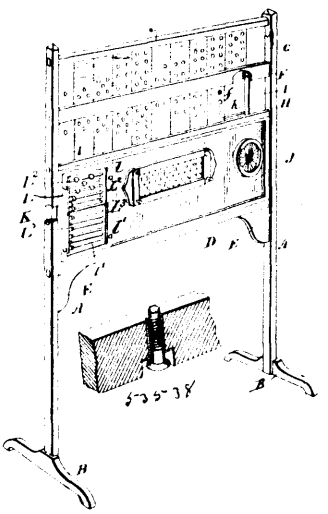
No. 53,537. Cash Register. (*Régistre à monnaie.*)



Charles H. Decker, Detroit, Michigan, U.S.A., 19th September, 1896; 6 years. (Filed 15th August, 1896.)

Claim.—1st. In a cash register, the combination of a plurality of vertical racks adapted to engage a single lifting pawl, a lifting pawl actuated by a key lever, means by which the racks are brought successfully into engagement with said lifting pawl, a scale located parallel to the path of said pawls, and pointers provided with indicating characters whereby they unite with the scale in indicating the total actuating impulses given by the key, substantially as described. 2nd. In a cash register, a plurality of vertical racks adapted to engage a single lifting pawl, a lifting pawl actuated by a key lever, and means by which the racks are brought successively into engagement with said lifting pawl, substantially as described. 3rd. In a cash register, the combination of a key lever, a lifting pawl on the key lever, a plurality of racks, each of which, except the first in series, is provided with an untoothed portion over which the pawl can act without lifting the rack, a lug at the bottom of the first, and a similar lug at the top of the second, said two lugs being adapted to engage and start the second rack upward when the first rack is near the end of its upward travel, substantially as specified.

No. 53,538. Arithmetical Calculator. (*Calculateur.*)



William Nelson Cuthbert, Toronto, Ontario, Canada, 19th September, 1896; 6 years. (Filed 8th August, 1896.)

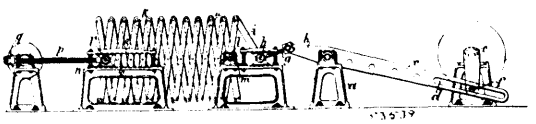
Claim. 1st. In an arithmetical calculator, the combination with the uprights A A, cross bars C, F and H, and number form board G divided into spaces containing hemispheres secured in each space, of tablets I, having also secured to them hemispheres corresponding in number for each tablet to each space and means for removably supporting them beneath the number board, as and for the purpose specified. 2nd. In an arithmetical calculator, the combination with the uprights A A, cross bars, C, F and H, and number form board G divided into spaces containing hemispheres secured in each space, of tablets I having also secured to them hemispheres corresponding in number for each tablet to each space, grooves *f* and *h* in the cross bars F and H respectively, and notches in the back of the tablets, as and for the purpose specified. 3rd. In an arithmetical calculator, in combination the uprights A A, frame J pivoted in the uprights, the bars H and D and the hole in the top and bottom of the frame, and a spring-pressed plug K in the bottom bar designed to be inserted in either of the holes in the top or bottom of the frame, as and for the purpose specified.. 4th. In an arithmetical calculator, a ball frame provided with suitable rod and balls arranged on those rods as specified, of adjustable side bars designed to groop the balls together, as and for the purposes specified 5th. In an arithmetical calculator, a mechanical schedule comprising the top and bottom strips with inwardly extending flanges, the number symbol strip secured to the upper strip and provided with a downwardly extending outer flange, the separate tablets adjustably secured at the bottom within the flange of the bottom strip, and provided with an inner and upwardly-extending flange and the pivoted side levers arranged to secure the tablets in position, as and for the purpose specified. 6th. The combination with the sectorial divided flexible semi-circles, of a frame provided with internal notches P^1, and arranged as and for the purpose specified.

No. 53,539. Mechanism for the Transmission of Power. (*Mécanisme pour transmettre la force.*)

Herman Bultmann, Bremen, and Sophus Hartman, Berlin, both in Prussia, 19th September, 1896; 6 years. (Filed 31st August, 1896.)

Claim. 1st. In a power transmitting mechanism, the combination of a power shaft, and crank secured thereto, a rock lever slotted

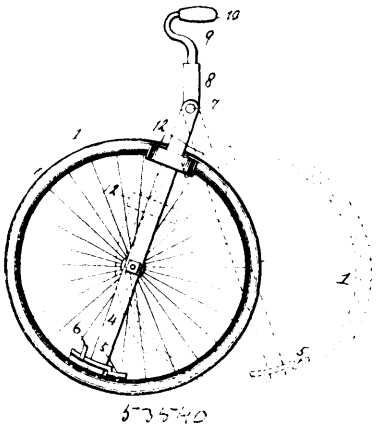
to receive the pin of said crank, a link and cross head secured to the end of the rock lever, guide frames A^1, A^2, lazy tongs pivoted at



one end to guide frame A, cross heads moving in said guide frames and a link, crank and driven shaft connected with the cross head of the moving end of the lazy tongs, substantially as described. 2nd. In a power transmitting mechanism, the combination of the driving crank shaft E, the slotted adjustable lever C, cross head *h*, link *g*, guide frame A^2, lazy tongs B, supported and held at one end upon said frame, guide frame A^1, cross head *n*, connecting rod *p*, and crank shaft Q, all combined, arranged and operating, substantially as described for the purpose specified.

No. 53,540. Walking or Skating Cycle.

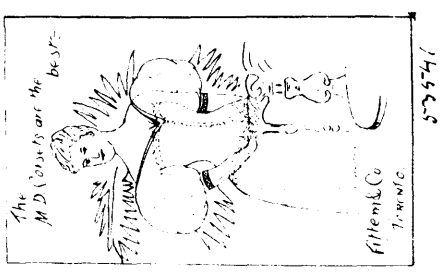
(*Cycle pour marcher ou patiner.*)



Tillman A. Marteeny, Kansas, Missouri, U.S.A., 19th September, 1896; 6 years. (Filed 20th August, 1896.)

Claim. 1st. A walking or skating cycle comprising a wheel, a frame pivotally mounted upon the axle of said wheel, and provided with a foot plate and leg clasp, and a handle bar having a pivoted connection with said frame, substantially as described. 2nd. A walking or skating cycle, comprising a wheel, a frame pivotally mounted upon the axle of said wheel and provided with a foot plate and a leg clasp, and an extensible and a contractible handle bar, having a pivoted connection with said frame, substantially as described. 3rd. A walking or skating cycle, comprising a wheel, a frame pivotally mounted upon the axle of said wheel and provided with a foot plate and an adjustable leg clasp, and a handle bar having a pivoted connection with said frame, substantially as described. 4th. A walking or skating cycle, comprising a wheel, a frame pivotally mounted upon the axle of said wheel and provided with a foot plate and an adjustable leg clasp, and an extensible and contractible handle bar having a pivoted connection with said frame, substantially as described. 5th. A walking or skating cycle, comprising a wheel, an arched bracket or yoke pivotally mounted upon the axle of said wheel, having its inner arm extended downwardly and provided with a foot plate, a leg clasp adjustably mounted upon said inner arm above the axle of the wheel, a sleeve pivotally connected to said arched bracket or yoke, a handle bar adjustably mounted in said sleeve, and provided with a handle or gripping surface, all arranged substantially as herein shown and described.

No. 53,541. Pictorial Card. (*Carte illustrée.*)

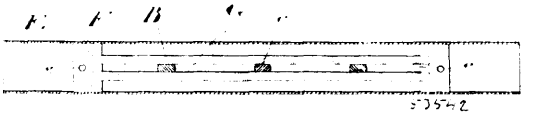


William Bradway Blackhall, Toronto, Ontario, Canada, 19th September, 1896; 6 years. (Filed 6th May, 1896.)

Claim. A transparency card comprising a pictorial representation of an animate or inanimate object on the face of the card, the form, frame, figure or contents of such object depicted on the back of the card surrounded by an opaque ground and arranged to register with the face picture and a clear backing sheet of light colour to hide the prepared back as and for the purpose specified.

53,542. Lock for Order Binders.

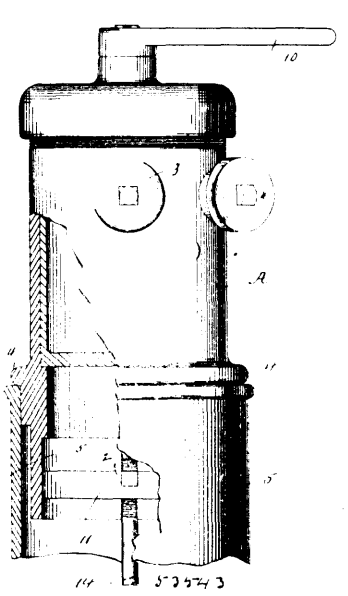
(*Serrure pour serre-papier.*)



Robert James Copeland, Toronto, Ontario, Canada, and Albert E. Chatterson, St. Louis, Missouri, U.S.A., 19th September, 1896; 6 years. (Filed 3rd August, 1896.)

Claim. 1st. A lock for order Binders comprising a plate having holes therein through which the posts of the binder may pass, in combination with a spring bar supported by the said plate and adapted to press on one side of the posts, substantially as and for the purpose specified. 2nd. A lock for order binders comprising a plate having holes therein through which the posts of the binder may pass, in combination with a spring bar supported by the said plate and adapted to press on the side of the posts, and a key adapted to pass through a suitable hole in the plate and shaped so as, when turned, to force back the said spring bar, substantially as and for the purpose specified. 3rd. A lock for order binders comprising a plate having a key hole therein, and holes through which the posts of the binder may pass, in combination with two spring bars supported at their ends on said plate and adapted to pass on both sides of the said posts and a key adapted, when inserted through the said key hole and turned, to press back the spring bars, substantially as and for the purpose specified. 4th. A lock for order binders comprising the tubular plate E, having holes *b*, and key hole *h*, formed therein, in combination with the posts B, and the bars G having their ends held in heads F, substantially as and for the purpose specified. 5th. A lock for order binders comprising the tubular plate E, having holes *b*, and key hole *h*, formed therein, in combination with the posts B, the bars G, having their ends held in heads F, having depressions therein into which the metal of the tube is punched, substantially as and for the purpose specified. 6th. A lock for order binders, comprising the tubular plate E, having holes *b* and key holes *h* and *g* formed therein in combination with the posts B, the bars G, the heads F, suitably held, and the key H, having the elliptical portion *e* and the circular end *d* formed on its stem, substantially as and for the purpose specified.

No. 53,543. Hydrant. (*Borne-fontaine*)

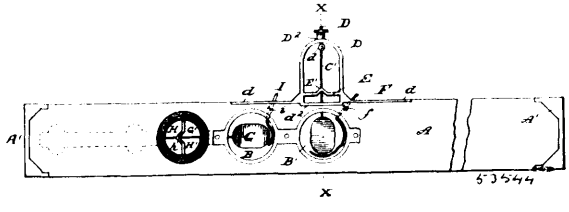


Elias Cronstedt, assignee, of Magnus Peder Elgen, both of St. Paul, Minnesota, U.S.A., 19th September, 1896; 6 years. (Filed 5th August, 1896.)

Claim. 1st. In a hydrant, the combination with the lateral plugs, of the valve cylinder fitted in said hydrant, and provided with a slotted opening in its wall, said valve cylinder communicating with the supply pipe and being adapted to be turned to bring its slot successively into registering engagement with said plugs. 2nd. In a hydrant provided with lateral plug openings, the combination of the valve cylinder fitted within said hydrant and normally closing

said openings, the valve cutting off communication between said cylinder and the source of supply, said cylinder being adapted to be turned to simultaneously open the valve between it and the source of supply and to cause a port in said cylinder to register with the plug openings. 3rd. In a hydrant provided with lateral plug openings, the valve for normally holding said openings closed, the valve for cutting off communication between the interior of the hydrant and the source of supply, and the means for simultaneously opening said valves to establish communication between the supply and one of said plug openings, and adapted to be further actuated to successively open communication with the remaining plug openings. 4th. In combination with a hydrant provided with lateral plug openings, the cylinder or sleeve fitted therein, normally closing said openings, the valve cutting off communication between the interior of said cylinder and the source of supply, said cylinder being adapted to be turned into communicating position with said openings, and to simultaneously open the main inlet valve. 5th. In combination with a hydrant provided with lateral plug openings, the sleeve or hollow cylinder fitted therein and normally closing said openings, but adapted to be turned into communication therewith, the valve closing the opening between said cylinder and source of supply and the screw-threaded connection between said valve and cylinder, whereby, as said cylinder is turned, said valve is opened. 6th. In combination with a hydrant provided with lateral plug openings, the sleeve or cylinder fitted within the same and normally closing said openings, but adapted to be turned into communication therewith, the valve closing the opening to said cylinder, the screw-threaded connection between said valve and cylinder, and the connection between said valve and the main inlet valve of the hydrant, whereby said valves are simultaneously opened as said cylinder is turned. 7th. In a hydrant, the combination with its lateral plugs, of the included hollow cylinder having a circumferential slotted opening in the plane of said plugs, and serving as a valve therefor, and the operative connection between said cylinder and the hydrant inlet valve, whereby the latter is opened by the turning of said cylinder.

No. 53,544. Plumb Level. (*Niveau à plomb.*)



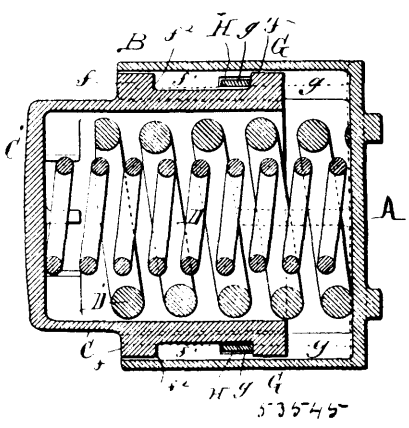
Lewis C. Raymond, Rutland, Vermont, and William E. Drew, Manchester, New Hampshire, both in the U.S.A., 19th September. 1896; 6 years. (Filed 8th August, 1896.)

Claim.—1st. In a level, the combination of the body portion, a flanged arched support secured thereto, and formed with an integral transverse bar parallel with the length of the body portion and having a line secured to the under side of the arched support at the top and passed through the opening in said angular extension and carrying a plumb, substantially as described. 2nd. In a level, the combination of a body portion with a chamber, a flanged arched support having its flanges seated in recesses in the body portion, said support being formed with a transverse bar having centrally upwardly extending angular portion with central opening, a detachable cover to said chamber, a plumb in said chamber, the line attached at one end to said plumb and passed through the opening in the angular extension of the support, and a screw rod having an eye to which the end of said line is attached, and a thumb screw on the end of the rod above the arch of the support, substantially as and for the purpose set forth.

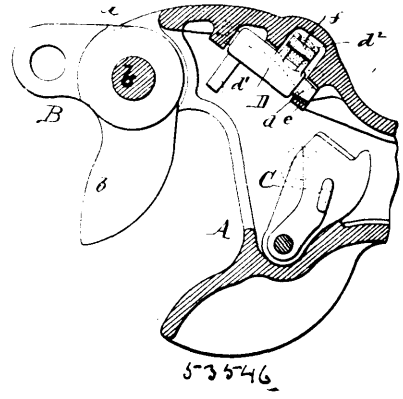
No. 53,545. Car Buffer. (*Tampon de chars.*)

The Gould Coupler Company, New York, assignee of Willard Fillmore Richards, Buffalo, both in the State of New York, U.S.A., 21st September, 1896; 6 years. (Filed 1st September, 1896.)

Claim.—1st. The combination with a base plate adapted to be secured to the end of a car and having a forwardly-projecting socket, provided with an internal longitudinal groove, of a tubular follower guided in said socket, closed at its front end and provided on its outer side with a rib or tenon engaging in said groove, a key extending transversely through the longitudinal groove of the socket and limiting the outward movement of the follower, and a buffer spring or springs arranged in said socket and follower, substantially as set forth. 2nd. The combination with a base plate adapted to be secured to the end of a car and having a forwardly-projecting socket, provided on its outer side with a hollow longitudinal enlargement forming a groove which opens into the socket, of a tubular follower guided in said socket, closed at its outer end and provided on its outer side with a longitudinal rib engaging in said hollow enlargement and having a recess, a key passing transversely through said hollow enlargement and the recess of said rib and a buffer spring or springs arranged in said socket and follower substantially as set forth.



No. 53,546. Car Coupler. (*Attelage de chars.*)



The Gould Coupler Company, New York, assignee of Willard Fillmore Richards, Buffalo, both in the State of New York, U.S.A., 21st September, 1896; 6 years. (Filed 1st September, 1896.)

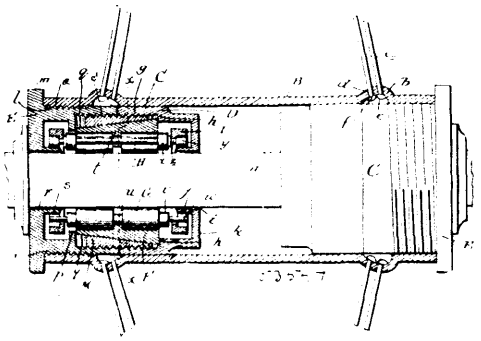
Claim.—1st. The combination with the drawhead, a movable coupling jaw and a lock, of a shifting lever arranged vertically within the drawhead and provided with a depending arm adapted to engage against the coupling jaw for opening the same, and above said shifting arm with an actuating arm, and a spring operating upon the upper arm of said shifting lever and tending to swing the same on its pivot, substantially as set forth. 2nd. The combination with the drawhead, a movable coupling jaw and a lock, of a shifting lever arranged vertically within the drawhead and provided with a depending arm adapted to engage against the coupling jaw and with an actuating arm, and an upright spring arranged within the drawhead and operating on said actuating arm, substantially as set forth. 3rd. The combination with the drawhead having an internal upright pocket, a swinging coupling jaw and a lock, of a shifting lever arranged vertically within the drawhead and provided with a depending arm adapted to engage against the coupling jaw, and above said arm with an actuating arm, an upright rod connected with the actuating arm of the shifting lever and arranged in said pocket, and a spring surrounding said rod between the upper end of said pocket and a nut or collar on the rod, substantially as set forth.

No. 53,547. Roller Bearing. (*Coussinet anti-frottant.*)

James D. Mattison, Saginaw, Michigan, and Norman Mattison, Sandwich, Illinois, both in the U.S.A., 21st September, 1896; 6 years. (Filed 31st August, 1896.)

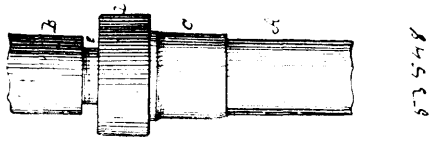
Claim.—1st. In a roller bearing, the combination of a shaft or axle, a shell or casing receiving the shaft or axle and having flanges surrounding the same, main bearing rollers bearing against the shaft or axle and having the reduced portions adjacent to their ends and the bosses at their ends, rollers arranged intermediate of the main bearing rollers and having the reduced intermediate portions and the enlarged portions adjacent to their ends, the latter engaging the reduced portions adjacent to the ends of the main bearing rollers and also having the portions bearing on the flanges on the ends of the shell or casing, movable rings surrounding and engaging the intermediate rollers and also surrounding the bosses of the main

bearing rollers and a suitable housing interposed between the main bearing rollers and the shell or casing; the said housing being



adapted to prevent endwise movement of said main bearing rollers, substantially as and for the purpose set forth. 2nd. In a roller bearing, the combination of a shaft or axle, a shell or casing receiving the shaft or axle and comprising two sections having interior threads and also having interior projections, rollers arranged within the shell or casing, a tapered housing ring surrounding the rollers and adapted to hold said rollers against endwise movement and abutting at its ends against the interior projections of the shell sections, and the wedge or taper ring surrounding the housing ring and having exterior threads engaging the interior threads of the shell or casing sections, substantially as and for the purpose specified. 3rd. In a roller bearing, the combination of a shaft or axle, a shell or casing receiving the shaft or axle and comprising two connected sections having interior projections, bearing rollers engaging the shaft or axle, rollers intermediate of the said bearing rollers and bearing on the shell sections, tapered housing ring surrounding the bearing rollers and adapted to hold said rollers against endwise movement and abutting at its ends against the interior projections, and the wedge or taper ring surrounding the housing ring and having exterior threads in the shell or casing sections, substantially as and for the purpose specified. 4th. In a roller bearing, the combination of an axle or shaft, and a wheel comprising a hub or box surrounding the axle provided with interior threads, shells or casings fitting snugly within the hub or box at opposite ends thereof and having exterior threads engaging interior threads of said hub or box, the said shells or casings respectively consisting of two sections having interior threads and also having interior projections, main bearing rollers engaging the shaft or axle, a tapered housing ring surrounding the bearing rollers and adapted to hold said rollers against endwise movement and abutting at its ends against the interior projections of the shell sections and the wedge or taper ring surrounding the housing ring and having exterior threads engaging the interior threads of the shell or casing sections, substantially as and for the purpose set forth. 5th. A roller bearing comprising main bearing rollers having reduced portions adjacent to their ends and also having bosses extending beyond said reduced portions, and intermediate rollers engaging the reduced portions of the main rollers, the bosses of the main rollers being adapted to turn without engaging any of the parts of the bearing, substantially as and for the purpose specified. 6th. A roller bearing comprising main rollers having reduced portions adjacent to their ends and also having bosses extending beyond said reduced portions intermediat rollers engaging the reduced portions of the main rollers, and rings surrounding and engaging the intermediate rollers and also surrounding but not engaging the bosses of the main bearing rollers, substantially as and for the purpose set forth.

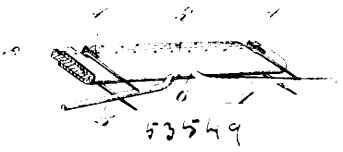
No. 53,548. Pipe Coupler. (*Joint de tuyau.*)



Erwin W. Whitmore and Edwin C. Dodge, both of Lynn, Massachusetts, U.S.A., 21st September, 1896; 6 years. (Filed 2nd September, 1896.)

Claim.—1st. In a pipe coupling of the character described, the coupling tube E provided with the tapered end E^1 and integral ring E^{11} formed on its face, which is next the lead pipe with the annular rib *e*, and the connecting pipe C provided on its inner surface with the steps C^1 C^{11}, the end of the pipe A being forced against said annular rib and crowded between said tapered end of the coupling tube and the stepped inner surface of the connecting pipe C substantially as described. 2nd. In a pipe coupling of the character described, the coupling tube E provided with the tapered end E^1 and integral ring E^{11} formed on its face which is next the lead pipe with the annular rib *e*, the connecting pipe C provided on its inner surface with the steps C^1 C^{11} and on its outer surface with the annular shoulder C^{111}, and the collar D provided on its inner surface with annular ledge D^1 for engagement with said shoulder, substantially as set forth.

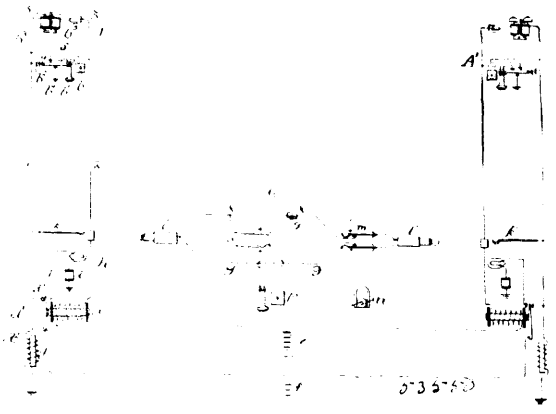
No. 53,549. Weather Strip. (*Bourrelet de porte.*)



William Z. Brown and The Schatsick Baecker Building Co., both of Quincy, Illinois, U.S.A., 21st of September, 1896; 6 years. (Filed 2nd September, 1896.)

Claim.—A weather strip comprising a shield formed from a strip of sheet metal, the same being creased or folded upon a longitudinal line and having its folded portions brought into proximal relation to each other, giving to the shield substantially a U-shape, a flexible strip inserted therein and a spring having its central portion located within the metal shield and its terminal portions inserted through perforations in the fold of the shield and extended in opposite directions, substantially as and for the purpose described.

No. 53,550. Apparatus for Telephone Lines.
(*Appareil pour lignes de téléphone.*)

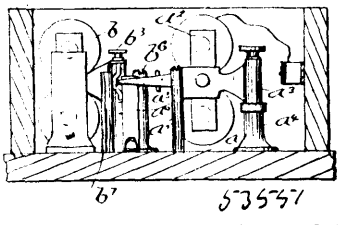


The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 21st September, 1896; 6 years. (Filed 3rd June, 1896.)

Claim. 1st. The combination with a telephone line, of a local storage battery at the substation thereof, a central source of charging current connected therewith, a switch at the central station controlling the connection of the said source of current with the local storage battery, and means for controlling the switch from the substation as described. 2nd. The combination with a telephone line, of a local storage battery at the substation thereof, a source of charging current at the central station connected with the local storage battery, a relay controlling the connection of said source of current with the storage battery, and means for exciting the relay controlled at the substation, as described. 3rd. The combination with a telephone line, of a local storage battery at the substation thereof, a line conductor connected therewith leading to a source of charging current at the central station, a relay having its contact points included in the line conductor at the central station, a circuit including the relay normally open at the substation, and means for closing the relay circuit as described. 4th. The combination with a metallic telephone line circuit, of a local storage battery in a ground branch from one line conductor at the substation, and a source of charging current in a ground branch from the same line conductor at the central station, a relay controlling contact points adapted to disconnect the said charging battery from the line conductor, included in the other line conductor together with a source of current, a telephone switch at the substation and switch contacts thereon for closing the relay circuit during the use of the telephone, as described. 5th. The combination with a metallic telephone line circuit, of a local storage battery in a ground branch from one line conductor at the substation, a source of charging current in a ground branch from the same conductor at the central station, a relay together with a source of current in the other line conductor, said relay having switch contacts controlling the continuity of the first mentioned line conductor, switch contacts controlling the continuity of a local circuit including a subsidiary signal in a switchboard, and a telephone switch at the substation adapted to complete the circuit, through the relay during the use of the telephone, as described.

No. 53,551. Lockout System for Telephone Lines.

(*Système de fermeture pour lignes de téléphones.*)



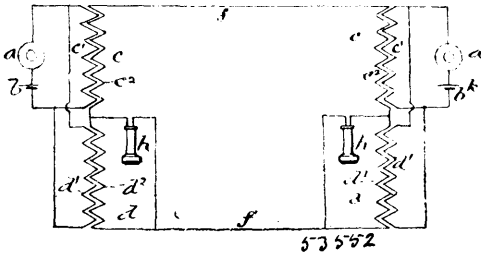
The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 21st September, 1896; 6 years. (Filed 3rd June, 1896.)

Claim.—1st. The combination with a telephone-line, of a telepone at a substation thereof, a relay having switch-contacts adapted to complete a connection of the telephone to permit the use thereof, a device adapted to prevent the completion of the circuit through the telephone and a magnet con rolling the said device, and means for exciting the relay-magnet alone or said last-mentioned magnet and the relay-magnet successively, whereby the use of the telephone may be permitted or prevented, substantially as described. 2nd. The combination with a telephone-line, of a telephone at a substation thereof, a circuit-controlling magnet controlling the circuits of the telephone to permit its use when the magnet is excited, a stop-controlling magnet adapted to prevent the use of the telephone when it is excited, a normally open battery-circuit through said circuit-controlling magnet, means for closing the battery-circuit through the stop-controlling magnet, and a telephone-switch and switch-contacts operated thereby adapted to close the circuit through the stop-controlling magnet and the circuit controlling magnet successively, whereby the use of the telephone may be prevented by closing the battery-circuit through the stop-controlling magnet, substantially as described. 3rd. In combination with a telephone-line, a telephone at one substation of the line, a circuit controlling magnet at that station controlling the circuit through the telephone to permit its use when the magnet is excited, a stop-controlling magnet and a device controlled thereby adapted to prevent the use of the telephone when its magnet is excited, a battery-circuit including the said stop-controlling magnet extending to another substation, a switch at the latter substation to close the battery-circuit, and a telephone-switch at said first-mentioned substation controlling the circuit of the telephone thereat adapted to close the circuit successively through the stop-controlling magnet and the circuit controlling magnet, substantially as described. 4th. The combination with a telephone-line extending in two normally separate branches to two substations, a grounded battery connected with one limb of the telephone-line a lock-out device adapted to prevent the use of the telephone at one substation, an electro-magnet controlling the lock-out device, in a ground branch from that side of the line which is not connected with the battery, and a switch at the other substation operated in the use of the telephone thereat having switch-contacts adapted to connect the two sides of the line-circuit together, substantially as described. 5th. In combination, a telephone-line comprising two normally separated line conductors extending to two or more substations, a battery connected with one of the line conductors, a circuit-controlling electro-magnet at each substation in a normally open ground branch from the same line conductor, a bridge, including telephonic instruments and switch-contacts controlled by said circuit-controlling magnet, a stop-controlling electro-magnet in a normally open ground branch from the other side of the telephone-line having mechanism adapted to prevent the operation of said circuit-controlling magnet, and a telephone-switch hook adapted to close both of said ground branches while the telephone is in use, substantially as described. 6th. The combination in a lock-out box, of a circuit-controlling electro-magnet adapted when excited to close the circuit through the telephone and to connect together the two limbs of the telephone-line, a stop adapted to obstruct the movement of the armature of said circuit-controlling magnet, a stop-controlling magnet, the circuit-controlling magnet and the stop-controlling magnet being in normally open ground branches from the different sides of the metallic circuit, and a telephone-switch having switch-contacts adapted to close the circuit through the stop-controlling magnet and through the circuit-controlling magnet successively, substantially as described.

No. 53,552. Telephone Circuit. (*Circuit de téléphone.*)

The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 21st September, 1896; 6 years. (Filed 3rd June, 1896.)

Claim.—1st. In combination, two helices adapted to have electromotive forces induced in them, connected in series in the same circuit, and a receiving instrument adapted to respond to varying currents in parallel circuit with one of the secondary helices, said second mentioned helix being adjusted so that no difference of potential exists between the points from which the reciving instrument is branched, substantially as described. 2nd. The combination with a source of variable magnetic field, of two helices in the said field connected in series in the same electric circuit, a responsive device for electric currents connected in parallel circuit with one



of the said helices, and a source of electric current in circuit with the two helices adapted to operate said responsive devices, the points of the line circuit with which the responsive device is connected being adjusted to a condition of no difference of potential with respect to outgoing currents by the adjustment of the electromotive force of the helix connected between the said points, substantially as set forth. 3rd. The combination with two induction coils having their primary helices in circuit with a source of varying current and their secondary helices in series in an electric circuit, of a responsive device connected in parallel with one of the said secondary helices, and a source of electric current in the said electric circuit adapted to actuate or control the said responsive device, the electromotive force in the secondary helix in parallel with the responsive device being adjusted to produce a condition of no difference of potential between the terminals of the responsive device with respect to outgoing currents, substantially as and for the purpose described. 4th. In combination, a microphone included in a local battery circuit, two induction coils having their primary helices connected in circuit with the microphone, and their secondary helices in series in a telephone line, and a telephone receiver in shunt or parallel circuit with one of the secondary helices, substantially as described. 5th. In combination, two induction coils having their primary helices in circuit with the same microphone, and their secondary helices in series in a telephone line circuit, and a telephone receiver in parallel circuit with one of the secondary helices the said helix in parallel circuit with the telephone being adjusted to have an electromotive force such in direction and amount as to produce points of no difference of potential between the telephone terminals, whereby the side tone is avoided, substantially as described. 6th. The combination in a telephone system, of a microphone at each station including in its circuit the primary helices of two induction coils whose secondary helices are included in series in the telephone circuit, and a telephone receiver connected in parallel circuit with one secondary helix at each station, the secondary helices in the parallel circuit with the telephones being constructed to have high impedance and to have eleltromotive forces induced in them such in direction and amount as to produce points of no difference of potential between the telephone terminals, whereby the side tone is avoided and the telephone receiver at either station is made responsive only to telephonic currents produced at the other station. 7th. The combination with a microphone, of two induction coils having their primary helices in parallel branches of the microphone circuit and their secondary helices in series in a telephone circuit, and a telephone receiver in parallel circuit with one of the secondary helices, the secondary helix in parallel with the telephone being adapted to have an electromotive force induced in it sufficient to produce points of no difference of potential at the terminals and the telephone, substantially in the manner described. 8th. In combination, two induction coils having their secondary helices connected with a circuit containing a source of variable currents, and their primary helices connected in parallel branches of a circuit, the circuit connections being arranged so that current induced in one of the primary helices by incoming current in its secondary helix increases the opposition of the other secondary helix to said incoming current.

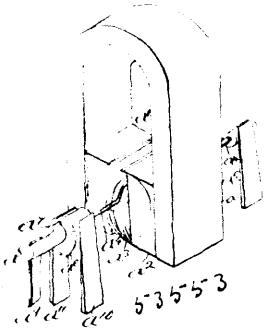
No. 53,553. Selective Signal and Lockout System.

(*Signal de choix et système de fermeture.*)

The Bell Telephone Company of Canada, Montreal, Quebec, Canada, Assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 21st September, 1896; 6 years. (Filed 25th June, 1896.)

Claim.—1st. The combination with a telephone-line made up of two line conductors not directly connected together at any substation, of a ground branch from one line conductor including a source of current, a ground connection from the other line conductor including a signaling instrument adapted to be operated by said current, and a switch at a substation for connecting the line conductors together substantially as described. 2nd. The combination with a telephone party line having its different line conductors normally separated, of several ground branches from the line including signal-bells or other appliances, ground branches from the different line conductors at a central station, a source of current in one of the ground branches, and a signaling instrument adapted to

respond to said current in the other branch, substantially as described. 3rd. The combination with a telephone-line circuit having its line conductors normally separated, and having different responsive instruments or signal-bells in ground branches from the different line conductors of a signaling-key adapted to connect a generator of signaling current with one of the line conductors and simultaneously to ground the other line conductor directly, substantially as described. 4th. The combination with a telephone-line having at two or more substations lock-out boxes adapted to be set by current from a battery connected with the line, of a key adapted to short-circuit the lock-out boxes to suspend their operation, substantially as described. 5th. The combination with a telephone-line, of several lock-out boxes having lock-out magnets connected in bridges of the line-circuit at different stations, and a battery in a bridge of the line-circuit controlling the lock-out boxes, and a key adapted to interrupt the current of the battery in the line circuit to temporarily suspend the operation of the lock-out boxes, substantially as described. 6th. The combination with a telephone-line having its line conductors, normally separate, of a telephone at each of several substations, a lock-out magnet controlling the continuity of a bridge of the line-circuit including each telephone, the lock-out magnet being connected in a ground branch from one line conductor, a battery at a central station connected with the other line conductor, and a key at the central station adapted to interrupt the current from said battery to the line to deenergize the lock-out magnets, substantially as described. 7th. In combination with a telephone-line comprising two line conductors, a relay-magnet at each of several stations on the line in a ground branch from one of the line conductors, a stop-controlling magnet in a ground branch from the other line conductor at each station, means for closing the circuit first of the stop-controlling magnet and later of the relay-magnet, a normally open bridge of the line-circuit including the subscriber's telephone controlled by the relay-magnet, a source of current in permanent connection with the line conductor connected with the relays, and a key at the central station adapted to ground said line conductor directly for the purpose of bringing two telephones simultaneously into connection with the line, substantially as described. 8th. In combination, two electro-magnetic responsive devices adapted to respond to pulsatory currents of opposite polarity in different parallel branches of a circuit a generator of pulsatory current in the circuit, and means for short-circuiting the responsive devices during the intermissions of current, substantially as described. 9th. The combination in an electric circuit, of two signal-bells adapted to respond to pulsatory current of opposite polarity and a electro-magnet, in three different parallel branches of the circuit, a generator of pulsatory current in the circuit, and means for closing together the terminals of the generator during the intermissions of current, substantially as described. 10th. The combination in a signalling-circuit, of two signal-bells adapted to respond to pulsatory currents of opposite direction, and an electro-magnet, in different parallel bridges of the signalling-circuit, a generator of pulsatory currents in another bridge of the circuit, and a commutator carried on the armature of said generator adapted to short circuit the terminals of the generator during the intermission of current, substantially as described. 11th. The combination with a revolving single-coil armature, of a ground connection to one terminal of the armature-coil, a commutator having two semi cylindrical segments, one of which is connected with the other terminal of the armature, and the other of which is permanently grounded, two collecting-springs bearing upon diametrically-opposite points of the commutator, and means for connecting either spring with a grounded signalling-circuit, whereby a pulsatory current of either direction may be applied to the signalling-circuit and the circuit may be grounded during the intermissions of current, substantially as described.

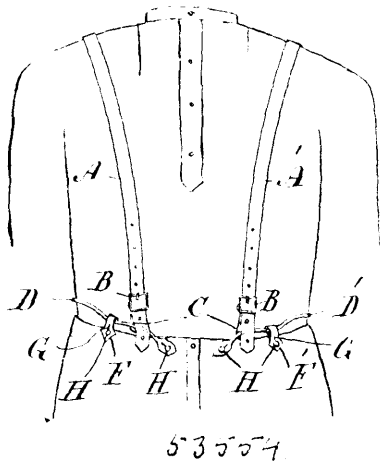


5-3-5-5-3

No. 53,554. Suspender. (*Bretelles.*)

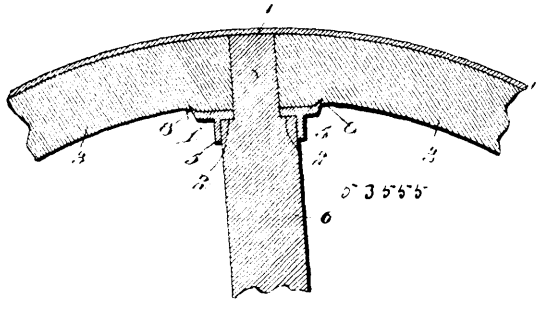
John Smith, Bryson, Quebec, Canada, 21st September, 1896; 6 years. (Filed 8th September, 1896.)

Claim.—1st. A pair of suspenders, comprising shoulder straps A, A^1, intersecting or movably conjoined at the back and provided with a loop at the rear ends and the front ends provided with a buckle having a loop C, horizontal side straps D, D^1, threaded through the front buckle loop C, of one shoulder strap and the rear loop of the other shoulder strap, said straps D, D^1, provided with a button-hole near the ends, and hip straps F, F^1, respectively looped around said side straps intermediately of the other loops, and provided with a button-hole G, as set forth. 2nd. A suspender, comprising shoulder straps crossed at the back and provided with a loop at the rear ends, buckles, at the front ends and provided with a loop, horizontal side straps inserted through said loops and having a button-hole near the ends, and hip straps sliding on said side straps, and provided with a button-hole, as set forth.



5-3-5-5-4

No. 53,555. Spoke Thimble. (*Douille de rais.*)

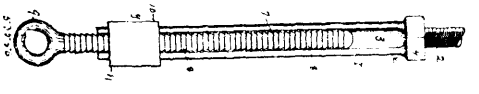


5-3-5-5-5

Donald John McLeod and Roderick Ross Morrison, Gabaronse, C.B., Nova Scotia, Canada, 21st September, 1896; 6 years. (Filed 26th September, 1894.)

Claim. A spoke thimble comprising a flat plate or body having a central tenon opening, parallel felly-embracing lips or wings located at opposite sides of the plate or body, formed integral therewith and projecting outward therefrom at right angles to the same, the spurs arranged at the edges of the plate or body, located at points intermediate of the lips or wings and arranged to engage the inner face of a felly, and a substantially annular flange formed integral with the plate or body extending inward from the inner face thereof and constituting a spoke-socket and receiving the body of the spoke at the inner terminal of the tenon thereof, substantially as specified.

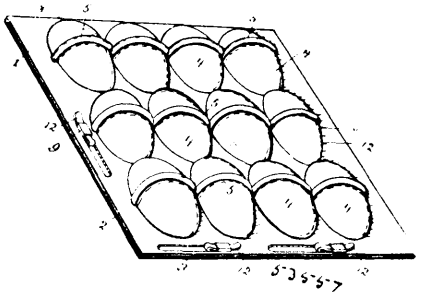
No. 53,556. Pipe Hanger, etc. (*Gâche de tuyau.*)



Robert William Clark, Buffalo, New York, U.S.A., 21st September, 1896; 6 years. (Filed 2nd September, 1896.)

Claim.—1st. A hanger for steam or other pipes consisting of a vertically channelled bracket provided with an enlarged lower end and notches in the channel within the enlarged lower end, a notched rod adapted for adjustable engagement with the notches in the vertical channel, and a loose collar adapted for removable engagement with enlarged lower end of the bracket to hold the notched rod in engagement with the bracket at any desired position. 2nd. A device for securing a pipe to the hanger consisting of twin parts removably pivoted to each other, each part composed of a long and short arm reversely bent the short arms adapted to overlap each other and the long arms having respectively a hole and a pin both radial to the pivot so as to interlock one with the other when the parts are closed, substantially as and for the purpose stated.

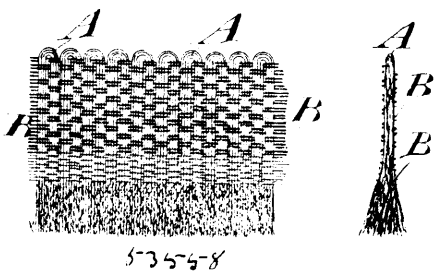
No. 53,557. Egg Holder for Shipping Crates.
(*Boîte à œufs.*)



Andrew J. Baker, Auburn, New York, U.S.A., 21st September, 1896; 6 years. (Filed 4th September, 1896.)

Claim.—1st. An egg holder composed of two similar sections provided with corresponding semi-egg-shaped concavities registering and forming egg pockets, and having continuous grooves at the top and bottom of the pockets forming projecting exterior hollow cushioning ribs, substantially as described. 2nd. An egg holder composed of two similar sections provided with corresponding semi-egg-shaped concavities, and having transversely disposed grooves forming exterior cushioning ribs, said sections being provided at the ends and at opposite sides of the concavities with depressed portions forming recesses, the recesses of one section registering with those of the other section to provide ventilating openings, substantially as described.

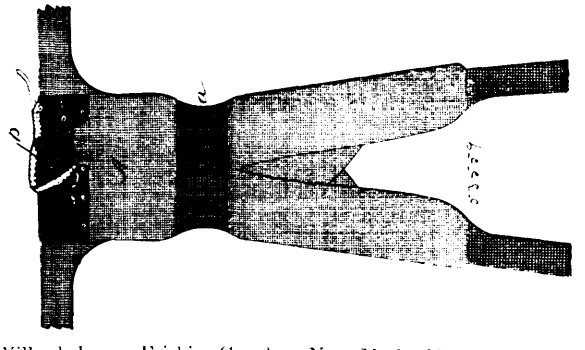
No. 53,558. Skirt Protector. (*Protecteur de jupes.*)



Harry Feder, New Yook, State of New York, U.S.A., 21st September, 1896; 6 years. (Filed 5th September, 1896.)

Claim.—A skirt protector, consisting of a fabric composed of a plurality of series of folded bunches of threads forming the weft of the fabric and having the bights of the folds of one series further from the edge of the fabric than the bights of the folds of another series, and warp threads interwoven with the said folded bunches, leaving the free ends of the bunches extended beyond the edge of the fabric to form a brush, substantially as set forth.

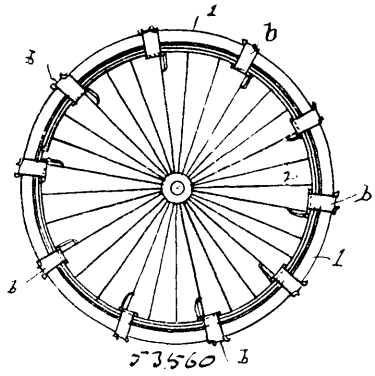
No. 53,559. Undergarment. (*Vêtement de dessous.*)



Willard James Frisbie, Camden, New York, U.S.A., 22nd September, 1896; 6 years. (Filed 8th September, 1896.)

Claim.—1st. A combination-knit undergarment having a body portion highly expansible both horizontally and vertically and having openings at the upper end on each side of the neck to permit the passage of the body and means for opening and closing said shoulder openings, the walls of said shoulder openings being substantially as elastic in lateral direction as the body portion of the garment. 2nd. A combination-knit undergarment, highly expansible both horizontally and vertically and having openings on each side of the neck opening to permit of the passage of the body, flaps for closing said shoulder openings as elastic in lateral direction as the body portion of the garment and means for opening and closing the said openings. 3rd. A high neck knit combination undergarment, having a body portion highly expansible horizontally and vertically, and having openings at the shoulder on each side of the neck opening, flaps for closing the said shoulder openings, the same being as elastic as the knit portion of the garment in lateral direction, and means far opening and closing the same.

No. 53,560. Bicycle Ice Creeper.
(*Grappin pour bicycles.*)



William T. S. Morrison, Cornish, Maine, U.S.A., 22nd September, 1896; 6 years. (Filed 8th September, 1896.)

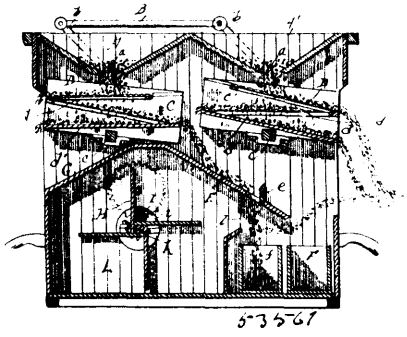
Claim. 1st. In combination with a pneumatic tire a flexible strap bearing two or more points, said strap having an adhesive inner surface and holding within its folded ends a fastening device whereby said strap is secured around the rim and tire, substantially as described. 2nd. In an ice creeper for bicycles, the combination of a spur piece having two or more downwardly depending points, a flexible strap holding the same, said strap having an adhesive inner surface and a fastening device the parts of which are held within the folded ends of said strap, substantially as described. 3rd. In an ice creeper for bicycles, the combination of a spur piece of multiple looped wire bearing two or more downwardly depending points, a strap interwoven with the loops of said wire, said strap having an adhesive inner surface and a fastening device, the parts of which are held within the folds of the ends of said strap respectively, substantially as described. 4th. The combination in an ice creeper for bicycles of the spur piece *a*, the adhesive surfaced strap *b* and the fastening pieces *c* and *d*, substantially as described. 5th. In an ice creeper for bicycles, the combination of a spur piece of multiple looped wire with two or more depending points, a strap interwoven with the loops of said wire, said strap having an adhesive inner surface, a fastening device, the parts of which are connected with the ends of said strap and a piece of flexible material placed over the upper surface of said wire, substantially as described. 6th. The combination of the spoke and rim of a bicycle, with a fastening consisting of the double angled wire having open loops at the ends, one of which ends is also turned outward at right angles with the plane of the loop, and a right angled piece having at its upper end an open loop and a strap, the ends of which are connected with the parts of said fastening pieces, substantially as described. 7th. In combination with a pneumatic tire a flexible strap bearing two or more points, said strap having an adhesive inner surface and holding, within its folded ends by means of its adhesiveness and compression on said folded ends, a fastening device whereby said strap is secured around the rim and tire, substantially as described. 8th. In a repair device for bicycle tires, the combination of a pneumatic tire, and flexible strip, said strip having an adhesive inner surface, and holding within its folded ends a fastening device whereby said strip may be secured around the tire of a bicycle, substantially as shown and described.

No. 53,561. Grain Cleaner. (*Cylindre émotteur.*)

John C. Welling Crisp, Michigan, U.S.A., 22nd September, 1896; 6 years. (Filed 8th September, 1896.)

Claim. 1st. In a grain-cleaner, the combination of a fan-chamber, a receiving-trough at one side thereof, over which the blast of air from the fan passes, a delivery-board forming part of the fan-casing, adapted to deliver grain into the receivers, and a delivery-board forming part of the fan-casing adapted to direct screenings out of the machine; with a pair of oscillating screen-frames arranged side by side above the fan-chamber and trough respectively, each screen being mounted upon a central rock-shaft, and each having an outwardly and downwardly inclined screen and board, and an inwardly and downwardly inclined screen between the first screen and board, and means for simultaneously oscillating the said screen-frames in the same direction, all substantially as and for the purpose described. 2nd. The combination of the casing a pair of feed-hoppers, arranged side by side therein, a pair of oscillating screen-frames arranges respectively below the hoppers, each screen-frame being mounted on a central rock-shaft, and each screen-frame having an

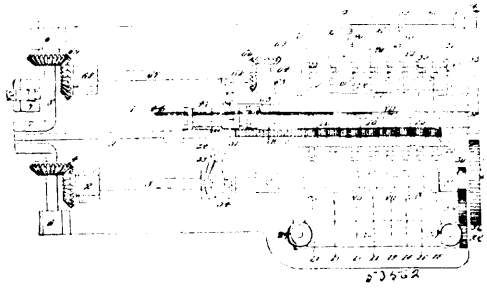
upper downwardly and outwardly inclined screen, and a bottom outwardly and downwardly inclined board; and an intermediate



downwardly and inwardly inclined screen longer than the upper screen, and means for simultaneously rocking said screen-frames in the same direction; with a fan-chamber below one screen-frame, a receiving trough below the other, and a board adapted to direct the clean grain from both screen-frames into the troughs, substantially as and for the purposes described. 3rd. In a grain-cleaner, the combination of a fan-chamber, a receiving trough at one side thereof over which the blast of air from the fan passes, a delivery-board forming part of the fan-casing, adapted to deliver grain into the receivers, and a delivery-board forming part of the fan casing adapted to direct screenings out of the machine; with a pair of oscillating screen-frames arranged side by side above the fan-chamber and trough, respectively, each screen being mounted upon a central rock-shaft, and each having an outwardly and downwardly inclined screen and board, and an inwardly and downwardly inclined screen between the first screen and board, and means for simultaneously oscillating said screen-frames in the same direction, with a feed-hopper above each screen-frame, the crank-arms on the ends of the rock-shafts, and pitment connecting said arms with a crank on the fan-shaft, whereby the screens are oscillated by and from the fan, all substantially as and for the purpose set forth.

No. 53,562. Machine for Making Wire Fencing.

(*Machine à clôture de fil de fer.*)



William Edenborn, Chicago, Illinois, U.S.A., 22nd September, 1896; 6 years. (Filed 23rd July, 1896.)

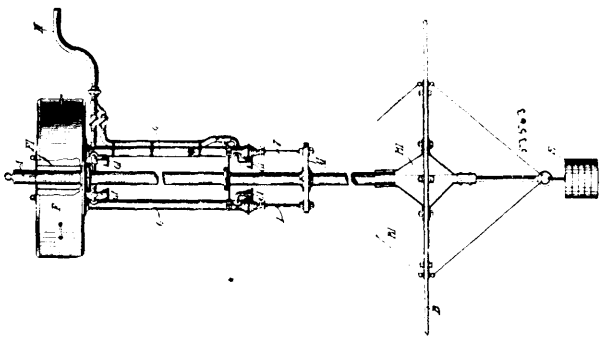
Claim.—1st. In a machine for making wire fencing, the combination of mechanism for intermittently feeding a series of strand wires, mechanism for intermittently feeding a series of transverse wires, mechanism for guiding and cutting the transverse wires, and mechanism for winding the ends of each section of the transverse wires about two of the strand wires, substantially as set forth. 2nd. In a machine for making wire fencing, the combination of mechanism for feeding a series of strand wires, mechanism for feeding a series of transverse wires, mechanism for guiding and cutting the transverse wires, and mechanism for winding the ends of each section of the transverse wires about two of the strand wires, substantially as set forth. 3rd. In a machine for making wire fencing, the combination of mechanism for intermittently feeding a series of strand wires, mechanism for intermittently feeding a series of transverse wires, mechanism for guiding and cutting the transverse wires, mechanism for winding the ends of each section of the transverse wires, about two of the strand wires, and mechanism for intermittently taking up the fencing after it is formed, substantially as set forth. 4th. In a machine for making wire fencing, the combination of a series of spindles each provided with a wire coiling finger, mechanism for moving strand wires through said spindles, mechanism for feeding a series of transverse wires, and mechanism for cutting said transverse wires, substantially as set forth. 5th. In a machine for making wire fencing, the combination of a series of spindles each provided with a wire coiling finger, means for causing the movement of a series of strand wires through said spindles, means for feeding a series of transverse wires across said strand wires, means for guiding and cutting off said transverse wires, and mechanism for turning said spindles to cause said fingers to wind the ends of each section of the transverse wires about two of the strand wires, substantially as set forth. 6th. In a machine for making wire fencing, the combination of a series of spindles provided with fingers, a series of sleeves enclosing said spindles, a rack for turning said sleeves and spindles, bell crank levers for imparting a longitudinal movement to said spindles, mechanism for feeding a series of transverse wires across a series of strand wires that pass through said spindles, and means for guiding and cutting off said transverse wires, substantially as set forth. 7th. In a machine for making wire fencing, the combination of mechanism for intermittently feeding a series of strand wires, mechanism for intermittently feeding a series of transverse wires, mechanism for winding the ends of each section of the transverse wires about the strand wires, and mechanism for guiding and cutting said transverse wires, said last mechanism consisting of levers 55 and 56 provided with guide tubes 60 and knives 61, said knives being arranged to co-act with stationary knives, substantially as and for the purpose set forth. 8th. In a machine for making wire fencing, the combination of mechanism for intermittently feeding a series of strand wires, mechanism for intermittently feeding a series of transverse wires, mechanism for winding the ends of each section of the transverse wires about two of the strand wires, and mechanism for guiding and cutting said transverse wires, said last mechanism consisting of pivoted levers 55 and 56 provided with guide tubes 60 and knives 61, and a cam 63, substantially as and for the purpose set forth. 9th. In a machine for making wire fencing, the combination of mechanism for feeding a series of strand wires, mechanism for feeding a series of transverse wires, mechanism for cutting the transverse wires, and mechanism for winding the ends of each section of the transverse wires about two of the strand wires, said mechanism for feeding the transverse wires being in duplicate, one of which feeds a set of said wires for connecting the first and second and the third and fourth strand wires together, and the other of which feeds a set of said wires for connecting the second and third and the fourth and fifth of said strand wires, substantially as set forth. 10th. In a machine for making wire fencing, the combination of a series of spindles provided with fingers, mechanism for moving strand wires through said spindles, mechanism for feeding a series of transverse wires, mechanism for cutting said transverse wires, and mechanism for turning said spindles consisting of pinions, one for each spindle, a rack engaging all of the pinions, and means for moving the rack, substantially as set forth. 11th. In a machine for making wire fencing, the combination of mechanism for intermittently feeding a series of strand wires, mechanism for feeding a series of transverse wires, mechanism for guiding and cutting the transverse wires, mechanism for winding the ends of each section of the transverse wires about two of the strand wires, and mechanism for forming crimps in the strand wires, substantially as set forth. 12th. In a machine for making wire fencing, the combination of mechanism through which strand wires pass, mechanism for feeding a series of transverse wires, mechanism for guiding and cutting the transverse wires, mechanism for winding the ends of each section of the transverse wires about two of the strand wires, and mechanism for forming crimps in the strand wires, substantially as set forth. 13th. In a machine for making wire fencing, the combination of mechanism through which strand wires pass, mechanism for feeding a series of transverse wires, mechanism for guiding and cutting the transverse wires, mechanism for winding the ends of each section of the transverse wires about two of the strand wires, and mechanism for crimping the strand wires and taking up the fencing, substantially as set forth. 14th. In a machine for making wire fencing, the combination of a series of spindles each provided with a wire coiling finger, mechanism for moving strand wires through said spindles, mechanism for feeding a series of transverse wires, mechanism for cutting said transverse wires, and mechanism for crimping said strand wires, substantially as set forth. 15th. In a machine for making wire fencing, the combination of a series of spindles through which strand wires pass, and which are provided with wire coiling fingers, mechanism for feeding a series of transverse wires, mechanism for cutting said transverse wires, and mechanism for crimping the strand wires and taking up the fencing, substantially as set forth. 16th. In a machine for making wire fencing, the combination of a series of spindles each provided with a wire coiling finger and through which the strand wires pass, mechanism for feeding a series of transverse wires, mechanism for cutting said transverse wires, and mechanism for crimping the strand wires and taking up the fencing, consisting of a cross head provided with dogs, a slide provided with dogs, mechanism for moving the slide and cross head, and a dog for holding the cross head from movement until the slide has been moved, substantially as and for the purpose set forth.

No. 53,563. Apparatus for Utilizing the Power of Sea Waves. (*Appareil pour utiliser les vagues comme pouvoir.*)

Bernard Morley Fletcher, 7 Victoria Street, Middlesex, England, 22nd September, 1896; 6 years. (Filed 25th June, 1896.)

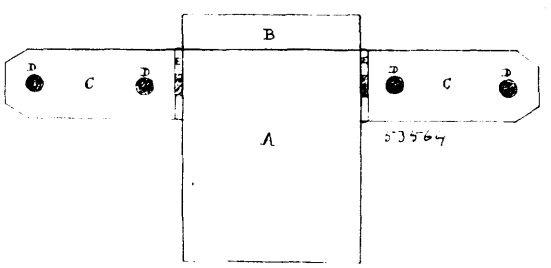
Claim.—1st. In apparatus for utilizing the power of waves, the employment of a platform or submerged resistance which offers resistance to vertical movement, yet maintains an approximately constant distance from a plane equi-distant between the average

elevations of the crests and troughs of the waves. 2nd. In apparatus for utilizing the power of sea waves, the use of a mast or masts, a



platform or platforms carried by the mast or masts, the whole being so loaded that it will float with the platforms horizontal and submerged, and the masts vertical and projecting a convenient distance above the water and capable of offering considerable resistance to vertical displacement. 3rd. In apparatus for the purpose described, the employment of two flotation bodies, one capable of rising and falling with the waves or agitated surface of the water and the other prevented from doing so by a resistance device, constituting a part of the second flotation body submerged to a depth at which the water is either not at all disturbed or less disturbed than at the surface. 4th. In apparatus for the purpose described, the combination with a platform or purchase point which offers resistance to vertical movement, of a buoy or float such as F, and one or more pumps or other device for applying the power of the float, substantially as described. 5th. Apparatus for utilizing the power of waves, comprising a buoy or movable part and another part which in relation to the buoy is approximately stationary, and means such, for example, as a pump operated by or from the buoy for transmitting the power characterized by the employment for the stationary part of one or more approximately vertical masts or hollow or flotation bodies A, which guide the buoy and serve as a resistance or purchase against or upon which the buoy can operate, and one or more submerged horizontal and approximately stationary platforms B, sunk in the required level by weights so that the mast will remain approximately vertical while the buoy is reciprocated by the action of the waves. 6th. Apparatus for utilizing the power of waves, comprising a buoy or movable part and another part which in relation to the buoy is approximately stationary, and means such for example as a pump operated by or from the buoy for transmitting the power, characterized by the employment for the stationary part of one or more approximately vertical masts or hollow or flotation bodies A, which guide the buoy and serve as a resistance or purchase against or upon which the buoy can operate, and one or more submerged horizontal and approximately stationary platforms B, sunk in the required level by weights so that the mast will remain approximately vertical while the buoy is reciprocated by the action of the waves, each platform B being provided with strips or cheeks for increasing the resistance to movement in the water and connected to the mast eccentrically or otherwise to tend to maintain the perpendicular position of the mast, substantially as and for the purpose specified.

No. 53,564. Tramping Iron. (*Fer à fouler.*)



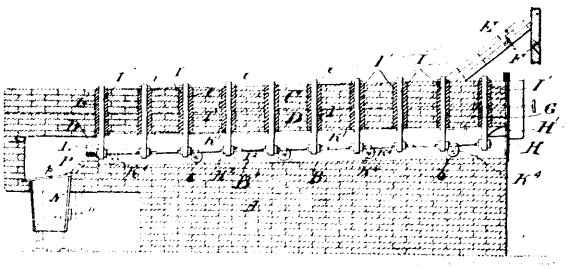
James Oxenrider and Andrew Elliott, jr., both of Wolseley, North-west Territories, 22nd September, 1896; 6 years. (Filed 10th June, 1896.)

Claim. The combination of the main plate A, with the heel protector B, and the iron straps C C, substantially as described and for the purpose hereinbefore set forth.

No. 53,565. Smelting Furnace. (*Haut fourneau.*)

John D. McDonald, Sudbury, Ontario, Canada, 22nd September, 1896; 6 years. (Filed 8th May, 1896.)

Claim. 1st. A smelting furnace comprising a crucible, an inclined feeder leading thereto and means for vibrating the said feeder, substantialy as shown and described. 2nd. A smelting furnace having a crucible, an inclined feeder leading thereto, devices for suspending such feeder, and means for vibrating the same, substantially as set



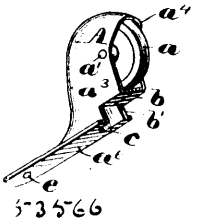
forth. 3rd. In a smelting furnace, a feeder composed of carriage sections having jacketed frames substantially as shown and described. 4th. In a smelting furnace, the combination of rails or ways having notched or cut out portions, the feeding carriage moving on said ways or rails and the hangers arranged to support the carriage when it drops in the notches or cut out portions, substantially as shown and described. 5th. The combination of the bed, the ways or rails thereon, cut out or notches as described, the swinging links forming hangers, and the carriage arranged to rest in said hangers when the wheels rest in the notches or cut out portions of the ways or rails, substantially as shown and described. 6th. In a smelting furnace, a crucible having an inclined plate leading upward from its mouth and adapted to direct the ore thereto, substantially as set forth. 7th. A smelting furnace having a crucible, a flue leding on an incline therefrom upward, a feeder located in said flue, and means for operating said feeder, substantially as shown and described. 8th. In a smelting furnace, the crucible having its mouth inclined and provided with a plate coinciding with said inclined mouth and adapted to direct the ore thereto, substantially as shown and described. 9th. The combination of the jacketed crucible, the ring surrounding the mouth thereof, and the jacketed inclined plate having its upper and lower sections secured above and below said ring plate, substantially as shown and described. 10th. In a smelting furnace, the combination with the crucible and the inclined plate leading to the mouth thereof, of a deflector arranged on said plate above the mouth of the crucible and adapted to direct the material to the sides of the mouth of the said crucible, substantially as set forth. 11th. In a smelting furnace, the combination with the crucible and the inclined plate, of the adjustable gate or gates movable over the surface of said plate, and controlling the discharge of the ore to the crucible, substantially as set forth. 12th. In a smelting furnace, the combination of the furnace wall or frame, having longitudinal side grooves, the feed carriage having at its sides dust guard plates operating in the grooves of the furnace walls or frame, means for suspending said feed carriage and means for vibrating the same, substantially as set forth. 13th. The combination of the feeder comprising the suspended ore carriage with the flue leading to the stack or uptake and the hanging damper, substantially as and for the purpose hereinbefore set forth. 14th. The combination of the flue leading to the stack or uptake, the hanging damper and ore carriage with the suspended hook links, substantially as and for the purpose hereinbefore set forth. 15th. The combination of the ore carriage having the wheels with the rails having the slots or cut out portions, substantially as set forth. 16th. The combination of the ore carriage and notched or cut out rails with the slide, substantially as set forth. 17th. The combination of the ore carriage, notched or cut out rails, the slides and the dust guards, substantially as set forth. 18th. The combination of the ore carriage and suspended links with the adjustable eccentrics, substantially as set forth. 19th. The combination of the water jacketed ore carriage with the false plates covering the surface of said carriage, substantially as set forth. 20th. The combination of the feeding carriage, the links suspending said carriage and the castings through which the links pass, substantially as set forth. 21st. The combination of the feeding carriage, the inclined plate and the divider or deflector, substantially as set forth. 22nd. The combination of the crucible, the incline leading thereto, the divider or deflector and the slides for diverting the ore at certain points of the plate into the crucible, substantially as set forth. 23rd. The combination with the crucible and the inclined plate at the mouth thereof, of the divider or deflector on said plate above the mouth of the crucible and the slides or gates arranged on said plate alongside the mouth of the crucible, substantially as set forth.

No. 53,566. Housing for Sash Pulleys.
(*Cadre de poulie pour les croisées.*)

John Henry Shull, Boston, and Frank W. Stevens, Newton, both of Massachusetts, U.S.A., 22nd September, 1896; 6 years. (Filed 21st July, 1896.)

Claim. 1st. A housing for sash pulleys formed with the load-bearing seat *b* constructed to rest upon the top of the jamb above the lower face of the lintel and an inwardly projecting attaching base, in a lower plane than the seat *b*, whereby it is adapted to face with the under side of the lintel, substantially as herein set forth. 2nd.

In combination with the window frame, having the lintel slotted as shown to receive the pulley housing, the herein described housing



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in which the pulley is journaled, formed with a load-bearing seat *b* resting upon the top of the jamb of the window frame, in the slot and having the inwardly projecting lateral extension a^6, lapping on or facing with the surface of the lintel and covering the slot, as explained. 3rd. In combination with a window frame, the herein described housing A having a pulley journaled therein at a^1, and formed with the load-bearing seat *b*, at a point within the vertical line of the pulley journal, and the shoulder b^1, for the reception of the upper end of the jamb *b* of the window, and provided with the laterally projecting base a^6, recessed at *c*, for the passage of the sash cord *d*, substantially as and for the purposes set forth. 4th. A housing for sash pulleys formed in two parts, each formed with a load-bearing seat *b*, and one of which carries the lateral attaching base a^6, said parts being secured together by the pulley-journal, as explained.

No. 53,567. Bobbin Holder for Spindles.

(*Porte-bobine pour fuseaux.*)

5-3567

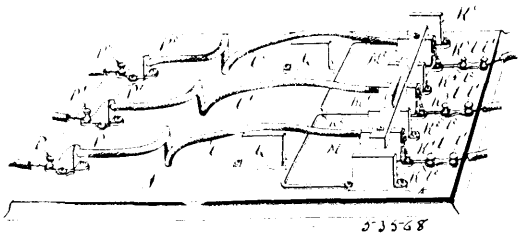
Oliver C. Burr and Waldo C. Curtis, both of Winsted, Connecticut, U.S.A., 22nd September, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—1st. A bobbin holder for spindles, consisting of expansible bands or coils *c* and c^1, and an interposed cork sleeve, which is of a greater external diameter than the external diameter of the coils, substantially as shown and for the purpose set forth. 2nd. A bobbin holder for spindles, comprising expansible coils *c* and c^1 and an interposed cork sleeve with inwardly-beveled ends, the coils being held upon the spindle by frictional contact therewith, the external diameter of the sleeve being greater than the external diameter of the coils, for the purposes set forth.

No. 53,568. Electric Switch. (*Commutateur électrique.*)

Elmer H. Wright, James J. Heckman, Charles C. Carnahan, Albert H. Graves, all of Chicago, Illinois, and William H. Carnahan, Apollo, Pennsylvania, all in the U.S.A., 22nd September, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. A three-wire system switch comprising a switch-board with two sets of terminals, each of which sets of terminals embraces three binding-screws or connecting devices, a plurality of contact-points on said switch-board, arranged in three electrically-connected groups, each of which groups is electrically connected with one of the terminals of one of the said sets, and a movable member provided with a plurality of contact-points each electrically connected with one of the terminals of the other set of the switch-board, the contact-points of the movable member being adapted for various engagement with those of the switch-board, substantially



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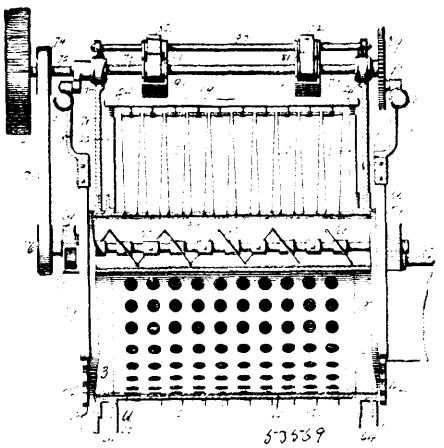
as set forth. 2nd. A three-wire system switch, comprising a switch-board provided with two sets of terminals, each of which sets embraces three binding-screws or connecting devices, a movable member, contact-points thereon, each electrically connected with one of the terminals of one set by means of a flexible conductor and a number of contact-points on the switch board in excess of those on said movable member, arranged in three electrically connected groups, each of which groups is electrically connected with one of the terminals of the second set, the contact-points of the movable member being adapted for various contact with the contact-points of the switch-board, substantially as set forth. 3rd. A plurality-contact permutation-switch, comprising two sets of terminals, each of which sets embraces a terminal for each line conductor of a system composed of an odd number of line conductors, two contact-carrying members one of which is movable with relation to the other, one of said members being provided with a contact-point for each line conductor and the other member being provided with a number of contact-points in excess of the number of line conductors, arranged in electrically-connected groups equal in number to the number of line conductors, each groups electrically connected with one of the terminals of one set, and each contact point of the other member being electrically connected with one of the terminals of the other set, the contact-points of one member being adapted for various contact with those of the other member, whereby the relation of currents of different character carried by said line conductors may be changed at will, substantially as set forth. 4th. A three-wire system switch comprising a switch-board provided with two sets of terminals of three each, a plurality of contact-points arranged upon said switch-board in three electrically-connected groups, each of which groups is connected with one of the terminals of one set, a contact-carrying member provided with three contact-points adapted for various engagement with those of the switch-board and flexible conductors connecting each of the contact-points of the movable member with one of the terminals of the second set, substantially as set forth. 5th. A three-wire-system switch, comprising a switch-board provided with two sets of terminals of three each, seven contact-points arranged in a series at uniform intervals apart across said switch-board and electrically connected in three groups, each groups electrically connected with one of the terminals of one set, one of said groups comprising three contact points and the other groups two each, and a contact-carrying switch-bar provided with three contact-points spaced at a distance apart equal to twice the distance between those of the switch-board and adapted for various engagement with the latter, said contact-points of the switch-bar each having electrical connection with one of the terminals of the second set by means of flexible conductors, substantially as set forth. 6th. A three-wire-system switch, comprising a switch-board provided with two sets of terminals of three each, seven contact-points arranged in a series at uniform intervals apart across said switch-board and electrically connected in three groups, each groups electrically connected with one of the terminals of one set, one of said groups comprising three contact-points and the other groups two each, and a contact-carrying switch-bar provided with three contact-points spaced at distances apart equal to twice the distance between those of the switch-board and adapted for various engagement with the latter, said contact-points of the switch-bar each having electrical connections with one of the terminals of the second set, by means of flexible conductors and fusible strips interposed in each circuit between the terminals of the switch, substantially as set forth. 7th. A plurality-contact permutation-switch, comprising two sets of terminals, each of which sets comprises a terminal for each line conductor of a system composed of an odd number of line conductors, two sets of contacts, one of which sets comprises a contact for each line conductor, each connected with one of the terminals of one set, and the other of which sets of contacts comprises a number of contacts in excess of the number of line conductors, said last mentioned contacts being electrically connected in a number of groups equal to the number of line conductors, each of which groups is electrically connected with one of the terminals of the other set, and means for bringing the contacts of one set into various electrical connection with those of the other, substantially as set forth. 8th. A plurality-contact permutation-switch, comprising two sets of terminals, each of which sets comprises a terminal for each line conductor, of a system comprising an uneven number of line conductors, two sets of contacts, one of which sets comprises a contact for each line conductor, each connected with one of the terminals of one set, and the other of which sets of contacts comprises a number of con-

tacts in excess of the number of line conductors, said last mentioned contacts being electrically connected in a number of groups equal to the number of line conductors, each of which groups is electrically connected with one of the terminals of the other set, and means for bringing the contacts of one set into various electrical connection with those of the other, substantially as set forth.

No. 53,569. Dust Collector. (*Ramasse-poussière.*)

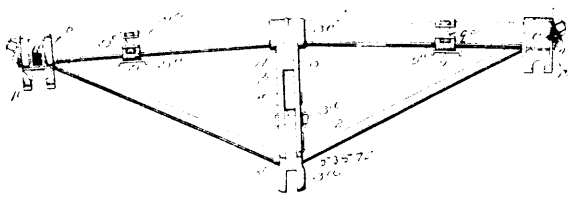


Faustin Prinz, Milwauke, Wisconsin, U.S.A., 22nd September, 1896; 6 years. (Filed 5th May, 1896.)

Clam.—1st. In a dust collector, the combination of a rotatable drum having openings in its periphery, dust collecting tubes fitting at their inner ends over the openings in the periphery of the drum so as to communicate with the interior of the drum, closed heads to the outer ends of the tubes, a cut off chamber inside the drum arranged to cut off the interior of the drum from the inner ends of the tubes as the latter are brought in succession opposite to the cut off chamber, said tubes opening into the cut off chamber as they are brought opposite thereto, a fan for passing dust laden air into the drum and through the tubes opening therein, and means for establishing communication between the cut off chamber and the inlet of the fan whereby a back draft is created through the tubes opposite the cut off chamber and thence through the cut of chamber and to the fan inlet, substantially as and for the purposes described. 2nd. In a dust collector, the combination of a rotatable drum having openings in its periphery, dust collecting tubes fitting at their inner ends over the openings in the periphery of the drum, closed heads to the outer ends of the tubes, a cut off chamber inside the drum arranged to cut of the interior of the drum from the inner ends of the tubes as the latter are brought in succession opposite to the cut off chamber, said tubes opening into the cut off chamber as they are brought opposite thereto, a fan for passing dust laden air into the drum and through the tubes opening therein, means for establishing communication between the cut off chamber and the inlet of the fan whereby a back draft is created through the tubes opposite the cut off chamber and thence through the cut off chamber into the fan inlet, and a conveyor in the cut off chamber for delivering therefrom the dust deposited therein, substantially as and for the purposes described. 3rd. In a dust collector, the combination of a rotatable drum having openings in its periphery, dust collecting tubes fitting at their inner ends over the openings in the periphery of the drum so as to communicate with the interior of the drum, closed heads to the outer ends of the tubes, a cut off chamber inside the drum arranged to cut off the interior of the drum from the inner ends of the tubes as the latter are brought in succession opposite to the cut off chamber, said tubes opening into the cut off chamber as they are brought opposite thereto, a fan for passing dust laden air into the drum and through the tubes opening therein, means for establishing communication between the cut off chamber and the inlet of the fan whereby a back draft is created through the tubes opposite the cut off chamber and thence through the cut off chamber and the fan inlet, a conveyor in the cut off chamber for delivering therefrom the dust deposited therein, and a hood at the end of the cut off chamber where communication is established with the fan, substantially as and for the purposes described. 4th. In a dust collector, the combination of a rotatable drum having openings in its periphery, dust collecting tubes fitting at their inner ends over the openings in the periphery of the drum so as to communicate with the interior of the drum, closed heads to the outer ends of the tubes, a bar extending across the heads of the tubes and having the latter connected therewith, supports for said bar, knockers for periodically acting on said bar to simultaneously jar the several tubes connected to the bar, springs for restoring said bar to its normal position, a cut off chamber inside the drum in communication with the tubes that are jarred, a fan for passing dust laden air into the drum and through the tubes, and means for establishing communication between the cut off chamber and the fan inlet to create a back draft through the tubes opening into the cut off chamber and thence through said chamber to the fan inlet, substantially as and for the purposes described. 5th. In a dust collector, the combination of a rotatable drum having openings in its periphery, dust collecting tubes fitting at their inner ends over the openings in the periphery of the drum, closed heads to the outer ends of the tubes, a cut off chamber inside the drum and communicating with the tubes as they are brought in succession over the chamber, said chamber having at its upper end laterally extending wings bearing against the interior of the drum over the open ends of the tubes to each side of the tubes in communication with the cut off chamber, a packing between said wings and interior face of the drum, and springs for pressing said wings and packing against the drum, substantially as and for the purposes described. 6th. In a dust collector, the combination of a rotatable drum having its openings in its periphery, dust collecting tubes fitting at their inner ends over the openings in the periphery of the drum so as to communicate with the interior of the drum, heads to the outer ends of the tubes, a cut off chamber inside the drum arranged to cut off the interior of the drum from the inner ends of the tubes as the latter are brought in succession over the cut off chamber, stationary heads about which the drum rotates, and means for passing dust laden air into the end of the drum through one of its stationary heads, substantially as and for the purposes described. 7th. In a dust collector, the combination of a rotatable drum having openings in its periphery, dust collecting tubes closed at their outer ends and fitting at their inner ends over openings in the periphery of the drum and increasing in diameter from their inner to their outer ends, a cut-off chamber inside the drum arranged to cut off the interior of the drum from the inner ends of the tubes as the latter are brought in succession over the cut off chamber and receive from said tubes dust deposited on their inner surfaces, stationary heads about which the drum rotates, means for passing dust laden air into the drum through one head, and means for dislodging dust from the interior of the tubes while over the cut-off chamber, substantially as and for the purposes described. 8th. In a dust collector, a series of dust collecting tubes of flexible porous material, each tube being formed of longitudinal sections of the material united together to enable the material to be stretched uniformly throughout its surface and means for passing dust laden air through said tubes, substantially as and for the purposes described. 9th. In a dust collector, the combination of a rotatable drum provided with openings in its periphery, and dust collecting tubes provided at their lower ends with rings to keep the tubes at that end distended, said rings adapted to be inserted endwise through the openings in the drum and then turned to prevent the withdrawal of the tubes from the drum, substantially as and for the purposes described. 10th. In a dust collector, the combination of a rotatable drum having elongated openings formed in its periphery, and dust collecting tubes provided at their lower ends with rings to keep said ends distended, the elongated openings in the drum permitting the rings to be inserted endwise and then turned to secure the tubes to the drum, substantially as and for the purposes described. 11th. In a dust collector, the combination of a rotatable drum provided at opposite ends with ratchet teeth, a crank-shaft supported at the upper portion of the drum, and pawls connected to the cranks of said shaft and arranged to engage the ratchet teeth at opposite ends of the drum, substantially as and for the purposes described. 12th. In a dust collector, the combination of a rotatable drum provided with ratchet teeth, a crank shaft provided with a pawl to engage the teeth on the drum and a counter balance to keep the pawl in position to engage said teeth, substantially as and for the purposes described. 13th. In a dust collector, the combination of a rotatable drum provided with dust collecting tubes, knockers to impart blows to said tubes to dislodge dust therefrom, and a shaft provided with cams to engage the knockers to keep the same out of engagement with the tubes as the drum is rotated and with projections to actuate the knockers so that they will impart blows to the tubes while the drum is at a state of rest, substantially as and for the purposes described. 14th. In a dust collector, the combination of the rotatable drum provided with ratchet teeth at opposite ends and carrying dust collecting tubes, a crank-shaft having pawls connected to the cranks thereof and arranged to engage the teeth at the opposite ends of the drum, a cog wheel on said shaft, and a drive-shaft provided with a pinion meshing with the cog wheels of the crank-shaft, substantially as and for the purposes described. 15th. In a dust collector, the combination of a rotatable drum provided with ratchet teeth, a crank shaft having a pawl connected to its crank arranged to engage the teeth of the drum, dust collecting tubes connected to said drum, knockers arranged to impart blows to said tubes, projections on the crank-shaft arranged to engage said knockers to actuate the same, a toothed-wheel on the said shaft, and a drive-shaft provided with a pinion meshing with said toothed-wheel, substantially as and for the purposes described. 16th. In a dust collector, the combination with a rotatable drum provided with ratchet-teeth at opposite ends and having dust collecting tubes, a shaft supported at the upper portion of the drum and provided with knockers to impart blows to said dust collecting tubes, a shaft adjacent to the knockers provided at one end with a toothed-wheel having a crank pin and at the opposite end with a crank, pawls connected respectively to the crank pin of the toothed-wheel and to the crank at the opposite end of the shaft and arranged to engage the teeth of the drum, cams on said crank-shaft arranged to engage the knockers and hold the same out of engagement with the dust collecting tudes as the drum rotates, pro-

jections on the same shaft arranged to actuate the knockers while the rotatable drum is at rest, and a drive-shaft provided with a pinion meshing with teeth of the wheel on the crank shaft, substantially as and for the purposes described. 17th. In a dust collector, the combination with the rotatable drum carrying dust collecting tubes, knockers to impart blows to said tubes, and a shaft carrying cams to actuate the knockers, of a drip cup located between said cams and dust collecting tubes to prevent oil dripping onto the collecting tubes, substantially as and for the purposes described. 18th. In a dust collector, the combination with the rotatable drum carrying dust collecting tubes, a shaft supporting knockers to impart blows to the tubes and a shaft carrying cams to actuate the knockers, of a drip cup connected at one point to the knocker shaft and at another with the cam carrying shaft and located between the cam and dust collecting tubes to prevent oil dripping on the tubes, substantially as and for the purposes described. 19th. In a dust collector, the combination with the drum formed with openings in its periphery, and the dust collecting tubes provided with the rings securing the tubes around the openings in the drum, of a protecting shield for the tubes applied to the ends where the rings are located, substantially as and for the purposes described. 20th. In a dust collector, the combination with the drum formed with openings in its periphery, and the dust collecting tubes provided with rings securing the tubes around the openings in the drum, of a protecting shield for the tubes formed of stiff material fitted inside the tubes at the ends where the rings are applied and passed beneath the rings, substantially as and for the purposes described. 21st. In a dust collector, the combination with the drum and cut-off chamber therein, of a cap applied at one end of the chamber and formed with a discharge spout having an inclined open top, and a shaft provided with conveyor flights inside the cut-off chamber and with flights located at its end next to the discharge spout to direct the material into the discharge spout, substantially as and for the purposes described.

No. 53,570. Brake Beam. (*Sommier de frein.*)



The Chicago Railway Equipment Company, Chicago, Illinois, assignee of Henry Benjamin Robischung, Kalamazoo, Michigan, both in the U.S.A., 22nd September, 1896; 6 years. (Filed 17th September, 1896.)

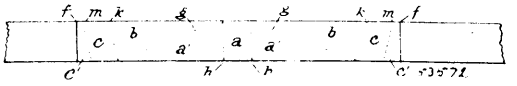
Claim.—1st. The combination in a trussed brake beam, of a compression member having a camber therein, a tension member whose ends intersect the ends of the compression member on the median line of the brake heads, and automatically adjustable brake heads arranged on said beam, substantially as for the purposes specified. 2nd. The combination in a trussed brake beam, of a compression member, a tension member whose ends intersect those of the compression member on the median lines of the brake heads, brake heads arranged on said beam, a strut or post interposed between the tension and compression members, and a key interposed between the compression member and strut or post, substantially as and for the purposes specified. 3rd. In a trussed brake beam, the combination with the tension member, compression member and the strut, the latter having a slot for its reception, of a wedge form key for taking up the slack of the structure, substantially as and for the purposes specified. 4th. In a trussed brake beam, the combination of a compression member, a tension member, a strut, and means for imparting a camber to the compression member, of a lock for securing said cambering means from displacement, substantially as and for the purposes specified. 5th. In a trussed brake beam, the combination with a compression member having a camber therein, of a tension member, a strut, a brake head having on its exterior a grooved washer seat, a grooved or corrugated washer having a projecting ear, and a nut with which said ear on the washer engages to prevent the rotation of the nut and the loss of camber in the compression member of the structure, substantially as and for the purposes specified. 6th. In a trussed brake beam, the combination with a compression member, and a tension member, of a strut or post having a vertical lever slot, and an extension or nose piece provided with perforated ears for the reception of a third suspension hanger, substantially as and for the purposes specified. 7th. In a trussed brake beam, the combination of a compression member, a tension member, and an interposed strut having a vertical lever slot and an extension or nose piece provided with perforated ears for a third suspension hanger, of a key interposed between the strut and compression member to take up the slack of the structure, substantially as and for the purposes specified. 8th. The combination with a brake beam having longitudinal ridges at its ends, of a brake head provided with yieldingly supported ribbed grip block, substantially as and for the purposes specified. 9th. In a trussed beam, the combination with a tension member, a compression member, and an interposed strut, of longitudinally ribbed end cups or sleeves for the reception of the ends of the compression member and through which the ends of the tension member pass, brake heads having pockets for yielding grip blocks, and yieldingly supported grip blocks arranged in the pockets of said brake heads, substantially as and for the purposes specified. 10th. The combination with a brake beam, of a brake head journalled on the end thereof, said break head having a pocket, a yieldingly supported grip block arranged in the pocket of the brake head and which engages the end of the brake beam, and means for retracting the yielding grip block to permit of the application and removal of the brake head, substantially as and for the purposes specified. 11th. A chafing-plate for brake beams, said plate provided with a grip band having projecting perforated ears and limit lugs thereon, substantially as and for the purposes specified.

No. 53,571. Process of Extracting Minerals from Ores, etc. (*Procédé pour extraire les métaux des minerais.*)

George Austin Schroter, and Thomas Lowthian, both of Denver, Colorado, U.S.A., 22nd September, 1896; 6 years. (Filed 21st July, 1896.)

Claim.—1st. The herein described process of extracting precious metals, particularly silver, from ores and metal-lurgical products, which consists in leaching the crushed and chloridized ore with a concentrated solution of brine to which has been added a small per cent. (½ to 4 per cent approximately) of a soluble salt of copper, substantially as specified. 2nd. The herein described process of extracting precious metals, particularly silver, from ores and metal-lurgical products, which consists first, in leaching the crushed and chloridized ore or product in a concentrated solution of brine, and second, in again leaching it with a concentrated solution of brine to which has been added a small percentage (from ½ to 4 per cent approximately) of a soluble salt of copper, substantially as specified. 3rd. The herein described process of extracting precious metals, particularly silver, from ores and metal-lurgical products, which consists in first leaching the crushed and chloridized ore with brine; second; leaching the ore with brine to which has been added a soluble salt of copper, as for example, copper sulphate; and, third, leaching the ore with brine, substantially as and for the purpose specified. 4th. The herein described process of extracting precious metals, particularly silver, from ores and metal-lurgical products, which consists in first, leaching the crushed and chloridized ore with hot acidulated brine; second, leaching the ore with hot acidulate brine to which has been added a soluble salt of copper, as for example, copper sulphate; and, third, leaching the ore with hot acidulated brine, substantially as and for the purpose specified.

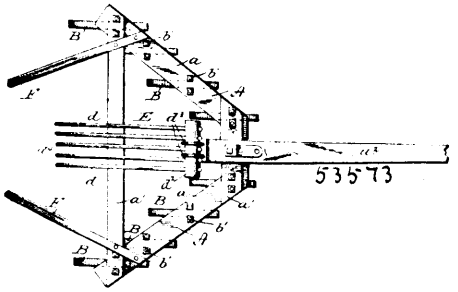
No. 53,572. Joist Hanger. (*Support de solives.*)



Vincent E. Gregg and Edward F. Bohm, both of Cleveland, Ohio, U.S.A., 22nd September, 1896; 6 years. (Filed 8th September 1896.)

Claim. A joist hanger having a seat for the joist, side-pieces extending therefrom to the supporting parts, and decreasing in width from the seat to the top, supporting wings extending from the toe of the seat to the top and increasing in width to an extent proportionate to the decrease in width of the side pieces, and a supporting part in continuation at right angles of each wing and adapted to rest on the supporting beam, substantially as described.

No. 53,573. Cultivator. (*Cultivateur.*)



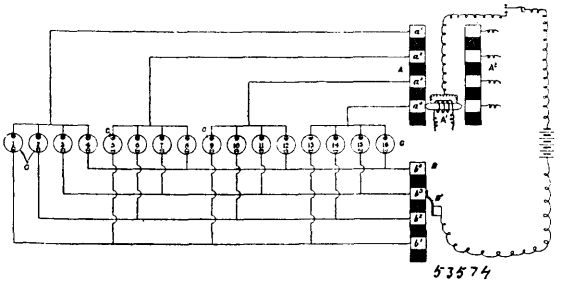
Stephen K. Vaughn, Hyde Park, and Denison M. Dickinson, Cambridge, both in Vermont, U.S.A., 22nd September, 1896; 6 years. (Filed 8th September, 1896.)

Claim. 1st. The herein described cultivator, comprising a V-shape frame, spring teeth, clips for adjustably supporting said teeth, said clips comprising each a flat metallic plate, and securing rods or bolts therefor, and a weeder comprising a series of longitudinal

spring wires centrally located on said frame, substantially as set forth. 2nd. The herein described cultivator, comprising a V-shape frame, spring-teeth adjustably secured to said frame, and a series of longitudinal spring-arms centrally mounted on said frame and having downwardly curved rear ends adapted to act as a weeder, substantially as set forth. 3rd. The herein described improved cultivator, comprising a V-shape frame, spring-teeth adjustably secured to said frame, a two-part clip centrally mounted on said frame, and a series of longitudinal spring-arms carried by said clip and having downwardly curved rear ends adapted to act as a weeder, substantially as set forth. 4th. The herein described cultivator, comprising a V-shape frame, spring-teeth adjustably secured to said frame, a two-part clip provided with grooves or recesses, a series of longitudinal spring-arms mounted in said grooves or recesses and having downwardly curved rear ends adapted to act as a weeder, and a securing clip for said two-part clip, substantially as set forth.

No. 53,574. Automatic Telephone Exchange.

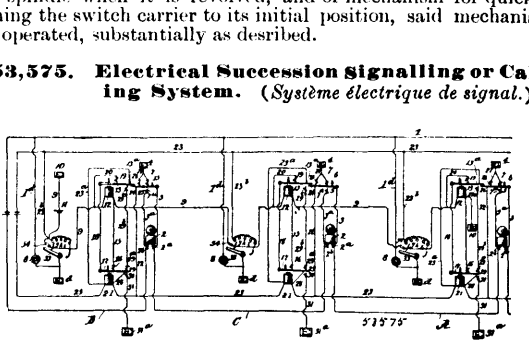
(*Echange automatique de téléphone.*



Solomon Berditschewsky, called Apostoloff, Eccleston Square, London, England, 25th September, 1896; 6 years. (Filed 23rd March, 1896.

Claim.—1st. A system of automatic telephone exchange, wherein the members of each pair (constituting a subscriber's circuit entering the central station) terminate in independently movable switches capable of being electro-mechanically propelled along rows of insulated contacts, the positive members of all the pairs (and consequently the switches in which they terminate) and the contacts on which the switches normally rest, being connected in a certain order in groups, which groups are respectively connected to corresponding contacts of all the rows of contacts appropriated to positive members, the negative members of all the pairs being connected in a certain order (different to that in which the positive members are connected) in groups which are likewise respectively connected to corresponding contacts of all the rows of contacts appropriated to negative members, the difference between the orders of grouping the positive and negative members being such that any one group of positive members comprises the positive members of pairs or couples whose negative members are comprised each in a different group of negative members, and reciprocally, so that a different pair or couple corresponds to each of the different combinations formed by conjoining any one of the positive set of contacts with any one of the negative set of contacts, the members of the groups in the two sets of groups of which the contacts are the terminals (and consequently the numbers of wires in the two sets of wires connecting corresponding contacts) being factors whose product equals the number of possible combinations and consequently the number of subscribers who may automatically intercommunicate through the central station, as specified. 2nd. In a system of automatic telephone exchange, where in the positive members of all the subscribers' lines the switches in which they terminate and the contacts on which said switches normally rest are connected in groups and likewise the negative members, their switches, and normal contacts are connected in groups differently formed, so that any one group of positive members comprises the positive members of pairs or couples whose negative members are comprised in as many different groups of negative members and *vice-versa*, the groups of positive and negative members being respectively connected to all the contacts occupying corresponding positions in all the rows of positive and negative contacts respectively, and wherein the two members of each pair terminate in electrically propelled switches independently movable over the rows of positive and negative contacts respectively, the combination with the one switch and its row of contacts, of a third row of contacts opposite thereto and grouped similarly to the grouping of the elements to which those contacts correspond, the switch in question being electromagnetically transferrable from the one row of said contacts to the other or third row so as to provide an alternative circuit of communication, which by such transfer of the switches from the one set of contacts to the other becomes for the time being an exclusive circuit for the purpose of maintaining secrecy, as described. 3rd. In a system of automatic telephone exchange, wherein the two members of each subscriber's line constituting a pair terminate in electrically propelled switches independently movable over rows of positive and negative contacts respectively and wherein the positive members of all the subscribers' lines, the switches in which they terminate, and the contacts on which said switches normally rest are connected in groups, and likewise the negative members, their switches and normal contacts in groups differently formed (so that any one group of positive members comprises the positive members of pairs or couples whose negative members are comprised in as many different groups of negative members, and *vice-versa*, the groups of positive and negative members being respectively connected to contacts occupying corresponding positions in all the rows of positive and negative contacts respectively), the combination, with electro-magnetic propelment mechanism for operating the respective switches and with means of closing the circuit of the local battery through the electro-magnetic propelment mechanism of the one or other switch (according to the direction of the current received from the transmitter), of circuit-closing mechanisms respectively adapted to send the one a succession of impulses of the one direction, and the other a succession of impulses of the other direction from the transmitter to the relay, and of numerator mechanisms for recording the number of impulses so sent, substantially as specified. 4th. In an automatic telephone exchange system, wherein the two members of each subscriber's line constituting a pair terminate in electrically-propelled switches independently movable over rows of positive and negative contacts respectively and wherein the positive members of all the subscribers' lines, the switches in which they terminate, and the contacts on which said switches normally rest are connected in groups, and likewise the negative members their switches and normal contacts in groups differently formed so that any one group of positive members comprises the positive members of pairs or couples whose negative members are comprised in as many different groups of negative members and *vice versa* the groups of positive and negative members being respectively connected to contacts occupying corresponding positions in all the rows of positive and negative contacts respectively the combination, with electric magnetic propelment mechanism for operating the respective switches and with means of closing the circuit of the local battery through the electro magnetic propelment mechanism of the one or other switch according to the direction (of the current received by it from the transmitter) of circuit closing mechanisms respectively adapted to send the one succession of impulses of the one direction, and the other a succession of impulses of the other direction from the transmitter to the relay, and of numerator mechanism for recording the number of impulses so sent, the movements of the one switch and consequently the number of contacts in the row over which it moves being limited to ninety-nine the corresponding numerator therefore having only a units and a tens wheel of figures whilst the movements of the other switch and the contacts over which it moves and the figure wheels of the corresponding numerator are unlimited in number so that the figures conjointly exhibited by the two numerators may always correspond to the serial number of the subscriber on whose combination of contacts the switches may for the time being placed. 5th. In an automatic telephone exchange system, wherein the members of each subscribers line the switches in which they terminate and the contacts on which said switches normally rest and over which they are traversed are connected in groups differently formed for the positive and negative members as herein described, the combination with each switch carrier of a screw spindle mounted to rotate and of electro magnetically operated mechanism adapted to impart step by step rotary motion to the screw spindle, the switch carrier being formed as a nut adapted to be traversed upon the screw spindle when it is revolved by the electro magnetic propelment mechanism for traversing said switch over the corresponding row of contacts, as specified. 6th. In an automatic telephone exchange system wherein the members of each subscribers line, the switches in which they terminate, and the contacts on which said switches normally rest and over which they are traversed are connected in groups differently formed for the positive and negative members as herein desc ibed, the combination with each switch carrier of a screw spindle mounted to rotate and of electromagnetically operated mechanism adapted to impart step by step rotary motion to the screw spindle, the switch carrier being formed as a nut adapted to be traversed upon the screw spindle when it is revolved, and of mechanism for quickly returning the switch carrier to its initial position, said mechanism being operated, substantially as desribed.

No. 53,575. Electrical Succession Signalling or Calling System. (*Système électrique de signal.*)



James Gilmore Smith, New York, State of New York, U.S.A., 25th September, 1896; 6 years. (Filed 4th November, 1895.)

Claim.—1st. A signalling system comprising three line wires, an electrical instrument connected with one of said wires, a spur wire

therefrom, and a circuit breaker for said spur wire, another of said wires having a magnet, devices for operating said circuit breaker operated by the magnet, and a shunt around said magnet, and the other of which line wires has a magnet to break said shunt. 2nd. A signalling system comprising a line wire, an electrical instrument connected with a spur wire leading from said line wire, a circuit breaker for said spur wire, a normally closed line wire having a magnet and armature to operate said circuit breaker, a shunt around said magnet, an armature 17 to break said shunt, a magnet to operate said armature and a line wire to energize said magnet. 3rd. A signalling system comprising a line wire, a spur wire therefrom, an electrical instrument in circuit with said line wire, a circuit breaker for said spur wire, a normally closed line wire having a magnet and armature the latter being arranged to operate said circuit breaker, a shunt around said magnet adapted to be broken by said armature, and another line wire having a magnet and armature, the latter being also arranged to break said shunt, and means for operating said magnets and instruments, as and when desired. 4th. A signalling system comprising a line wire, a spur wire leading therefrom, a contact included in the spur circuit, a signaling instrument connected with said spur wire, a contact for connection with said first mentioned contact and leading to ground, a normally closed line having a magnet and armature, the latter being arranged to operate said first mentioned contact and insulated therefrom, a shunt around said magnet including said armature therein, a contact in said shunt to engage said armature, another line circuit having a magnet 21 and armature 17, the latter being included in the shunt and adapted to break the circuit through said shunt, and means for operating said magnet and instrument. 5th. In an electrical signalling system, a plurality of wires, a plurality of stations located on said wires, one wire being normally electrically divided into sections, the other wire being undivided throughout all the stations, and circuit changing devices at each station connected with the through wire arranged to change the sections of the first mentioned wire so as to provide a through wire to a station, and to hold the circuit as thus formed to enable a calling station to signal to a desired station only, without affecting the signaling device at an intermediate station, and without affecting the circuit changing devices in any station beyond the called station. 6th. In an electrical signalling system one wire maintained complete throughout all the stations, a second wire divided by earth-connection at each station, a third wire also divided by earth-connection at each station, electrical devices at each station located in the second wire for operating electrical devices in the first wire at said stations to effect removal of earth connections from the second and third wires, signal devices located upon the third wire at each station and operative upon closing the circuit of said wire. 7th. In an electrical signalling system comprising two or more stations, one wire complete through all the stations, a second wire having normal earth connections at each station, electrically operating circuit changing devices at each station arranged to effect removal of the earth connection of said wire at such stations as are required to enable the next station only to be reached by a through wire, said devices being arranged to hold such wire so established as a through wire at each intervening station while a similar change is being effected by similar means at other stations between a calling and a called station, without affecting the circuit changing devices in any station beyond the called station. 8th. In an electrical system for signalling successively from any one station to any other of a number of stations on the same line, one normally charged with passing through all the stations, a second and third wire divided by earth connection at each station, devices at each station for closing and opening said section and third wires, devices at each station so arranged that the closing and opening of the second wire circuit at any station will remove the earth connection at each station successively until the desired station is reached and the calling station enabled thereby to operate the signal instrument of such desired station without operating any intermediate signal instrument. 9th. In an electrical signalling system the combination of a continuous wire and two wires each of which latter has spurs or wire connections to earth at each station, and electrical circuit changing devices at each station for removing the said earth connections at such stations and means to make inoperative one of the electro magnetic devices by which the said earth connections have been removed whereby a called station can be reached without affecting the circuit changing devices in any station beyond the called station. 10th. In an electrical signalling system having a plurality of stations, the combination of a normally closed line or circuit having an electro magnet included in it at each station, and two lines divided into sections by earth connections at each station, one of said wires including a signaling apparatus at each station. 11th. In an electrical signalling system the combination of three wires, one of which forms a normally closed circuit throughout, and the other two wires forming sections between stations by means of earth connections at each station, electrical devices in one wire operating electrical devices in another wire to effect connection successively through the intermediate station to the station desired. 12th. The combination of a normally closed circuit and a contact to break said circuit, with a magnet and armature, the latter being arranged to operate said contact to break said circuit, a circuit for said magnet, a shunt around said magnet, and a magnet and armature, the latter being arranged to break said shunt, and a circuit for the last mentioned magnet. 13th. The combination of a circuit and a contact arranged to break said circuit, with a magnet and armature, the latter being arranged to operate said contact to break said circuit, a shunt around said magnet, said armature being included in said shunt, and with another magnet and armature, the latter being included in said shunt to make and break the circuit therethrough. 14th. A signalling system comprising a line wire, a spur wire leading therefrom, a contact included in the spur circuit, a signalling instrument connected with said spur wire, a contact for connection with said first mentioned contact and leading to ground, a contact 24 operated with said first mentioned contact and insulated therefrom, a normally closed line having a magnet and armature, the latter being arranged to operate said first mentioned contact and insulated therefrom, a shunt around said magnet including said armature therein, a contact in said shunt to engage said armature, another line circuit having a magnet 21, located in a spur wire 22, leading from said l ne, and an armature 17 for the magnet 21, the latter being included in the shunt and adapted to break the circuit through sai l shunt, and the spur wire 22 being connected with the contact 24, the contact 24 normally engaging a contact 26 leading to ground, a wire 31 leading to ground and having a contact 30, a contact 29 connected with the armature 17 and insulated therefrom, and a wire 23 leading from a terminal of the magnet 21 to the contact 29 whereby when the circuit is broken at 24, 26, it will be re-established at 29, 30. 15th. A signalling system having two wires one of which is connected with a signalling instrument or call bell, another of said wires being used to cut out said instrument, combined with a switch board or box having pivoted arms provided with contacts to normally close the circuit through the bell wire and arranged to break and re-establish said circuit when one arm is turned, means for sending a current through said bell wire when its circuit is so re-established, a contact connected with the cut out wire, and a contact operated by said arm to operate said cut out contact. 16th. A signalling system comprising three wires, one of which is connected with a signaling instrument or call bell, another being a normally closed wire having devices to break the circuit through the call bell, and the other wire having devices to cause the normally closed line devices to operate, combined with a switch board or box having a pivoted arm connected with a battery, a pair of normally disconnected contacts connected with the bell wire, and with a push button or switch respectively, a contact on said arm to close the circuit through said contacts, the normally closed line having a normally closed contact to be operated by said arm to break the circuit through said line, and a contact connected with the above-mentioned wire, and a contact operated by said arm to close the circuit through the last mentioned wire. 17th. A switch board or box having a pivoted arm connected with a battery, a series of contacts for connection with a push button or switch, a corresponding series of contacts for connection with a line wire, said contacts being arranged in pairs, a contact carried by and insulated from said arm and arranged to make connection between pairs of said contacts, and another contact or contacts connected with another line wire, and a contact in said arm to engage therewith to close the circuit from said battery through said wire. 18th. A switch board or box having a pivoted arm connected with a battery, a series of contacts for connection with a push button or switch, a corresponding series of contacts for connection with a line wire, said contacts being arranged in pairs, a contact carried by and insulated from said arm and arranged to make connection between pairs of said contacts, and another contact or contacts connected with another line wire, a contact in said arm to engage therewith to close the circuit from said battery through said wire, and a normally closed contact for connection with a normally closed line wire, said arm when turned acting to break the circuit through said closed contact. 19th. A switch board or box comprising two pivoted arms connected with a battery, a signalling wire leading therethrough from opposite directions, one part of the wire being connected with a contact 34, and the other part with a contact 35, contacts 34*a*, 35*a* connected together, and contacts *c* on said arms, to join the contacts 34, 34*a* and 35, 35*a* respectively, contacts 42, 43 and 42*a*, 43*a* connected with the contacts 34, 35 respectively, and contacts 37, 38, 37*a*, 38*a* respectively connected with a push button or switch 8 by wires 41, 41*a*, the contacts 37, 42 and 38, 43, as well as contacts 37*a*, 42*a* and 38*a*, 43*a*, being arranged to be connected by the contacts *c* on the arms 33, 33*a*. 20th. A switch board or box comprising two pivoted arms connected with a battery, a signalling wire leading therethrough from opposite directions, one part of the wire being connected with a contact 34 and the other part with a contact 35, contacts 34*a*, 35*a* connected together, and contacts *c* on said arms to join the contacts 34, 34*a*, 35, 35*a* respectively, contacts 42, 43 and 42*a*, 43*a* connected with the contacts 34, 35 respectively, and contacts 37, 38 and 37*a* and 38*a* respectively connected with a push button or switch 8 by wires 41, 41*a*, the contacts 37, 42 and 38, 43, as well as contacts 37*a*, 42*a* and 38*a*, 43*a*, being arranged to be connected by the contacts *c* on the arms 33, 33*a*, and contacts 47, 47*a* for connection with another line wire, contacts 49, 49*a* connected together, a contact 48 on each arm 33, 33*a* to connect contacts 47, 49 and 47*a*, 49*a* respectively, and contacts 51, 51*a* respectively connected with said other line wire, and adapted to be connected with the contacts on the arms 33, 33*a* respectively. 21st. A switch board or box comprising two pivoted arms connected with a battery, a signalling wire leading therethrough from opposite directions, one part of the wire being connected with a contact 34, and the other part with a contact 35, contacts 34*a*, 35*a* connected together, and contacts *c* on said arms to join the contacts 34, 34*a* and 35, 35*a*

respectively, contacts 42, 43 and 42*a*, 43*a* connected with the contacts 34, 35 respectively, and contacts 37, 38 and 37*a*, 38*a* respectively connected with a push button or switch 8 by wires 41, 41*a*, the contacts 37, 42 and 38, 43, as well as contacts 37*a*, 42*a* and 38*a*, 43*a*, being arranged to be connected by the contacts *c* on the arms 33, 33*a*, and contacts 47, 47*a* for connection with another line wire, contacts 49, 49*a* connected together, a contact 48 on each arm 33, 33*a* to connect contacts 47, 49 and 47*a*, 49*a* respectively, and contacts 51, 51*a* respectively connected with said other line wire and adapted to be connected with contacts on the arms 33, 33*a* respectively, and normally closed contacts 54, 54*a* for connection with a normally closed line, a projection on each arm 33, 33*a* acting to operate the contacts 54, 54*a* respectively to break said normally closed line. 22nd. An electrical circuit comprising a line wire, an electrical instrument connected therewith means for causing the latter to operate, a circuit-breaking device in the circuit of said instrument, and a separate line wire having electrical devices for operating said circuit breaking device, combined with a telephone circuit for use when a signal is given in the calling circuit. 23rd. An electrical circuit comprising a line wire, an electrical instrument connected therewith, means for causing the latter to operate, a circuit breaking device in the circuit of said instrument, and a separate line wire having electrical devices for operating said circuit breaking device, combined with two telephone line wires having spurs therefrom provided with contacts 63, 63*a*, and a switch 64 for connection with said contact, and a telephone instrument connected with said switch. 24th. An electrical circuit comprising a line wire, an electrical instrument connected therewith, means for causing the latter to operate, a circuit breaking device in the circuit of said instrument, and a separate line wire having electrical devices for operating said circuit breaking device, combined with two telephone line wires having spurs therefrom provided with contracts 63, 63*a*, and a switch 64 for connection with said contracts, and a telephone instrument connected with a switch 65 in the circuit from the switch 64 to the telephone. 25th. A switch board or box having pairs of contacts 34, 34*a* and 35, 35*a*, the contacts 34*a* and 35*a* being electrically connected together, normally closed contacts 54, 54*a*, pairs of contacts 37, 42 and 37*a*, 42*a*, contacts 51, 51*a*, and pivoted arms 33 and 33*a*, carrying contacts *c*, 48 and 51 *b*, adapted to engage the contacts on the board or box, all arranged for joint operation, substantially as specified. 26th. In a signalling system having a plurality of stations, a wire passing through said stations and having branch connections at each station, and circuit changing devices located at each station arranged to operate one at a time successively to break said branch connections at stations successively and to hold said branch connections broken to provide a through line to the station desired, without affecting the circuit changing devices in any station beyond the called station. 27th. In a signalling system having a plurality of stations, a wire passing through said stations and normally in circuit with signalling devices at each station, circuit changing means for preventing any intermediate one of said signalling devices from operating so that the instrument on the line next beyond can operate, without affecting the circuit changing devices at or beyond the called station, and means for restoring said instruments to their proper circuits simultaneously. 28th. In a signalling system having a plurality of stations, a wire passing through said stations, a signalling instrument at each station normally in circuit with said wire, a separate wire passing through said stations, and circuit changing devices connected with said separate wire at said stations and arranged to cut said instruments from circuit with their wire at the intermediate station so as to provide a through wire to the signalling instrument at the station desired without affecting the circuit changing devices in any station beyond the called station. 29th. An electrical circuit comprising a line wire, a signalling instrument connected therewith, a normally broken shunt around said instrument and containing a contact normally leading to ground, a normally closed line wire having a magnet 12 and armature 13 to operate said contact to break the ground for the signaling instrument and close the shunt around said instrument, a shunt around the magnet 12 and a line circuit having electrical devices to break the shunt around the magnet 12, as and for the purpose specified. 30th. An electrical circuit comprising a line wire, a signalling instrument connected therewith, a shunt around said instrument having a contact to normally break said shunt and leading to ground, a normally closed line having a magnet 12 and an armature 13, the latter being arranged to operate said contact to break the ground and close the shunt around the signalling instrument, a shunt around the magnet 12 having a contact to engage the armature 13, a line wire 33 having a magnet 21 and an armature 17 included in the shunt around the magnet 12, and a shunt around the magnet 21 having a wire connected with a contact carried by the armature 13, and a wire 29*b* having contacts 29*a*, 29*c*, to be engaged respectively by a contact 29 on the armature 17, and the contact on the armature 13, all arranged as herein specified. 31st. The combination of a circuit to break it, with a magnet 12 and an armature 13, the latter being arranged to operate said contact, a shunt around said magnet, said armature being included in said shunt, a magnet 21 and armature 17, the latter being also included in said shunt, and a shunt around the magnet 21 arranged to be closed and broken by both the armatures 13 and 17. 32nd. The combination of two magnets, 12 and 21, and armatures, 13 and 17, for said magnets respectively, with a wire extending from the magnet 21 to a contact carried by the armature 13, and a wire 29*b*, having a contact 29*c*, normally out of engagement with the contact on the armature 13, and a contact 29*a* normally in engagement with a contact on the armature 17, and a wire connecting the latter contact with the magnet 21. 33rd. In a signalling system, the combination of a circuit having a contact 5 leading to ground, a magnet having an armature 13 to operate said contact, a shunt around said magnet, the armature 13 being included in said shunt, a magnet 21 having an armature 17 included in said shunt, a shunt around the magnet 21 leading to a contact on the armature 13, a wire 29*b*, in said shunt having contacts 29*a*, 29*c*, and a wire 22 leading from said magnet to a contact 24 on the contact 5, a contact 26 leading to ground and normally engaging the contact 24, and a wire 31 leading to ground and having a contact 30 to be engaged by the contact 29 on the armature 17. 34th. In a signalling system having a plurality of stations, a wire passing through said stations in opposite directions, signalling instruments at said stations connected with the portion of the wire extending in one direction, means at each station adapted to cut the signalling instrument at that station from the line, and means at said stations connected with the portion of said wire extending in the opposite direction adapted to operate the signalling instruments on said wire. 35th. In a signalling system having a plurality of stations, a wire passing through said stations in opposite directions, signalling instruments at said stations connected with the portion of said wire extending in one direction, said signalling instruments having individual circuits leading from said portion of said wire, means at said stations connected with the portion of said wire extending in the opposite direction adapted to operate the signalling instruments on said wire, an means at each station for breaking the individual circuit of any signalling instrument in another station to establish a through line to the next station. 36th. In a signalling system having a plurality of stations, two wires passing through all of said stations in opposite directions, signalling instruments connected to the portion of one of said wires at each station that extends in one direction, said signalling instruments having individual circuits at each station leading from said wires, means at each station connected with the portion of said wire which extends in the opposite direction adapted to operate said signalling instruments, and electrical devices connected with that portion of the second-mentioned wire which extends in one direction through the stations to break the individual circuits of said instruments, and means connected with the oppositely extending portion of said second-mentioned wire adapted to operate said electrical devices connected with the other portion of said wire. 37th. In a signalling system having a plurality of stations, two wires passing through all of said stations in opposite directions, signalling instruments connected to the portion of one of said wires at each station that extends in one direction, said signalling instruments having individual circuits at each station leading from said wire, means at each station connected with the portion of said wire which extends in the opposite direction adapted to operate said signalling instruments, and electrical devices connected with that portion of the second-mentioned wire which extends in one direction through the stations to break the individual circuits of said instruments, and means connected with the oppositely extending portion of said second-mentioned wire adapted to operate said electrical devices connected with the other portion of said wire, and a third wire passing through all of said stations adapted to operate in conjunction with said electrical devices to break the individual circuits of said signalling instruments, and means connected with said third mentioned wire arranged to act on said electrical devices to restore the circuits through said instruments. 38th. In a signalling system having a plurality of stations, two wires running in opposite directions through said stations, one of said wires having electrical instruments connected with it, said instruments having individual circuits at said stations leading from said wire, the other wire having electrical devices to effect the breaking of said individual circuits in said electrical instruments at one station to permit the current to pass to the electrical instrument at the next station, and means connected with the opposite portion of said wire for operating the devices connected with said wires. 39th. In a signalling system comprising a plurality of stations, a wire leading through all said stations in two directions, signalling instruments at each station which have individual circuits leading from one portion of said wire, and means in each station connected with the other portion of said wire for operating the electrical instrument at the first station of the series directly, and circuit changing devices in said first station arranged to be operated from any station on the series for breaking the individual circuit of the electrical instrument in said first mentioned station, and for establishing a through line to the station beyond.

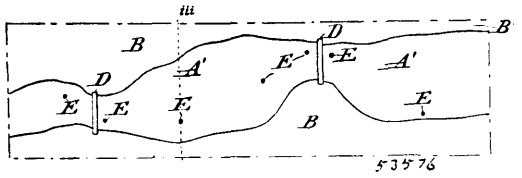
No. 53,576. Mining Gold and Similar Metals.

(*Procédé pour miner l'or, etc.*)

Herman Frasch, Cleveland, Ohio, U.S.A., 25th September, 1896; 6 years. (Filed 31st July, 1896.)

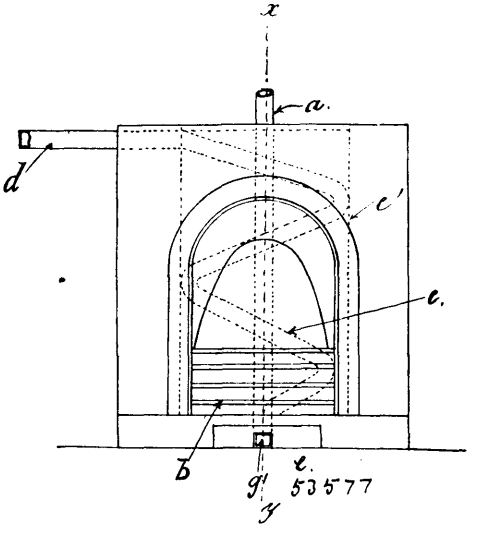
Claim.—1st. The process of mining gold, or analogous metal such as silver or platinum, by introducing into the auriferous or argentiferous or platiniferous earth in its natural bed in the ground a reagent which converts such metal into a compound soluble in water, and removing the aqueous solution of gold or like metal formed by the aid of such reagent, substantially as described. 2nd. The pro-

cess of mining gold, or analogous metal, such as silver or platinum, by introducing into the auriferous or argentiferous or platiniferous



earth in its natural bed in the ground a reagent which converts such metal into a compound soluble in water, removing the aqueous solution of gold or like metal formed by the aid of such reagent, and recovering the metal therefrom, substantially as described. 3rd. The process of mining gold, or analogous metal, such as silver or platinum, by forcing under pressure into the auriferous or argentiferous or platiniferous each in its natural bed in the ground a reagent which converts said metal into a compound soluble in water, and removing the aqueous solution of gold or like metal formed by the aid of such reagent, substantially as described. 4th. The process of mining gold, or analogous metal, such as silver or platinum, by introducing into the auriferous or argentiferous or platiniferous earth in its natural bed in the ground an aqueous solution of a reagent which converts such metal into a compound soluble in water, and removing the aqueous solution of gold or like metal formed by the aid of such reagent, substantially as described. 5th. The process of mining gold, or analogous metal, such as silver or platinum, by driving a well, shaft or opening in the ground through overlying or intermediate masses to, into, or through the auriferous or argentiferous or platiniferous earth or its vicinity, introducing into such earth through such well, shaft or opening, a reagent which converts such metal into a compound soluble in water, and removing the aqueous solution of gold or like metal formed by the aid of such reagent, substantially as described. 6th. The process of mining gold, or analogous metal, such as silver or platinum, by introducing into the auriferous or argentiferous or platiniferous earth in its natural bed in the ground an aqueous solution of a reagent which converts such metal into a compound soluble in water, such solution being of a high specific gravity, and so introduced as to displace water which the said earth may carry, and removing the aqueous solution of gold or like metal formed by the aid of such reagent, substantially as described. 7th. The process of mining gold, or analogous metal, such as silver or platinum, by introducing into the auriferous or argentiferous or platiniferous earth in its natural bed in the ground a reagent which converts such metal into a compound soluble in water, causing such reagent in solution to percolate through such earth from its point of introduction to one or more intercepting receptacles, and removing the aqueous solution of gold or like metal formed by the aid of such reagent, substantially as described. 8th. The process of mining gold, or analogous metal, such as silver or platinum, by driving a well, shaft or opening in the ground through overlying or intermediate masses to, into, or through the auriferous or argentiferous or platiniferous earth or its vicinity, introducing into such earth through such well, shaft or opening, a reagent which converts such metal into a compound soluble in water causing such reagent in solution to procolate through such earth, and removing the solution of gold or like metal from one or more intercepting receptacles through other wells, shafts or openings, substantially as described. 9th. The process of mining gold, or analogous metal, such as silver or platinum, by enclosing the auriferous or argentiferous or platiniferous earth in its natural bed in the ground in one or more artificially formed basins, introducing into such basins a reagent which converts such metal into a compound soluble in water, and removing the aqueous solution of gold or like mstal formed by the aid of such reagent, substantially as described. 10th. The process of mining gold, or analogous metal, such as silver or platinum, by enclosing the auriferous or argentiferous or platiniferous earth in its natural bed in the ground in one or more artificially formed basins, driving one or more wells, shafts or openings into the earth in such basins or the vicinity thereof, introducing into the basins a reagent which converts such metal into a compound soluble in water, and removing the aqueous solution of gold or like metal formed by the aid of such reagent, substantially as described. 11th. The process of mining gold or platinum, by introducing a solution of chlorine into the auriferous or platiniferous earth in its natural bed in the ground, and removing the chloride of gold or platinum solution formed thereby, substantially as described. 12th. The process of mining gold or platinum, by introducing a solution of chlorine into the auriferous or platiniferous earth in its natural bed in the ground, removing the chloride of gold or platinum solution formed thereby, and recovering the gold or platinum by electrical deposit substantially as described. 13th. The process of mining gold or platinum, by introducing a solution of chlorine into the auriferous or platiniferous earth in its natural bed in the ground, removing the chloride of gold or platinum solution formed thereby, recovering the gold or platinum and regenerating the chlorine solution by electrical deposit, and introducing such regenerated solution into the ground for acting again upon the gold or platinum to effect its removal in solution, substantially as described. 14th. A mine of gold, or analogous metal, such as silver or platinum, composed of one or more wells, shafts or openings in the ground to, into, or through the permeable auriferous or argentiferous or platiniferous earth or the vicinity thereof, and provided with means, such as pumping machinery or the like, for introducing or forcing a fluid reagent into the said earth, and for moving or exhausting and removing the gold or silver or platinum solution, substantially as described. 15th. A mine of gold, or analogous metal, such as silver or platinum, composed of a basin with an artificially formed wall or walls enclosing auriferous or argentiferous or platiniferous earth in its natural bed in the ground, with one or more wells, shafts or openings into said basin, and provided with means, such as pumping machinery or the like, for introducing or for forcing a fluid reagent into the earth in said basin and for removing or exhausting and removing the gold or silver or platinum solution from the said basin, substantially as described. 16th. A mine of gold, or analogous metal, such as silver or platinum, composed of one or more reagent introducing wells, shafts or openings in the ground on one side of the permeable auriferous or argentiferous or platiniferous earth, and on the other side thereof one or more intercepting receptacles having openings to give access to such receptacles, said mine being further provided with means for introducing the chemical reagent and removing the solution of gold or analogous metal, substantially as described. 17th. A mine of gold or analogous metal, such as silver or platinum, composed of a deposit of auriferous or like earth in a natural excavation like a river bed, and provided with one or more basin forming walls across the excavation or valley and also with one or more wells or shafts in the parcels of ground above such walls, substantially as described. 18th. The process of mining gold, or analogous metal, such as silver or platinum, by introducing into a natural body of permeable auriferous or argentiferous or platiniferous earth in its natural bed in the ground a reagent which converts such metal into a compound soluble in water, so that the said eafth is permeated by said reagent percolating through or standing in the said earth and the particles of gold distributed through said earth are thus exposed to said reagent, removing the compound thus formed in dilute aqueous solution, and recovering the metal therefrom, substantially as described.

No. 53,577. Fire-Grates, Stoves, Furnaces, etc.
(*Grille, poêle, fourneise, etc.*)



James Daniel Hannah and William Charles Clement Peele, both of Shrewsbury, Shropshire, England, 25th September, 1896; 6 years. (Filed 27th July, 1896.)

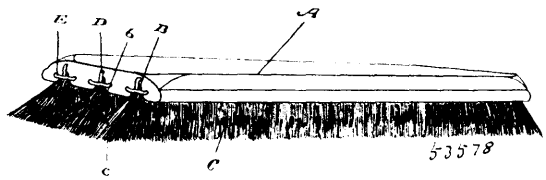
Claim.—1st. The improved construction of stove, consisting of a casing containing a flue which is heated by the fire, a pipe in communication with the chimney, the inlet end of which is set at a lower level than the inlet of the flue aforesaid, a depending partition between said inlets for the purpose of interrupting the current of air so that part of it will pass up the flue, all in combination and substantially as described. 2nd. In fire-grates, stoves, furnaces and the like, in combination an induction pipe in communication with the chimney for the purpose of inducing a current of air to flow towards the heating flue, and arranged so that the level of the inlet to the induction pipe is lower than the level of the inlet to the heating flues.

No. 53,578. Brush. (*Brosse.*)

Oliver Martin, Berlin, Ontario, Canada, 25th September, 1896; 6 years. (Filed 18th June, 1896.)

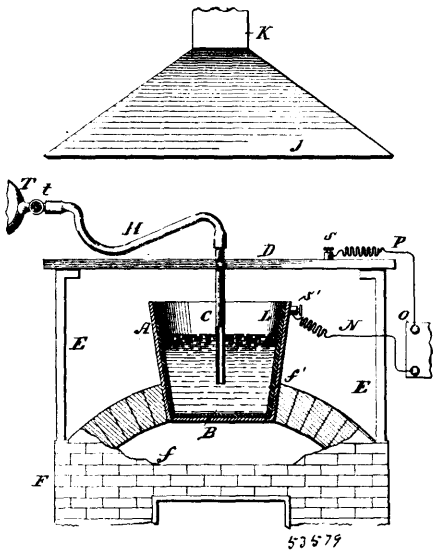
Claim.—A brush comprised of a brush back, having in its under side a series of longitudinal grooves, substantially U-shaped in cross section, the edges of each of the grooves slightly rounded,

with the grooves at each end of the brush back cut deeper for a length of one-half an inch more or less from the end inwardly to



cause the bristles or fibres to expand and form a wing at each end of the brush, a series of bristles or fibres located within the said grooves, fastening wires holding the said bristles in the said grooves, and staples to lock the ends of the fastening wires to the ends of the brush, substantially as specified.

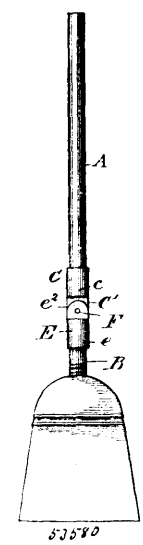
No. 53,579. Art or Process of Reducing Aluminum.
(*Art et procédé de réduire l'aluminum.*)



Frank H. Gooch, New Haven, and Leonard Waldo, Bridgeport, both in Connecticut, U.S.A., 25th September, 1896; 6 years. (Filed 21st October, 1895.)

Claim.—1st. As an improvement in the art of manufacturing aluminum, the herein described process which consists in passing an electric current through a suitable fused bath containing a suitable halogen compound of aluminum, thereby electrolyzing the bath, and in supplying to the bath the vapour of water, substantially as and for the purposes set forth. 2nd. As an improvement in the art of manufacturing aluminum, the herein described process which consists in passing an electric current through a suitable fused bath containing the chloride of aluminum and in supplying steam to the bath, substantially as and for the purposes set forth. 3rd. As an improvement in the art of manufacturing aluminum, the herein described process which consists in passing an electric current through a suitable fused bath containing the chloride of aluminum and the chloride of an alkaline metal, and in supplying steam to the bath, substantially as and for the purposes set forth. 4th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, thereby electrolyzing the same, and supplying steam to the bath, substantially as and for the purposes set forth. 5th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing together the chloride of aluminum and sodium and the fluorides of aluminum and sodium, passing an electric current through the fused mass, thereby electrolyzing the same, and supplying steam to the bath, substantially as and for the purposes set forth. 6th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing together the chlorides of aluminum, sodium and potassium, and the fluorides of aluminum and sodium, passing an electric current through the fused mass, thereby electrolyzing the same, and supplying steam to the bath, substantially as and for the purposes set forth. 7th. As an improvement in the art of manufacturing aluminum, the herein described process, which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline earth metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current of suitably low voltage through the fused mass, thereby electrolyzing the same, and in supplying steam to the bath, substantially as and for the purposes set forth. 8th. As an improvement in the art of manufacturing aluminum, the herein described process, which consists in forming a bath by fusing together the chlorides of aluminum and magnesium with the fluorides of aluminum and sodium, passing an electric current of suitably low voltage through the fused mass, thereby electrolyzing the same, and in supplying steam to the bath, substantially as and for the purposes set forth. 9th. As an improvement in the art of manufacturing aluminum, the herein described process, which consists in forming a bath by fusing together the chloride of aluminum, the chloride of an alkaline earth metal and the chloride of sodium with the fluorides of aluminum and sodium, passing an electric current of suitably low voltage through the fused mass, thereby electrolyzing the same, and in supplying steam to the bath, substantially as and for the purposes set forth.

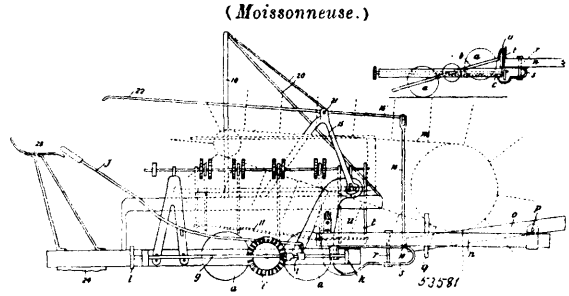
No. 53,580. Broom Handle. (*Manche de balai.*)



Richard C. Daly, Chispa, Texas, U.S.A., 25th September, 1896; 6 years. (Filed 17th June, 1896.)

Claim.—1st. A broom or other like implement having a handle in two parts pivotally connected together, substantially as described. 2nd. A broom or other like implement having a handle in two parts pivotally connected together, and means for holding the parts at any desired angle with relation to each other, substantially as described. 3rd. A coupling for a handle, consisting of two substantially like parts, each comprising a ferrule and an extension, and a set screw threaded through openings in said extensions, substantially as described. 4th. A coupling for a handle, consisting of two substantially like parts, each comprising a ferrule and an extension, and a set screw threaded through openings in said extensions, said extensions being in substantially the axial line of the ferrule, substantially as described.

No. 53,581. Reaping and Harvesting Machine.
(*Moissonneuse.*)

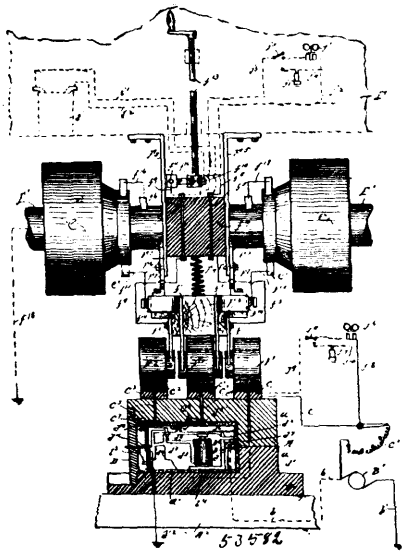


John Crawford Moore, Eastbourne, Sussex, England, 25th September, 1896; 6 years. (Filed 11th June, 1896.)

Claim.—1st. The combined construction and arrangement of the various parts substantially as described and illustrated herein. 2nd. In reaping and harvesting machines of the class herein described, two frames or supports movably or pivotally connected together, one frame carrying the ground or driving wheels or rollers and the other the machine and mechanism. 3rd. In reaping and harvesting machines of the class herein described, a movable bearing or socket engaging upon the end of a roller spindle, said socket being enclosed

by a ferrule attached to the roller. 4th. The means for operating the frame carrying the driving wheels, so that the wheel or wheels at one end of frame can be raised from the ground for the purpose of facilitating the turning of the machine.

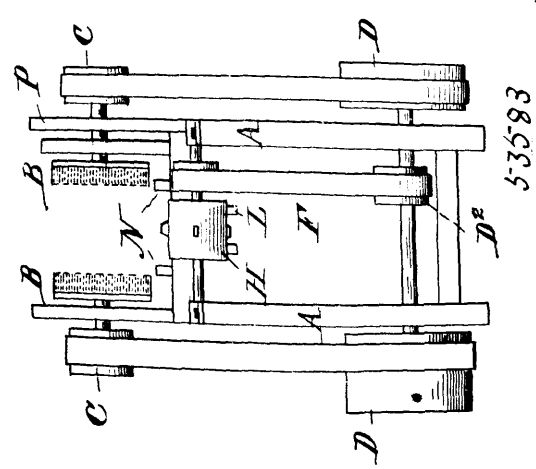
No. 53,582. Electric Railway System.
(*Système de chemin de fer électrique.*)



Byron E. Osborn, New York, U.S.A., 25th September, 1896; 6 years. (Filed 28th May, 1896.)

Claim.—1st. In an electric railway system, the combination of a casing or conduit provided with pockets or chambers extending inwardly from one of its longitudinal faces and formed with less height and width than the thickness and width of the casing or conduit, a line conductor arranged in the casing or conduit and passed through the pockets or chambers, and supports movable in the pockets or chambers towards and away from the line conductor and provided with means for engaging said conductor, substantially as described. 2nd. In an electric railway system, the combination of a casing or conduit provided with pockets or chambers extending inwardly from one of its longitudinal faces and formed of less height and length than the thickness and width of the casing or conduit, a line conductor arranged in the casing or conduit and passed through the pockets or chambers, stationary braces projecting from the inner end sides of the pockets or chambers for supporting the line conductor, and supports movable in the pockets or chambers toward and away from the line conductor and provided with means for engaging said conductor, substantially as specified. 3rd. In an electric railway system, the combination of a casing or conduit provided with pockets or chambers extending inwardly from one of its longitudinal faces and formed of less height and length than the thickness and width of the casing or conduit, a line conductor arranged in the casing or conduit and passed through the pockets or chambers, and supports for closing the pockets or chambers consisting of hollow receptacle movable toward and away from the line conductor and provided with means for engaging said conductor, substantially as set forth. 4th. In an electric railway system, the combination of a casing or conduit provided with pockets or chambers extending inwardly from one of its longitudinal faces and formed of less height and length than the thickness and width of the casing or conduit, a line conductor arranged in the casing or conduit and passed through the pockets or chambers, stationary braces projecting from the inner end sides of the pockets or chambers for supporting the line conductor, and supports for closing the pockets or chambers consisting of hollow receptacles movable towards and away from the line conductor and having their inner ends provided with slots for receiving the line conductor and the adjacent ends of the stationary braces, and means arranged within said receptacles for engaging the line conductor, substantially as and for the purpose described. 5th. In an electric railway system, the combination of a casing or conduit consisting of upper and lower sections having cut-outs in their adjacent faces aligned with each other for forming pockets or chambers in the casing or conduit, said cut-outs extending inwardly from one longitudinal side face of the casing or conduit toward its opposite side face and being formed of less height and length than the thickness and width of the sections, a line conductor arranged in the casing or conduit, supports for closing the pockets or chambers, and means mounted on the supports for engaging the line conductor, substantially as set forth. 6th. In an electric railway system, the combination of a line conductor for the main current, a second conductor for the current of reduced energy, a moving vehicle, a sectional conductor for conveying the current to the vehicle, a series of independently movable connecting pieces for connecting the line conductor, said sectional conductor, permanent magnets for holding the connecting pieces in their normal position, and electro magnets for actuating said connecting pieces, substantially as specified. 7th. In an electric railway system, the combination of a concealed or covered line conductor, a grounded current generator connected to said conductor, an exposed conductor for the passage of a current of reduced energy having one end grounded, a conductor for conveying the current to the vehicle, a series of independently movable connecting pieces for connecting the concealed or covered line conductor to the latter conductor, permanent magnets for holding the connecting pieces in their normal position, a series of grounded electro magnets for actuating said connecting pieces, and a moving vehicle connected to the ground and provided with means for controlling the operation of the electro magnets, substantially as and for the purposes set forth. 8th. In an electric railway system, the combination of a concealed or covered line conductor for the main current, an exposed conductor for the passage of a current of reduced energy, a moving vehicle, a conductor for conveying the current to the vehicle, independently-movable, connecting-pieces for connecting the concealed or covered line conductor to the latter conductor, permanent magnets for holding the connecting-pieces in their normal position, electro magnets connected to the exposed conductor for actuating said connecting-pieces, a current-generator carried by the vehicle, and connections for connecting the current-generator to the electro-magnets, substantially as described. 9th. In an electric railway system, the combination of a casing or conduit provided with pockets or chambers extending inwardly from one longitudinal face, a line conductor within the casing or conduit, a continuous conductor and separated sectional conductors arranged upon the top face of the casing or conduit, a vehicle movable along the casing or conduit for successively connecting the divisions of one of the sectional conductors to the continuous conductor upon the top face of the casing or conduit, connecting-pieces arranged in the pockets or chambers for successively connecting the divisions of the other sectional conductor to the line conductor within the casing or conduit, permanent magnets arranged in said pockets or chambers for holding the connecting-pieces in their normal position and electro-magnets arranged in said pockets or chambers and connected to the divisions of the former sectional conductor for controlling the operation of said connecting-pieces, substantially as specified. 10th. In an electric railway system, the combination of a casing or conduit provided with pockets or chambers extending inwardly from one longitudinal face, a line conductor within the casing or conduit, a continuous conductor and separated sectional conductors arranged upon the top face of the casing or conduit, a vehicle movable along the casing or conduit for successively connecting the divisions of one of the sectional conductors to the continuous conductor upon the top face of the casing or conduit, terminals projecting within the pockets or chambers and connected to the divisions of the sectional conductors, supports for closing the pockets or chambers consisting of hollow receptacles provided with terminals for frictionally engaging the former terminals, branch electric conducting-pieces within the supports connected to the line conductor within the casing or conduit, connecting pieces within the supports having corresponding ends movable into engagement with branch electric conducting-pieces and their opposite ends weighted for normally forcing said connected pieces from operative position, permanent magnets for holding the connecting-pieces in their normal position, and electro magnets in the pockets or chambers for actuating the conducting-pieces, substantially as set forth.

No. 53,583. Can Burnishing Machine. (*Brunissoir.*)



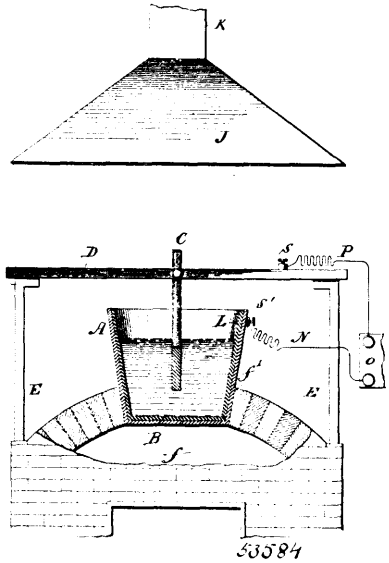
Guillermo Antonio Farini, London, County of London, England 25th September, 1896; 6 years. (Filed 17th March, 1896.)

Claim.—1st. In a burnishing machine, the combination of a series of burnishing brush heads, and a flexible feed mechanism for a can between such brush heads with the ends in contact therewith. 2nd.

In a burnishing machine, the combination with the frame of two series of parallel oppositely arranged driven shafts, brush heads on the inner ends thereof and a feed for cans between such brush heads, substantially as described. 3rd. The combination with a frame having side bars P, a series of shafts journalled therein on opposite sides of a central runway, pulleys on the ends of said shafts, a single belt for driving all the pulleys on each side, circular flat brush heads on the inner ends of the shaft, and a feed between the brush heads for the cans.

No. 53,584. Art or Process of Reducing Aluminum.

(*Art et procédé de réduire l'aluminum.*)



Frank A. Gooch, New Haven, and Leonard Waldo, Bridgeport, both in Connecticut, U.S.A., 25th September, 1896; 6 years. (Filed 21st October, 1895.)

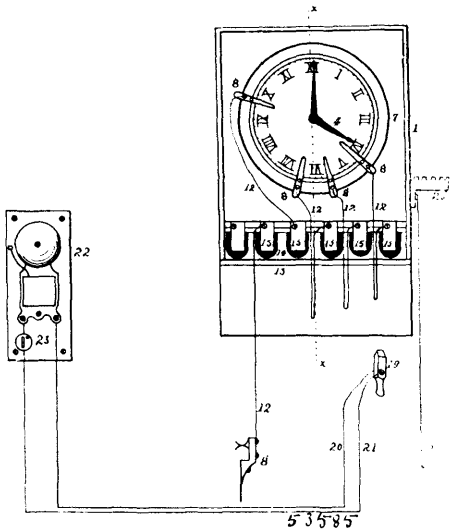
Claim.—1st. As an improvement in the art of manufacturing aluminum by reduction from its compounds, the herein described process which consists in passing an electric current through a suitable fused bath containing a suitable halogen compound of aluminum, thereby electrolyzing the same, and in introducing into the bath hydrogen in combination in a suitable solid compound, substantially as and for the purposes set forth. 2nd. As an improvement in the art of manufacturing aluminum by reduction from its compounds, the herein described process which consists in passing an electric current through a suitable fused bath containing a suitable halogen compound of aluminum, thereby electrolyzing the same, and in adding to the bath a suitable solid compound containing water in combination, substantially as and for the purposes set forth. 3rd. As an improvement in the art of manufacturing aluminum, the herein described process which consists in passing an electric current through a suitable fused bath containing the chloride of aluminum, thereby electrolyzing the same, and in adding to the bath a suitable salt containing water in combination, substantially as and for the purposes set forth. 4th. As an improvement in the art of manufacturing aluminum, the herein described process, which consists in passing an electric current through a suitable fused bath containing the chloride of aluminum, and the chloride of an alkaline metal, thereby electrolyzing the same, and in adding to the bath a suitable salt containing water in combination, substantially as and for the purposes set forth. 5th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, thereby electrolyzing the same, and in adding to the bath a suitable salt containing water in combination, substantially as and for the purposes set forth. 6th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing the chloride of aluminum and the chloride of sodium, with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, thereby electrolyzing the same, and in adding to the bath a suitable salt containing water in combination, substantially as and for the purposes set forth. 7th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in fusing together the chlorides of aluminum, sodium and potassium, and the fluorides of aluminum and sodium, passing an electric current through the fused mass, thereby electrolyzing the same, and in adding to the bath a suitable salt containing water in combination, substantially as and for the purposes set forth. 8th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, thereby electrolyzing the same, and in adding to the bath a suitable salt containing water of crystallization, substantially as and for the purposes set forth. 9th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline earth metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, and adding to the bath a suitable solid compound containing water in combination, substantially as and for the purposes set forth. 10th. As an improvement in the art of manufacturing aluminum, the herein described process, which consists in forming a bath by fusing the chloride of aluminum and the chloride of magnesium with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, and adding to the bath a suitable solid compound containing water in combination, substantially as and for the purposes set forth. 11th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing together the chloride of aluminum, the chloride of an alkaline earth metal and the chloride of sodium with the fluorides of aluminum and sodium, passing an electric current through the fused mass, and adding to the bath a suitable solid compound containing water in combination, substantially as and for the purposes set forth. 12th. As an improvement in the art of manufacturing aluminum, the herein described process, which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline earth metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, and adding to the bath a suitable salt containing water of crystallization, substantially as and for the purposes set forth. 13th. As an improvement in the art of manufacturing aluminum, the herein described process which consists in forming a bath by fusing the chloride of aluminum and the chloride of magnesium, with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, and adding to the bath a suitable salt containing water of crystallization, substantially as and for the purposes set forth. 14th. As an improvement in the art of manufacturing aluminum, the herein described process, which consists in passing an electric current through a suitable fused bath containing the chloride of aluminum, and adding to the bath a hydrous chlooide of aluminum, substantially as and for the purposes set forth. 15th. As an improvement in the art of manufacturing aluminum, the herein described continuous process, which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, and in adding to the bath from time to time suitable quantities of a hydrous chloride of aluminum, substantially as and for the purposes set forth. 16. As an improvement in the art of manufacturing aluminum, the herein described continuous process, which consists in forming a bath by fusing the chloride of aluminum and the chloride of an alkaline metal with the fluoride of aluminum and the fluoride of sodium, passing an electric current through the fused mass, and in adding to the bath from time to time suitable quantities of the hydrous crystalline chloride of aluminum, substantially as and for the purposes set forth. 17th. As an improvement in the art of manufacturing aluminum, the herein described continuous process, which consists in forming a bath by fusing the chloride of aluminum and the fluoride of sodium, with the flouride of aluminum and the flouride of sodium, passing an electric current through the fused mass, and in adding to the bath from time to time suitable quantities of the hydrous crystalline chloride of aluminum, substantially as and for the purposes set forth. 18th. As an improvement in the art of manufacturing aluminum, the herein described continuous process, which consists in fusing together the chlorides of aluminum and sodium, and potassium, and the fluorides of aluminum and sodium, passing an electric current through the fused mass, and in adding to the bath from time to time suitable quantities of the hydrous crystalline chloride of aluminum, substantially as and for the purposes set forth.

No. 53,585. Electric Signal. (*Signal électrique.*)

Frank C. Jordan, Wadsworth, Ohio, U.S.A., 25th September, 1896; 6 years. (Filed 17th July, 1896.)

Claim.—1st. In an electric calling apparatus, the combination with a clock and a battery having one pole in connection with the hour-hand and its shaft, of a switch having one contact-plate in connection with the other pole of said battery, and an electrical bell, and a plug having opposite contact-plates connected with the posts of said bell, and adapted to be inserted between the plates of said switch, and a detachable finger connected with the opposite plate of said switch and arranged to make electrical connection with the hour-hand of the clock at determinate times, substantially as shown and for the purpose specified. 2nd. In an electric calling apparatus, the combination with a clock and battery having one pole in connection with its hour-hand and shaft, of a switch having a series of pairs of contact-plates, one plate of each pair in connection with the other pole of said battery, a like number of electric bells, and a like

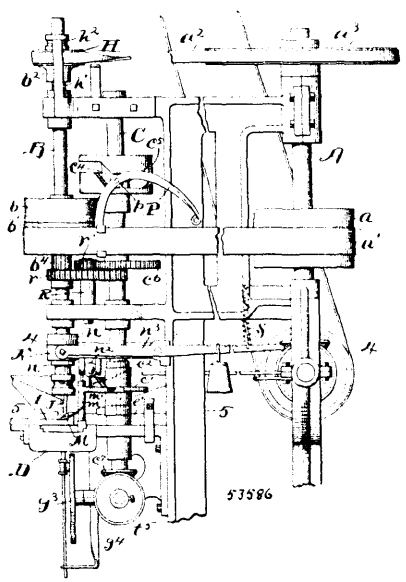
number of plugs having opposite contact-plates connected with respective posts of said bells, and adapted to be inserted between



the plates of said switch, and a like number of detachable fingers connected respectively with the opposite plates of said switch, and arranged to make electrical connection with the hour-hand of said clock at different times, substantially as shown and described. 3rd. The combination with the battery and electric bell and the clock having its hour-hand in connection with one pole of the battery, of the annular rim to sustain detachable contact-fingers, and detachable contact-fingers adapted to rest on said rim and make connection with said hour-hand and the opposite pole of said battery, substantially as shown and described. 4th. The combination with the clock, and the battery, said clock having its hour-hand connected with one pole of said battery, the switch-board having one set of plates in connection with said battery, and the other set in connection with detachable fingers adapted to connect with said hour-hand, and plugs connected with separate bells, and adapted to be inserted in said switches, of the multiple switch 25, adapted to have its plates connected by conducting-fingers, and simultaneously actuate a determinate number of bells, all constructed and arranged substantially as shown and described.

No. 53,586. Nut Tapping Machine.

(*Machine à tarauder les écrous.*)



Norman Benjamin Wood, Cleveland, Ohio, U.S.A., 26th September, 1896; 6 years. (Filed 3rd August, 1896.)

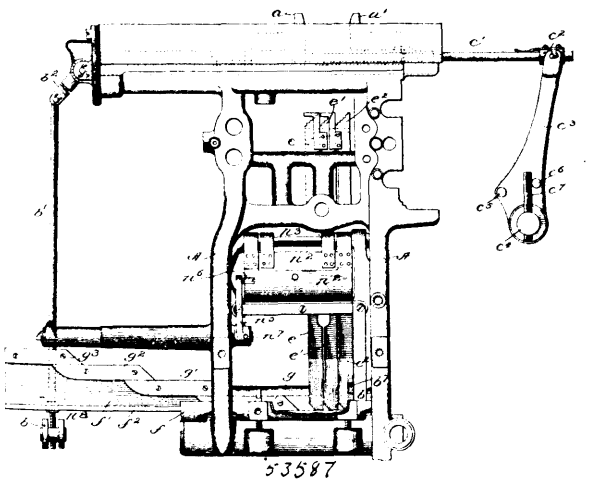
Claim.—1st. In a nut tapping machine, in combination, a longitudinally movable tap shaft adapted to be revolved alternately in opposite directions, fast and loose pulleys on said shaft, a driving belt, a bolt shifter, means for operating the latter, and means for reversing the motion of the shaft, a device for feeding the nuts one by one beneath said shaft, and a fixed wrench, a cam shaft receiving motion from the tap shaft, a cam thereon, and a pivoted lever operated by the said cam and engaging with and moving said tap shaft longitudinally, substantially as and for the purpose specified. 2nd. The combination of a shaft B, fast and loose pulleys thereon, a belt for driving them, and a belt shifter adapted to move the belt substantially as described so that it will drive the loose pulley alone or both pulleys together, a shaft C, and intermediate connections between the loose pulley and said shaft, whereby the latter is constantly driven, substantially as and for the purpose specified. 3rd. In a nut tapping machine, in combination, a longitudinally movable tap shaft, a fast and loose pulley thereon, a belt for driving them, a loose pulley constantly driven in a fixed plane in the opposite direction, a clutching device for connecting said pulley with the shaft, a belt shifter, means for operating it, and mechanism for moving the tap shaft longitudinally, substantially as and for the purpose specified. 4th. In a nut tapping machine, in combination, a longitudinally movable tap shaft, fast and loose pulleys thereon, a pinion rigid with the loose pulley, a cam shaft, gears connecting said pinion and cam shaft, a driving belt, a belt shifter adapted to move said belt off of the fast pulley and onto it again without moving it off of the loose pulley, a cam on the cam shaft for operating the belt shifter, mechanism for moving the tap shaft, and a cam on a cam shaft for operating said mechanism, substantially as and for the purpose specified. 5th. In a nut tapping machine, in combination, a longitudinally movable tap shaft, fast and loose pulleys thereon, a belt for driving them, a belt shifter, a pulley concentric with said shaft and constantly driven in one direction, a friction clutching device on said pulley and shaft, a constantly driven cam shaft, a cam thereon operating said belt shifter, a cam and intermediate mechanism for moving said tap shaft longitudinally and causing the engagement of said friction device, substantially as and for the purpose specified. 6th. In a nut tapping machine, in combination, a tap shaft, means for alternately revolving the same in opposite directions, a reciprocating feed slide having in its top a recess to receive a nut, a feed spout adapted to discharge into said recess, a pressure finger entering said spout, and means for actuating said finger so as to release one nut at a time, substantially as and for the purpose specified. 7th. In a nut tapping machine, in combination, a tap shaft, means for alternately revolving the same in opposite directions, a reciprocating feed plate, a feed spout, a pressure finger entering said spout, and a revolving cam for operating said finger, substantially as and for the purpose specified. 8th. In a nut tapping machine, in combination, a longitudinally movable vertical tap shaft, means for alternately revolving said shaft in opposite directions, mechanism for raising said tap shaft, a feed spout adapted to discharge the nuts singly into the feed slide, a reciprocating feed slide having a recess into which the nuts drop from the feed spout, mechanism for moving said slide back and forth between the feed spout and tap shaft, and a wrench adapted to engage with the nut on the tap, when said tap shaft is raised, substantially as and for the purpose specified. 9th. In a nut tapping machine, in combination, a tap shaft, means for alternately revolving the same in opposite directions, a hopper, a vertically reciprocating feed plate therein having an inclined groove in its top edge, a reciprocating feed slide having in its top side a recess to receive a nut, and a feed spout adapted to receive the nuts from the feed plate and to discharge them one by one into said recess in the feed slides, substantially as and for the purpose specified. 10th. In a nut tapping machine, in combination, a hopper, a feed plate vertically movable through the bottom of said hopper, a crank shaft for actuating said plate, a driving shaft, a bevel gear fixed to one of said shafts, a shell t^2 secured to the other shaft, a bevel gear mounted on said shaft having a hub which projects into said shell, a friction band surrounding said hub, and set screws passing through said shell and engaging with said band, substantially as and for the purpose specified. 11th. In a nut tapping machine, a longitudinally movable vertical tap shaft and mechanism for alternately revolving the same in opposite directions, mechanism for periodically raising said shaft, a sleeve loose upon said shaft, a fixed collar above said sleeve, and a counterbalanced lever engaging with said sleeve, substantially as and for the purpose specified.

No. 53,587. Linotype Machine. (*Machine linotype.*)

Ottmar Mergenthaler, Baltimore, Maryland, U.S.A., 26th September, 1896; 6 years. (Filed 11th August, 1896.)

Claim.—1st. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device adapted to advance the space bars successively. 2nd. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device adapted to advance the space bars successively, the length of one of the steps on the space bars being equal to the distance of the highest step on the shoving device above the base of the lowest step therein. 3rd. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a plurality of separate stepped pushers provided with shoulders or projections overlapping from one shover to the next for completing the advance into the line of steps entered, but not yet advanced, to their final positions in the line. 4th. In a justifying mechanism, and in combination with a composed line of

matrices and stepped spaces therein, a stepped shoving device to advance the space bars successively, and a stepped slide to act



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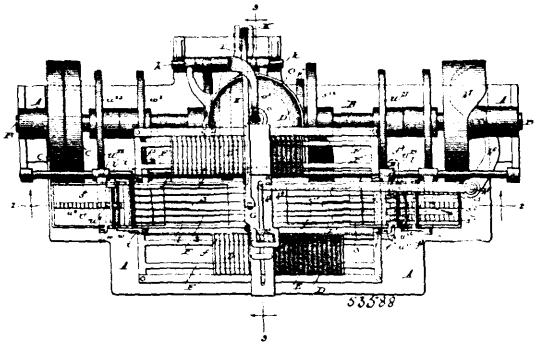
upon the shoving device. 5th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device to advance the space bars successively, and a stepped slide to act on the shoving device, the height of the steps on the slide being equal to the length of the steps on the space bar. 6th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a series of independently movable stepped shovers, and a step slide arranged to act on the series of shovers, substantially as described. 7th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device to advance the spaces successively, means for advancing the shoving device, and means for checking its advance when the line is released endwise. 8th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device adapted to advance the spaces successively, means for advancing the shoving device, and pawl and ratchet mechanism to limit its advance when the line is released. 9th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a separate shoving device comprising a number of separate pushers or shovers provided with ratchet teeth, and pawl devices co-operating with said ratchet teeth to limit the advance of the pushers. 10th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device comprising a number of separate stepped shovers with ratchet teeth thereon, a pawl mechanism co-operating with said ratchet teeth, a lever for disengaging the pawls, and a cam for operating said disengaging device at the same time the clamping jaws of the line are closed. 11th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device comprising a number of separate pushers or shovers arranged in line, means for advancing the shovers, a pawl and ratchet mechanism for limiting their advance when the line is released, and means for throwing the pawl and ratchet mechanism out of engagement when the line is clamped. 12th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device, means for advancing the shoving device when the line is clamped endwise, means for arresting the further advance of the shoving device while the line is released, an executor for bringing to their final positions in the line the steps partly entered by the shoving device, and means for substantially compressing the line to the length required. 13th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device, a stepped slide, and means for advancing and retreating the slide. 14th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device, a stepped slide to advance the same, means constantly tending to move the slide in one direction, and a cam acting in opposition to said means. 15th. In a justifying mechanism, and in combination with a composed line of matrices and spaces therein, a stepped shoving device, a stepped slide for advancing the same, a spring-actuated gearing for actuating the slide, and a cam operating in opposition to the spring. 16th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a stepped shoving device, and a stepped slide for operating the same, the lower end of the shoving device and the edges of the slide steps being correspondingly inclined. 17th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a shoving device, a stepped slide for actuating the same, a rack on the slide, a pinion engaging the rack, a sprocket-wheel on the pinion shaft, a sprocket chain, a spring connected with and tending to move the chain, an oscillating lever connected to the opposite end of the chain, and a cam for operating the lever. 18th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, means for operating the spaces for justifyihg the line, vice jaws to limit the length of the line, said jaws being normally without tendency to close during justification, and means for closing them after final adjustment of the spaces has taken place, whereby justification may be carried on without interference of the jaws. 19th. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, the jaws to limit the length of the line, mechanism for opening and closing said jaws, the stepped pushers having ratchet-teeth, a pawl engaging said teeth to limit the advance of the spaces and pushers when the jaws are opened, and connections acting to disengage the pawl when the jaw is closed, and *vice versa*. 20th. In a justifying mechanism, and in combination with stepped pushers, the pawl engaging the same, the rock shaft n^7, and its arms for disengaging the pawl, the sliding jaw, its controlling bar b^4, the eccentric b^5, and its crank for operating said bar, and the rod connecting the crank with the arm of the rock shaft n^7. 21st. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, in combination with a stepped shover to advance the spaces successively in the line, and an executor substantially as shown to engage the spaces and complete the advance of the entered step. 22nd. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, a plurality of stepped pushers each having a lip or shoulder overlapping the next, means for advancing said pushers successively, and an executor to finally engage the spaces having steps partly entered in the line to complete their entrance. 23rd. In a justifying mechanism, and in combination with a composed line of matrices and stepped spaces therein, in combination with mechanism for advancing the spaces successively to insert but one additional step at a time into the line until the line is filled out, means for carrying some of the inserted steps to their final positions in the line simultaneously with the insertion of a subsequently inserted step or steps, whereby the steps successively itserted into the line are in part advanced to their final positions in the line, while the insertion of others is proceeding. 24th. In a linotype machine, a knife block carrying both trimming knives, and bodily removable without disturbing the adjustment of the knives. 25th. In a linotype machine, a knife block carrying both trimming knives, and bodily removable without disturbing the adjustment of the knives, and means for locking said knife block in place permitting its speedy release. 26th. In a linotype machine, the combination of a mould carrying-wheel, a knife block movably mounted in the frame, and an aligning surface carried by the mould-wheel and acting on the knife block to determine the relation of the knives to the mould. 27th. In a linotype machine, a knife block and spring tending to move the same in one direction, in combination with the mould carrier acting in opposition to the spring to determine the position of the knife support and its relation to the mould. 28th. In a linotype machine, the mould disc and the mould therein, an adjustable aligner, and a movable knife block, co-operating with an adjuster on said aligner. 29th. In a linotype machine, the mould disc and mould therein, in combination with the aligning device for the knife block, consisting of the adjustable plate united with the disc by a sliding connection in a line diagonal to the mould, whereby the distance of the aligner from the mould may be varied without destroying parallelism. 30th. In a linotype machine, the sliding mould closing jaw a, combined with friction devices for opening and closing the same. 31st. In a linotype machine, and in combination with the sliding jaw a, its operating rod c^1, the vibrating arm c^3, and the frictional connection between said arm and rod. 32nd. In a linotype machine, the sliding jaw a, its operating rod c^1, the vibrating arm c^3, the frictional device connecting the same with the rod, and the rock shaft c^4, connected with arm c^3, by devices allowing lost motion between them, substantially as shown. 33rd. In a linotype machine, the slotted mould wheel, in combination with the inserted mould having overhanging ears at its two ends, and the retaining screws seated in the disc and having their heads cut away on one side as shown. 34th. In a justifying mechanism, and in combination with a series of stepped spaces, mechanism for advancing part of the spaces in the line to predetermined points without advancing the remainder. 35th. In a justifying mechanism, in combination with a line of type matrices or dies, a series or spaces each thicker at one end than at the other, and means for advancing the spaces through the line step by step predetermined distances to effect justification. 36th. In a justifying mechanism, an elongated space thicker at one end than at the other, in combination with means for positively advancing said space through the line to predetermined positions. 37th. In combination with a line of matrices, elongated space bars therein, jaws or abutments to limit the elongation of the line, means for advancing the space bars with a yielding pressure through the line, and means for thereafter advancing the space bars positively through the line to predetermined positions. 38th. In a justifying mechanism, a series of stepped space bars, means for advancing said bars less than the entire number in the line at the time to enter their proper steps in the line, and means thereafter acting on all the spaces in the line to ensure the full entrance of the previously entered steps. 39th. In a justifying mechanism, a series of stepped spaces and means for adjusting the same endwise through the line to enter their appropriate space therein, in combination with a movable plate or carrier having a series of lips or shoulders adapted

to engage all the spaces in the line, whereby the carrier is enabled to advance all of the entered steps fully into the line whatever the position of the spaces in relation to each other and to the line. 40th. In a justifying mechanism, and in combination with a series of stepped spaces, a series of pushers acting to advance the spaces step by step through the line to enter their appropriate steps therein, and a plate or carrier finally acting on all the spaces in the line to ensure the seating of the previously entered steps fully within the line. 41st. In a justifying mechanism, a pusher for adjusting the spaces arranged to automatically move different and definite distances to give variant positions to the spaces. 42nd. In a linotype machine, and in combination with a space adjusting blade or executor, and a movable melting pot, intermediate connections through which the pot moves the blade. 43rd. In a justifying mechanism, and in combination with a line of matrices and stepped spaces therein, jaws or abutments to limit the length of the line, means for adjusting the spaces through the line to effect its elongation, and means for separating the jaws to permit the entrance of the last step and thereafter to close the jaws. 44th. In a justifying mechanism, and in combination with the line of matrices and stepped spaces therein, mechanism for adjusting the spaces, and mechanism for automatically compressing the line after the final adjustment of the spaces. 45th. In a justifying mechanism, in combination with a series of spaces movable endwise through the line, an operating device arranged to engage the thin ends of the spaces and pull them through the line to the required positions.

No. 53,588. Linotype Machine. (*Machine linotype.*)



Ottmar Mergenthaler, Baltimore, Maryland, U.S.A., 26th September, 1896; 6 years. (Filed 11th August, 1896.)

Claim.—1st. In a linotype casting machine, a galley adapted to receive of composed lines of matrices, and a casting mechanism adapted to receive said lines from the galley. 2nd. In a linotype casting mechanism, the combination of two galleys or holders for composed lines of matrices, and an intermediate casting mechanism arranged to receive the matrices from one galley and deliver them to the other. 3rd. The two sliding galleys, each grooved or channelled to receive composed lines of matrices, the intermediate mould and guide, and a reciprocating carrier arranged to deliver the successive lines from the galley to the guide, and thence to the second galley. 4th. The sliding galleys and means for advancing them step by step, in combination with the intermediate guide, the reciprocating matrix carrier, the mould adjacent to the guide, and means for supplying the mould with molten metal. 5th. In a linotype casting machine, and in combination, independent matrices, a guide to hold them in line, a mould, the rising and falling tables, and justifying slides or bars mounted on the tables and arranged to advance through the matrix line. 6th. The movable galleys, the lifting tables, the intermediate guide, the mould thereunder, and the melting pot delivering into the mould, when combined for joint operation, substantially as described. 7th. In combination with the mould, the matrix supporting guide movable to and from the mould, and the matrices adapted to embrace or straddle the mouth of the mould, substantially as described. 8th. The hollow cylindrical mould wheel or carrier, in combination with means for presenting matrices externally thereto, means for delivering molten metal thereto from the interior, and an internal ejector to discharge the slugs or linotypes. 9th. The hollow, cylindrical mould carrier, in combination with means for presenting the matrices externally thereto, and the melting pot having its delivery mouth extended within the carrier. 10th. In combination with the hollow cylindrical mould carrier, the internally arranged knife, to dress the base of the slugs or linotypes. 11th. In a linotype machine, a rotary carrier, provided with a plurality of moulds, in combination with mechanism for presenting composed lines of matrices, mechanism for delivering molten metal, mechanism for trimming the slugs or linotypes while in the moulds, and ejecting devices to deliver the linotypes from the moulds, and means for intermittingly rotating the carrier to present each mould to the said mechanisms in the order named. 12th. In a linotype casting mechanism, the combination of a hollow, cylindrical carrier, provided with a plurality of moulds, mechanism for presenting composed lines of matrices externally to the moulds one at a time, a melting pot and means for delivering metal therefrom internally to the moulds, and means for operating the carrier to present and place its moulds successively between the pot and the matrix support. 13th. In a linotype machine, a rotary carrier, a series of moulds therein, casting devices to co-operate therewith, means for moving the mould carrier intermittingly, and a movable knife arranged to dress the base of the linotypes in the successive moulds and while the latter are at rest. 14th. The hollow cylindrical carrier, in combination with the ribbed moulds seated therein, and the adjustable mould-confining plates. 15th. In a linotype casting mechanism, the sectional moulds having adjustable liners and the fastening blades adapted to engage and hold the liners. 16th. In a linotype machine, the combination of a mould, and a movable carrier therefor, a reciprocating knife to trim the base of the slug or linotype in the mould, and means for moving the knife and the mould alternately, whereby the trimming of the slug may be effected while the mould is at rest. 17th. In a linotype machine, the combination of the following elements: A galley or holder containing composed lines of matrices, a casting mechanism, and a mechanism for presenting the composed line of matrices successively to the casting mechanism. 18th. The method of spacing out a composed line of matrices, consisting in thrusting a series of stepped space bars through said line from opposite sides until its elongation is effected, thereafter withdrawing the spaces on one side sufficiently to remove their partly entered steps from the line, and finally, advancing the spaces from the opposite side a further distance. 19th. The method of spacing out a composed line of matrices, consisting in introducing the thin ends of stepped spaces into the line, advancing the spaces through the line by a yielding pressure until it reaches the predetermined limit, and finally, slightly withdrawing a portion of the spaces and advancing the remaining spaces further into the line, to fill the space vacated by the receding spaces. 20th. The method of spacing out a composed line of matrices, consisting in introducing into the line, at points where spaces are to occur, blank plates, and thereafter thrusting through the line adjacent to said plates, a series of stepped spaces. 21st. In a justifying mechanism, and in combination with a line of matrices and stepped spaces, mechanism for advancing the spaces through the line to elongate the same, means for limiting such elongation of the line, and mechanism for effecting the retreat of the partly entered steps which are unable to fully enter the line. 22nd. In a justifying mechanism, a series of laterally movable space bars, a composed line of matrices containing selecting plates adapted to engage the respective space bars, and means for advancing the matrix line endwise past the spaces, whereby the ends of the spaces are distributed along the line in position to enter the same at the required points. 23rd. In a justifying mechanism, the combination of a line of matrices, a series of variant plates inserted in said line, a series of elongated spaces having ends of variant forms, means for shifting the matrix line past the ends of the spaces that the latter may be distributed by the plates, and means for adjusting the spaces endwise through the line to effect the justification. 24th. In a justifying mechanism, and in combination with means for presenting a line of matrices, two series of stepped spaces arranged and adapted to be thrust through the matrix line from opposite sides. 25th. In a justifying mechanism, and in combination with means for presenting a line of matrices, two series of space bars, those of one series connected with a single slide and adapted to be advanced equally and in unison through the line, and those in the opposite side divided into two or more groups, and connected with means for advancing those of one group slightly in advance of those in the next group, whereby the line may be lengthened by the action of less than the whole number of spaces at a time. 26th. In a justifying mechanism, and in combination with stepped spaces, a series of connected slides attached thereto having a limited, independent motion, for the purpose of thrusting their spaces through the line unequally. 27th. In a justifying mechanism, and in combination with a series of stepped space bars, a series of slides or carriers attached thereto, means for causing these slides to advance primarily different distances, and means for further advancing the slides in unison. 28th. In a justifying mechanism, a series of stepped spaces, a supporting slide for advancing the same through the line in series, means for closing the ends of said spaces together laterally when not in action, means for distributing the ends of the spaces along the line to suitable points for entering the same, and means for thrusting said spaces endwise through the line. 29th. In combination with a line of matrices, two series of stepped space bars, slides and connections thereto for advancing said spaces with yielding pressure through the line of matrices, the pawl and ratchet mechanism for slightly withdrawing one series of spaces, and a pawl and ratchet mechanism for further advancing the other series of spaces. 30th. In a justifying mechanism, and in combination with means for sustaining a line of matrices, a stepped space bar having a flexible portion, and a slide to which said space bar is pivoted, that its end may swing laterally, that is to say, lengthwise of the matrix line.

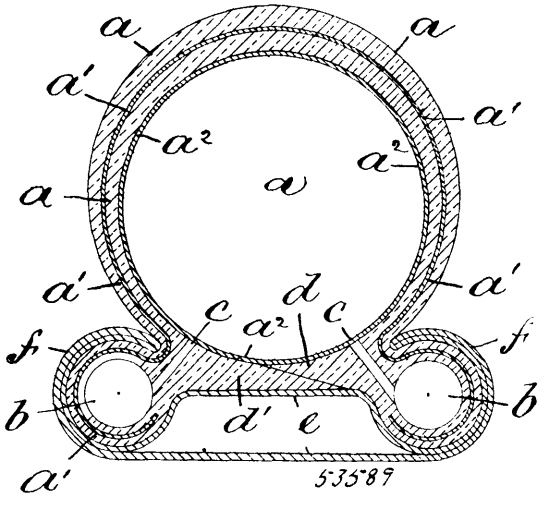
No. 53,589. Velocipede and Other Wheel Tire.

(*Bandage de roue de vélocipède, etc.*

James Joseph Warry, Birkenhead, Chester, England, 26th September, 1896; 6 years. (Filed 5th September, 1896.)

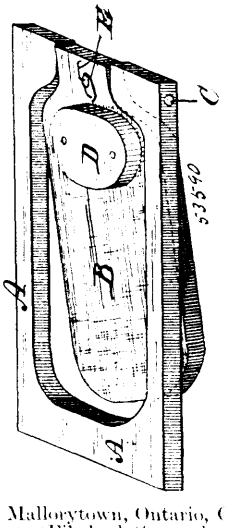
Claim.—1st. In a pneumatic tire, the combination of a single main inflation tube and a fastening tube or tubes on the lower out-

side parts thereof, communicating with the interior of the main inflation tube, and a rim having open channels larger at the interior



than at the openings in which said fastening tubes fit, substantially as set forth. 2nd. A pneumatic tire, consisting of a single main inflation tube and a fastening tube or tubes thereon, fitting in a channel or channels in the rim and adapted to be inflated, and having overlapping edges by which the said main tube is sealed, said edges being disposed so as to lie or rest upon the rim, substantially as and for the purposes set forth. 3rd. The pneumatic tire, consisting of the tubular inflated part a with textile strengthening lamina, fastening tube b, communicating with the interior of the tubular part a, a rim c, with channels f in which the tubes b lie, and the overlapping edges d, d^1, as set forth. 4th. In a pneumatic tire, a single main inflation tube having an overlapping flap or edges by which the air tightness of the tire is maintained, and wires such as b therein, by which the pressure of air within the tire is prevented from forcing it out of place or of straining or moving the overlapping edges from the required position, for the purposes set forth. 5th. A pneumatic tire, consisting of a single main inflation tube having annular channel portions such as b, fitting in channels f in the rim, and canvas or like material a^2 extending across said channels, and overlapping edges within the rim by which the tire is sealed, substantially as set forth. 6th. A pneumatic tire, consisting of a single main inflation tube a, wires b, grooved or channelled parts b, and overlapping edges d, d^1, as herein set forth.

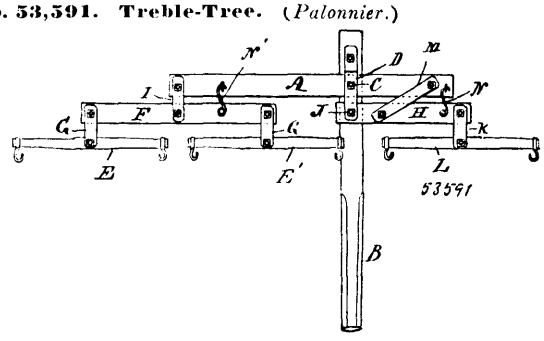
No. 53,590. Shirt-Bosom Ironing-Board.
(*Planche à repasser pour chemises.*)



George S. Reynolds, Mallorytown, Ontario, Canada, 26th September, 1896; 6 years. (Filed 8th September, 1896.)

Claim. 1st. The combination of the bosom-board section B, and the bordering section A, joined by a pintle C, passing through both sections, whereby they are hinged together flush with one another to be uniformly flat, as set forth. 2nd. The combination of the bosom-board section B, having a neck-block D planted thereon, and the surrounding or bordering section A hinged to section B by a pintle C passing through both sections, and with or without the spring clasp E, as set forth.

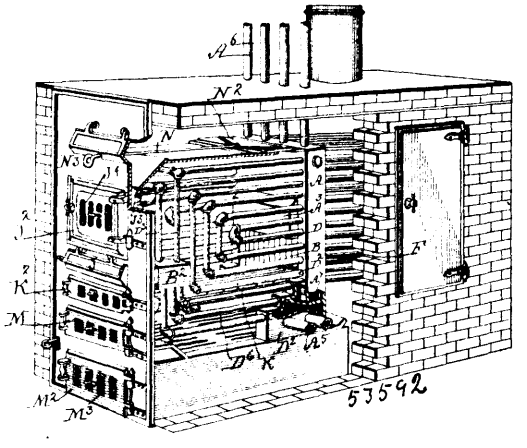
No. 53,591. Treble-Tree. (*Palonnier.*)



Arthur W. Rowsom, Whitehurst, Ontario, Canada, 26th September, 1896; 6 years. (Filed 8th September, 1896.)

Claim. 1st. The combination with the whiffle-tree A, pole B, whiffle-tree F, and double-trees E, E¹, of the lever bar H, bolt J, pivotal straps or connecting links M, and single-tree L, as set forth. 2nd. A treble-tree, comprising whiffle-trees A and F, double-trees E, E¹, lever bar H, diagonal link M, single-tree L, and straps or links G, I, K, substantially as set forth.

No. 53,592. Hot Water Furnace.
(*Fournaise à eau chaude.*)

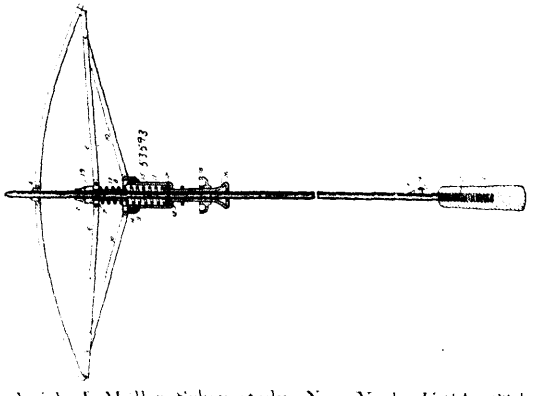


Joseph T. Robbins, Newton, Iowa, U.S.A., 26th September, 1896; 6 years. (Filed 31st August, 1896.)

Claim. 1st. An improved hot water furnace, comprising a suitable casing, a vertical water chamber extended transversely of the central part of the furnace and having a draft passage in its lower end, a draft passage leading from the furnace in front of the vertical water chamber to the flue, means for closing said passage and a draft passage from the furnace in the rear of the water chamber to the flue, a grate made of water pipes connected with said water chamber, above the draft passage in said chamber, and a grate beneath the said draft passage, for the purposes stated. 2nd. In a hot water furnace, a central chamber, adapted to be extended transversely of a furnace to divide the same into two compartments and having a draft passage in its under central portion, an outward projection on its front face above the central portion having a horizontal under surface and a series of pipes adapted to form a grate screwed into said horizontal under surface, and extended downwardly and then forwardly, for the purposes stated. 3rd. In an improved furnace the combination of a hollow water front adapted to be extended transversely of the furnace and having a horizontal bottom, a central water chamber having a draft passage in its lower end, a part of its front face extending outwardly and provided with a horizontal under surface and a grate composed of a number of pipes screwed into the bottom of the front chamber then extended horizontally and then upwardly and screwed into the bottom of said projection on the central water chamber, for the purposes stated. 4th. The combination in a hot water furnace of a central chamber adapted to extend transversely of a furnace to divide the same into two parts and having a draft passage formed in the under central portion, notches or steps formed in the lower slide portions of its front face, an outward projection formed on its front face and having a horizontal bottom, a water front adapted to extend transversely of the furnace, a grate composed of a plurality of water pipes connected with the horizontal bottom of the projection on the front face of the central water chamber extended downwardly therefrom and then forwardly and finally upward into the said water front, for the purposes stated. 5th. The combination in a hot water furnace, of a central chamber adapted to extend transversely of a furnace to divide the same into two parts and having a draft passage formed

in its under central portion, notches or steps formed in the lower side portions of its front face, an outward projection formed on its front face, and having a horizontal bottom, a water front adapted to extend transversely of the furnace, a grate composed of a plurality of water pipes connected with the horizontal bottom of the projection on the front face of the central water chamber extended downwardly therefrom and then forwardly and finally upward into the said water front, a plurality of pipes connected with the side portions of the central water chamber extended forwardly therefrom and curved backwardly again into the said chamber in the same vertical plane, a plurality of pipes connected with the aforesaid notches or steps in the central water chamber passed forwardly and then upwardly into the water front, and a plurality of pipes connected with the sides of the central water chamber and extended forwardly and then downwardly into the water front, all in the same vertical plane, and a plurality of pipes connected with the top and forward surface of the central water chamber projecting forwardly then transversely of the furnace and backward into the central water chamber in the same horizontal plane, for the purposes stated. 6th. The combination, in a hot water furnace, of a central chamber adapted to extend transversely of a furnace to divide the same into two parts and having a draft passage formed in its under central portion, notches or steps formed in the lower side portions of its front face, an outward projection formed on its front face and having a horizontal bottom, a water front adapted to extend transversely of the furnace, a grate composed of a plurality of water pipes connected with a horizontal bottom of the projection on the front face of the central water chamber extended downwardly therefrom and then forwardly and finally upward into the said water pipes, a plurality of pipes connected with the side portions of the central water chamber extended forwardly therefrom and curved backwardly again into the said chamber in the said vertical plane, a plurality of pipes connected with the aforesaid notches or steps in the central water chamber passed forwardly and then rearwardly into the water front and a plurality of pipes connected with the sides of the forward face of the central water chamber extended forwardly into the water front, all in the same vertical plane, and a plurality of pipes connected with the top and forward surface of the central water chamber projecting forwardly then transversely of the furnace and backward into the central water chamber, all in the same horizontal plane, a plurality of pipes connecting with the central chamber below the grate, and a series of rows of pipes having horizontal partitions in their central portions extending to a point near their rear ends, in a staggered manner, and a row of pipes extending from the bottom of the central water chamber rearwardly, then upwardly, and into the central water chamber at its top, all arranged and combined substantially in the manner set forth, for the purposes stated. 7th. An improved furnace, comprising a suitable casing, a central water chamber having notches or steps in its lower side portions, a projection at its front as set forth, a water front having an inclined central top portion as shown and described, the grate composed of a plurality of pipes elbowed into the central water chamber and the water front as set forth, the pipes at the sides and top of the chamber in the front of the central water chamber and pipes below the grates connected with the water chamber substantially as shown, the rows of pipes in the back of said central water chamber substantially as shown and described, the air-feeding pipes below the grate as set forth, the air tubes at the sides of the upper fuel door, the door for feeding air to said tube as set forth, a fuel door above the grate, a second grate below the grate proper, a fuel door above said second grate, a door beneath said grate, a plate at the top of the chamber in front of the central water chamber, a damper on said plate, and a flue connected with the chamber in the rear of the central water chamber, all arranged and combined to operate in the manner set forth and for the purposes stated.

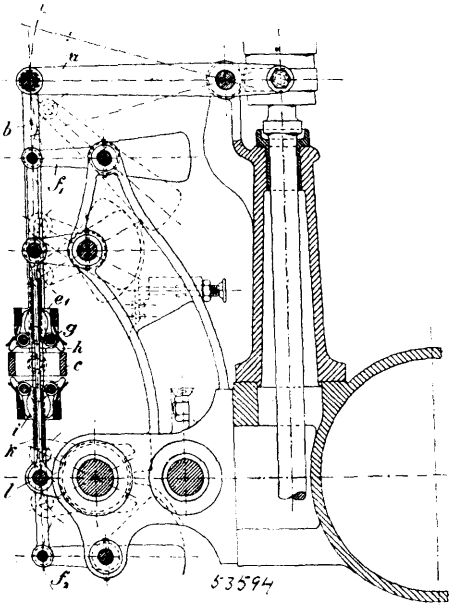
No. 53,593. Self-opening Umbrella. (*Parapluie.*)



Frederick J. Muller, Schenectady, New York, U.S.A., 26th September, 1896; 6 years. (Filed 11th August, 1896.)

Claim.—1st. In an umbrella of the class described, having an upper and lower series of radial braces adapted to operate the ribs thereof by means of an actuating coiled spring surrounding the umbrella-stick between an upper and lower runner to which the inner ends of the said upper and lower series of braces are respectively, pivotally attached, the combination of a depending sleeve incasing the said actuating coiled spring and forming a seat therefor, the lower end of said sleeve being attached to the upper end of a tubular finger-grip sliding on the umbrella-stick and the upper end of the said depending sleeve having a threaded connection with the main part of the lower runner aforesaid and capable of being separated therefrom, with an umbrella-stick adapted to be stripped of its handle and catch readily without the use of tools so as to permit sliding the aforesaid finger-grip, sleeve and spring off or on the umbrella-stick in the manner and for the purposes set forth. 2nd. In an umbrella of the kind described, the lower or main runner 9 having an internally screw-threaded flange, in combination with the band 14 surrounding said main runner, and the sleeve or cup 11, provided with the ridge 15, having its upper end externally screw-threaded and adapted to be connected to the main runner and secure the band 14 in its position, substantially as shown and described.

No. 53,594. Cut-off Valve Regulating Mechanism.
(*Mécanisme régulateur pour soupape de détente.*)



Martin Hanner, Duisburg, Prussia, Germany, 26th September, 1896; 6 years. (Filed 27th August, 1896.)

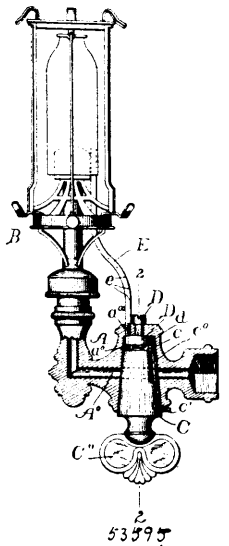
Claim.—1st. In a cut-off regulating mechanism, the combination of the valve or expansion slide, a shifting device therefor connected to the governor and means normally held in position to be operated by said shifting device on motion in either direction to connect said shifting device to the expansion valve or slide to shift the latter and automatically disengage itself therefrom and return to normal position, substantially as set forth. 2nd. In an expansion gear mechanism for steam engines, the combination in a shifting device connected to the governor, detents mounted on each side of said shifting device, a toothed bar connected to the expansion valve or slide and adapted to be engaged by said detents and means of disengaging said detents from said toothed bar and automatically returning them to normal position, substantially as set forth. 3rd. In an expansion gear mechanism for steam engines, the combination of the governor, the frame *e* normally held in central position connected to said governor and adapted to be moved thereby from said central position when the speed of the governor is changed, boxes e^1, e^2, on each side of the frame *e*, detents *i* mounted on said boxes and having arms adapted to be engaged by said frame *e*, and tooth bar *a* connected to the expansion valve or slide and adapted to be engaged by said detents arranged and adapted to operate, substantially as set forth. 4th. In an expansion valve gear for steam engines, the combination of the expansion valve, its shaft, and shifting rings and pawls mounted concentrically with said shaft and connected with the governor, substantially as and for the purposes set forth.

No. 53,595. Device for Facilitating the Lighting of Gas Burners. (*Appareil pour faciliter l'allumage des becs de gaz.*)

Leonard Henry Arnold Drueding, New Orleans, Louisiana, U.S.A., 26th September, 1896. (Filed 17th August, 1896.)

Claim.—1st. In a gas fixture, the combination with the valve casing provided with the main passage therethrough and a smaller side passage therein; the main valve plug fitting in said casing and provided with the main opening therethrough and also a groove

therein through which gas may escape from the said main passage in the casing to the said side passage at a certain point during the

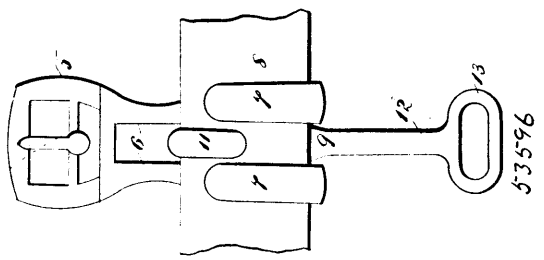


movement of the said main plug; of a secondary plug also working in said casing and adapted to open and close said side passage, and means connected with said main plug for turning said secondary plug to open and close said side passage, substantially as described. 2nd. In a gas fixture, the combination with the valve casing provided with the main passage therethrough and a smaller side passage therein; the main valve plug fitting in said casing and provided with the main opening therethrough and also a groove therein through which gas may escape from the said main passage in the casing to the said side passage at a certain point during the movement of the said main plug; of a secondary plug also working in said casing and adapted to open and close said side passage; a pair of shoulders on said secondary plug and a stud on said main plug adapted to engage said shoulders upon said secondary plug and thus turn said secondary plug to open or close said side passage, substantially as described. 3rd. In a device of the character described, the combination with a gas burner of the valve casing provided with the main passage therethrough and a smaller side passage therein; the main plug fitting in said casing, and having the main passage therethrough and provided with a groove or passage adapted to communicate with the main passage in the casing at a point between the open and closed positions of the plug, a perforated tube leading from the outer end of said side passage in the casing to the tip of the burner; a secondary plug also fitting in said casing, having a passage therethrough, and adapted to open and close the said side passage, and means operated by said main plug for turning said secondary plug through the proper angle to open or close the side passage, substantially as described. 4th. In a device of the character described, the combination with a gas burner, of the valve casing provided with the main passage therethrough and a smaller side passage therein; the main plug fitting in said casing, and having the main passage therethrough, and provided also with a vertical groove therein to one side of the main passage; a perforated tube leading from the outer end of said side passage in the casing to the tip of the burner; a secondary plug also fitting in said casing, and having a passage therethrough adapted to be turned into and out of line with said side passage in the casing, a pair of shoulders upon the periphery of said secondary plug, and a stud on said main plug adapted to engage said shoulders on said secondary plug, and turn the same, substantially as described. 5th. In a device of the character described, the combination with the valve casing having the main passage therethrough and a smaller side passage therein, and a main plug adapted to open and close the main passage, and also to admit gas to and to shut gas off from said side passage; of a secondary plug operated by said main plug during a portion of its movement, and adapted to open and close said side passage, substantially as and for the purposes described.

No. 53,596. Attachment for the Thills or Shafts of Carriages, Buggies, etc. (*Attache pour limonières de voitures, etc.*)

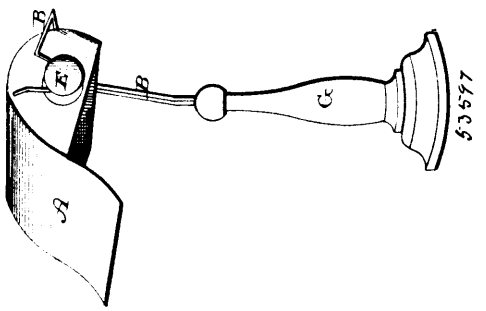
William R. Chapin and Archibald Law Lindsay, both of Wyoming, Pennsylvania, U.S.A., 26th September, 1896; 6 years. (Filed 18th August, 1896.)

Claim.—1st. A harness attachment for the shafts or thills of a vehicle, said attachment being constructed as herein described, and as shown in the drawing. 2nd. A harness attachment for the shafts or thills of a vehicle, consisting of circular or segmental carrying hooks or jaws, which open upwardly, and which are adapted to receive the shaft or thill, said hooks or jaws being provided with an upwardly directed buckle or other fastening device for the back-band of the harness, and a lever pivotally connected with said carrying hooks or jaws, and provided with means for securing the belly-band thereto,



said lever being adapted to lock the shaft or thill in the carrying hooks or jaws, substantially as shown and described. 3rd. The herein described harness attachment, for the shafts or thills of vehicles, consisting of a buckle, provided with downwardly directed shanks or arms, at the lower ends of which are outwardly and upwardly curved carrying hooks or jaws, and a lever pivotally mounted between the lower ends of said shanks or arms, said lever being provided at its upper end with a circular or segmental hook or jaw, which is curved upwardly and outwardly, and the lower end of said lever being extended downwardly, and provided with means whereby the belly-band may be connected therewith, substantially as shown and described.

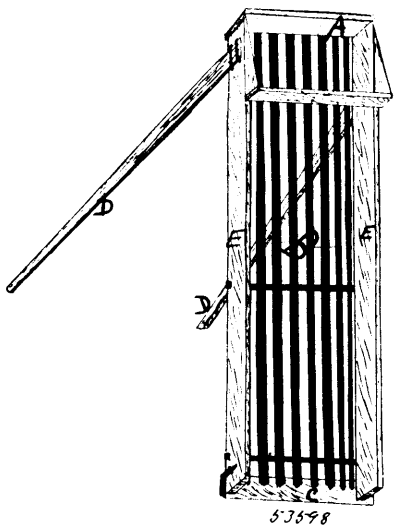
No. 53,597. Adjustable Shade. (*Reflecteur ajustable.*)



Arthur F. Espersen, Tacoma, Washington, U.S.A., 26th September, 1896; 6 years. (Filed 20th August, 1896.

Claim.—The shade having an adjusting knob secured to one end and a lamp socket to the other, combined with a wire supporting frame which has one recessed arm to receive the lamp socket, and another to receive the shank of the knob, substantially as shown.

No. 53,598. Machine for Cleaning Potatoes and Separating the Sprouts therefrom. (*Machine pour nettoyer les patates et détacher les germes.*)

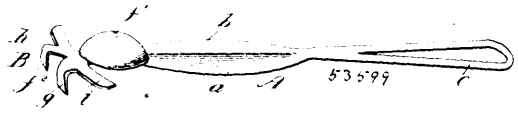


Theophile Brunelle, Tiny, Ontario, Canada, 26th September, 1896; 6 years. (Filed 20th August, 1896.)

Claim. The combination of the feed box A, with the slats B, and the supports C and D and side pieces E, substantially as and for the purpose hereinbefore set forth.

No. 53,599. Hoof Trimming Implement.

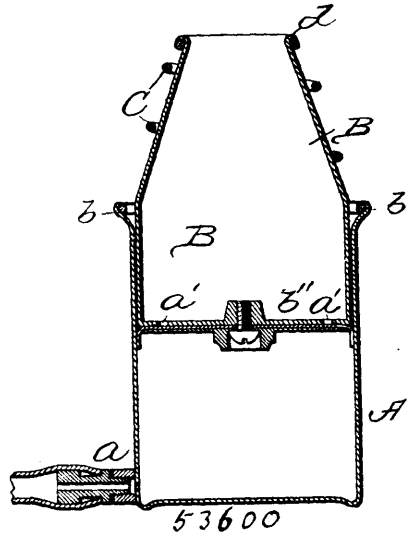
(*Paroir de maréchal.*)



Oscar Wilbanks, Blanco, Arkansas, U.S.A., 26th September, 1896; 6 years. (Filed 21st August, 1896.)

Claim.—1st. In a hoof trimming or paring implement, substantially as herein shown and described, comprising a cutter-blade having a rounded boss, a holder formed with angular and curved prongs, levelling arms, and a rounded socket piece into which the rounded boss of the cutter-blade is snugly fitted, and a pivot connecting the rounded boss and the socket piece, as and for the purposes described. 2nd. In a hoof paring or trimming implement, comprising a holder made in a single piece with the partly ball-shaped socket, the hook-shaped prongs, and the outwardly extending levelling arms, a double-edged cutter blade provided with the rounded boss which is fitted snugly into the socket, and a pivot connecting the rounded boss of the cutter-blade to the rounded socket portion of the holder, all arranged and adapted for operation in the manner and for the purposes described.

No. 53,600. Pneumatic Pump. (*Pompe pneumatique.*)



William Frank Browne, New York, State of New York, U.S.A., 26th September, 1896; 6 years. (Filed 31st August, 1896.)

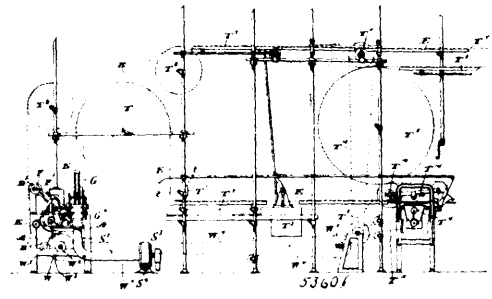
Claim. 1st. In a pneumatic pump, the cylinder or barrel having a projecting flange, and the piston or plunger B, having at its upper end a suitable flange, as *d*, in combination with a suitable spring interposed between said flanges, substantially as and for the purpose described. 2nd. In a pneumatic pump, the cylinder or barrel having a circumferential flange, and the piston or plunger having a conical upper end and an outwardly turned flange, at or near its top, in combination with a coiled spring interposed between said flanges and adjacent to said conical portion of the plunger, substantially as and for the purpose described.

No. 53,601. Machine for Making Matches.

(*Machine pour faire des allumettes.*)

The Diamond Match Company, Chicago, Illinois, assignee of Jacob Pulver Wright, New Haven, Connecticut, both in the U.S.A., 28th September, 1896; 6 years. (Filed 1st January, 1896.)

Claim.—1st. In combination with a hopper for the splints, and a travelling feeder with splint receiving pockets, a swinging and reciprocating clearer at or near the point where the feeder passes from the hopper, and means for swinging such clearer inward with reference to the hopper, and raising it, substantially as and for the purpose specified. 2nd. In combination with a hopper for the splints, and a travelling feeder with splint-receiving pockets, a clearer at or near the point where the feeder leaves the hopper, having a pair of swinging and reciprocating plates, and means for swinging such plates inward with reference to the hopper, and raising them, substantially as and for the purpose shown. 3rd. In combination with a hopper for the splints, and a travelling feeder with splint receiving pockets, a clearer, at or near the point where the feeder leaves the hopper, consisting of a series of pairs of swinging and reciprocating plates, and means for moving such pairs of plates successively inward and upward with relation to the hopper contents, substantially as and for the purpose set forth. 4th. In combination with a hopper for the splints, and a travelling feeder with splint re-



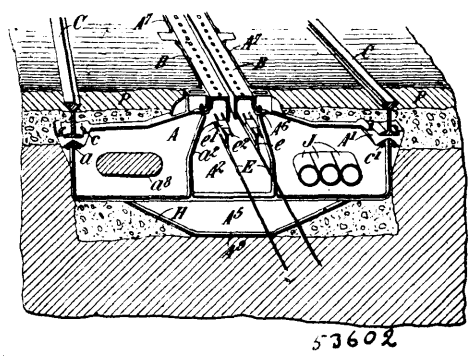
ceiving pockets, a clearer, at or near the point where the feeder leaves the hopper, having a plate supported so as to be capable of a swinging and rising and falling motion, a rotary piece and an eccentric on the latter engaging the plate, substantially as and for the purpose described. 5th. In combination with a hopper for the splints, and a travelling feeder with splint-receiving pockets, a clearer, at or near the point where the feeder leaves the hopper, having a pair of plates supported so as to be capable of both a swinging and a rising and falling motion, a rotary piece, and a pair of eccentrics thereon engaging and actuating the plates, substantially as and for the purpose specified. 6th. In combination with a hopper for the splints, and a travelling feeder with splint-receiving pockets, a series of pairs of plates, at or near the point where the feeder leaves the hopper, means for supporting such plates so that they can swing and rise and fall, a rotary shaft, and a series of pairs of eccentrics thereon engaging and actuating the plates, substantially as and for the purpose shown. 7th. In combination with a hopper for the splints, and a travelling feeder with splint-receiving pockets, a series of pairs of plates, at or near the point where the feeder leaves the hopper, means for supporting such plates so that they can swing and rise and fall, a rotary shaft, and a series of pairs of eccentrics thereon engaging and actuating the pairs of plates, the pairs of eccentrics being differently arranged on the shaft with reference to the rotation of the latter, substantially as and for the purpose set forth. 8th. In combination with a hopper for the splints, and a travelling feeder with splint-receiving pockets, a pair of clearer plates, at or near the point where the feeder leaves the hopper, having slots, a rod engaging such slots, a rotary shaft and a pair of eccentrics thereon, engaging and actuating the plates, substantially as and for the purpose described. 9th. In combination with a hopper for the splints, and a travelling feeder with splint-receiving pockets, a series of pairs of plates, at or near the point where the feeder leaves the hopper, each having a slot, a rod engaging the slots in the plates, a rotary shaft and a series of pairs of eccentrics on the shaft engaging and actuating the plates, the different pairs of eccentrics being situated on the shaft so that their portions of greatest eccentricity are in different planes radial from the axis of the shaft, substantially as and for the purpose specified. 10th. In combination with a hopper for the splints, a travelling feeder for taking the splints from the hopper, having a series of splint-receiving pockets with portions upon which the splints can rest, and the bottoms of the pockets open between such portions, substantially as and for the purpose shown. 11th. In combination with a hopper for the splints, a travelling feeder for taking the splints from the hopper, having portions to support the splints, and ribs extending between such portions so as to form pockets or receptacles for the splints with open bottoms, substantially as and for the purpose set forth. 12th. In combination with a hopper for the splints, a travelling feeder for taking the splints from the hopper, having the portions to support the splints on opposite sides of the middle points and the separate ribs with the spaces between them open, extending between the splint supporting portions of the feeder, an exhaust trunk communicating with the spaces between the ribs, and an exhaust device connected with the trunk, substantially as and for the purpose described. 13th. In combination with a hopper for the splints, a travelling feeder for taking the splints from the hopper, having a series of splint-receiving pockets with openings in their bottoms, and one or more large openings beyond the series of pockets, and an exhaust device connected with the openings in the feeder, substantially as and for the purpose specified. 14th. In combination with a hopper for the splints, a travelling feeder with a series of pockets to receive the splints, and openings between such series, an exhaust device connected with such openings when they are passing the hopper, substantially as and for the purpose shown. 15th. In combination with a hopper for the splints, a travelling feeder having the series of splint-receiving pockets with openings in their bottoms, and the larger openings between the series of pockets, an exhaust device connected with such openings and those in the bottoms of the pockets, substantially as and for the purpose set forth. 16th. In combination with a hopper for the splints, the hollow rotary feed drum having the two ends with separate ribs extending across from one end to the other, so as to leave open bottomed splint receiving spaces between the ribs, substantially as and for the purpose described. 17th. In combination with a hopper for the splints, the hollow rot-

ary feed drum having the two ends with several series of ribs extending across between such ends to leave between the ribs splint-receiving spaces with openings in their bottoms, circumferentially extending ribs on the drum ends between the series of ribs and openings in the drum periphery between such circumferentially extending ribs, substantially as and for the purpose shown. 18th. In combination with a hopper for the splints, the hollow rotary feed drum having a series of splint-receiving pockets with portions to support the splints on opposite sides of the middle points of the latter, and the bottoms of the pockets between such portions left open, substantially as and for the purpose specified. 19th. In combination with a hopper for the splints, the hollow rotary feed drum having several series of splint-receiving pockets with openings in their bottoms, circumferential ribs between the series of pockets, and openings between such ribs, substantially as and for the purpose set forth. 20th. In combination with a hopper for the splints, the hollow rotary feed drum having a series of splint-receiving pockets with openings in their bottoms to allow the passage of short splints or pieces of splints, and an exhaust device in communication with the interior of the drum, substantially as and for the purpose described. 21st. In combination with a hopper for the splints, the hollow rotary feed drum, having a series of splint-receiving pockets with portions of their bottoms adapted to support the splints on opposite sides of the middle points of the latter, and the remainder of the bottoms between such portions, open, and an exhaust device communicating with the interior of the drum, substantially as and for the purpose specified. 22nd. In combination with a hopper for the splints, the rotary drum having a series of splint-receiving pockets and an opening in its periphery beyond such pockets, and an exhaust device in communication with the interior of the drum, substantially as and for the purpose shown. 23rd. In combination with a hopper for the splints, the hollow rotary feed drum having several series of splint-receiving pockets with portions of their bottoms left open, and large openings in its periphery between the series of pockets, and an exhaust device communicating with the interior of the drum, substantially as and for the purpose set forth. 24th. In combination with a hopper for the splints, the hollow rotary feed drum having the two ends, several separate series of ribs extending across between such ends with the spaces between the ribs left open to the interior of the drum, circumferentially extending ribs on the drum ends between the series of transverse ribs, and openings or spaces between such circumferentially extending ribs, and an exhaust device communicating with the interior of the drum, substantially as and for the purpose described. 25th. In combination with a hopper for the splints, the hollow rotary drum having openings in its sides or ends, and its periphery provided with splint-receiving pockets with portions of their bottoms open to the interior of the drum, a casing partially enclosing the drum, so as to form a chamber communicating with the opening in the drum ends, and an exhaust device having its trunk connected with such chamber, substantially as and for the purpose specified. 26th. In combination with a hopper for the splints, the hollow rotary drum having openings in its ends, and its periphery provided with several series of splint-receiving pockets with their bottoms between the drum ends open to the interior of the drum and with openings between the series of pockets also communicating with the interior of the drum, a casing in which the drum revolves adapted to form a closed chamber with spaces on each side of the drum communicating with the openings in the drum ends, and a space through which the under side of the drum passes, and an exhaust device in communication with the interior of such casing, substantially as and for the purpose shown. 27th. In combination with a hopper for the splints, the hollow rotary feed drum having openings in its ends, and its periphery formed of two series of ribs extending between the drum ends, such series being separated by large spaces, and circumferentially extending raised portions on the drum ends on opposite sides of such spaces, a casing enclosing the lower side of the drum, and having portions extending up on opposite sides of the drum so as to form spaces or chambers on opposite sides of the drum, in communication only with the openings in the drum ends and the chamber below the drum, an exhaust device, and connections between the same and the latter chamber, substantially as and for the purpose set forth. 28th. In combination with a hopper for holding match splints, a feeder to take the splints therefrom having a moving surface provided with series of splint-receiving pockets separated by unpocketed spaces, substantially as and for the purpose described. 29th. In combination with a hopper for holding match splints, a rotary feed drum having its periphery provided with a series of splint receiving pockets, and unpocketed surfaces at opposite ends of the series of pockets, substantially as and for the purpose specified. 30th. In combination with a hopper for holding match splints, a rotary feed drum having its periphery provided with several series of splint-receiving pockets, and unpocketed portions between the ends of the series of pockets, substantially as and for the purpose shown. 31st. In combination with a hopper for holding match splints, a rotary drum having its periphery provided with one or more series of splint-receiving pockets, with a plane unpocketed portion at the end of the series of pockets, a rotating transfer device having pockets to receive the splints from the feed drum, and means for shifting the splints from the feed drum pockets into those of the transfer device, substantially as and for the purpose set forth. 32nd. In combination with a hopper for holding match splints, a rotary feed drum having in its periphery series of splint-receiving pockets, with unpocketed spaces between the end of the series, a rotary transfer device having splint-receiving pockets, and guides to engage the splints in the pockets of the drum, and shift them therefrom into the pockets of the rotary transfer device, substantially as and for the purpose described. 33rd. In combination with a hopper for holding match splints, a a rotary feed drum having its periphery provided with a series of splint-receiving pockets and an unpocketed portion, an intermittently travelling transfer carrier, means for transferring the splints from the pockets of the drum to the transfer carrier, and means for moving such carrier intermittently, substantially as and for the purpose specified. 34th. In combination with a hopper for holding match splints, a rotary feed drum having its periphery provided with several series of splint receiving pockets, with unpocketed spaces between the ends of such series, a transfer device to take the splints from the drum pockets, an intermittently travelling transfer carrier receiving the splints from the transfer device, and means for intermittently moving the transfer carrier, substantially as and for the purpose shown. 35th. In combination with a hopper for holding match splints, a rotary feed drum having its periphery provided with a series of splint-receiving pockets, and an unpocketed portion beyond the end of such series, the rotary transfer drum, the intermittently travelling transfer carrier receiving the splints from the transfer drum, and means for moving such carrier intermittently, substantially as and for the purpose set forth. 36th. In combination with a hopper for holding match splints, the rotary feed drum having its periphery provided with series of splint-receiving pockets separated by unpocketed portions, the transfer drum having notches or pockets to receive the splints from the drum, the intermittently travelling transfer carrier having parallel portions provided with splint-receiving notches, and means for intermittently moving such transfer carrier, substantially as and for the purpose described. 37th. In combination with a hopper for holding match splints, the travelling feed device having series of splint receiving pockets, and unpocketed portions between the ends of the series of pockets, a transfer device to take the splints from the feed device pockets, the parallel transfer chains provided with splint-holding notches to receive the splints from the transfer device, and means for intermittently moving such chains, adapted to move the chains only while the splints are being transferred to them from the feed device, substantially as and for purpose specified. 38th. In combination with a hopper for holding match splints, the rotating feed drum having its periphery provided with several series of splint-receiving pockets, and unpocketed portions between such series, the rotary transfer drum having the notched discs to receive the splints, guides to shift the splints from the feed drum to the transfer drum, the two parallel transfer chains having splint-holding notches, guides for shifting the splints from the transfer drum into the notches of the chains, and means for moving such chains while the splints are being delivered to their notches, substantially as and for the purpose shown. 39th. In combination with the notched transfer chains, the driving roller around which they pass, and a support for the chains beyond such roller, a toothed wheel on the shaft of such roller, a driven wheel, a pawl on the latter to engage the toothed wheel on the roller shaft, and means for tripping the pawl out of engagement with the toothed wheel at certain intervals, substantially as and for the purpose set forth. 40th. In combination with the notched transfer carrier, and the driving roller for moving it, a toothed wheel rotating with such roller, a driven rotary wheel, a rock shaft journalled thereon, a pawl on such shaft to engage the toothed wheel rotating with the roller, a trip arm on the rock shaft and a device to engage and move such arm to trip the pawl at a certain point in the rotation of the pawl-carrying wheel, substantially as and for the purpose described. 41st. In combination with the notched transfer carrier and the driving roller for moving it, a toothed wheel rotating with such roller, a driven rotary wheel, a rock shaft journalled thereon, carrying a pawl to engage the toothed wheel and a trip arm, a rotary piece carrying a lug in the path of the trip arm, and suitable gearing to give such piece a rotation in the same direction as that of the pawl-carrying wheel, but at a slower rate, substantially as and for the purpose specified. 42nd. In combination with the notched transfer carrier and the driving roller for moving it, a toothed wheel rotating with such roller, a driven rotary wheel carrying a rock shaft provided with a pawl to engage the toothed wheel and a trip arm, a rotary piece carrying a trip lug in the path of the trip arm, and worm gearing for rotating the rotary piece in the same direction as the rotation of the pawl-carrying wheel, but at a slower rate, substantially as and for the purpose shown. 43rd. In combination with the two parallel notched transfer chains, having teeth on their inner sides, the rollers over which such chains pass, having the circumferential grooves to receive and guide the chains, and recesses to engage the chain teeth, substantially as and for the purposes set forth. 44th. In combination with the two parallel notched transfer chains, having teeth on their inner sides, the rollers over which the chains pass having circumferential grooves to receive and guide the chains, and deeper longitudinal grooves to receive the teeth on the chains, substantially as and for the purpose described. 45th. In combination with the notched transfer chains, having teeth on their inner sides, the guides for such chains having rebates to receive the chains and deeper rebates to accommodate the chain teeth, and guide plates to keep the chains in the rebates having overhanging flanges to engage the outer or upper sides of portions of the chains

below the notched portions, substantially as and for the purpose specified. 46th. The transfer carrier, consisting of chains each formed of notched links pivotally connected together, and toothed guide links pivotally connected with alternate notched links, and having their upper or outer edges lower than the notches of the links, substantially as and for the purpose shown. 47th. In combination with a splint-conveying carrier, having two parallel notched portions to support the splints, an exhaust trunk communicating with an opening or throat situated between the notched portions of the carrier, and an exhaust device connected with such trunk, substantially as and for the purpose set forth. 48th. In combination with a splint-conveying transfer carrier consisting of two parallel endless flexible portions provided with splint-receiving notches, an exhaust trunk communicating with an opening or throat between the two parts of the transfer carrier, and an exhaust device connected with such trunk, substantially as and for the purpose described. 49th. In combination with the transfer chains provided with splint-receiving notches, the plate between such chains provided with a slot or elongated opening, an exhaust trunk communicating with such opening, and an exhaust device connected with the trunk, substantially as and for the purpose specified. 50th. In a match making machine, in combination with a carrier to receive the splints and hold them while they are being treated, a travelling conveyer to receive the splints from a source of supply and carry them into a position in front of the receiving and holding carrier, and means for moving such conveyer intermittently, substantially as and for the purpose shown. 51st. In a match making machine, in combination with a carrier to receive the splints and hold them while they are being treated, a travelling transfer device to receive the splints from a source of supply and carry them into a position in front of the receiving and holding carrier, and means for moving the transfer device intermittently, substantially as and for the purpose set forth. 52nd. In a match making machine, in combination with a carrier to receive the s lints and hold them while they are being treated, a travelling endless conveyer to receive the splints from a source of supply and convey them into a position in front of the receiving and holding carrier, and means for moving such conveyer intermittently, substantially as and for the purpose described 53rd. In a match making machine, in combination with a carrier to receive the splints and hold them while they are being treated, means for moving such carrier with a step-by-step movement, a travelling endless conveyer to receive the splints from a source of supply and convey them to a position front of the receiving and holding carrier, and means for moving such conveyer forward intermittently, substantially as and for the purpose specified. 54th. In a match making machine, in combination with a carrier to receive the splints, and hold them while they are being treated, a travelling endless conveyer, provided with splint receiving notches adapted to receive the splints from a source of supply and convey them to a point in front of the splint receiving and holding carrier, and means for intermittently moving such notched conveyer, substantially as and for the shown. 55th. In a match making machine, in combination with a carrier to receive the splints and hold them while they are being treated, the transfer device consisting of a pair of endless notched flexible carriers adapted to receive the splints from a source of supply and carry them to a point in front of the receiving and holding carrier, and means for moving such transfer device intermittently, substantially as and for the purpose set forth. 56th. In a match making machine, in combination with the carrier to receive the splints and hold them while they are being treated, the parallel notched transfer chains to carry the splints to a point in front of the splint receiving and holding carrier, and means for moving such chams intermittently, substantially as and for the purpose described. 57th. In a match making machine, in combination with a carrier provided with means to receive and hold the splints in rows, a moving transfer device to bring a row of splints in front of the carrier, a lifter to lift the splints from such transfer device, and means for driving the splints on the lifter into the splint receiving and holding devices on the carrier, substantially as and for the purpose specified. 58th. In a match making machine, in combination with a carrier provided with means to receive and hold the splints in rows, a transfer device adapted to hold match splints in position parallel to each other, means for moving such device to bring the splints in front of the splint receiving and holding carrier, a notched lifter, means for lifting the same to raise the splints from the transfer device, and means for forcing the splints supported on the lifter into the splint receiving and holding devices of the carrier, substantially as and for the purpose shown. 59th. In a match making machine, in combination with a carrier provided with means to receive and hold the splints, a transfer device adapted to receive and hold a series of splints, means for moving such transfer device to carry the splints in front of the splint receiving and holding carrier, a notched lifter to lift the splints from the transfer device, means for raising the lifter, a beater to engage the splints on the raised lifter and force them into the splints receiving and holding devices of the carrier, and means for actuating such beater, substantially as and for the purpose set forth. 60th. In a match making machine, in combination with a carrier provided with means for receiving and holding match sticks, the transfer device having the parallel notched portions, means for moving such transfer device intermittently, the lifter having the two parallel notched plates to take the splints from the transfer device, means for moving the lifter, and means for moving the splints on the raised lifter into the splint receiving and holding devices of the carrier, substantially as and for the purpose described. 61st. In a match making machine, in combination with a carrier provided with means to receive and hold the splints, the parallel transfer chains with notches to receive splints, the lifter having the two notched plates to raise the splints from the chain notches, and means for forcing the splints supported on the lifter into the splint receiving and holding devices of the carrier, substantially as and for the purpose specified. 62nd. In a match making machine, in combination with a carrier provided with means to receive and hold the splints, the two parallel notched transfer chains, means for moving them intermittently, the lifter having the two parallel notched plates to lift the splints from the transfer chains, means for actuating such lifter, a beater bar to engage the splints on the raised lifter and force them into the splint receiving and holding devices of the carrier, and means for actuating such bar, substantially as and for the purpose shown. 63rd. In a match making machine, in combination with a carrier provided with means to receive and hold the splints, the two parallel notched transfer chains, means for moving them intermittently, the lifter having the two parallel notched plates to lift the splints from the transfer chains, means for actuating such lifter, a beater bar to engage the splints on the raised lifter and force them into the splint receiving and holding devices of the carrier, and means for actuating such bar, substantially as and for the purpose set forth. 64th. In a match making machine, in combination with a carrier provided with series of splint receiving and holding devices adapted to hold the splints in rows, means for moving such carrier with a step-by-step motion, a transfer device to bring a row of splints in front of the carrier, means for moving such device intermittently, a lifter to raise the splints from the transfer device, means for actuating the lifter, and a beater to force the row of splints on the raised lifter into a row of splint receiving and holding devices of the carrier, substantially as and for the purpose descaibed. 65th. In a match making machine, in combination with a carrier provided with devices for receiving and holding splints, a rising and falling lifter to raise a series of splints into position opposite the receiving and holding devices of the carrier, means for forcing the splints so raised into said devices, and means for actuating the lifter, substantially as and for the purpose specified. 66th. In a match making machine, in combination with a carrier provided with devices for receiving and holding splints, a rising and falling lifter to raise the splints up into position opposite the receiving and holding devices of the carrier, a beater bar to force the splints from the lifter into such devices, having a guard to extend over the upper sides of the splints on the lifter, means for actuating the lifter and means for actuating the beater bar, substantially as and for the purpose shown. 67th. In a match making machine, in combination with a carrier provided with devices for receiving and holding splints, a rising and falling lifter having splint holding notches, the beater bar having a guard to extend over and close to the lifter when the latter is raised, means for actuating the lifter, and means for actuating the beater bar, substantially as and for the purpose set forth. 68th. In combination with the lifter having the splint receiving notches, and means for rising and lowering it, the beater bar made movable substantially at right angles to the travel of the lifter, and having a guard frame attached to it extending over the lifter in position to keep any splints down in the notches of the lifter when the latter is raised, and means for actuating the beater bar towards and from the lifter, substantially as and for the purpose described. 69th. The splint lifter, having the two reciprocating heads and the plates carried thereby having their upper edges notched, in combination with the levers, connections between the latter and the heads, cams to actuate the levers to raise the lifter, and one or more springs acting to lower it, substantially as and for the purpose specified. 70th. The beater bar supported on the two swinging arms in combination with the two levers, the links connecting the levers with the bar, the cams for actuating the levers in one direction, and one or more springs acting to swing the levers in the other direction, substantially as and for the purpose shown. 71st. The beater bar and means for movably supporting the same, in combination with the levers, the cams for acutating the same, and links connecting the levers with the bar made adjustable in length, substantially as and for the purpose set forth. 72nd. The beater bar, and means for movably supporting the same in combination with the levers, the cams for actuating the same, and links connecting the levers with the bar, each made in two parts, with a screw sleeve connection between the parts, substantially as and for the purpose described. 73rd. In a match making machine, in combination with a step-by-step moving carrier having s ries of splint receiving and holding devices adapted to receive and hold the splints in rows, means for moving such carrier, the endless transfer chains with splint holding notches moving such chains intermittently to bring successive rows of splints in front of the carrier, a lifter to lift such splints out of the chain notches when the chains are at rest, means for actuating the lifter, a beater bar to force the splints on the raised lifter into the splint receiving and holding devices on the carrier, and means for actuating such beater bar while the carrier is at rest between its step-by-step movements, substantially as and for the purpose specified. 74th. In a match making machine, in combination with a travelling carrier having splint receiving and holding devices and means for feeding such carrier along with a step-by-step motion, a toothed wheel connected with the carrier feeding means, a locking bolt to engage such wheel, a lever connected with the bolt, a cam to actuate the lever, to move the bolt into engagement with the wheel and hold it so for

a certain predetermined time, and a spring to move the lever to retract the bolt, substantially as and for the purpose shown. 75th. In a match making machine, in combination with a travelling carrier for receiving and holding the splints while being treated, two sets of feeding devices for moving the carrier along with a step-by-step motion, engaging such carrier at different points in its travel, the two toothed wheels each connected with one of the carrier feeding devices, the two locking bolts to engage these wheels, a lever connected with these bolts on opposite sides of its pivotal point, a cam to move and hold the lever in position to bring and keep the bolts in engagement with the respective wheels, and a spring to return the lever to retract the bolts, substantially as and for the purpose set forth. 76th. As a means for holding and carrying match splints, a carrier having an opening to enclose a portion of a splint, and clamping devices to clamp a part of the splint projecting beyond such opening, substantially as and for the purpose described. 77th. As a means for holding and carrying match splints, a carrier having an opening to enclose a portion of a splint, and a pair of spring clamps to engage the splints beyond such opening, substantially as and for the purpose specified. 78th. As a means for holding and carrying match splints, a carrier having a series of openings to enclose portions of the splints, and clamping devices to clamp the splints beyond such openings, substantially as and for the purpose shown. 79th. As a means for holding and carrying match splints, a carrier having a series of openings to enclose portions of the splints, and separate spring clamping devices, one for each opening, to clamp the splints at a point beyond the openings, substantially as and for the purpose set forth. 80th. In a carrier for match splints, in combination with a plate provided with an opening to enclose a portion of a splint, a splint clamping device on the back of the plate, substantially as and for the purpose described. 81st. In a carrier for match splints, in combination with a plate having openings to receive and enclose portions of the splints, a series of pairs of spring clamping fingers, one pair for each opening, on the back of the plate, substantially as and for the purpose specified. 82nd. In a carrier for match splints, in combination with a plate having an opening to receive and enclose a portion of a splint, a pair of spring clamping pieces on the back of the plate having their opposing faces grooved, substantially as and for the purpose shown. 83rd. In a carrier for match splints, in combination with a plate having a series of openings to receive and enclose portions of the splints, a series of splint clamping devices on the plate, having their opposing faces grooved, to receive and hold portions of the splints beyond the plate, substantially as and for the purpose set forth, 84th. In a carrier for match splints, in combination with a main plate having rows of openings to receive and enclose portions of splints, plates attached to the main plate between rows of openings therein, and having portions standing out from the main plate split or cut so as to form independently movable splint engaging spring fingers, substantially as and for the purpose described. 85th. In a carrier for match splints, in combination with a plate having rows of openings to receive and enclose portions of the splints, plates fastened to the main plate between the rows of openings, having upturned portions close to the sides of the adjoining rows of openings, grooved and split, or cut to form separate splint clamping fingers with grooves in their splint engaging sides, substantially as and for the purpose specified.

No. 53,602. Electric Railway. (*Chemin de fer électrique.*)



John Charles Love and John Earle Hodges, both of London, England, 28th September, 1896; 6 years. (Filed 7th January, 1896.)

Claim.—1st. A slotted conduit, comprising a slot rail having a depending flange, a yoke provided with an upwardly projecting support for the slot rail, which support is provided with a recess to receive a nut and with a bolt hole extending horizontally into the said recess, and means for fastening the slot rail to said support, consisting of a bolt which is inserted through the rail flange and the bolt hole, and a nut located within said recess and engaging the screw-threaded end of the bolt. 2nd. A slotted conduit, comprising a flanged slot rail, a yoke provided with a support for the slot rail, containing a recess to receive the nut and a bolt hole extending into said recess, said yoke being provided also with a recess or chamber outside of said support to receive a bolt head, and means for fastening the slot rail to the said support consisting of a bolt which engages the flange of said slot rail and passes through said bolt hole, and a nut located in the said recess and engaging the screw-threaded end of the bolt. 3rd. A slotted conduit, comprising slot rails having inner and outer depending flanges and cast metal yokes provided at their upper ends with integral supports for the slot rails constructed to enter between the flanges of said slot rails, and means for fastening the slot rails to said supports consisting of bolts which pass through the outer flanges of the said slot rails and into the said supports, and which act to clamp the rails laterally against said supports. 4th. A slotted conduit, comprising slot rails and yokes consisting of integral castings provided at their upper ends with integral supports for the slot rails, and vertically arranged paving plates located outside of and parallel with the slot rails and extending between the yokes, said yokes being provided at their sides faces adjacent to the said supports with vertical sockets to receive the ends of the paving plates. 5th. A slotted conduit, comprising slot rails having depending flanges, yokes for supporting the said slot rails, and paving plates extending between the yokes outside of the slot rails, said yokes being provided at their upper ends with supports for the slot rails and being provided also with chambers outside of said supports to receive bolt heads, and having at opposite sides of said chambers sockets to receive the ends of the paving plates. 6th. A slotted conduit, comprising slot rails, yokes for supporting the same provided with overchanging supports for the slot rails, paving plates extending between the upper ends of the yokes outside of the slot rails, and liner plates extending between the yokes below the slot rails. 7th. A slotted conduit, comprising slot rails, yokes provided at their upper ends with overhanging supports for the slot rails, paving plates extending between the upper ends of the yokes outside of the slot rails, and liner plates extending between the yokes below the slot rails, said yokes being provided with sockets to receive the ends of the paving plates and having flanges adapted to engage the ends of the liner plates to hold the latter in place. 8th. An electric railway, comprising a slotted conduit having slot rails, a yoke consisting of an integral casting having a central conduit opening, overhanging supports for the slot rails, and lateral extensions for supporting the tram rails; said yoke being provided also with integral walls forming a man-hole to afford access to the interior of the conduit, a conductor within the conduit, an insulating support for the conductors attached to the yoke, and a hatch or cover fitting within the upper margins of the walls of the man-hole, by the removal of which access may be had to said insulating support. 9th. A slotted conduit, provided with slot rails and with a man-hole adjacent to said slot rails, a cover for said man-hole, and a movable deflector located within the man-hole beneath the cover thereof. 10th. A slotted conduit, provided with slot rails and with a man-hole adjacent to said slot rails, with a cover for said man-hole and with a movable deflector located within the man-hole and projecting at its upper edge past the adjacent edge of the adjacent slot rail. 11th. A slotted conduit for electric railways, comprising slot rails, line wires suspended beneath the slot rails, a man-hole adjacent to said slot rails, a man-hole cover, and a movable deflector located within the man-hole and having its upper edge arranged between the line wire and the outer edge of the slot rail. 12th. A slotted conduit, comprising slot rails and provided with a man-hole, a deflector plate within the man-hole, and inclined flanges at the sides of the man-hole for supporting said deflector plate. 13th. A slotted conduit, provided with slot rails and with a man-hole, and inclined flanges at the sides of the man-hole for supporting the plate, said flanges being provided with stops to hold the plate in its operative position. 14th. A conduit tramway, comprising a conduit, tram rails and yokes for the conduit having lateral extensions for supporting the tram rails, said lateral extensions being provided with seats for the tram rails, and within said seats downwardly converging bolt holes, and beneath said seats bearing surfaces for nuts arranged at right angles to said bolt holes, said bolt holes being made smaller at their lower than at their upper ends, and hook bolts inserted through said bolt holes and engaged with the flanges of the tram rails. 15th. A slotted conduit, comprising slot rails and yokes for supporting the same, said slot rails being provided with depending, stiffening flanges and being supported by the yokes only, and a man-hole which opens into the conduit and is provided with a hatch or cover which is supported at its outer and end margins only, and extends at its inner edge to, and is at such inner edge free from and unsupported by the adjacent slot rail. 16th. A slotted conduit, comprising slot rails, yokes which support the slot rails, said slot rails having depending, stiffening flanges and being supported by the yokes only, a man-hole which opens into the conduit and is provided with side and end walls cast integral with one of the yokes, and a hatch or cover for the man-hole which rests on the side and end walls of the man-hole and extends at its inner edge to, and is at such inner edge free from and unsupported by the adjacent slot rail. 17th. A slotted conduit, comprising slot rails, yokes supporting the slot rails, a concrete bed which forms the bottom of the conduit, and a man-hole which opens into the conduit and is formed by side and end walls, which are cast integral with the yoke and which extends downwardly to and rest upon the said concrete bed. 18th. A slotted conduit, comprising slot rails, yokes for supporting the slot rails, paving plates extending between the yokes outside of the slot rails, and a

man-hole formed by said end walls which are cast integral with the yoke, the end wall of the man-hole being provided with a socket for the adjacent end of the paving plate. 19th. A yoke for a conduit tramway having a central conduit opening and provided with lateral extensions for supporting the tram rails, said extensions having lower, horizontal, bearing surfaces formed by horizontal flanges which are extended to form the bottom wall of the conduit opening, and a central depending stiffening web extending downwardly from said flanges and containing a stiffening bar of wrought metal cast in the said stiffening web. 20th. A slotted conduit, comprising slot rails having depending flanges, and cast metal yokes having rail supports which enter between the flanges of the slot rails, said yokes being provided with wrought metal stiffening bars embedded in the metal of the yoke and extending from the body of the yoke into said slot rail supports. 21st. A conduit tramway, comprising a slotted conduit, yokes for the conduit which support the tram rail, and a supplementary conduit pipe consisting of integral sleeves on the yokes, and pipe sections engaged at their ends with the ends of said sleeves, and forming with the same the continuous conduit pipe. 22nd. A conduit tramway, comprising a slotted conduit, yokes for the said conduit which support the tram rails, and a supplementary conduit pipe consisting of integral sleeves on the yokes and longitudinally divided pipe sections which are engaged with the said sleeves and form with the same the conduit pipe. 23rd. A conduit tramway, comprising a slotted conduit, yokes for the conduit constructed to support the tram rails, and a supplementary conduit pipe consisting of integral, tubular sleeves on the yokes, provided at their outer ends with upper and lower curved flanges and semi-cylindric upper and lower pipe sections which rest at their ends respectively upon the upper flange, and within the lower flange of the tubular sleeves. 24th. An insulator for supporting a line conductor within a conduit pipe, the same consisting of a plurality of blocks of non-conducting material, said blocks being provided with oppositely arranged, open ended slots so constructed that when the blocks are oppositely placed within the conduit pipe said slots will form an aperture for the passage of the conductor. 25th. A conduit pipe for electric conductors, consisting of upper and lower longitudinally divided sections, and insulators for supporting the electric conductor within the pipe, comprising a plurality of non-conducting blocks provided with oppositely arranged, open ended slots, and adapted at their ends to engage the opposite sides of the pipe, the lower section of said pipe being provided with lugs which project from its inner surface in position to engage the outer faces of the blocks, and thereby hold the same together and against displacement. 26th. A conduit tramway, comprising a slotted conduit, tram rails and man-holes, yokes for supporting the rails, and a supplementary conduit pipe consisting of integral sleeves in the yokes located below the rail seats thereof, and pipe sections which extend between the yokes and are engaged at their ends with the said sleeves, said pipe sections being arranged to pass through the man-holes, and being provided with openings located within the man-holes whereby access may be had to the conductors located within the supplementary conduit pipe. 27th. A supporting device for line wires comprising two separable plates between the margins of which the conductor is gripped and held, one of which plates is apertured and the other provided with a loop which projects therefrom through the apertured plate, a wedge passing through the said loop and engaging the outer face of the apertured plate, and a locking wire inserted between the said wedge and an opposing part of one of the plates, said wire being bent at its ends to engage the head ends of the wedge and an oppositely facing surface of one of the plates. 28th. A supporting device for electric conductors provided with a clamp comprising two separable plates between the margins of which the conductor is gripped and held, one of said plates being apertured and the other provided with a loop which projects therefrom through the said apertured plate, a wedge passing through the said loop and engaging the outer face of the apertured plate, and a locking wire seated in a groove in said wedge and bent at its ends to engage the head of the wedge and an oppositely facing surface of one of the plates. 29th. A support for electric conductors, comprising an insulated block, two separable plates, between the margins of which the conductor is held, one of which plates is extended past the other and is embedded in said insulating block, one of said plates being apertured and the other provided with a loop which projects therefrom through the said apertured plate, a wedge passing through said loop and engaging the outer face of the apertured plate, and a locking device to hold the wedge in place. 30th. A tension for keeping under tension a conductor which is free to move endwise relatively to its supports, the same comprising a guide rod or rods arranged parallel with the conductor, a sliding insulating block which supports the end of the conductor, a supporting clip for the conductor attached to said insulating block, a second insulating block also adapted to slide on said rod or rods and having an elongated bearing thereon, a plate attached to said insulating block and extending toward the conductor, an adjustable coupling rod connected at its ends with the said clip and plate, and a spring applied to act on the second insulating block for maintaining tension on the conductor. 31st. A tension device for keeping under tension a conductor which is movable endwise relatively to its supports, the same comprising guide rods, an insulating block, a clip attached thereto and engaging the conductor, said clip being provided at one end with a hook-shaped projection, a second, sliding insulating block having an elongated bearing on said guide rods, a plate secured in said second block and extending toward the conductor, and a coupling rod provided with a turnbuckle and having at one end a loop or eye to engage the hook-shaped projection on the end of said clip, and at its opposite end a lateral projection adapted to engage the said plate. 32nd. A slotted conduit for an electric railway provided with yokes and containing a line wire or conductor, and a tension device for keeping the said line wire under tension, consisting of a guide rod or rods attached to the yokes of the conduit, an insulating block sliding on said guide rod or rods, a clip for supporting the wire secured to said insulating block, a second insulating block also sliding on said guide rods, a plate secured in said second insulating block, an adjustable coupling rod connected at its ends with the said clip and plate, and a compression spring applied between the said second insulating block and an opposing surface of one of the yokes. 33rd. A connecting device between the sections of an electric line wire or conductor consisting of a revoluble disc which is mounted at one side of the conductor and projects between the adjacent ends of the sections, said ends of the sections being curved into concave form to fit against the periphery of the disc, said disc consisting of conducting and non-conducting parts whereby electric connection may be established or interrupted by turning the said disc to bring its conducting or non-conducting part into contact with the conductor sections. 34th. A line wire or conductor, consisting of a plurality of sections which are free to move longitudinally with relation to their supports, and a telescopic coupling for electrically connecting the ends of the adjacent sections, said coupling comprising insulated sleeves which receive the ends of the conductor sections, and a revoluble disc consisting of conducting and non-conducting parts, and which engages at its periphery the inner ends of said sleeves. 35th. A telescopic connection between the sections of a line wire or conductor, comprising an insulating plate, sleeves attached to said plate to receive the ends of the conductor sections, and a revoluble disc mounted on said plate with its periphery engaging the inner ends of said sleeves, said disc being provided with conducting and non-conducting parts. 36th. A line wire for electric railways consisting of a plurality of sections which are free to move relatively to their supports, means for supporting the said wire comprising sliding insulating blocks, and clips secured to the said blocks and supporting the adjacent ends of the sections, tension devices acting on said clips to keep the sections under tension, and a telescopic coupling piece connecting the adjacent ends of the conductor section, and an auxiliary conductor section detachably connected at its ends with the said clips. 37th. A travelling contact device for electric railways, comprising a trolley arm which consists of a short section mounted on a horizontal pivot and a longer section pivotally connected with the shorter section by a pivot arranged at right angles to the horizontal pivot, whereby the trolley wheel or contact piece is supported on the opposite side of the horizontal pivot from the point of connection of the two sections of the arm, and means affording a yielding upward pressure of the trolley wheel or contact piece against the conductor. 38th. A travelling contact device for electric railways, comprising a trolley arm which consists of a short section mounted on a horizontal pivot and a longer section pivotally connected with the shorter section at an acute angle therewith by a pivot arranged at right angles to the horizontal pivot, whereby the trolley wheel or contact piece is supported on the opposite side of the horizontal pivot from the point of connection of the two sections of the arm, and means affording a yielding upward pressure of the trolley wheel or contact piece against the conductor. 39th. A travelling contact device for electric railways, comprising a trolley arm which consists of a relatively short section mounted upon a horizontal pivot and a relatively long section carrying the contact device and pivotally connected with the shorter section by a pivot arranged at right angles with the horizontal pivot, and means applied to the shorter section of the arm tending to rotate the arm about its horizontal pivot and to thereby hold the contact piece yieldingly against the line conductor. 40th. A travelling contact device for electric railways, comprising a trolley arm which consists of a relatively short section mounted on a horizontal pivot, a relatively long section carrying the contact device and pivotally connected with the shorter section by a pivot arranged at right angles to the horizontal pivot, an arm rigidly secured to the shorter section, and a spring for lifting the contact piece attached at its upper end to the upper end of said arm. 41st. A travelling contact device for electric railways, comprising a supporting bar, a trolley arm consisting of a short section which is pivotally mounted on a horizontal pivot attached to the supporting bar, and a longer section carrying the trolley or contact piece and connected with the shorter section by a pivot arranged at right angles with the horizontal pivot, an inclined arm rigidly attached to the shorter section, a spring attached at its upper end to the said arm and at its lower end to a rigid part projecting from the supporting bar, and a curved surface on said part over which the spring is bent.

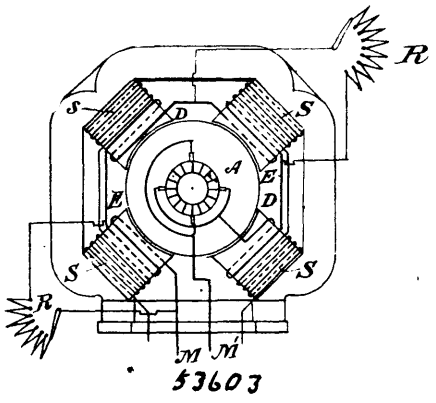
No. 53,603. Dynamo Electric Machine.

(*Machine dynamo électrique.*)

The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Elihu Thomson, Swampscott, Massachusetts, U.S.A., 28th September, 1896; 6 years. (Filed 14th November, 1894.)

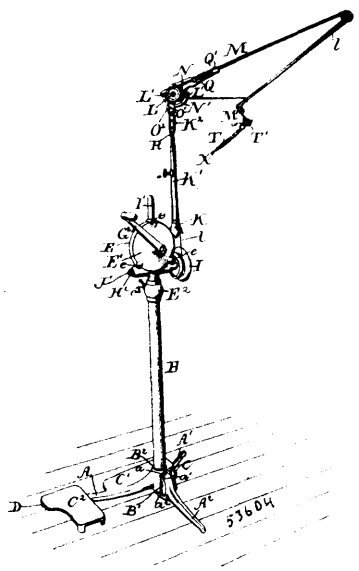
Claim.—1st. The combination of two or more compound wound dynamo electric machines working in multiple arc and connected

by an equalizer, with means for adjusting individually, and with relation to one another the field strength of the different machines



due to their respective series windings, as set forth. 2nd. The combination of two or more compound wound dynamo electric machines working in multiple arc and connected by an equalizer, with means for shunting portions of the series windings of such machines individually, and thereby altering the relation between their respective series fields, as required. 3rd. The combination of two or more compound wound dynamo electric machines working in multiple arc and connected by an equalizer, and having their series windings divided respectively into sections, part of which are always in the main circuit of the machines, and another part of which are shunted by shunt connections of variable resistance. 4th. The combination of two or more compound wound dynamo electric machines working in multiple arc, and means for shunting portions of the series windings in such machines and thereby altering the relation between their respective series fields, as required. 5th. A compound wound dynamo electric machine having its series winding divided into sections, and a shunt connection of variable resistance around a part only of such series winding, as set forth.

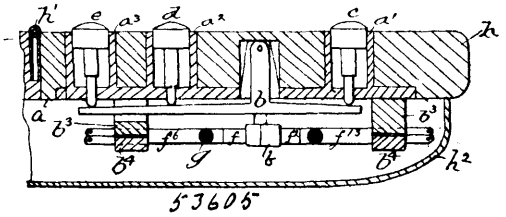
No. 53,604. Surgical Engine. (*Machine chirurgicale.*)



The S. S. White Dental Manufacturing Company, Philadelphia, Pennsylvania, assignee of Arthur W. Browne, Prince's Bay, New York, both in the U.S.A., 28th September, 1896; 6 years. (Filed 17th August, 1896.)

Claim.—1st. The engine frame base provided with legs, one of which is jointed in place by a vertical pivot so as to be capable of swinging horizontally, and also provided with the vertical central socket, substantially as and for the purpose set forth. 2nd. The combination of the frame base having the fixed legs and the vertical central socket and provided with the leg jointed in place so as to be capable of swinging horizontally, the frame upright detachably engaging the socket in the base and engaged by the jointed leg which is thus held against swinging movement, substantially as and for the purpose set forth. 3rd. The combination of the base having the two rigid legs and the pivoted leg having the fork concaved at its extremity, and provided with the socket at the junction of the legs, the frame upright fitting in the socket of the base and engaged by the concaved fork of the pivoted leg, and means for engaging and locking together the base and upright, substantially as and for the purpose set forth. 4th. The engine frame base having three legs, two of which are rigidly connected by a foot rest, and to one of which so-connected legs is secured another foot rest projecting in or about in the same direction as that in which the third leg of the frame projects, substantially as and for the purpose set forth. 5th. The combination of the base having the two rigid legs connected by a foot rest and provided with a third leg, and the foot rest jointed at its heel to one of the rigid legs and projecting in or about in the same direction as that in which said third leg projects and limited in its movement about its pivot by contact with the leg to which it is pivoted, substantially as and for the purpose set forth. 6th. The combination of the engine frame, the gearing frame detachably supported at the top thereof, the gearing within the gearing frame, the pulley actuated by said gearing and having supporting connection with the gearing frame, and the engine standard detachably connected at its lower end with the gearing frame and carrying at its upper end the mechanism which is driven by the gearing-actuated pulley, substantially as and for the purpose set forth. 7th. The combination of the pulley head section of the engine standard, the carrier for the engine arm having supporting connection with said section, the engine arm pivotally connected near its inner end with said carrier, and the spring secured to the engine arm at one end and bearing and sliding at its opposite end upon the carrier, substantially as and for the purpose set forth. 8th. The sectional carrier for the hand-piece comprising the yoke made in two parts and constituting the externally-threaded split sleeve, each of said parts being provided with a pulley hub bearing, substantially as and for the purpose set forth. 9th. The combination of the yoke sections constituting the externally-threaded split sleeve and having the pulley hub bearings, the pin of the wrist joint section of the engine arm held in said split sleeve, the internally-threaded sleeve for embracing the split sleeve of the yoke sections, and the pulley mounted by its hub in its bearing in the sectional yoke, substantially as and for the purpose set forth. 10th. The combination of the hand-piece carrier, the hand-piece casing terminating at rear in advance of the carrier, the tool-carrying spindle mounted to rotate in the hand-piece casing and projecting beyond the rear end thereof, means for rotating the spindle having direct detachable connection with the rear end thereof, and catch devices for detachably engaging the rear end of the hand-piece casing with the carrier, substantially as and for the purpose set forth. 11th. The combination of the carrier, the hand-piece casing terminating at rear in advance of the carrier, the tool-carrying spindle mounted to rotate in the hand-piece casing, projecting beyond the rear thereof and through the carrier and longitudinally grooved at its rear end, the pulley with its hub having bearing in the carrier and adapted to engage the grooved end of the spindle, and catch devices for detachably engaging the rear end of the hand-piece casing with the carrier, substantially as and for the purpose set forth. 12th. The combination of the hand-piece casing provided with the lateral tubular lug or short sleeve, the tool-carrying spindle mounted to rotate in the hand-piece casing, projecting beyond the rear thereof and longitudinally grooved at its rear end, the carrier, in advance of which the hand-piece casing terminates, the pin and spring actuated catch of the carrier for engaging the tubular lug of the hand-piece casing, and the pulley provided with the hub having bearing in the carrier and adapted to engage the grooved end of the spindle, substantially as and for the purpose set forth.

No. 53,605. Telephone Keyboard, etc.
(*Clavier de télephone, etc.*)

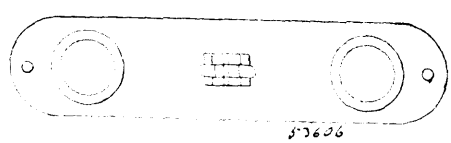


The Bell Telephone Company, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, and Frank Robert McBerty, Downer's Grove, both in Illinois, U.S.A., 28th September, 1896; 6 years. (Filed 4th September, 1896.)

Claim.—1st. The combination with a centrally pivoted rocking lever, of a button pressing upon each end thereof, and a wedge at block b^1 carried by the lever adapted to move between switch springs to alter their contacts with anvils provided for them, substantially as described. 2nd. The combination with a centrally pivoted rocking lever, of a button adapted to act upon each end thereof, a double wedge b^1 carried by the lever, symmetrically placed switch springs upon opposite sides of the double wedge, each face of the wedge being adapted to enter between one pair of switch springs, and contact anvils and circuit connections for the switch springs, substantially as described. 3rd. The combination in a

listening and ringing key, of an oscillating or rocking lever, a button acting upon one end of the lever to move it in one direction, two buttons adapted to act upon its other extremity to move it to different distances in the opposite direction, switch contacts adapted to be operated by the movement of the lever in either direction, and other switch contacts operated by its movement through different ranges, substantially as described. 4th. The combination with an oscillating or rocking lever, of a button acting upon one end to move the lever in one direction, and two buttons acting upon its other extremity to move it to different extents in the opposite direction, the switch block or double wedge b^1 carried by the lever symmetrically disposed switch springs upon opposite sides of the double wedge adapted to be moved thereby, and different sets of contact points whose connections with their respective springs are altered in accordance with the movement of the lever in different directions and to different extents, substantially as described. 5th. In combination, a double wedge oscillating between switch springs, the springs being so adjusted with reference to the wedge that the pressure of one spring or pair of springs thereon assists to force the wedge between the opposite springs, as described. 6th. The combination with a hinged keyboard or shelf, of keys mounted thereon having their switch springs placed on edge and arranged in a plane parallel with the keyboard, whereby the keys may be readily inspected, as described. 7th. In combination, the oscillating lever b carrying the double wedge b^1, the keys c and d acting upon the lever on opposite sides of its fulcrum, the switch springs f, f^1, f^2 and f^3 arranged symmetrically in pairs on opposite sides of the double wedge b^1, and switch contacts or anvils for the springs, as described. 8th. The combination with the oscillating lever b carrying the wedge b^1 of the buttons c, d and e acting upon the lever, the switch springs f, f^1, f^2 and f^3 arranged symmetrically in pairs upon opposite sides of the wedge b^1, the parts being so adjusted that pressure upon buttons c forces the wedge between the springs f, f^1, and pressure upon button e forces it between springs f^2, f^3, while pressure upon button d returns it to its normal central position, as described. 9th. The combination with the listening and ringing key, of the grounded switch spring f^3 oscillating between contact anvils f^8, f^{11}, to ground the plug circuit in ringing, or to close the local circuit of the restoring coil of the clearing-out annunciator when the telephone is connected with the plug circuit, as described. 10th. In combination, two connecting plugs, a combination listening and ringing key having its switch springs connected with the different contact pieces of the connecting plugs, the key being provided with an oscillating lever and with buttons pressing upon opposite ends of the lever, said lever being adapted to move the switch springs to connect the telephone with the plug circuit when in one position, and to disconnect the same when in another position, as described. 11th. In combination, a plug circuit, a key included therein, said key provided with an oscillating lever acted upon by three buttons, said lever controlling switch contacts to connect a telephone with the plug circuit when one key is depressed, to disconnect said telephone when another button is depressed, and to both disconnect the telephone and close the circuit of a local generator of signalling current to the circuit when a third button is depressed, substantially as described. 12th. The combination with a two-part plug adapted for use with metallic circuits, a plug circuit and a key connected therewith, said key being adapted when operated to disconnect one contact piece of the plug from the remainder of the plug circuit and to connect it with one terminal of a grounded generator and to ground the other side of the plug circuit, as described. 13th. The combination with two pairs of symmetrically disposed switch springs, of a double wedge between the adjacent free ends of the springs, the wedge being normally free from both pairs of switch springs, and means for forcing the wedge between either pair of switch springs to alter their positions substantially as described. 14th. The combination with two pairs of symmetrically disposed switch springs, of a double wedge carried upon a centrally pivoted rocking lever, placed between their presented ends, and normally free from both pairs of springs, switch contacts for each spring, and a press button acting upon each end of the said lever to force the wedge between the opposite pair of springs, substantially as described. 15th. The combination with two pairs of symmetrically disposed switch springs, of a double wedge mounted upon a centrally pivoted rocking lever, between the presented ends of the switch springs, the wedge being normally free from both sets of springs, and means for forcing the wedge between either pair of springs, the range of movement of the wedge in one direction being so adjusted that it is held by the corresponding pair of springs and prevented from returning to its normal central position, and a press button acting upon the lever to return the wedge to its central position, substantially as described. 16th. In an operator's key, the combination with two pairs of symmetrically disposed switch springs, of a double wedge adapted to be forced between either pair of springs, double plugs each having its two parts connected with the different members of one pair of switch springs, the resting contacts of one pair of springs being connected with the two parts of the other plug, and the alternate contacts of the same switch springs being connected with the terminals of a calling generator, the alternate contacts of the other pair of switch springs constituting the terminals of an operator's telephone whereby when the wedge is moved in one direction one plug is disconnected from the other and connected with a calling generator, and when the wedge is moved in the other direction the telephone is connected in a bridge between the different conductors uniting the plugs, substantially as described. 17th. The combination with a pair of switch springs, of a wedge adapted to be forced between their free extremities to move them outward, an auxiliary spring i^x, adapted to follow one of the switch springs in its movement, and a contact point i^x, upon which the spring i^x is adapted to close when the switch spring is moved outward, substantially as described. 18th. The combination with the two pairs of symmetrically disposed switch springs, of a double wedge between the presented extremities of the two pairs of springs, normally free from both pairs, two press buttons, one adapted to move the wedge in each direction, a double connecting plug having its parts connected with the members of each pair of switch springs, alternate contact points constituting the terminals of a telephone, for one pair of switch springs, the wedge being adapted to be held between this pair of springs when thrust between them to press them outward, alternate contacts for the other pair of switch springs constituting the terminals of a calling generator, the wedge being adapted to be returned to its central position by the pressure of the corresponding springs upon it when it is thrust between them, substantially as described. 19th. The combination with two pairs of symmetrically disposed switch springs, of a double wedge between the presented ends of the springs, mounted upon a rocking lever, a press button acting upon each end of the lever, the range of movement of the lever, and the press buttons being so adjusted that one button may move the wedge from its normal intermediate position to a position between one pair of springs, and the other button may move the wedge from this position to its normal position and thence between the other pair of springs, substantially as described. 20th. In combination, a pair of switch springs each connected with one contact piece of a plug, a resting contact for one switch spring included with the main magnet of a self restoring annunciator in a bridge across the plug circuit, an auxiliary spring controlled by one of the switch springs to close upon a contact anvil when the spring is pressed outward, the auxiliary spring and its anvil being included in the restoring circuit of the said annunciator, and a pair of alternate contact points for the switch springs constituting the terminals of a telephone, another pair of switch springs each of which is connected with one contact piece of another plug, normal resting contacts for these springs, each connected directly with one contact piece of the first mentioned plug, alternate contact anvils forming the terminals of a calling generator, and a double wedge adapted to be thrust alternately between the presented ends of the pairs of switch springs, whereby the telephone may be connected with the plug circuit, and the local circuit of the annunciator closed, the annunciator may be connected in a bridge of the plug circuit, or the plug circuit may be opened and a generator of signalling current may be looped into circuit with one plug, as described.

No. 53,606. Keyboard Apparatus for Telephone Switchboards. (*Appareil de clavier pour téléphones.*)

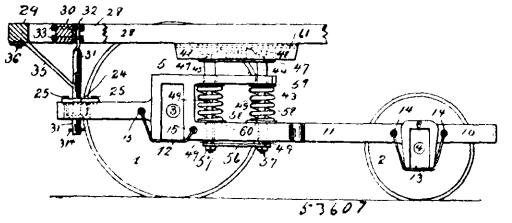


53606

The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 28th September, 1896; 6 years. (Filed 4th September, 1896.)

Claim.—1st. The combination with several pairs of connecting plugs, of a separate key for each pair of plugs adapted to connect the different conductors of the corresponding plug circuit together through a bridge conductor common to the different keys, without interrupting the continuity of the plug circuit, and a signalling key adapted to loop a generator of signalling current into the said common bridge conductor, substantially as described. 2nd. The combination with several pairs of connecting plugs, each pair being united by conductors constituting a plug circuit, of a key for each pair of plugs adapted to complete a bridge connection between the different conductors of the corresponding plug circuit through a conductor common to all of the said keys without interrupting the plug circuit, and another key controlling the said common conductor, adapted to include the operator's telephone or a source of signalling current alternately into the common bridge conductor, substantially as described. 3rd. The combination with several pairs of connecting plugs, the members of each pair being united through conductors constituting a plug circuit, of a signalling key in each plug circuit adapted to disconnect the contact pieces of one plug of the pair from those of the other member of the pair and to connect them with a generator of signalling current, a listening key in each plug circuit adapted to unite the different conductors of the corresponding plug circuit through a bridge conductor common to all the listening keys, and a key included in said bridge conductor adapted to loop an operator's telephone or a generator of signalling current alternately into the bridge conductor, substantially as described.

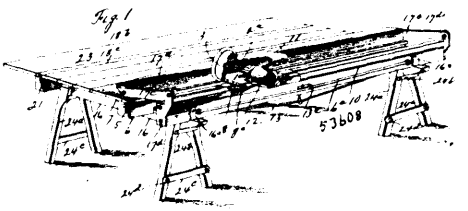
No. 53,607. Motor Truck. (*Chassis de moteur.*)



John A. Brill, assignee of Walter S. Adams, both of Philadelphia, Pennsylvania, U.S.A., 28th September, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. The combination, in a car body, of the pivotal truck having an axle box frame and yokes therein, large driving wheels at the forward and smaller trailing wheels at the rear end of said frame, both sets being journalled in the yokes at opposite ends of the frame, bars above the frame extending rearwardly from the upper part of the forward yokes, bearings sustained above said bars by posts passing through said bars, springs supporting the posts on said frame below said bars, rub plates on the car engaging said bearings, a tranversely disposed and segmentally slotted draw-head secured to said frame forward of the driving wheels, and a vertically disposed draw-bar on the car passing through said slot, substantially as described. 2nd. The combination, with the car, a truck and its frame, of the draw-head located adjacent one set of the truck wheels having a segmental slot, a roller in and controlled by the slot, a draw-bar adjacent said set of wheels controlled by the roller in the slot of the draw-head, passing through the roller and vertically movable therein, transversely disconnected swing-bearing bolsters adjacent said set of wheels, springs supported on the side bars of the frame, bearings on the bolsters, and rub plates and curved restraining plates on the car engaging the bearings, substantially as described. 3rd. The combination with a truck having a frame for supporting a car body and preserving the parallelism of the axles, said frame being supported upon the axles and having longitudinal side beams and axle box yokes, and spring supported bearing bolsters carried by and adapted to have a movement in said side beams either transversely or longitudinally, said movement being independent of that of the bearings on the car springs, a car body, and car rub plates for engagement with the said bearings, substantially as described. 4th. The combination in a truck having a frame comprising longitudinally disposed side bars supported upon the axles of the truck, and car-bearing bolsters supported upon said side bars, said bolsters being adapted to have a movement longitudinal, fore and aft, of the frame, substantially as described. 5th. The combination in a truck having side bars and connected yokes supported upon the axle boxes of the truck, transversely disconnected bearing bolsters supported upon the side bars, and a plurality of guides for the movements of the bolsters upon the side bars, each of said guides being derived from one of the yokes, substantially as described. 6th. The combination, with an axle box frame, and a car body frame, of the slotted and channelled draw-head secured to one of said frames, an apertured roller moving in said channel, a slotted plate enclosing said roller, and a draw-bar secured to the other frame and passing through said slot and movably through said roller, substantially as described. 7th. The combination of a car body and an axle box frame having rearward extensions from each of the axle box yokes, two of said extensions being disconnected, of springs between the extensions, and side bearings for supporting the car body resting on said springs, substantially as described. 8th. The combination, with a car body, and an axle box frame having upper and lower extensions from one pair of axle box yokes, the upper extensions being disconnected, of springs supported on one of said extensions, and side bearings for supporting the car body resting on said springs, substantially as described. 9th. An axle box frame having the central sections 11, the yokes 5 extending above the central sections, and the non-continuous arms 53 extending from the upper portions of the yokes in the same directions as the central sections, substantially as described. 10th. The combination, with the draw-bar 31, of the draw-head having a segmental slot 19, the shoulders 27, the segmental slot 22 between the shoulders, the apertured roller 26 within the slot 19 and about the draw-bar, and normally resting on the shoulders 27, substantially as described. 11th. The combination, with the slotted draw-head having the apertured lugs or ears 23, of the slotted plate 24 having apertures aligning with those in the head, and bolts 25 for securing the head and plate together, substantially as described. 12th. The combination, with the side bearing, of the shouldered spring posts, a support for the posts, the springs 58 about the posts and between the shoulder and support, and a bar 56, uniting the ends of the posts, substantially as described. 13th. The combination, with the side bar 11, the yoke 5, of the bar 53 extending from the top of the yoke, the posts 44 passing through the bar 53 of the side bar, the bearing 40 above the bar 53 securing the ends of the posts together, shoulders 50 on the posts lying within the bar 53, springs 58 about the posts and between both bars, a plate 59 between the top of the springs and the shoulders, and a cross or tie bar 56 for securing the ends of the posts together, substantially as described. 14th. In combination, with the bearing 40, of the guide bar 53, apertures therein, a bushing in said apertures, spring posts secured to said bearing and passing through the bushings, and means for guiding the lower part of said posts, substantially as described. 15th. The combination, with the bar 53, apertures therein, an elastic abutment within the apertures, of the bearings 40, the spring posts passing through the abutment, and means for guiding the lower ends of said posts, substantially as described. 16th. The combination, with the bar 53, the apertures therein, an elastic ring 65 within the apertures, bushings 64 within said ring, of the bearing 40, the spring posts secured thereto and passing through the bushing, and means for securing the lower ends of the posts together, substantially as described. 17th. The combination, with the bar 53, of the aperture therein, the elastic ring 65 within the aperture, the bushing 64 within the ring, the detachable aperture plate 65^a for retaining the ring and bushing in place, the bearing, the post attached to the bearing and passing through said bushing and plate, and means for guiding the end of said post, substantially as described.

No. 53,608. Machine for Trimming Wall Paper.
(*Machine à couper le papier de tenture.*)



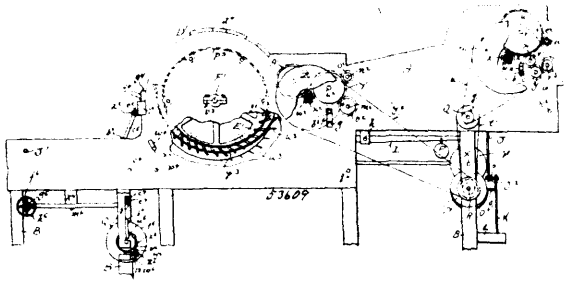
Twiggs Price, Bucyrus, James Norman Goodbread, and Joseph Albert Williams, both of Nevada, all in Ohio, U.S.A., 28th September, 1896; 6 years. (Filed 8th August, 1896.)

Claim.—1st. The combination, with guideways and a straight edge applied to one of the same, of a concaved or dished rotary cutter or disc, a carriage bearing the shaft carrying said cutter and having means for its propulsion by hand and a roller or wheel fixed to said shaft and travelling on said guideway, said carriage having at one side an arm engaging a longitudinal slot or groove in one guideway and at its other side a guide formed of parallel plates fitting closely the other guideway, and one of said plates having its lower edge engaging a longitudinal groove in the side of said guideway, substantially as set forth. 2nd. The combination, with the guideways, the inner one of which carries a straight edge, of a presser bar having a hinged connection with the outer guideway and adapted to be swung from and to said straight edge, and a cutter operating with relation to said straight edge and carried by a carriage mounted and travelling upon said inner and outer guideways, substantially as and for the purpose set forth. 3rd. The combination, with the guideways and the straight edge carried by the inner guideway, and the cutter operating with relation to said straight edge, and carried by the carriage travelling upon the guideways, of the herein described presser bar carried by the plates or arms 17c, the latter having a pivoted or hinged connection with the outer guideway, whereby the presser bar is adapted to be swung over, substantially as and for the purpose set forth. 4th. An improved cutting machine of the class described, comprising the guideways, the straight edge carried by the inner guideway, the rotary cutter, the carriage bearing the shaft carrying said cutter, the traction roller or wheel secured upon the cutter shaft, and having a bearing contact upon the outer guideway, guide plates projecting from said carriage and respectively engaging the guideways, and the hinged swinging presser bar having a pivotal or hinged connection with the outer guideway and adapted to swing over with relation to the straight edge upon the inner guideway, substantially as set forth. 5th. In a paper-hanger's machine, the carriage supporting frame having its longitudinal bars provided with aligning mortises or recesses below the connecting bars thereof, and cam fastenings, in combination with trestles or supports having in their top pieces, fitting in sail mortices, transverse slits engaged by said fastenings, and button pieces pivoted on said top pieces of the trestles and having tongues engaging or lapping corresponding tongues on said cross pieces of the carriage supporting frame, substantially as set forth. 6th. In a paper-hanger's machine, the combination of the carriage supporting frame, trestles having transverse slits and button pieces, a side piece having cam fastenings engaging said slits and mortises in its under side, receiving the top pieces of the trestles, and mortises in its inner side engaged by said button pieces, and a table having underneath cross pieces engaging mortises in the upper rabbeted surface of said side piece, substantially as set forth.

No. 53,609. Machine for the Manufacture of Excelsior Wrappers and Pads. (*Machine pour la fabrication de coussin et enveloppe en bois de fibre.*

Excelsior Wrapper Company, assignee of Helen Fay Shadbolt, both of Sheboygan, Wisconsin, U.S.A., 28th September, 1896; 6 years. (Filed 17th August, 1896.)

Claim.—1st. The combination, with a suitable frame, of a pair of horizontally disposed endless feed belts, arranged on different



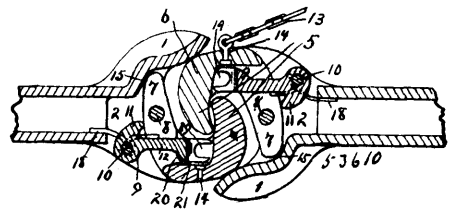
planes, two pairs of vertically disposed endless guide belts, each of said endless feed belts being arranged between one of said pairs of guide belts, a pair of picker rollers, one of which is mounted on yielding bearings, arranged adjacent to the end of the first feed belt and above the plane of the other feed belt, gearing and belting for operating all of said parts in conjunction with each other, and an independently geared picker roller arranged adjacent to the pair first named, and adapted to be revolved at a greater rate of speed than the first named picker rollers, substantially as set forth. 2nd. The combination with a suitable frame, of a pair of horizontally disposed endless feed belts, arranged on different planes, a pair of picker rollers arranged adjacent to the delivery end of the first feed belt and above the plane of the second feed belt, a pair of pressure rollers arranged, one above the other, adjacent to the delivery end of the second feed belt, and the lower of said pressure rollers having yielding bearings on a transverse yoke, gearing and belting for operating all of said parts in conjunction with each other, a pivotally suspended lever in engagement with said yoke, and a feed-regulating device connected to said lever and to the gearing of said picker rollers, whereby when the material passing between the pressure rollers separates them too widely the picker rollers will revolve at a less rate of speed, substantially as set forth. 3rd. The combination, with a suitable frame, of a pair of horizontally disposed endless feed belts, arranged on different planes, a pair of picker rollers, one of which is mounted on yielding bearings, arranged adjacent to the delivery end of the first feed belt and above the plane of the second feed belt, a pair of pressure rollers arranged one above the other adjacent to the delivery end of the second feed belt, and the lower of said pressure rollers having yielding bearings on a transverse yoke, gearing and belting for operating all of said parts in conjunction with each other, a pivoted lever suspended beneath the second feed belt, one end of said lever being in engagement with said yoke, a partly revoluble rod journalled on the main frame and carrying a rigid crank-arm, a link connecting said crank-arm to the other end of said lever, a pair of cone pulleys journalled adjacent to each other, a flexible ring surrounding one cone pulley and in movable contact with both, a pair of levers adjustably shackled together, one of said levers being rigidly secured to the partly revoluble rod and the other being pivoted to the frame, and carrying the described flexible ring, and the shaft of one of said cone-pulleys being geared to the main driving shaft of the machine, while the shaft of the other cone-pulley is connected by a system of belts and pulleys, with the gearing of the said picker rollers, substantially as set forth. 4th. The combination, with a suitable frame, of a carding cylinder, comprising side pieces, having secured upon the inner surfaces thereof cam ways, consisting of single continuous tracks, and for about half the distance thereof, additional outer tracks, forming cam-grooves between, a pair of annular discs or wheels whose rims are provided with tangentially disposed slots, a series of movable bars projecting through said slots and in engagement with said tracks and cam-grooves, said bars being provided with projecting teeth or pins, and a series of spring packers supported adjacent to said carding cylinder, and arranged one between each two adjacent teeth or pins of said movable bars, substantially as set forth. 5th. The combination with a suitable frame, of side-pieces provided with cam-tracks and grooves, a carding cylinder having annular discs or wheels, with tangentially disposed slots in the rims thereof, and movable bars projecting through said slots and in engagement with said cam tracks and grooves, and carrying projecting teeth or pins, a toothed concave covering part of said cylinder, and spring packers arranged in series between the teeth or pins on the movable bars, feeding rollers one of which always revolves on the same plane and is provided with teeth or pins, and the other of which is mounted on yielding bearings, an endless carrying belt below said cylinder, and a pressure and guide-roller located above said belt and adjacent to the cylinder, at a point just beneath the packers where the described teeth or pins on the movable bars are retracted by the travel of said bars within the cam-groove, substantially as set forth. 6th. The combination, with a suitable frame, of a former-tube suspend therefrom, a mandrel suspended within and projecting from the forward end of the former-tube, a small roller at the forward end and another roller on the upper surface of said mandrel, a pair of feed rollers arranged one above the other adjacent to one end of the former-tube and mandrel, and a pair of delivery rollers similarly arranged adjacent to the other end thereof, a continuous guiding tape passing around and over the upper feed roller, thence under the roller on the upper surface of the mandrel and around the roller on the forward end thereof, and back beneath the mandrel to the said feed roller, and a glue-pot spout interposed between the forward end of the mandrel and the said delivery rollers, substantially as set forth. 7th. The combination, with a suitable frame, of a pair of feed rollers arranged one above the others to receive them, the fabric and filling as it is fed forward, a transverse shaft adjacent to the upper feed roller and geared to the journal of the latter, bevel-gear pinions adjustably secured to said transverse shaft, a pair of movable upright frames carrying vertical shafts at their adjacent ends, bevel-gear pinions on said shafts in mesh with the pinions on the transverse shaft, vertical shafts at the other end of said upright frames, vertical rollers on said vertical shafts at each end of said frames, and vertical guide-belts travelling around said vertical rollers, a transverse bar or beam extending across the main frame just above the tops of the movable upright frames, yokes straddling this bar or beam and secured to the tops of the said upright frames, and thumb-screws passing through screw-threaded perforations in the upper parts of said yokes, and bearing against the top of said bar or beams, substantially as set forth. 8th. The combination, with a suitable frame, provided with slots or recesses in the side-timbers thereof, and upward projecting pins on the upper surfaces of said timbers at some considerable distance from said slots or recesses, of a tapering former-tube provided with slots in its side walls adjacent to its rear or widest end, a removable cross-bar inserted through said slots and having its ends dropped within the slots or recesses in the side-timbers, a second cross-bar having perforations in its ends for removable engagement with the said upward projecting pins on said side-timbers, hooks depending downward from said second cross-bar, a pair of chains, the links of which are adjustably engagable with said hooks, and a spiral spring extending under the former-tube at this point and the ends of which unite the adjacent ends of said pair of chains, substantially as set forth. 9th. The combination, with a suitable frame, provided with slots or recesses in the side-timbers thereof, and upward projecting pins on the upper surfaces of said side-timbers at some considerable distance from said slots or recesses, of a removable cross-bar having its ends dropped within the said slots or recesses, and a second cross-bar having perforations in its ends for removable engagement with said upward projecting pins of said side-timbers, a removable tapering former-tube adjustably suspended from said cross-bars, a removable tapering mandrel suspended within said former-tube, but free from contact therewith, one end of said mandrel being secured by a bolt to the first-named cross-bar, a yoke or clip straddling said mandrel, the lower ends of said yoke or clip coming flush with the bottom of the mandrel and there secured thereto, and said yoke or clip having an upward projecting screw-bolt rigid therewith extending through a hole in the second cross-bar, an adjusting nut on said screw-bolt just beneath said bar, and a hand-nut on the upper end of said bolt above said bar, substantially as set forth. 10th. The combination, with a suitable frame, of a pair of rollers arranged one above the other, the journal of the upper roller always revolving in the same plane in suitable bearings in said frame, a pair of blocks hinged to the under surface of the side-timbers of said frame and receiving the journal of the lower roller, said blocks being formed with vertical slots therethrough, lag-screws passed upward through said slots in the blocks, without contact with the walls of said slots, into the timbers of the frame above, and springs interposed between the heads of said lag-screws and the under surfaces of said timbers, substantially as set forth. 11th. The combination, with a suitable frame, of a horizontally disposed endless feed-belt passing over rollers, the journals of the roller at the delivery end carrying a toothed pinion at one end and exterior to the frame, a pair of picker rollers arranged one above the other, one of whose journals travels always in the same plane and carries a large gear wheel at one exterior end, and a small pinion at the other exterior end, while the journal of the other picker roller of said pair rests upon yielding bearings within slots of the side pieces of the main frame, and carries at one exterior end a small pinion, the said journals of said pair of picker rollers being united by link straps carrying pinions in mesh with the said small pinions on said journals, a pair of studs projecting from the opposite side piece of the frame, carrying pinions in mesh with each other, one of said last-named pinions being in mesh with the pinion of the journal of the adjacent roller of the endless feed belt, and the other of said pinions being in mesh with the large gear wheel on the adjacent end of the journal of the first-named picker roller, a stud on the same end piece of the main frame carrying a large pulley and a pinion integral therewith in mesh with said large gear wheel of said first-named picker roller, a transverse shaft on the main frame having pulley belt and gear connections with the main driving shaft, and carrying a small independent pulley, and a belt extending from this last-named pulley to the described large pulley on the stud, substantially as set forth. 12th. The combination, with a suitable frame, of a pair of horizontally disposed endless feed belts arranged on different planes, a pair of picker rollers arranged one above the other adjacent to the delivery end of the first feed belt, and the journal of one of said picker rollers having a yielding bearing, a pair of pressure rollers similarly arranged adjacent to the delivery end of the second feed belt, and the journal of one of said pressure

rollers also having a yielding bearing, a pair of feed rollers similarly arranged just beyond the pressure rollers, and the journal of one of said feed rollers having also a yielding bearing, a feed-regulating device comprising a pair of cone pulleys mounted on transverse shafts in a frame so as to be almost but not quite in contact, and a movable flexible contact ring around one of said cone pulleys and in contact with both, a lever and link connection between the movable flexible contact ring of the feed-regulating device and the yielding bearing of the lower feed roller, a main driving shaft, a bevel gear connection between the main driving shaft and the shaft of the upper cone pulley, a small independent pulley and a stepped-cone pulley on the shaft of the lower cone pulley, a transverse shaft above the feed-regulating device carrying a small independent pulley, and a stepped-cone pulley, a belt connecting the said two stepped-cone pulleys, pinions on the journals of the rollers of the delivery ends of the feed bolts, a gear wheel on one end of the upper picker roller, a train of gears meshing therewith and with the pinion of the adjacent roller journal of the first feed belt, a linked-strap and pinion connection, on the other side of the machine, between the journals of the said pair of picker rollers, a like linked-strap and pinion connection between the journals of the pressure rollers, a gear wheel on the other end of the journal of the upper pressure roller, in mesh with the pinion of the adjacent roller-journal of the second feed belt, a stud on the frame carrying a large pulley and a pinion rigid therewith, said pinion being in mesh with the large gear wheel of the journal of the upper pressure roller, a like large gear wheel on the adjacent end of the journal of the upper feed roller, in mesh with the pinion on the stud, a like stud carrying a large pulley and a pinion rigid therewith in gear with the large gear wheel on the journal of the first named picker roller, a belt connecting the last named large pulley with the small independent pulley on the transverse shaft above the feed-regulating device, and another belt connecting the small independent pulley on the shaft of the lower cone pulley with the large pulley on the stud between the gear wheels of the upper pressure and feed rollers, substantially as set forth. 13th. The combination, with a suitable frame, of a former tube and mandrel supported thereby, a pair of delivery rollers arranged one above the other, the journal of the lower roller being mounted in yielding bearings, a glue pot spout interposed between the forward end of the mandrel and the said rollers, a main driving shaft having a bevel gear connection with the journal of the upper delivery roller, a bracket provided with an arc-slot, secured to the main frame, and through which bracket the main driving shaft passes, a pair of compressing rollers journalled near the end of the main frame, a train of gears connecting the said rollers with the upper delivery roller, a stationary blade projecting from the end of the machine, a knife shaft carrying a revolving knife at one end, and at its other end passing through said bracket and there carrying a pinion, a removable collar on the said knife shaft between the bracket and the pinion, an adjusting lever mounted loosely on the main driving shaft close to and on one side of the bracket, and a pinion rigid on said shaft on the other side of the bracket, a stud projecting from the bracket carrying a compound pinion loosely mounted thereon for engagement with the pinion on the main driving shaft and the pinion on the knife-shaft, and a bolt passing through the adjusting lever and through the arc-slot in the bracket and carrying a tightening nut on its end, substantially as set forth. 14th. The combination with a suitable frame, of a carding cylinder provided with retracting teeth, an endless feed belt located beneath the same, a pressure and guide roller having a journal mounted in oblique slots in the side pieces of the frame, an idler-roller beneath the last named roller, within the endless feed-belt, a paper-supporting frame on a plane below said endless belt, carrying a roll of fabric, a transverse roller for said fabric beneath the delivery end roller of said endless belt, a main driving shaft, a pair of large rollers, arranged one above the other, and with the journal of the lower roller mounted in yielding bearings, and with the journal of the upper roller connected by a bevel gearing to the main driving shaft, a transverse shaft adjacent to said rollers, and carrying a pair of pulleys, a belt connecting one of said pulleys to the upper of said rollers, another belt connecting the other pulley on said shaft with the first named pressure and guide roller, a pair of movable upright frames, carrying vertical guide belts, extending between the pair of large rollers named and the delivery end of the feed belt, a cross timber on the main frame adjacent to the carrying-cylinder, and an arm pivotally attached to said cross timber, and carrying a roller at its lower end resting on the last named pulley belt, substantially as set forth.

No. 53,610. Car-Coupler. (*Attelage de chars.*)

Philip C. Brown and Joseph I. Irwin, both of Columbus, Indiana, U.S.A., 28th September, 1896; 6 years. (Filed 8th July, 1896.)

Claim.—1st. In a car-coupling, the combination with the draw-head thereof, of a horizontally swinging knuckle pivoted in the draw-head, having a buffer surface so sloped that the point of contact of two such knuckles impacting will be such as to force the said knuckles open, and having another portion adapted to receive an impact from the co-operating knuckle and thereby throw said knuckle inward and effect a coupling. 2nd. In a car-coupling, the combination with the draw-head having a guard-arm, of a horizontally swinging knuckle pivoted in the draw-head, having a buffer surface so sloped that the direction of pressure at the point of contact of two such knuckles impacting, when both are closed and the draw-heads in alignment, will pass outside of the pivotal axes of



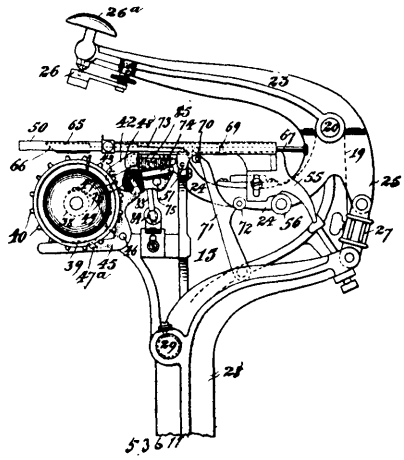
the knuckles, whereby the pressure will open the knuckles from their closed position, and having another portion projecting out of the mouth of the draw head except when the knuckle is in its closed position and arranged to subsequently receive an impact from the co-operating knuckle to throw the knuckle inward and effect a coupling, substantially as described. 3rd. In a car-coupling, the combination with the draw-head having a guard-arm, of a horizontally swinging knuckle pivoted in the draw-head, having a buffer surface so sloped that the direction of pressure at the point of contact of two such knuckles impacting, when both are closed and with the draw-heads in alignment, will pass outside of the pivotal axes of the knuckles, whereby the pressure will open the knuckles from their closed position, and having another portion projecting out of the mouth of the draw-head except when the knuckle is in its closed position, and arranged to subsequently receive an impact from the co-operating knuckle to throw the knuckle inward, and effect a coupling, and independent means for so throwing said knuckle, substantially as described. 4th. In a car-coupling, the combination with the draw-head having a guard-arm, of a horizontally swinging knuckle pivoted in the draw-head, having a buffer surface so sloped that the direction of pressure at the point of contact of two such knuckles impacting, when the knuckles are closed and with the draw-heads in alignment, will pass outside of the pivotal axes of the knuckles, whereby the pressure will open said knuckles from their closed position, and having another portion projecting out of the mouth of the draw-head except when the knuckle is in its closed position, and arranged to receive an impact from the co-operating knuckle to throw the knuckle inward and thereby effect a coupling, and a spring for throwing said knuckle, substantially as described. 5th. In a car-coupling, the combination with the draw-head having a guard-arm, of a horizontally swinging knuckle pivoted in the draw-head, having a buffer surface so sloped that the direction of pressure at the point of contact of two such knuckles impacting, when both are closed and with the draw-heads in alignment, will pass outside the pivotal axes of the knuckles, whereby the pressure will open the knuckles from their closed position, and a lever pivoted upon the draw-head and projecting out of the mouth thereof and arranged to close said knuckle by impact of the co-operating knuckle, substantially as described. 6th. In a car-coupling, the combination with the draw-head having a guard-arm, of a horizontally swinging knuckle pivoted on the draw-head, a lever arranged to be actuated by the entering end of the similar knuckle of the opposite draw-head to throw the knuckle inward and effect a coupling, and means, independent of said entering end, for actuating said lever, substantially as described. 7th. In a car-coupling, the combination with the draw-head having a guard-arm, of a horizontally swinging knuckle pivoted on the draw-head, a lever arranged to be actuated by the entering end of the similar knuckle of the opposite draw-head to throw the knuckle inward, and a spring for so throwing said knuckle, substantially as described. 8th. In a car-coupling, the combination with the draw-head having a guard-arm, of the horizontally swinging knuckle pivoted on the draw-head, a movable guard arranged to be actuated by the entering end of a similar knuckle of the opposite draw-head, said guard having an operative connection with the first knuckle whereby the latter will be moved inward, or closed, by the impact of the opposite knuckle, and independent means for closing said knuckle, substantially as described. 9th. In a car-coupling, the combination with the draw-head having a guard-arm, of a knuckle pivoted on the draw-head and a guard lever pivoted on the draw-head, one arm of said lever being arranged to be actuated by the entering end of a similar knuckle of the opposite draw-head, and the other arm engaging the first knuckle so as to throw it inward, substantially as described. 10th. In a car coupling, the combination with the draw head having a guard-arm, of the horizontally swinging knuckle pivoted on the draw-head, a guard-lever pivoted on the draw-head, one arm of said lever being arranged so as to be actuated by the entering end of a similar knuckle of the opposite draw-head, and the other arm engaging the first knuckle so as to throw it inward, and independent means for actuating said knuckle, substantially as described. 11th. In a car-coupling, the combination with the draw-head having a guard-arm, of the horizontally swinging knuckle pivoted on the draw-head, and a guard-lever pivoted on the draw-head in the rear of the knuckle and having an arm interposed between said knuckle and the entering end of the similar knuckle of the opposite draw-head and actuated by said end, said lever also having an arm engaging the first knuckle so as to throw it inward, substantially as described. 12th. In a car-coupling, the combi-

nation with the draw-head having a guard-arm, of the horizontally swinging knuckle pivoted on the draw-head, a guard-lever pivoted on the draw-head in the rear of the knuckle and having an arm interposed between said knuckle and the entering of the similar knuckle of the opposite draw-head and actuated by said end, said lever also having an arm engaging the first knukcle so as to throw it inward, and independent means for actuating said lever, substantially as described. 13th. In a car-coupling, the combination with the draw-head having a guard-arm, of the horizontally swinging U shaped knuckle pivoted, through its rear arm, upon the draw-head, its bend receiving the nose of the opposite similar knuckle, and mechanism for swinging said knuckle inward arranged to be actuated by the transverse inward movement of the opposite knuckle, substantially as described. 14th. In a car-coupling, the combination with the draw-head having a guard-arm, of the horizontally swinging U-shaped knuckle pivoted, through its rear arm, upon the draw-head, its bend receiving the nose of the opposite similar knuckle, mechanism for swinging said knuckle inward arranged to be actuated by the transverse inward movement of the opposite knuckle, and a spring for so swinging said knuckle, substantially as described. 15th. In a car-coupling, the combination with the draw head, of the horizontally swinging U-shaped knuckle the rear arm of which engages the draw-head to transmit the pull thereto through said rear arm, and ejector mechanism, actuated by the outward movement of said knuckle, for moving the other knuckle outward, substantially as described. 16th. In a car-coupling, the combination with the draw-head, of the horizontally swinging U-shaped knuckle the rear arm of which engages the draw-head to transmit the pull thereto through said rear arm, and a lever actuated by the outward movement of the knuckle, and engaging the end of the opposite knuckle to eject it from the draw-head, substantially as described. 17th. In a car-coupling, the combination with the draw-head, of the horizontally swinging U-shaped knuckle pivoted through its rear arm upon the draw-head, and an arm swinging on the draw-head extending across the rear arm of the knuckle and having in its end a recess to receive a pin for a link-and-pin coupling, said recess being open on the side next the knuckle whereby the stress upon the pin is borne by said knuckle, substantially as described. 18th. In a car coupling, the combination with the draw-head and a horizontally swinging knuckle pivoted thereon, said knuckle being slotted to permit the passage therethrough of a link, of a pin-support movable relatively to the knuckle, said knuckle being recessed to receive the pin-support when not in use, substantially as described. 19th. In a car-coupling, the combination with the draw-head and a horizontally swinging knuckle pivoted thereon, said knuckle being slotted to permit the passage therethrough of a link, of a pin-support movable relatively to the knuckle, and when in position to receive the pin permitting the pin to bear against the rear of the knuckle, said knuckle being recessed to receive the pin-support when not in use, substantially as described. 20th. In a car-coupling, the combination with the draw-head and a horizontally swinging knuckle pivoted thereon, said knuckle being slotted to permit the passage of a link, of a pin-support movable relatively to the knuckle, and when in position to receive the pin permitting the pin to bear against the rear of the knuckle, said knuckle being recessed to receive the pin-support when not in use, substantially as described. 21st. In a car-coupling, the combination with the draw-head, of the horizontally swinging knuckle pivoted on the draw-head, a guard-lever interposed between said knuckle and the entering end of the similar knuckle of the opposite draw-head and actuated by the latter knuckle to close the other, said lever being provided with a recess to form a pin-hole for a link and-pin coupling, substantially as described. 22nd. In a car-coupling, the combination with the draw-head, of a horizontally swinging knuckle pivoted therein, and means for yieldingly holding said knuckle in its closed position, substantially as described. 23rd. In a car-coupling, the combination with the draw-head, the knuckle 4 pivoted thereon, and the guard-lever 9 also pivoted on the draw-head, said knuckle and lever having opposite vibratory movements, substantially as described. 24th. In a car-coupling, the combination with the draw-head, the knuckle 4 pivoted thereon, the guard-lever 9 also pivoted on the draw-head, said knuckle and lever having opposite vibratory movements, and the spring 18 actuating said lever and knuckle, substantially as described. 25th. In a car coupling, the combination with the draw-head, the knuckle 4 having the forked arm whereby it is pivoted on the draw head, and the guard-lever 9 passing through said fork, as and for the purpose set forth. 26th. In a car-coupling, the combination of the draw-head, the knuckle 4 having the forked arm whereby it is pivoted on the draw-head, the guard-lever 9 passing through said fork, and the spring 18 actuating said lever and knuckle, substantially as described.

No. 53,611. Addressing Machine. (*Machine à adresser.*)

The Addressograph Company, assignee of Joseph Smith Duncan, both of Chicago, Illinois, U.S.A., 28th September, 1896; 6 years. (Filed 14th August, 1896.)

Claim.—1st. In addressing machines, an endless type belt composed of hinged link plates having printing surfaces suspended upon a single drum or pulley having a step-by-step revolution, and adapted by said revolution to bring the type surfaces successively into position for printing, substantially as set forth and for the purposes specified. 2nd. In machines for printing a predetermined list of addresses or other forms, an endless type belt suspended by its own weight over a single drum or pulley and provided with hinged

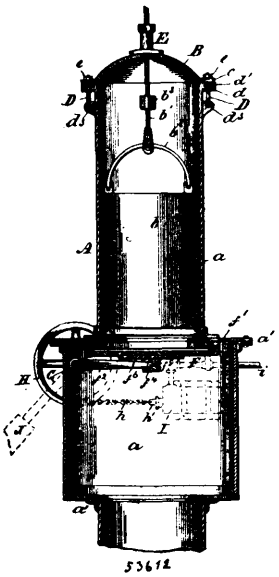


link plates with stamping or printing surfaces, a platen capable when properly actuated of forcing the surface to be printed into contact with the stamping or printing surfaces, and mechanism for imparting to the drum or pulley and the type belt a step-by-step revolution and bringing the link plates successively into co-operation with the platen, all substantially as above set forth and for the purposes specified. 3rd. In an addressing machine, the combination with a rotatable drum, an endless type belt suspended thereon, a pivoted arm carrying a platen, a pivoted operating lever adapted to be oscillated by the foot of the operator and a link connecting said lever and said arm, said link and said lever constituting a toggle which is straightened by the oscillation of the lever in making an impression, substantially as described. 4th. In an addressing machine, a rotatable drum, an endless type belt suspended thereon, a pivoted arm carrying a platen, a driving pawl actuated by said arm for rotating the drum, an operating lever pivoted between its ends and adapted to be oscillated on its pivot by the foot of the operator, said lever extended rearwardly from its pivot and a relatively short link connecting the rear end of the platen carrying arm with the rearwardly extended end of the operating lever, said link and said extended end of the lever constituting a toggle which is straightened by the oscillation of the arm, substantially as and for the purpose described. 5th. In an addressing machine, the combination with a revoluble drum adapted to support an endless type belt, a pivoted arm carrying a platen, a pivoted operating lever having its upper end extended rearwardly from its pivot, and an adjustable link connecting said rearward extension and the platen carrying arm, substantially as described. 6th. In an addressing machine, the combination with a revoluble drum, of an endless type belt mounted thereon, a stationary ink reservoir and a transferring pad carried by a pivoted frame, a rock shaft having a crank thereon and a stud on which the said frame is pivoted and means for rocking said shaft upon its pivot, whereby to move said transfer pad out of contact with the supply and into contact with the printing face on the type belt, substantially as described. 7th. In an addressing machine, the combination with a revoluble drum, of an endless type belt suspended thereon, a pivoted arm having a platen, said arm having a rigid extension, a driving pawl pivoted to said extension, an ink-transferring pad mounted in a rocking frame, a rock shaft having a crank and a stud on which said rocking frame is mounted and a roller bearing on said crank arm, whereby the depression of the platen effects the application of ink to the type-belt, and the rotation of the drum one step, substantially as described. 8th. In an addressing machine, the combination with a revoluble drum carrying an endless type-belt, of a driving pawl for advancing said drum step by step, said pawl having a lateral projection or dog and ratchet discs rotatably mounted adjacent to said pawl and having dissimilar teeth, said ratchet discs being movable so as to bring the one or the other into operative position with reference to the pawl, substantially as and for the purpose described. 9th. In an addressing machine, the combination with a revoluble drum carrying an endless type-belt, a pivoted printing arm carrying a platen, a pivoted plate to support the material which is to receive the impression, a sliding ink pad mounted in ways on said pivoted plate, a rocking lever adapted to bear up said pad, whereby to move it into position above the printing form and actuated by the printing arm and a spring to retract the said pad, substantially as described. 10th. A type-belt for addressing machines, composed of a series of detachable link plates articulated together and adapted to hold or provided with printing surfaces, substantially as described. 11th. A link plate for an endless type-belt composed of a single sheet of metal having upturned margins, one of which is curved to provide recessed sides and with transverse notches, and the other margin

whereof is provided with integral projections adapted to enter said notches and engage in said seats, substantially as described. 12th. In an addressing machine, the combination with a revoluble drum, of an endless type-belt mounted thereon and having type forms in which addresses are printed, and a revoluble holder mounted adjacent to the drum and having two or more of its surfaces provided with type forms for imprinting dates or other matter on the same sheet on which the address is impressed, substantially as described.

No. 53,612. Air Lock for Caissons.

(*Ecluse pour caissons.*)



53612

William C. Barr, Jersey City, New Jersey, U.S.A., 29th September, 1896; 6 years. (Filed 27th August, 1896.)

Claim.—1st. An air-lock for caissons, comprising a cylinder having an inner or lower gate, and an upper gate or cover removably secured to the upper end of said cylinder, as set forth. 2nd. An air-lock for caissons, comprising a cylinder having an inner or lower gate, an upper removable gate or cover for closing the upper end of said cylinder, and means for securing said cover to said cylinder, substantially as set forth. 3rd. In an air-lock for caissons, the combination with a cylinder having an inner or lower gate, and a bucket and a rope therefor movable in said cylinder, of a removable cover for the upper end of said cylinder having a hole therein through which the rope is passed, substantially as and for the purpose set forth. 4th. In an air-lock for caissons, the combination with the cylinder having an inner or lower gate, and a bucket and rope therefor movable in said cylinder, of a removable cover for the upper end of said cylinder having a hole through which said rope is passed, and means connected to said cylinder designed to engage said cover for removably securing the latter, substantially as set forth. 5th. In an air-lock for caissons, the combination with the cylinder having an inner or lower gate, a bucket and a rope therefor movable in said cylinder, and a block or shackle on said rope adjacent to said bucket, of a cover removably secured on the upper end of said cylinder and having a hole therein through which said rope is passed, said block or shackle being designed to engage said cover in the removal of said bucket, as and for the purpose stated. 6th. An air-lock for caissons, comprising a cylinder having an upper extension and an inner or lower gate designed to fit against the lower end of said extension, and a bucket and rope therefor movable in said cylinder, and a cover removably secured to the upper end of said extension and designed to be removed therefrom by the elevation of said bucket beyond said extension, substantially as set forth. 7th. In an air-lock for caissons having a cylindrical extension, and a bucket and rope therefor, a cover designed to close the upper end of said extension, said cover having a series of peripheral slots, and nutted bolts secured to said extension and designed to be extended through said slots, substantially as set forth. 8th. The combination with the cylinder having an upper extension and an inner or lower gate, and a bucket and rope therefor, of a cover for the upper end of said extension having a peripheral flange provided with a series of open slots, a seat for said flange surrounding the upper end of said extension, and a series of nutted bolts pivoted to the exterior of said extension and designed to be extended through said slots for holding said cover against its seat, substantially as set forth. 9th. An air-lock for caissons, comprising a cylinder having a seat therein, and a swinging gate loosely mounted on its support, as set forth. 10th. An air-lock for caissons, comprising a cylinder having a seat therein, a swinging arm, and a gate loosely mounted on the free end of the said arm, as set forth, said gate being held to said seat by air-pressure in said cylinder, as stated. 11th. An air-lock for caissons, comprising a cylinder having a seat therein, a swinging arm, a gate, and a ball-and-socket connection between said arm and said gate, as set forth. 12th. An air-lock for caissons, comprising a cylinder having a seat therein, a swinging arm having its free end rounded, a gate, and socket-plates secured to the latter and enclosing the rounded end of said arm, as set forth. 13th. An air-lock for caissons, comprising a cylinder having a downwardly facing seat and a swinging gate designed to be held up against said seat, as set forth. 14th. An air-lock for caissons, comprising a cylinder having a ring provided with a groove, rubber fitted in said groove and facing downward, and a swinging gate designed to be held up against said rubber, and set forth. 15th. An air-lock for caissons, comprising a cylinder having a seat, a rock-shaft, a gate carried by said rock-shaft, and a piston connected to said shaft and operating in an air cylinder, as set forth. 16th. In an air-lock for caissons, comprising a cylinder having a seat, a rock-shaft having an arm, a gate loosely mounted on said arm, a piston operating in an air-cylinder, and connections between said piston and said rock-shaft, as set forth. 17th. An air-lock for caissons, comprising a cylinder having a seat, a rock-shaft having an arm, a gate mounted on said arm, a wheel on said rock-shaft, a piston operating in an air-cylinder, and a chain connected at its ends to said piston and said wheel, as set forth. 18th. The combination with the air-confining cylinder having an offset, of a ring secured thereto and having a groove, rubber in said groove, a shaft having a wheel on one end, and an arm secured to said shaft at one end, a gate loosely mounted on the free end of said arm, an air-cylinder having a valved pipe opening therein, a piston movable in said air-cylinder and a chain connecting the rod of said piston to said wheel, substantially as set forth.

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

4482. AARON FRENCH (assignee), 2nd term of No. 37,320, from the 4th September, 1896. Moulder's Flask, September 2nd, 1896.

4483. AARON FRENCH (assignee), 2nd term of No. 37,321, from the 4th September, 1896. Process of and Mould for Making Castings, September 2nd, 1896.

4484. AARON FRENCH (assignee), 2nd term of No. 37,322, from the 4th September, 1896. Process of and Mould for Casting Steel Wheels, September 2nd, 1896.

4485. AARON FRENCH (assignee), 2nd term of No. 37,323, from the 4th September, 1896. Manufacture of Annealed Steel Wheels, September 2nd, 1896.

4486. CHARLES KELLNER, 2nd term of No, 37,544, from the 6th October, 1896. Method of Lining Vessels, Digestors and the Like, September 2nd, 1896.

4487. JOHN DRAPER, 2nd term of No. 24,907, from the 7th September, 1896. Gang Plough, September 8th, 1896.

4488. MILO COVEL, 2nd term of No. 37,333, from the 7th September, 1896. Brazing Clamp for Band Saw-Mills, September 8th, 1896.

4489. MILO COVEL, 2nd term of No. 37,345, from the 8th September, 1896. Device for Hammering and Straightening Saws, September 8th, 1896.

4490. EDWARD F. BROWNELL, 2nd term of No. 37,350, from the 9th September, 1896. Bake Pan, September 8th, 1896.

4491. JAMES YOCUM BORDEN, 2nd term of No. 37,373, from the 12th September, 1896. Hair and Wig, September 12th, 1896.

4492. HERMAN FRASCH, 2nd term of No. 37,881, from the 2nd December, 1896. Furnace for Preparing Metals, etc., September 10th, 1896.

4493. HERMAN FRASCH, 2nd term of No. 38,070, from the 4th January, 1896. Process and Apparatus for Refining and Purifying Petroleum, September 10th, 1896.

4494. HERMAN FRASCH, 2nd term of No. 38,071, from the 4th January, 1896. Art or Process of Refining Petroleum, September 10th, 1896.

4495. GEORGE P. GATES, 2nd term of No. 37,394, from the 15th September, 1896. Strainer for Fluid Pipes, September 12th, 1896.

4496. ALEXANDER STANLEY ELMORE, 2nd term of No. 37,427, from the 18th September, 1896. Process for Obtaining Zinc by Electrolysis, September 14th, 1896.

4497. WILLIAM B. DUNNING, 3rd term of No. 25,005, from the 24th September, 1896. Base Burning Stove for Steam Heating Boilers, September 15th, 1896.

4498. JOHN A. CALDWELL, 2nd term of No. 37,602, from the 15th October, 1896. Water Tube Steam Engine, September 16th, 1896.

4499. CHRISTOPHER COLUMBUS BRADLEY, 2nd term of No. 37,447, from the 16th September, 1896. Thill Coupling, September 16th, 1896.

4500. HAHNEMANN A. CUTMONE, 2nd term of No. 37,611, from the 15th October, 1896. Speaking Tube, September 17th, 1896.

4501. CHARLES SEARS, 2nd term of No. 37,429, from 18th September, 1896. Art of Making Stereotype Moulds, September 17th, 1896.

4502. WILLIAM WOODS (assignee), 3rd term of No. 24,994, from the 23rd September, 1896. Kerosene Lamp, September 17th, 1896.

4503. ALEXANDER MARCY, 2nd term of No. 37,459, from the 24th September, 1896. Piano Action and Keyboard, September 18th, 1896.

4504. BENJAMIN DICKINSON, 3rd term of No. 25,020, from the 25th September, 1896. Screw Propeller, September 18th, 1896.

4505. DARWIN ALMY, 2nd term of No. 37,635, from the 17th October, 1896. Steam Generator, September 21st, 1896.

4506. GEORGE V. FOSTER & CO. (assignee), 2nd term of No. 37,507, from the 2nd October, 1896. Horse Blanket, September 25th, 1896.

4507. GEORGE WASHINGTON MILTIMORE, 3rd term of No. 25,018, from the 25th September, 1896. Art of and Machinery for Dressing Metal, September 25th, 1896.

4508. WILLIAM S. BORDEN (assignee), 2nd term of No. 37,666, from the 23rd October, 1896. Fence, September 25th, 1896.

4509. JOHN GALT, 2nd term of No. 37,480, from the 29th September, 1896. Furnace, September 29th, 1896.

4510. ARTHUR JENNINGS, 2nd term of No. 37,509, from the 2nd October, 1896. Wagon, September 29th, 1896.

4511. JOHN H. W. STRINGFELLOW, 2nd term of No. 37,523, from the 3rd October, 1896. Art of and Machine for Making Gas, September 29th, 1896.

4512. J. MILLIKIN & CO. (assignee), 2nd term of No. 37,584, from the 12th October, 1896. Steamer for Tempering Grain, September 29th, 1896.

4513. HENRY N. HOPKINS AND EMERY H. BRYANT, 2nd term of No. 37,559, from the 7th October, 1896. Safety Switch, September 30th, 1896.

TRADE-MARKS

Registered during the month of September, 1896, at the Department of Agriculture—Copyright and Trade-Mark Branch.

5731. LEEMING, MILES & COMPANY, Montreal, Que. Soap or cream for shaving purposes, 1st September, 1896.

5732. THE GOTHAM COMPANY, New York, N. Y., U.S.A. Rubber nipples, 1st September, 1896.

5733. THE GOTHAM COMPANY, New York, N. Y., U.S.A. Nursers, 1st September, 1896.

5734. H. B. FOULD, Toronto, Ont. Arsenic complexion wafers, 1st September, 1896.

5735. ALFRED FERLAND, Montréal, Qué. Eau minérale St. Benoit, 1 septembre, 1896.

5736. HYSLOP, SON & McBURNEY, Toronto, Ont. Bicycles, Tricycles and motor Cycles, 3rd September, 1896.

5737. THE HAMILTON DISTILLERY COMPANY, LIMITED, Hamilton, Ont. Whiskies, 3rd September, 1896.

5738. MICHIGAN CORSET COMPANY, Jackson, Michigan, U.S.A. Corsets, 4th September, 1896.

5739. THE WELCOME SOAP COMPANY, St. John, N. B. Soap, 4th September, 1896.

5740. WALTER CRAWFORD PEARCE GADEN, Montreal, Que. Washing compound, 5th September, 1896.

5741. } COOPER, COOPER & COMPANY, Southwark, London, England. Tea,
5742. } 5th September, 1896.

5743. THE CANADIAN WATCH CASE COMPANY, Montreal, Que. Watch Cases, 5th September, 1896.

5744. ALFRED CRAWLEY, Ottawa, Ont. A Medicinal Preparation, 17th September, 1896.

5745. ALEXANDRE LEGRAND, Ainé, Directeur Général de la Societé Anonyme de la DISTILLERIE DE LA LIQUEUR BENEDICTINE DE L'ABBAYE DE FÉCAMP, à Fécamp, Seine Inférieure, France. Une Liqueur, 18 septembre 1896.

5746. PRATT FOOD COMPANY, Philadelphia, Pennsylvania, U.S.A. Prepared Food for Animals, 21st September, 1896.

5747. } PRATT FOOD COMPANY, Philadelphia, Pennsylvania, U.S.A. Prepared
5748. } Food for Poultry, 21st September, 1896.

5749. THE DIAMOND MACHINE AND TOOL COMPANY, Toronto, Ont. Cycles and parts and fittings thereof, 22nd September, 1896.

5750. THE HAMILTON DISTILLERY COMPANY, LIMITED, Hamilton, Ont. Vinegars, 24th September, 1896.

5751. SAMUEL SWERDFEGER, Township of Winchester, County of Dundas, Ont. A Salve, 26th September, 1896.

5752. THE ATLAS BRONZE COMPANY, LIMITED, Salford, Manchester, England. Metals in ingots and similar form, particularly bearing metals and antifriction metals and bearings, and parts of machinery made of such metals, 26th September, 1896.

5753. RICHARD SMITH, Macclesfield, Cheshire, England. Flour and other cereals, Bread, Cakes, Biscuits and Confectionery and other similar goods, 26th September, 1896.

5754. }
5755. } THE UJ HUNYADI ACTIENGESELLSCHAFT, Budapest, Hungary.
5756. } Mineral Water, 28th September, 1896.

5757. WILLIAM AUGUSTUS HALL, Bellows Falls, Vermont, U.S.A. Paints 29th September, 1896.

5758. }
5759. } J. H. FRANCIS, Pakenham, Ont. Flour, 30th September, 1896.
5760. }

COPYRIGHTS

Entered during the month of September, 1896, at the Department of Agriculture – Copyright and Trade-Mark Branch.

8709. BRITISH DEAD MARCH. (For Piano or Organ.) By A. G. Dawdy, Southwold Station, Ont., 2nd September, 1896.

8710. KING OF THE MIGHTY SEA. (Song.) Words and Music by S. T. Church. Whaley, Royce & Co., Toronto, Ont., 3rd September, 1896.

8711. MY LOVE AND I WALTZ. For Piano, by F. J. Hatton. Whaley, Royce & Co., Toronto, Ont., 3rd September, 1896.

8712. THE STUDENTS' HISTORY NOTE BOOK. By Rev. J. O. Miller, M.A. The Copp, Clark Co. (Ltd.), Toronto, Ont., 3rd September, 1896.

8713. THE UP TO DATE MARCH. (Two-Step.) Arranged by G. Hermann. Whaley, Royce & Co., Toronto, Ont., 3rd September, 1896.

8714. GRANDE MARCHE MILITAIRE. (Pour Piano.) Par Adè L Mai , Toronto, Ont., 3 septembre 1896.

8715. MASSEY'S MAGAZINE, September, 1896. The Massey Press, Toronto, Ont., 4th September, 1896.

8716. THE COMING OF CHLOE. By Mrs. Hungerford. Book Published in "The Globe," Toronto, Ont. (Temporary Copyright.) National Press Agency, London, E.C., England, 4th September, 1896.

8717. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 5TH SEPTEMBER, 1896. The Mail Printing Co., Toronto, Ont., 5th September, 1896.

8718. LARMES D'AMOUR. Paroles de Wilfrid Larose, Musique de Leon Medaer. Wilfrid Larose, Montréal, Qué., 5 septembre 1896.

8719. HOTEL REGISTER. (Interleaved with printed blotters, and Dominion of Canada and American Hotel Guides attached.) Davis & Henderson, Toronto, Ont., 8th September, 1896.

8720. DRAMES DE LA VIE RÉELLE. Roman Canadien, par G. I. Barthe. J. A. Chenevert, Sorel, Qué., 8 septembre 1896.

8721. CHRIST OUR GOVERNOR; OR, A MESSAGE OF PEACE UNTO ALL MEN WHOSOEVER THEY MAY BE, AND AN ELECTION WARNING CRY; OR, GOD THE RULER OVER ALL THINGS. By Donald McLennan, Amberley, Ont., 8th September, 1896.

8722. THE CHURCH SERVICE RECORD. Church Record Publishing Co., Truro, N.S., 9th September, 1896.

8723. THE VETERINARY SCIENCE. The Anatomy, Diseases and Treatment of Domestic Animals. By J. E. Hodgins, V.S., and T. H. Haskett, Toronto, Ont., 9th September, 1896.

8724. DREAMLAND. (Lullaby.) Words by H. H. MacNamara, Music by Chas. R. Palmer. The Anglo-Canadian Music Publishers' Association (Ltd.), London, England, 11th September, 1896.

8725. THE ROCK-A-BY LADY. Words by Eugene Field, Music by M. Irene Gurney. The Anglo-Canadian Music Publishers' Association (Ltd.), London, England, 11th September, 1896.)

8826. SELECT POEMS OF GOLDSMITH, WORDSWORTH, SCOTT, KEATS, SHELLEY, BYRON. Edited from Authors Editions, with Introductions and Annotations. By Frederick Henry Sykes, M.A., Ph.D. The W. J. Gage Co. (Ltd.), Toronto, Ont., 11th September, 1896.

8727. LA GRAMMAIRE, par Eugène Labiche, and LE VOYAGE AUTOUR DE MA CHAMBRE, par Xavier de Maistre. Edited with Biographical and Critical Notices of the Authors, Notes, Vocabulary and Exercises in Composition, &c. By John Squair, B.A., and John MacGillivray, Ph.D. (French Literature, 1897.) The W. J. Gage Co. (Ltd.), Toronto, Ont., 11th September, 1896.

8728. CÆSAR, DE BELLO GALLICO. Books II, III and IV. With Introduction, Notes, Maps and Illustrations, Appendices with Hints and Exercises on Translation at Sight and on Re-Translation into Latin, and a Complete Vocabulary to Cæsar. By J. C. Robertson, B.A. The W. J. Gage Co. (Ltd.), Toronto, Ont., 11th September, 1896.

8729. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 12TH SEPTEMBER, 1896. The Mail Printing Co., Toronto, Ont., 12th September, 1896.

8730. THE DELINEATOR. (A Journal of Fashion, Culture and Fine Arts, October, 1896.) The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 14th September, 1896.

8731. THE GLASS OF FASHION. (October, 1896.) The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 14th September, 1896.

8732. HISTORICAL CHART OF CANADA. (Second Edition.) James P. Taylor, Lindsay, Ont., 15th September, 1896.

8733. HISTORY OF THE COUNTIES OF ARGENTEUIL, Quebec; and PRESCOTT, Ontario, FROM THE EARLIEST SETTLEMENT TO THE PRESENT. By C. Thomas, St. Andrews, Que., 17th September, 1896.

8734. MINIATURE PAINTED ON IVORY, by J. Hudson, of MAJOR-GENERAL SIR ISAAC BROCK. Mrs. L. M. Taylor, Toronto, Ont., 18th September, 1896.

8735. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 19TH SEPTEMBER, 1896. The Mail Printing Co., Toronto, Ont., 19th September, 1896.

8736. LIFE AND CONDUCT. By J. Cameron Lees, D.D., LL.D. Wm. Briggs, (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 21st September, 1896.

8737. WALTER GIBBS, THE YOUNG BOSS, AND OTHER STORIES. (A Book for Boys.) By Edward William Thomson. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 21st September, 1896.

8738. CUTHBERT'S DRAWING EXERCISE BOOK. (For Extra Practice Work.) The Copp, Clark Co. (Ltd.), Toronto, Ont., 21st September, 1896.

8739. RENOUF'S BOOK-KEEPING BLANKS. (Consisting of a series lettered A, B and C.) E. M. Renouf, Montreal, Que., 22nd September, 1896.

8740. CANADIAN HISTORY NOTES. By G. E. Henderson, Toronto, Ont., 24th September, 1896.

8741. YOUTHFUL FANCIES. By various authors. (For Piano.) Revised, arranged and edited by Heinrich Zoellner. Whaley, Royce & Co., Toronto, Ont., 24th September, 1896.

8742. THE CREW OF THE "CANADA." (Photo.) Josiah Bruce, Toronto, Ont., 24th September, 1896.

8743. THE YACHT "CANADA." (Photo marked A.) Josiah Bruce, Toronto, Ont., 24th September, 1896.

8744. THE YACHT "CANADA." (Photo marked B.) Josiah Bruce, Toronto, Ont., 24th September, 1896.

8745. THE CABOT CALENDAR, 1497-1897. Mary Agnes FitzGibbon and Sara Mickle, Toronto, Ont., 25th September, 1896.

8746. THE CANADIAN ALBUM. Encyclopedic Canada; or the Progress of a Nation. Edited by J. Castell Hopkins. (Volume V.) Thomas S. Linscott, Brantford, Ont., 26th September, 1896.

8747. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 26TH SEPTEMBER, 1896. The Mail Printing Co., Toronto, Ont., 26th September, 1896.

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